Canine-Human Music: A Zoömusicological Inquiry

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Finally, thank you to Mia, my family dog, who led me down this path in the first place. She continues to bring immense joy to me and my family.

Declaration

I, *Solomon Frank,* certify that the work contained in this thesis is entirely original and my own work and has not been submitted for a higher degree to any other university or institution.

Ethical approval has been granted for the study presented in this thesis from The University Animal and Human Ethics Committees. Animal carers were required to read and to sign an information document. Informed consent was given individually prior to the collection of data.

In writing this thesis, I utilised AI tools (ChatGPT version 5) to edit sections of writing and check for grammatical errors.

OpenAI. 2025. *ChatGPT*. https://chat.openai.com.

Solomon Frank, September 2025

Acknowledgment of Country

This thesis was written on unceded Cammeraygal and Gadigal lands within the Eora nation. I acknowledge the interdependent link that Aboriginal people have had to this land for thousands of years and the continuing struggle with colonising forces that have robbed Indigenous peoples of their lands and cultures. Music and interspecies companionship have, and continue to be, an integral part of Aboriginal society. I pay my respects to Elders past and present.

Abstract

This project positions canine-human music-making as a compelling site for rethinking music, collaboration, and relationality beyond the limits of the human. Guided by the premise that musicality in species beyond humans, songbirds, and whales has been historically overlooked—and that music-making with domestic dogs (*Canis familiaris*) has often been framed through the lens of comedy—it seeks to challenge species boundaries that diminish recognition of animals' creative capacities. Within the field of zoömusicology, I facilitated co-created interspecies encounters to investigate canine responses to music within mutualistic human–dog relationships. Using clarinet, voice, and other sonic stimuli, I engaged with dogs and their companions in diverse settings, cultivating bonds and observing vocalisations and behaviours. Drawing on reflexive ethnographic methods, I gathered qualitative data—including fieldnotes, behavioural descriptions, sonographic analyses, and the perspectives of carers—that support the classification of these interactions as forms of "musicking" (Small 1998). To expand these observations, I conducted in-depth interviews with dog guardians to explore how musical practice shapes relationships and the ways people and dogs approach such practices. I also analysed online and archival media featuring musically expressive dogs—a pluralistic genre amplified by digital technologies and global media. Across these stages, some dogs displayed behaviours that appear to exceed assumptions about canine vocal and perceptual limits, including pitch-matching and rudimentary mimicry. This research foregrounds the relational aspect of music as central to examining these practices, suggesting they may also be understood as forms of play. The project culminated in *Dog Choir*, a participatory workshop-performance with dogs and humans, designed to shed further light on canine musical curiosity and to frame the phenomenon through shared play and joy. Positioning these collaborations through Tsing's (2015) "contaminated diversity" and Small's (1998) conception of musicking, I propose that canine–human musicking offers embodied, affective modes of ecological attunement—inviting humans to reconsider their place within, rather than above, the more-than-human world.

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Track 1 Commonly utilised clarinet gestures

Track 2 Tilly, 23 May 2023, 3 minutes 7 seconds

Track 3 Tilly, 23 May 2023, 4 minutes 1 second

Track 4 Tilly "woowoo," 5 July 2023, 1 minute 37 seconds

Track 5 Tilly "woowoo," Play 1, 6 July 2023, 1 minute 15 seconds

Track 6 Tilly "woowoo," Play 2, 20 September 2023, 1 minute 52 seconds

Track 7 Tilly, 15 November 2023, 2 minutes 44 seconds

Track 8 Tilly, 15 November 2023, 3 minutes 1 second

Track 9 Tilly, 15 November 2023, 4 minutes 26 seconds

Track 10 Arca "awoo" howl, 18 September 2023, 2 minutes 19 seconds

Track 11 Arca "uhroor" bark-howl, 18 September 2023, 3 minutes 50 seconds

Track 12 Arca "roor" whine, 6 September 2023, 2 minutes 26 seconds

Track 13 Arca "rooff" bark, Play 2, 19 January 2024, 26 seconds

Track 14 Arca “rr-rooff” growl-bark, Play 2, 19 January 2024, 1 minute 7 seconds

Track 15 Arca, Play 1, 18 September 2023, 2 minutes 10 seconds

Track 16 Arca, Play 1, 19 January 2024, 46 seconds

Track 17 Arca, 6 September 2023, 5 minutes 57 seconds

Track 18 Arca 16, December 2023, 2 minutes 29 seconds

Track 19 Arca, 6 September 2023, 7 minutes 39 seconds

Video 1 *Dog Choir* edited highlights 21 July 2024 (videography by Steve Wilson-Alexander)

Participants Featured in this Study

Participants featured and discussed in this thesis include:

Mia (dog) and myself (Solomon, or Solly, Frank)
Tilly (dog) and Chloe Abdelnour (human)
Arca (dog) and Verity Mackey (human)
Razzly or Raz (dog) and Alon Ilsar (human)
Idris (dog) and Emily Doolittle (human)

A note on language: where possible, I refer to dogs without using possessive pronouns relating to their human counterparts and primary carers (e.g., "his dog" or "she owns this dog"). Given the problematically hierarchical and exploitative language of "dog owner," I will refer to the dog-human relationship as human and canine "carers," "guardians," or "companions" (the latter being the term Donna Haraway [2008] adopts when describing such a relationship). In instances of archival documentation of dogs and people, I employ "owner" to refer to the humans, since this is the language of the time.

Chapter 1: Introduction

> *I grew up playing clarinet alongside Milly, a great Dane-Rhodesian ridgeback cross—a gentle giant who would answer my practice with ardent howls and barks. As a family, we laughed at her vocal interruptions, assuming the clarinet's timbre hurt her ears; after all, my piano practice, and my brothers' much louder guitar playing, elicited no such response. When Milly died in my final year of school, we adopted Mia, a staffie-cattle dog cross: a classic rescue mutt with a heart of gold. She, too, found her voice with the clarinet, but in a vernacular all her own. By the end of my undergraduate composition degree—my musical tastes at their most experimental—I began playing with Mia more regularly, despite my mother's continued sense that the sound troubled her. I found the opposite. I would lift the clarinet, and Mia would seek me out, settle close, and willingly vocalise. I learned to hear her not through the lenses of comedy or pain, as I had with Milly, but as an improviser: her gestures were diverse and complex, and she seemed to answer, adjust, and adapt as my lines shifted. We kept living together—co-existing, loving, listening—and these sessions became a small ritual braided into our days. Here, at the seam between domestic life and musical experimentalism, my journey into canine musicality began.*

* * *

This thesis investigates the widely apparent but scarcely discussed phenomenon of collaborative musical relationships between humans and dogs. The project emerges from an artistic practice-led research methodology, utilizing precedents established in zoömusicology, ethnomusicology, the environmental humanities, ethology, and biology as a launching pad for creative and ethnographic pursuits with dogs and people. My work is grounded in the view that ethnomusicology—and musicology more broadly—stands to benefit greatly from posthumanist and more-than-human philosophical frameworks, a position echoed throughout contemporary scholarship (e.g., Keller 2012; Lestel 2014; Taylor 2017; Silvers 2020).

At its core, this project positions canine-human music making as a compelling site for rethinking music, collaboration, and relationality beyond the limits of the human. My research seeks to substantiate my claim that people and dogs can collaboratively make music, while attempting to understand the diverse contexts, forms, and modes through which this

phenomenon is occurring. Building on the musical groundwork I established with my family dog Mia (Frank 2018), I conducted fieldwork that explores the potential of forming musical practices with dogs previously unfamiliar to me. Additionally, the project scrutinizes diverse perspectives on, and external media examples of, canine-human musical practice that evidence lateral and individualised approaches to interspecies collaboration.

The aims of the project are:

- To explore the place of, and canine response to, collaborative interspecies music making in domestic, social, and shared settings, as well as its potential role as a playful, socially and sensorially enriching activity;
- To draw attention to overlooked musical abilities in species beyond humans, songbirds, and whales—particularly highlighting the importance and consequence of social engagement as a core element of musicality;
- To challenge established human-centred definitions of music, and thereby question the presumed uniqueness of music as a human cultural activity;
- To foreground interspecies musical collaboration as a means of recognising non-human agency, relationality, and co-creation—ultimately advocating for a more inclusive, ecologically attuned understanding of music that dissolves rigid boundaries between humans and other animals.

In fulfilling these aims, the broad objectives of this project are:

- To build musical practices and interpersonal relationships with domesticated dogs (and their guardians) in ways analogous to human musical collaborations, specifically focussed on their musical capabilities and behaviours as individuals;
- To sensitively record, document, and analyse the resulting musical, quasi-musical, and extra-musical behaviours;
- To develop interspecies musical practices amidst the broader phenomenon of canine-human music;
- To examine and challenge the dominant historic cultural positioning of the musical dog as novel, cute, and silly;
- To mobilize the perspectives of others engaged in similar practices to triangulate and expand the findings from my personal collaborations;

- To synthesise and enact my findings in a public facing outcome that foregrounds canine musical agency, capacity, and curiosity for audiences (human and dog) outside the academy.

I approach this topic through three primary lenses. First, I draw upon my own experiences forming musical practices with dogs across various contexts. Second, I incorporate the experiences and perspectives of others who have engaged in similar practices, whether documented through interviews, social media, or archival media accounts. Third, I discuss the development and presentation of a public artistic outcome, *Dog Choir*, which synthesises the insights of my research and the perspectives of others into an interactive performance format. Together, these strands structure the thesis and guide the chapters that follow.

The academy has long hesitated to grant animals musicality, constrained by anthropocentric definitions of music and cognition. While the field of zoömusicology has questioned this presumption, mainstream musical discourse has largely ignored dogs as musical subjects and lacks the wider perspective of music as existing beyond human borders on an evolutionary spectrum "proportioned to the respective needs of each species, or to their respective *Umwelten*" (Martinelli 2004: 249). In its studies of animal musics, zoömusicology has focussed predominantly on birds (Mâche 1983; Taylor 2017; Doolittle 2020 and others), whales (Rothenberg 2008; South 2022; 2025), and, to a lesser extent, insects (Rothenberg 2014). However, an emerging cohort of researchers has begun to explore more diverse species using novel research mechanisms, including partaking in and studying interspecies collaboration (Rothenberg 2008; 2016; South 2022; Harrison and Kruszona 2024; Kriengwatana, Nager, South, Ullrich, and Doolittle 2025).

My earlier work provided practical insights into canine-human musical practices as they manifest in online social and mass media (Frank 2021) and through improvisation sessions with Mia, my family dog (Frank 2018). These efforts form the basis for my assertion in this thesis that dogs (and other animals whose vocalisations do not adhere to traditional Eurocentric definitions of music) should nonetheless be considered in zoömusicological discourse. These previous forays serve as foundational work on which to build my current research: working with new dogs, exploring archival media, and developing a public outcome that both enhances my fieldwork and furthers communication of my research beyond the academy.

I begin with two fundamental premises: that dogs are deeply embedded in human lives across the globe and that music likewise permeates cultures. This thesis examines the nexus of these two pervasive cultural phenomena. I will argue that by paying close attention to more-than-human creative agency, we can more fully satisfy our responsibilities as conscientious participants in a global interspecies community. The more our world becomes globalized and technologized—further severing our ties to the natural world (Plumwood 2009)—the more our bond with dogs nonetheless persists, even flourishes amidst these messy entanglements of ecologies, bodies, and technologies. The ubiquity of dogs in human societies represents an ancient connection with the more-than-human, grounding us within the primordial soup that modern culture often treats as "other." Despite irrevocably disrupting more-than-human lives, we persist in seeking empathetic and ethical modes of coexisting with our non-human planetary roommates; perhaps music can serve as a radical model of more-than-human "becoming with" (Haraway 2008: 2).

I approach this project with the knowledge that humans have permanently altered the lives of domesticated, captive, and companion animals, and any pretence of studying animals in their "natural state" is fraught (Bekoff 2007; Despret and Meuret 2016); therefore, new lateral approaches (beyond the explicitly melodic allure of wild songbirds and cetaceans) must be considered when studying humanity's sonic interactions and disturbance of animal lives. As such, this thesis aims to look beyond forms of animal sound that more closely mirror our own musics to probe our explicitly interactional, musical experiences with "humanity's best friend."

Despite this zoömusicological emphasis on cetacean and avian activities, the social media category of canine-human music provides substantial anecdotal evidence of diverse canine musical and collaborative capacities, from dogs habitually playing piano (e.g., Buddy Mercury 2025) to dogs with apparent absolute pitch (e.g., Schlauwauwau 2014). Although these examples reveal complex interspecies sonic entanglements, most remain understudied; yet, these practices have permeated the mainstream: dogs and their people competing on reality TV talent contests (VTM 2015; Britain's Got Talent 2020; Talent Recap 2020; America's Got Talent 2021), people collaborating with dogs with digital technolology (Nigahiga 2019; Hirokisan79 2021), and many singing dogs achieving viral fame. Granted, such practices unfold not in labs or concert halls but in messy, relational, digitally mediated settings where humans and animals share space. Instead, as I set out, the novel musical

behaviours and remarkable vocal capacities observed in these contexts—some with scientific precedent beyond birds and whales (Hoeschele, Merchant, Kikuchi, and ten Cate 2015)—I suggest that they may surface specifically because of these individualised, and "unnatural" environments of domestication and twenty-first-century cohabitation.

In mainstream and social media, such canine vocal and sonic practices have been mostly relegated to the category of novelty, comedy, and "cute," where scant attention is paid to the unique aesthetic, collaborative, and potentially musical qualities of these practices. Even when dogs voluntarily and vigorously participate in human music, it is often dismissed as a chucklesome trick (Altizer 2021), where viewers seem to laugh at the novel spectacle of a non-human performing a purportedly uniquely human behaviour. While canine musical and vocal behaviours may have been overlooked because they do not immediately resemble mainstream musical forms (unlike some birds and whales who utilise melodic motifs and humanly analogous rhythmic structures in their songs), canine-human musical collaborations adhere to another fundamental marker of musicality in their social, interpersonal context: dogs appear to enthusiastically participate in human music as part of their domestic relationships with people. This thesis explores how relationality and the accompanying behaviours native to human-human musical collaboration—intimacy, trust, understanding, and even joy—seem to be fundamental foundations for mutually enriching human-dog musical engagement. This thesis takes seriously the proposition that canine-human collaborative musical practices exhibit evidence of a valid musical element beyond the musical product itself: a shared social and relational context (as illuminated by music sociologist Tia DeNora [DeNora 2000] and others).

With this specifically interactional context in mind, as well as dominant historic perceptions of such practices through the lens of comedy, I will explore play, joy, and humour as central dimensions of canine-human musicking, positioning canine vocalisations and musical participation in these contexts as forms of relational and creative engagement. In particular, I will argue for "taking the silly seriously": embracing the laughter, absurdity, and delight that arise in these encounters while recognising them as meaningful and musically rich contributions that merit scholarly attention. Play behaviours have often been left unexamined within scientific discourse precisely because they resist reductionist evolutionary frameworks and are not easily explained in terms of utility or survival (Bekoff 2010; Bateson 2015). By foregrounding play, I will show how canine vocalisations and improvisations can be

understood as intrinsically motivated, socially situated practices that generate joy for both species. Humour and silliness in these contexts do not trivialise the practice but instead become aesthetic and ethical registers through which collaboration unfolds. Positioning interspecies music-making as playful reorients the frame away from novelty or anthropomorphic curiosity and towards a serious engagement with levity as a mode of meaning-making.

Alongside zoömusicology, ecomusicology and acoustic ecology provide critical frameworks for situating this project within broader conversations about sound, environment, and multispecies entanglement. Ecomusicology, rooted in the humanities, foregrounds ecological awareness and ethical engagement with soundscapes and musical practices (Allen 2011: 418). Also focussed on sound and environment, acoustic ecology studies the relationships between living beings and their sonic environments (including biodiversity assessments), emphasizing how listening can foster ecological understanding and environmental stewardship (Schafer 1977; Truax 2001). This thesis will additionally bring together approaches from more-than-human geography, ethnomusicology, critical animal studies, multispecies ethnography, and the environmental humanities. In so doing, it articulates the diverse forms, contexts, precedents, and perceptions of canine-human musical practices as relational forms of interspecies musical practice that trouble traditional human boundaries of musicality.

I have chosen to retain the label of "music" for the practices and behaviours discussed in this thesis for two interrelated reasons grounded in zoömusicological and musicking-based frameworks. First, by inviting the reader to perceive canine behaviours through a semiotic lens of music, I seek to disrupt and counter the dominant, purely structural terminology used within the sciences to describe canine vocalisations—an approach that, I argue, produces reductionist accounts that overlook the relational, expressive, and context-dependent dimensions of canine sound-making. Framing these behaviours as musical instead foregrounds their communicative, affective, and participatory qualities, aligning with fundamental zoömusicological efforts to expand music beyond anthropocentric definitions. Second, many of the canine behaviours examined in this thesis emerged through dogs' enthusiastic participation in pre-existing human musical practices, and are therefore most productively understood through Christopher Small's concept of "musicking" (Small 1998), which emphasises music as an activity constituted through relationships, interaction, and shared meaning-making across species.

In this research, I do not attempt to recover or understand the "natural" vocal and musical behaviours of dogs and humans in their original habitat; rather, this project recognises that each human-dog relationship is nuanced and informed by individual histories. Therefore, it explores how novel, cross-species, and recognizably musical practices arise from human interventions in the disturbed, precarious environment of the twenty-first century. How has this "contaminated diversity" (Tsing 2015, 30) manifested in human-dog interspecies musical practices? Within an ancient lineage of human-dog coevolution, how do beings (both human and non-human participants) represent themselves and engage in creative exchange under contemporary conditions? In asking these questions, this project seeks to challenge anthropocentric conceptions of music and creativity by foregrounding interspecies musical collaboration as a means interspecies play and of recognising non-human agency, relationality, and co-creation—ultimately advocating for a more inclusive, ecologically attuned understanding of musicking that dissolves rigid boundaries between humans and other animals.

This thesis unfolds across seven chapters, each building toward a broader argument for recognising canine-human musicking as a valid, pluralistic, and ethically significant practice. **Chapter 2: Literature Review** surveys the interdisciplinary scholarship underpinning this research, from zoömusicology, ethnomusicology, animal justice, and the sciences, to posthumanist philosophy, with key attention to Christopher Small's "musicking" (Small 1998), Donna Haraway's more-than-human ethics (Haraway 2008), and Martha Nussbaum's Capabilities Approach for animal justice (Nussbaum 2023). **Chapter 3: Methodology** outlines the multi-pronged, iterative approach developed for this project, combining practice-led fieldwork with dogs, archival and media analysis, practitioner interviews, and the creation of a participatory performance.

Chapter 4: Case Studies documents my collaborations with Tilly, Arca, and shelter dogs, analysing the emergent sonic, structural, and relational forms of their musicking while highlighting overlooked canine auditory and vocal aptitudes. Using clarinet, voice, and other sonic stimuli, this fieldwork involved working with dogs and their human companions in diverse settings, cultivating individual bonds and systematically observing canine vocalisations and behaviours. Drawing on reflexive analytic frameworks from contemporary ethnomusicology, I collated qualitative data—behavioural descriptions, sonographic analyses, and participant interviews—to support classifying these interactions as forms of "musicking"

(Small 1998) and musical practice. **Chapter 5: Perspectives on Dog-Human Music in the Media** situates these encounters within a longer history, examining how musical dogs have been represented in archival press and digital platforms like YouTube and TikTok, often framed through comedy and anthropomorphism. **Chapter 6: Individual Perspectives** complements these analyses through interviews with practitioners Emily Doolittle and Alon Ilsar, offering first-hand insight into the diversity of bespoke interspecies practices. The insights gathered across these research stages culminated in *Dog Choir*, a participatory workshop-performance for dogs and humans designed to further explore canine musical curiosity and advocate for more inclusive musical practices**. Chapter 7: *Dog Choir*** details the design, execution, and reception of my public-facing performance workshop, which synthesised findings from earlier stages into a participatory setting where dogs, humans, and audiences explored sound together.

Finally, **Chapter 8: Conclusion** consolidates these findings, positions dogs as creative agents within zoömusicology, and argues for expanded definitions of musicality. It also reflects on the broader ethical and ecological implications of interspecies musicking, suggesting directions for future research in interactional enrichment, scientific study of canine vocal aptitudes, and further ethnographic examination of co-created interspecies practices.

Guided by the premise that non-human musicality—songbirds and whales included—has been historically overlooked, and as part of a wider practice of taking the silly seriously, this thesis presents and celebrates canine-human musicking as playful, interspecies relationality rooted in a shared evolutionary history. In an era of ecological precarity, I will argue that this interspecies creativity—that I first encountered with Milly, then Mia—offers an embodied, affective mode of ecological attunement—inviting humans to reconsider our place within, rather than above, the more-than-human world.

Chapter 2: Literature Review

This chapter surveys the interdisciplinary body of literature that informs this research. Section 2.1, "The Case for Dogs in Zoömusicology," reviews existing studies and precedents, and Section 2.2, "Reductive Human Definitions and 'Musicking,'" introduces Christopher Small's phenomenological concept of "musicking" for understanding interspecies musical practices. Section 2.3, "Ethnomusicology and the More-than-Human Turn," examines ethnomusicological accounts and methods for exploring non-Western representations of the more-than-human in music, while Section 2.4, "Interspecies Entanglements Amidst Environmental Crisis," engages with posthuman philosophical frameworks such as Donna Haraway's more-than-human ethics and Tsing's notion of "contaminated diversity". The chapter then turns to scientific investigations of animal musicality and behaviour (2.5 "Science and the Humanities in Conversation"), followed by ethical approaches to engaging animals in research (2.6 "Interspecies Etiquette" and 2.7 "Animal Justice and 'Wonder'"). Section 2.8, "Sci-Fi Realities: Talking Dogs and Technology," explores how emerging technologies and speculative futures reshape our understanding of dogs in the twenty-first century. Finally, Section 2.9, "Creative Output as Zoömusicological Research," considers artistic practice as a valid mode of inquiry. Altogether, these perspectives situate the project within wider environmental, technological, ethical, and cultural discourses, illuminating new pathways for canine–human musical practices.

2.1 The Case for Dogs in Zoömusicology

In 2021, Pam Quinn and the chihuahua Casper auditioned for season 16 of *America's Got Talent* (America's Got Talent 2021) with a vocal duet of Eric Carmen's "All by Myself" (later made famous by Celine Dion) (Fig. 1). Pam sang the verses alone, but as the intensely melancholic chorus began ("all by myself"), Casper fervently barked, howled, and screamed in long descending phrases seeming to mirror the mournful passion of Pam's singing. The two progressed to the next round of the competition but were subsequently eliminated. Since 2021, Pam and Casper have garnered an enormous social media following (with over a million Instagram followers and nearly as many TikTok followers at the time of writing), recorded nearly one thousand videos, appeared on numerous television shows and podcasts, and set up a Cameo account where fans can pay for personalised videos filmed by the duo.

Their extensive catalogue of videos seems to evidence a habitual and mutually responsive interspecies musical practice that bears striking resemblance to many human musical practices. Moreover, their content, alongside other analogous dog-human musical documentations, suggests broad popular appeal. As apparent in their online archive, their practice is formed on a bedrock of intimacy, trust, companionship, and love, yes, love: elements familiar to anyone who has lived with and cared for a dog. Pam and Casper's musically entangled relationship serves as one example amidst thousands of dogs socially enmeshed in human musical practices, including my own formative experiences playing clarinet with my family's dog Milly as a child, then later with Mia.



Figure 1. Pam Quinn (right) and Casper (left) competing on season 16 of *America's Got Talent* in 2021 (screenshot taken from America's Got Talent 2021: 2:09).

Zoömusicology is the study of the musical aspects of sound communication in non-human animals. The credo of zoömusicology (that music is not a solely human phenomenon) has been established through research primarily examining songbirds and whales (Mâche 1992; Rothenberg 2005 and 2008; Taylor 2017; Doolittle 2020; South et al. 2023) and, to a lesser extent, insects (Rothenberg 2014). People across history have observed and speculated on the musicality of animals, beginning with Aristotle (350 BCE) who describes various birds as having a "musical voice" (Aristotle 1910: Book IV and IX). Notable others included Charles Darwin, in his acknowledgement that birdsong possesses commonalities with our own sense

of musicality, writing that the "sounds emitted by birds offer in several respects the nearest analogy to musical notes" (Darwin 1871/1981), as well as F. Schuyler Mathews' *Field Book of Wild Birds & Their Music* (Mathews 1904), Heinz Tiessen's *Musik der Natur* describing the songs of 305 birds (Tiessen 1953), Wallace Craig's musical interrogation of the vocalisations of the wood pewee (Craig 1943), and more (e.g., Allen 1888; Coffin 1928; Sotavalta 1956; Szöke, Gunn, and Miroslav 1969; Hall-Craggs 1969 and 1974; Szöke and Filip 1977). However, zoömusicology was only formally named and established as a field when composer François-Bernard Mâche's utilised the term "*zoomusicologie*" in his 1983 book *Music, Myth and Nature* (Mâche 1983/1992). Mâche proposed the importance of musicological expertise and analysis in studying animal sound, pointing to the musically inadequate attempts by scientists to define or meaningfully comment on the potential of animal musics (Mâche 1983/1992).

In the decades since Mâche's initial work, practitioners have continued examining animal sound through musical lenses: semiotician, composer, and musicologist Dario Martinelli has published works exploring animal musical aesthetics and semiotics (Martinelli 2001; 2004; 2010); composer, violinist, and ornithologist Hollis Taylor has extensively mapped the musical worlds of the Australian pied butcherbird (Taylor and Lestel 2011; Taylor 2008; 2010; 2017; 2021) and other Australian avian species (Taylor 2014; 2018); and composer and researcher Emily Doolittle has similarly explored northern hemisphere birds' musical capacities (Doolittle 2012; 2020), often in successful partnerships with scientists (Doolittle, Gingras, Endres, and Fitch 2014; Rendell, Doolittle, Garland, and South 2021). These efforts largely explore animal song through discrete species lenses, probing the vocalisations of wild animals. Other practitioners have embraced forms of research that explicitly utilise human intervention. Clarinettist and philosopher David Rothenberg, having improvised with birds, whales, and insects, considers animal musical cultures through the potential for interspecies collaboration (Rothenberg 2005, 2008, 2016, and 2018), whilst musician Jim Nollman has comparably pursued, recorded and written about his own interspecies musical practices with a diverse range of species (Nollman 1982 and 1997).

We must question why scholars have devoted so little attention to canids' rich vocalisations and their proven eagerness to engage in human musical practices. A historical tendency—found not only in zoömusicology but also in the sciences—more readily characterizes animal vocalisations as "musical" only when they align with Eurocentric markers of musicality, such

as melody, equally-tempered tonal harmony, and regular pulse. The widespread use of the word "song" to describe avian and cetacean vocalisations exemplifies this tendency. Philosopher Dominique Lestel raises the salient point that science practitioners dominate fields in which animal culture is defined and discussed, leading to ill-defined and Eurocentric definitions of art and music (Lestel 2012). Lestel asks provocatively, "If animals do not perform art like the bourgeois of nineteenth-century Europe, does it mean that they do not perform art at all?" (Lestel 2012: 174). Similarly, musicologist Rachael Mundy points to ornithology's dependence on spectrograms over musical notation as a means of analysing and subsequently framing birdsong as non-aesthetic (Mundy 2009). Lestel advocates for more nuanced and culturally diverse considerations of animal art that step outside of mainstream Western traditions by including the avant-garde, improvisation, Indigenous musics, and non-Western traditions.

The scant attention paid to canines in existing zoömusicological research includes attempts at collaborations with wolves by Jim Nollman in his album *Playing Music with Animals: Interspecies Communication of Jim Nollman with 300 Turkeys, 12 Wolves and 20 Orcas* (Nollman 1982), Jack Harrison's research examining the role of music in canine and animal sports (Harrison and Kruszona 2024; Harrison 2020), as well as Carola Bauckholt's vocal composition *Instinkt*, transcribing chorus wolf howls for vocalists with the intent to reveal the musical qualities of canid howling (Bauckholt 2007-2008); however, dogs remain obscure within the already obscure discipline of zoömusicology. Building on these efforts to fill the canine gap in the zoömusicological literature, zoömusicologist Katherine Altizer advocates taking seriously the musical contributions and implications of piano-playing dogs, specifically in response to her investigations of Lolabelle, experimental musician Laurie Anderson's late piano-playing rat terrier (Altizer 2021). Altizer "…began to wonder if it were possible to listen to a musicking dog with an ear turned away from humor and musical experimentalism and turned instead toward Lolabelle herself, to listen to her in a way that centers her" (Altizer 2021: 718). Altizer suggests that canine-human musical practices, such as Lolabelle's collaboration with dog trainer Elizabeth Weiss, can serve as socially and therapeutically beneficial activities. Video documentation of Lolabelle demonstrates the dog's diversified musical vocabulary, including commands for playing piano, howling/barking, and differing and deliberate levels of dynamic and rhythmic intensity (Cathy Grier 2010) (Fig. 2). However (and more significantly), these videos demonstrate the emergence of canine musicality within relational contexts. Anderson, Lolabelle's human

companion, speaks of the therapeutic benefit the pianistic practice had for the dog, seemingly sensorially and socially enriching Lolabelle's life as she was dying:

> I wanted to find a way to help her because when she went blind, she didn't do well at all, she panicked. This trainer said: "I taught my dogs to play piano," and I said: "Whoah – OK!" And she said: "I think it really helps Lolabelle." So there were concerts every day, and she was playing this stuff, and it was really a situation where music saved her life. She basically recovered her social world through music (Anderson cited in an interview with Romney 2016: non-paginated).

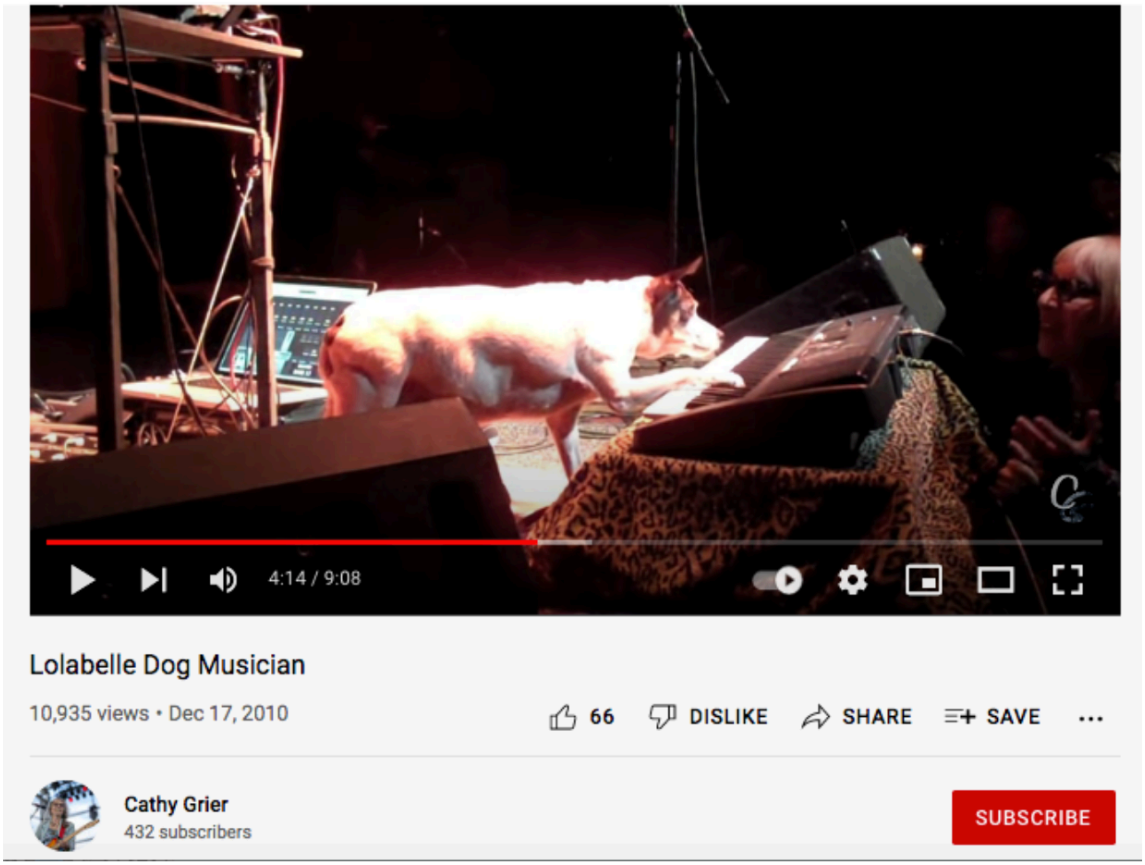


Figure 2. Lolabelle performing at a concert in New York (screenshot taken from Cathy Grier 2010: 4:14).

As Altizer makes clear, the goals of Lolabelle's piano playing were primarily physiotherapeutic, in line with similar approaches taken by her trainer Weiss with other ailing older dogs (as Weiss discusses on the podcast "Dog Save the People" [Bartlett 2019]). Anderson and Weiss seemed less interested in creating a human musical product that adhered to certain markers of musical aptitude like functional harmony, pulse, and melody, and were instead more focussed on the therapeutic benefit for Lolabelle and the positive

interpersonal/animal fellowship that collaborative music making could sow. This echoes research establishing the role music making plays as an interpersonal lubricant in social situations to forge social bonds between diverse groups and individuals (DeNora 2000; Born 2011). Despite a focus on music as a process with social and therapeutic outcomes, the product—a repertoire of songs played by Lolabelle accompanied by electronic tracks that Anderson composed—appeared popular with audiences (evidenced by Lolabelle's multiple well attended concerts in New York before her death).

In advocating for the inclusion of dogs in zoömusicological discourse, adopting a broader, more phenomenological understanding of music is essential: one that values not just the final product (such as a musical work), but also the full scope of the musical process, including all its elements, interactions, and participants. This perspective leads naturally into Christopher Small's notion of "musicking," where the boundaries of music are fluid and shaped through relational, participatory acts (Small 1998).

2.2 Reductive Human Definitions and "Musicking"

When considering the potentially musical quality of canine vocal practices and interspecies collaboration, one inevitably confronts the longstanding debate surrounding the definition of music. This debate is especially fraught in scientific and musicological contexts, where definitions have historically been shaped by Eurocentric and anthropocentric frameworks. As Lestel argues, many animal vocalisations have been disregarded as music precisely because they do not resemble European art music in form or context (Lestel 2012). In contrast, Christopher Small's concept of "musicking" challenges such rigid definitions by emphasising music as a social and relational activity, broadening the scope of what—and who—can be understood as musical (Small 1998).

Most zoömusicologists agree that the policing of musical definitions has historically been skewed by Eurocentric and anthropocentric biases that preclude musics that do not display structural and functional similarities with Western music (Mâche 1983/1992; Doolittle and Gingras 2015; Taylor 2017; Altizer 2021). For instance, nineteenth-century critic and writer Eduard Hanslick, who pioneered a supremely formalist definition of music, was adamant that non-human animal sounds such as birdsong could not be considered music (Hanslick 1891: 152), citing nature's lack of "harmony and melody" (Hanslick 1854/2018: 96). Hanslick

additionally made problematic distinctions between European "art music" (*Tonkunst*) and non-European "natural music" (*natürliche Musik*), holding that the differing formal qualities of non-Western musics disqualified them from his definition of music. "When South Sea islanders clatter rhythmically with pieces of metal and wooden sticks, and along with it bellow out an unintelligible howling," he wrote, "that is natural music, for it is not music at all" (Hanslick 1854/2018: 96).

Taylor compiles a similar assortment of explicitly human definitions of music:

> Merriam's "Music sound cannot be produced except by people for other people" (1964: 6); Sessions' "music is created by human beings" (1950/1974, 11); Kolinski's "Music has been created by man" (1967, 1); Harrison's "non-linguistic sound, when used (with some degree of intention) by human beings" (1977, 30); Blacking's "humanly organized sound" (1995, 10); Bowman's "a product of human minds" (1998: 69); Cook's "humanly generated sounds" (1998, 4); Cross' "a peculiarly human phenomenon... quite outside the repertoire of behaviors of other species" (2003, 109-110); and Borgo's "an emergent property of humans attending to organized sounds in time" (2007: 65) (Taylor 2008: 2).

Similarly, Igor Stravinsky maintained that music required a human hand, writing of environmental sounds, "They are promises of music; it takes a human being to keep them: a human being sensitive to nature's many voices, of course, but who in addition feels the need of putting them in order and who is gifted for that task with a very special aptitude. In his hands all that I have considered as not being music will become music" (Stravinsky 1942/1970: 24). These culturally pervasive perspectives have tacitly excluded many animal vocal practices—especially those of non-avian and non-cetacean species—from most mainstream musicological discourses.

In contrast (but contemporaneous to Stravinsky), composer John Cage offered a radically different conception of music as "purposeless play" (Cage 1937/1962: 44), one that welcomes indeterminacy and opens the door for non-human and environmental sounds to be considered as musical agents, while also foregrounding music as an intrinsically motivated act of "play." These competing conceptions of music—and their human-centered

boundaries—continue to shape contemporary discourse where many scholars conceive of music in purely human terms, with animal sounds rarely considered. Like Hanslick's, these definitions view music primarily as a product, overlooking the processes and relational contexts that underlie it.

This formalist centring of the product itself, while neglecting music as a multimodal, culturally contingent phenomena, continues to be reflected in scientific discourse, where music is frequently defined by explicit structural parameters, often neglecting the multimodal, communicative, social, or spiritual dimensions that music holds in many cultures (Lestel 2014). Martinelli notes that numerous human cultures do not possess a word that directly translates to "music," with the term often encompassing a variety of oral traditions, including speech and poetry (Martinelli 2004: 231). Taylor similarly points to Australian Aboriginal songlines—oral maps passed down through generations—as an example of music functioning as a navigational and epistemological tool, rather than as a purely aesthetic experience (Taylor 2017: 199).

Taylor further critiques the tendency to seek fixed definitions of music, noting that such definitions are "…premature and lopsided ... biased and outmoded" (2017: 188). Rather than declaring animal vocalisations as definitively music, she invites us to ask why they have been excluded from the conversation in the first place. She states, "Human music's multifunctional nature likely reflects multiple selection pressures, and present-day musical activities may not correspond exactly to earlier uses" (Taylor 2017: 188). Taylor questions definitions that rely too heavily on cultural context, and her pragmatic approach recognises music's multifunctionality, suggesting that present-day musical practices may differ significantly from their evolutionary origins.

While few musicologists now insist that music is purely aesthetic, scientific paradigms often overlook the aesthetic and creatively expressive potential of animal sound, where scientists assume communicative animal sound functions only in a proto-lingual manner (as seen in recent viral headlines claiming artificial intelligence had revealed the structural mechanics of cetacean "language"—in reality, the AI had merely identified consistent vocal structures [superficially resembling structures in human language] across a number of recordings with no indication of lingual meaning [Latham and Bressanin 2024]). Evolutionary musical

researcher Steven Brown suggests a more integrative view, positing that music and language both stem from a dual-natured communicative precursor: music emphasizes emotive meaning through sound, whereas language emphasizes referential meaning. He writes: “Music and language are seen as reciprocal specializations of a dual-natured referential emotive communicative precursor, whereby music emphasizes sound as emotive meaning and language emphasizes sound as referential meaning” (Brown 2000: 271). However, the fundamental question of whether music or language emerged first lies beyond the scope of this research.

Nonetheless, it is within this context that Christopher Small’s concept of “musicking” offers a powerful alternative. In his 1998 book *Musicking: The Meanings of Performing and Listening*, Small redefines music as an active, social process rather than a static object (Small 1998). He frames music not as a noun but as a verb: something people do. This includes not only performing and composing but also listening, rehearsing, and facilitating musical events. For Small, musicking encompasses all participants (performers, audience members, organisers, technicians) and emphasises the social aspects of music-making. By shifting attention from the finished musical product to the process of interaction, Small dismantles formalist and structuralist notions of music, inviting us to consider a wider array of variables, agents, and contexts. This process-oriented view also reveals how music reflects and shapes social, cultural, and political relationships. Whether the ritualised structure of a classical concert or the informal intimacy of a jam session, each musical setting constructs a specific relational dynamic that is equally vital in defining the act as music. Small’s inclusive model encourages an understanding of music not as a rarefied art form but as a ubiquitous, participatory practice embedded in everyday life.

This approach to studying music is often adopted to examine the practices of improvising jazz and experimental musicians, whose work cannot neatly be encapsulated in a discreet work or definitive *magnum opus* (Denzler and Guionnet 2020). Musicological scholars have increasingly adopted ethnographic methods to document the practices of improvising musicians. Rather than focusing solely on scores or recordings, researchers engage directly with improvisers and their collaborators to better understand the processes and relational contexts that shape their music. In genres such as experimental and jazz improvisation, where authorship is often shared, examining the social dynamics of musical collaboration becomes

essential to understanding how the music functions. Australian improviser Jim Denley emphasizes that the social makeup of an improvising group is fundamental to grasping the formal and aesthetic qualities of its music (Denley 2020). Using the example of the large-scale Australian improvising ensemble Splinter Orchestra, Denley argues that both the structure and sound of the music are deeply shaped by the personal dynamics within the ensemble. He describes this form of music-making, which emphasises sensitive, embodied, deep listening practice, as a microcosm of broader social and ecological systems, where attentiveness to non-human agents—spaces, materials, and environments—become integral to the musical process (Denley 2020).

Building on this socially phenomenological view of music, Ailbhe Kenny presents a model for studying "communities of musical practice" in which practice is considered "participatory, collaborative and takes account of context" (Ailbhe 2016: 1). Drawing from Wenger and Lave's foundational work on communities of practice, she identifies three core elements: mutual engagement, joint enterprise, and shared repertoire (Wenger and Lave 1991). This framework can be fruitfully applied to human-canine musical interactions, where dogs are not passive subjects but active participants in co-created sound worlds in which, in many cases, these three elements are explicitly evident. Interspecies musical practices challenge conventional ideas of musical authorship and agency, reinforcing the idea that music is inherently relational and accounted for through context.

Central to Small's theory is the idea that listening is just as vital to musicking as sound production. Tia DeNora similarly foregrounds role of listening to music as a social force, describing it as a resource people use to constitute their emotional, physiological, and psychological states. Far from being mere accompaniment, music listening shapes, and is shaped by, the flow of everyday action: "the soundtrack of ...action [is] not merely accompaniment ... [it is] not merely overlaid upon it" (DeNora 2000: 67). Echoing Taylor's view of musical definitions being too easily skewed by culture context, to accommodate the complex, overlapping, and contradictory understandings of music, musicologist Anthony Seeger offers the metaphor of a banana as the concept of music (Seeger 2002). Portraying the banana as a product of a larger system (a branch, a tree, a forest, a terrestrial ecology, an evolution) that can be sliced in any number of "theoretical cuts" allows for pluralism in understanding and defining music (Seeger 2002: 189). A banana is not just a discrete object, but the product of a broader ecological and evolutionary system. Depending on how one

slices it—whether longitudinally or crosswise—different features and functions come into view. This metaphor allows for a non-essentialist view of music, one in which diverse "cuts" or perspectives yield equally valid insights.

In reconsidering what music is and who gets to participate in it, contemporary scholars increasingly challenge the restrictive and exclusionary frameworks of the past. From Hanslick's formalism to Stravinsky's insistence on human authorship, traditional definitions have often marginalized non-Western and experimental musical traditions because they cannot be catalogued and studied as discrete products produced by singular authors. However, by adopting more inclusive, process-oriented, and relational models—offered by thinkers like Small, Ailbhe, and DeNora— music can be understood as a dynamic and potentially interspecies phenomenon. Seeger's banana metaphor aptly encapsulates this shift: music, like culture, is multifaceted, contextual, and open to reinterpretation.

Having suggested that canine musicality lies not in rigid definitions but in the co-creation of sound, meaning, and relationality across species and contexts, my focus now shifts to ethnomusicology, which provides research frameworks and case studies showing how non-Western cultures musically represent and account for more-than-human voices.

2.3 Ethnomusicology and the More-than-Human Turn

Western frameworks for defining music—often rooted in formalist aesthetics, notation, and the valorisation of individual authorship—have traditionally excluded non-human sonic practices. However, more-than-human creative and musical agency has long been acknowledged in the rich, relational soundworlds embedded in many Indigenous and non-Western epistemologies. A growing body of ethnographic, philosophical, and artistic work reveals alternative non-Western understandings of music—not as a fixed category, but as an ongoing, embodied, and multispecies process. This section examines ethnomusicological accounts of non-Western musical traditions that foreground more-than-human agency, the environment, and interspecies collaboration in efforts to explore how my researching of co-created human-dog music might benefit from these ethnomusicological methodologies and respond to the diverse perspectives found in non-Western cultures.

2.3.1 The more-than-human in ethnomusicology

Ethnomusicology has long investigated how musical practices express human relationships with environments, animals, communities, and cosmologies (e.g., Feld 1982; Levin and Süzükei 2006; Brabec de Mori and Seeger 2013; Ingram 2018; Silvers 2020; Titon 2020 and 2021). Amid urgent ecological crises, this field has begun to more overtly acknowledge the deep embedding of musical cultures within more-than-human ecologies (Silvers 2020), mirroring broader moves in the humanities toward multispecies, relational thinking—responding not only to environmental degradation, but to the epistemic and ethical limitations of anthropocentrism (Despret and Meuret 2016; Haraway 2016; Rose and Van Dooren 2017 and others). In contrast to Western classical music, which has historically attempted to isolate sound within acoustically sealed, environmentally neutral spaces, many non-Western musical traditions remain in active, dialogic relationship with their surroundings and engage with the agency of non-human entities. These include musical engagement with animals, landscapes, spirits, and weather—relationships in which music operates not just as an aesthetic form but as a practical, spiritual, and ecological technology. Such traditions challenge human-nature dualisms and foreground models of coexistence that Western thought has often rendered invisible or inconceivable (Plumwood 2009).

This recognition of more-than-human agency resonates deeply within zoömusicological frameworks, wherein some scholars argue that many forms of animal sound should be considered cultural products and studied as such (Rothenberg 2005, 2008, and 2014; Taylor 2017; South, Garland, Rendell, d'Ettorre, Freeberg, and Ridley 2023). As Marcello Keller suggests, zoömusicology and ethnomusicology are not discrete fields but overlapping modes of inquiry, with shared concerns: vocal culture, dialect, entrainment, improvisation, and sonic agency (Keller 2012). Unlike Keller, who argues that zoömusicology can be seen as the umbrella field under which ethnomusicology sits and that the two disciplines should be furthered in tandem, Martinelli believes that animal behaviours should be studied with the same rigour as similar phenomena occurring within human behaviour; likewise, human behaviours should not be studied in isolation rather in the wider context of all life. Martinelli argues that if we view humans not as separate from or above the rest of the animal kingdom—but rather as the product of broader evolutionary processes (where "every human characteristic can be seen as a result of a wider process" [Martinelli 2001: 345])—then

zoömusicology (particularly when framed within ethnomusicology) shifts the viewfinder from anthropocentrism to biocentrism. This perspective, he suggests, can enrich our understanding of many human phenomena, with music serving as just one illustrative example.

2.3.2 Representational ethics and the challenge of voice

Both ethnomusicology and zoömusicology contend with the representational dilemmas of giving voice to others, whether human or non-human. The "crisis of representation" (first coined by Marcus and Fischer regarding anthropology [Marcus and Fischer 1986]) in ethnomusicology critiques the colonial and extractive modes through which researchers have historically portrayed the musical worlds of cultures not their own. In his reflections (particularly in *The Study of Ethnomusicology: Thirty-One Issues and Concepts*), ethnomusicologist Bruno Nettl critically examined the assumptions behind ethnomusicological fieldwork and analysis. He raises concerns about power dynamics, the authority of the researcher, and the ways in which the field has often failed to properly acknowledge the musical agency of non-Western or marginalized groups (Nettl 2005). Similarly, in advocating for more reflexive and culturally holistic models of ethnomusicological analysis, ethnomusicologist Timothy Rice acknowledges that fieldwork is not just data collection, but relationship-building, and that musical knowledge is co-produced between researcher and participants (Rice 2017). His concern is not only epistemological but ethical: how does one write about others, especially those who cannot speak back within the structures of academic discourse, without distorting, appropriating, or silencing them?

In animal studies, this problem is mirrored in the challenge of interpreting non-human behaviours and expressions without either explicitly anthropomorphising or reducing them to mechanistic functions, which has led to many scientific portrayals of animals devoid of complex emotional and social lives (Bekoff 2007). Both fields require reflexivity, humility, and attentiveness to context. In discussing the field of animal studies, Matthew Calarco critiques how traditional Western philosophy has constructed "the animal" as a singular, abstract, and oppositional category to "the human," arguing that this representation ("animals do this" or "dogs do this" and "crows do that," implying that all non-humans or members of a

species behave as a homogenous block of automatons) erases the diversity and singularity of animals, and reduces them to mere conceptual tools within anthropocentric thinking (Calarco 2008). Instead of claiming mastery over animal meaning or insisting on transparency, Calarco promotes an ethics of hesitation and openness, calling for attentiveness to the singular being of animals without rushing to define, categorize, or instrumentalize them. This is a methodological and ethical response to the crisis of representation—a way of proceeding without claiming to fully know or speak for one animal or being, let alone an entire species.

2.3.3 Musical practices in dialogue with ecology

Ethnomusicological work on non-Western musical traditions offers rich models for understanding music as environmentally situated. In Tuvan throat singing, vocal techniques mimic both the acoustic and symbolic features of the landscape, engaging with spirits of place in a sonic form of animist offering (Levin 2006). Among the Kaluli of Papua New Guinea, birdsong is not only imitated in music but also embedded in emotional and cosmological frameworks that required ethnomusicologist Steven Feld to become an ornithological expert to understand its meanings and write about Kaluli culture (Feld 2012). Likewise, Kam "big song" traditions in China encode ecological knowledge, intertwining human musical expression with the soundscape of rivers, mountains, and animals (Ingram 2017). These examples, indicative of a wider array of non-Western engagements with more-than-human phenomena, resist the separation of music from context. They model an approach in which music functions as a way of knowing the world and of embodying relationships between self and the world: spiritually, socially, and environmentally. Such work also benefits from nontraditional forms of presentation. Feld's *Voices of the Rainforest* film bypasses textual mediation to offer an immersive audiovisual experience of Kaluli musical ecology (Feld, Richards, Leonard, and Hart 2019). Ethnomusicologist Christian Ferlaino's spatial musical compositions based on Calabrian goat-herding practices transform ethnographic insights into artistic performance, enacting sonic relationships through tuned bell scores (Ferlaino 2023).

The emergence of ecomusicology, situated at the intersection of ethnomusicology, environmental humanities, and acoustic ecology, offers a fertile framework for integrating artistic, scientific, and activist approaches to study more-than-human musical culture and

creativity. Ecomusicology foregrounds the role of music in mediating human-environment relationships, asserting that music and sound can foster ecological awareness and action (Allen and Dawe 2016). It values collaboration, conversation, and community over solitary inquiry, paralleling my own commitment to interspecies relationality and co-creation as a means of critiquing of the anthropocentric biases that place animals as static non-creative beings.

Following scholars like Jeff Todd Titon, one might understand music not just as a reflection of culture but as a potential agent of ecological change. Titon proposes "…a sound commons for all living creatures" (Titon 2020: 219), arguing for modes of listening and musical engagement that challenge anthropocentric assumptions and reframe our relationships with the biosphere. Within this vein, composer David Dunn uses technology to render the sonic worlds of beetles, bats, and underwater invertebrates audible to humans, inviting aesthetic and ethical contemplation of lives beyond our immediate perception (Dunn 1996; 2008). My project takes inspiration from Dunn, who advocates for the synthesis of acoustic ecology research and art music by suggesting that the endeavour of composing music could be "…a tradition that is more interested in making a form of music that draws attention to the structure of auditory perception itself and/or issues of sound as an organizing factor in both human and non-human living systems" (Dunn 2008: non-paginated).

2.3.4 Non-Western canid soundworlds and sonic ontologies

Canid species have cohabited with nearly every human culture on Earth. Living within the Australian urban Anglosphere has deeply shaped how I understand and value dogs, but it is crucial to acknowledge the diverse ways non-Western cultures have historically conceptualised human-dog relationships—and the entanglement of these relationships with sound and music.

Across diverse cultural contexts, music and sound have long operated as mediums of interspecies relationships with dogs, far beyond the bounds of human-centred aesthetics. In Tuvan shamanism, for instance, vocal mimicry of wolves is not a performance but a ritual technology for communion. As ethnomusicologists Theodore Levin and Valentina Süzükei describe, shamans use howls and instruments made from wolf skulls to invoke the presence of wolves as guides and kin, collapsing the boundary between human, animal, and spirit

(Levin and Süzükei 2011: 76). Levin describes Tuvan music as part of a wider sound making tradition that has roots as "sound technology" developed for life on the steppe and in the Taiga forests of Tuva (Levin and Süzükei 2011: 23). Sonic mimesis and mimicry of the landscape (including wolves' howls and stag mating calls) have been important in hunting: musical traditions are a sonic repository of environmental knowledge. Here, music is participatory, transformative, and embedded within ways of relating to and surviving within a more-than-human world: a way of "becoming with" the world (Haraway 2008: 2), in sharp contrast to the distanced formalism of Western musical paradigms.

A similarly relational sonic logic is found in Aboriginal Australian understandings of dingoes. As both environmental humanities scholar Deborah Bird Rose and Australian historians Fred Clark and Ian Cahir outline, dingoes are seen as kin and co-creators in the songlines that traverse the landscape, encoding ancestral knowledge through sound (Rose 2012; Cahir and Clark 2013). These are not metaphors but lived sonic geographies, where the howl of a dingo carries law, story, and place. Sound is a carrier of memory, not noise but presence, situating humans and animals within an ecological and spiritual web.

Eduardo Kohn's work with the Runa people of the Ecuadorian Amazon further echoes this perspective. For the Runa, dogs are sentient interpreters of the forest's signs, beings whose barks are social utterances. Kohn urges us to attend to the intersubjective dimensions of human-animal communication, where shared meanings arise not only through language but through gesture, sound, and mutual attunement (Kohn 2013). This understanding finds parallel in ritual performance, such as the *Theyyam* ceremonies of people in Kerala, India. As ethnomusicologist Lisa Hermann-Fertig observes, performers in trance channel animal deities, sometimes canine, through music, movement, and drumming (Hermann-Fertig 2023). These performances enact ontological transformation, not symbolic representation. For people in these diverse cultural contexts, sound is a means through the boundary between human and animal negotiated, understood, and embodied, and music becomes a materialisation of interrelation spiritual connection. While I do not conceive of my practices with dogs as explicitly spiritual, together, these diverse non-Western examples of musical engagement with the canine invite a rethinking of canine musical practice as a practice worth considering beyond the comic novelty through which it is often perceived online

Ethnomusicologists have long explored music's role in human–environment interactions, and embracing non-human voices and agency compels us to rethink our analytical and ethical frameworks. Indigenous traditions often treat sound as environmental knowledge and spiritual practice rather than mere art. These traditions model alternate ways of living, listening, and making music in a more-than-human world, challenge Western human exceptionalism, and deepen ecological awareness.

2.4 Interspecies Entanglements Amongst Environmental Crisis

While many ethological studies of wild animals attempt to observe behaviours in the absence of human influence, such conditions are impossible when considering domesticated dogs. The ancient entanglement between dogs and humans—an evolutionary, social, and cultural relationship—demands a methodological and philosophical approach that accepts co-dependence as a foundational premise. Instead of seeking an elusive notion of "natural" behaviour, this research acknowledges that dogs and humans have mutually shaped one another for millennia. Whether or not one believes that dogs possess musicality, it seems undeniable that they already participate in and alter human musical practices.

Posthuman philosopher Donna Haraway provides an essential framework for understanding this canine-human relationality. In *The Companion Species Manifesto* and *When Species Meet* (Haraway 2003; 2008), she argues against a species-discrete biological lens in studying dogs and calls instead for an account of living beings grounded in mutually responsive "intra-actions." Her question "Whom and what do I touch when I touch my dog?" (Haraway 2008: 3) complicates the apparent simplicity of interspecies contact by revealing the layered histories, power structures, and forms of intimacy embedded within it. Haraway's concept of "contact zones" names the physical, emotional, and historical spaces in which humans and dogs meet, co-create, and "become with" one another (Haraway 2008: 2). Haraway's concept of "oddkin" challenges normative, genealogical, and species-bounded notions of kinship by foregrounding relationships formed through contingency, care, and shared becoming rather than biological resemblance or hierarchical mastery (Haraway 2016). she argues that ethical multispecies futures depend on "making kin" in unexpected ways—across difference, asymmetry, and partial understanding—rather than reproducing human exceptionalism or sentimentalized companionship. Her notion of "oddkin" thus names relational formations that are intentionally non-ideal, uneasy, and situated, acknowledging power differentials while

insisting on mutual response-ability. Rather than examining humans and animals in isolation or through narrow disciplinary lenses, Haraway insists on a framework that recognises interdependency, co-creation, and mutual responsiveness. In describing relationships with dogs, she refers to this entanglement through explicitly emotional language as a "nasty developmental infection called love" (Haraway 2008: 16), foregrounding the affective charge that shapes and defines our species' co-evolution.

Rose similarly emphasises the significance of the more-than-human in ecological and ethical thinking. In her work on extinction and multispecies justice, Rose utilises the figure of the wild dog to frame human relationships with nature in the context of a contemporary extinction crisis (Rose 2012). Her writing insists on the ethical stakes of cohabiting with other species, as well as on the importance of responding to their presence not just with control or care but with respect, creativity, and shared vulnerability.

This call to interspecies attentiveness is echoed in the work of anthropologist Anna Lowenhaupt Tsing, who explores the economy surrounding the matsutake mushroom as an exemplar of the entangled relationships between non-human and human beings in a world shaped by globalised capitalism (Tsing 2015). Tsing elicits the way in which geopolitical forces have formed new ecologically significant relationships amongst beings, what she refers to as "contaminated diversity" (Tsing 2015: 30). Her methodology, which foregrounds narrative and lived experience, discourages linear thinking around human progress (as limited to the human); instead, advocating for more "imaginative frameworks" in uncovering instances of "multi-species world making" through the lens of capitalism (Tsing 2015: 22). Similarly calling for attention to disturbed more-than-human ecologies, geographers Maan Barua and Anindya Sinha propose further work in investigating the lives and habits of animals in urban environments by synthesising and combining methodologies from geography and ethology (Barua and Sinha 2019). This approach and Tsing's concepts resonate with the domestic, digital, and often humorous settings in which many human-dog musical practices unfold. These messy, mediated musical interspecies collaborations (as seen on social media) can be read as expressions of "contaminated diversity": strange relationships between beings emerging in the crevices between globalisation, co-evolution, technological mediation, and affective interdependency.

Building on Tsing's notion of "contaminated diversity" and the entangled ecologies it describes (Tsing 2015: 30), environmental humanities scholar Thom van Dooren's work on extinction offers a powerful ethical and narrative framework for thinking through multispecies loss and responsibility. Through his emphasis on the slow, situated, and relational nature of extinction—what he calls "unravelling worlds" (van Dooren 2014: 6)—van Dooren rejects detached, abstract accounts of ecological crisis in favour of close, place-based storytelling that foregrounds the lived experiences and mutual dependencies of species.

Environmental and more-than-human geographers have similarly called for analytical frameworks that account for both individual human and non-human perspectives and narratives in constructing environmental histories and futures (Prebble, McLean, and Houston 2021). As O'Gorman and Gaynor argue, disciplines like environmental history and environmental humanities must work together to uncover the complexities of ecological relationships and shared agency (O'Gorman and Gaynor 2020). To support a methodological shift away from anthropocentrism, geographers Anja Kanngieser, Michael Gallagher, and Jonathan Prior advocate for the use of sound as a radical approach to studying geopolitics. They highlight sound's "radical incommensurability" and its historical neglect within research methodologies, largely due to the dominance of visual paradigms and past technological limitations in capturing sonic phenomena (Gallagher, Kanngieser, and Prior 2017: 2). The authors argue that incorporating broader listening practices into geographic inquiry allows sound to be recognised not only as a form of knowledge but also as an active agent, capable of influencing deep cognitive and developmental processes in living beings. Musical collaboration between humans and dogs, particularly in the digital age, offers a vivid site through which to examine these entanglements: where affect, sound, technology, and history converge. These entangled sonic relationships call for research approaches utilising narrative, lived experience, and anecdote as a way to embrace complexity, partiality, and embodied co-presence—an ethos shared by both environmental humanities and critical animal studies. In this messy relational context, scientific objectivity and reductionist methodologies must also be re-evaluated.

2.5 Science and the Humanities in Conversation

2.5.1 Situated knowledges

In studying animal behaviour (and potential musicality), the prevailing scientific methodologies often assume a disembodied form of objectivity—an ideal of scientific neutrality that strives to observe and analyse without influence from the researcher's own perspective or the specific context in which the research is conducted. This notion of objectivity, however, has been critiqued by Donna Haraway, whose concept of "situated knowledges," introduced in her 1988 essay *Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective*, challenges the idea of universal, detached knowledge (Haraway 1988). Haraway argues that all knowledge is inherently shaped by the social, historical, and material contexts from which it arises, emphasizing that no observation or interpretation is ever truly neutral. The so-called "god trick" of objective science, the idea that knowledge can be produced from a position of complete detachment, obscures the reality that every researcher's perspective is partial and situated (Haraway 1988).

Rather than dismissing objectivity altogether, Haraway proposes a more embodied form of objectivity that recognizes the positionality of the knower and the relational nature of knowledge production. This approach to epistemology urges us to be reflexive, accountable, and open to multiple viewpoints, acknowledging the diversity of perspectives that contribute to our understanding of the more-than-human. In the study of animal musicality, this framework invites researchers to question the assumptions embedded in scientific methodologies that often treat animals' vocalisations and behaviours as discrete, objective phenomena to be studied in isolation (as is common among scientific studies of bird song—such as the universalised structural analysis of song bird vocalisations (Sasahara, Kazutoshi, Cody, Cohen, and Taylor 2012)—and whale song, as in the purely structural analysis of humpback whale vocalisations (Zeh, Rekdahl, Rice, Clark, and Rosenbaum 2021; Lin, Wu, Chang, Parinov, and Shevtsov 2023). These are then interpreted through the reductionist lens of evolutionary fitness, a common thesis put forward vis-à-vis birdsong (Andersson 1994; Catchpole and Slater 2008). By embracing situated knowledges, the disciplines could instead (and with no loss of scientific rigour), move toward a more inclusive and responsible research of animals, one that considers the complexities of the social and cultural contexts in which both human and animal musicality emerge. This approach recognizes that our knowledge of animals' sonic constructs and musicality are always partial, shaped by the dynamics between researcher, animal, and environment.

2.5.2 Unearthed animal vocal and aural aptitudes

Recent scientific investigations are increasingly acknowledging the existence of potential animal musicality beyond the traditional focus on songbirds and whales. These findings lend significant support to zoömusicological theories, which suggest that certain animals possess an inherent sensitivity to music. Notably, biologist Marisa Hoeschele's paper draws together various studies on animal auditory perception, revealing diverse parallels between human and animal perceptual mechanisms (Hoeschele et al. 2015). These studies show that even animals with little evolutionary commonality to humans demonstrate similar auditory capabilities, particularly in relation to musicality. Rather than attempting to define what constitutes "music," these researchers focus on the auditory capacity of animals, probing their ability to engage with musical stimuli. For instance, research has demonstrated that pigeons can distinguish between Bach and Stravinsky (Neuringer and Porter 1984), bottlenose dolphins can generalize octaves (Herman, Richards, and Wolz 1984), and carp can differentiate between blues and classical music (Chase 2001), among other diverse examples Hoeschele recounts.

Echoing the sentiments of Haraway in critiquing dominant scientific methodologies, zoömusicologists Kriengwatana, Nager, South, Ullrich, and Doolittle raise important concerns about the methodologies employed in animal auditory perception and vocalisation studies (Kriengwatana et al. 2025). They note that much of the research overlooks essential extrinsic factors—such as the unique individual listener properties, playback context, and producer characteristics—and lacks rigorous musical discussions. These unexamined omissions introduce biases and misunderstandings in studies of animal musical responses. They also warn that improper music-source referencing, musical misinterpretations, and unchecked assumptions about individual and species preferences further compound these issues (Kriengwatana et al. 2025: 2). Based on this, they insist on rigorous selection of musical stimuli and careful attention to the context of animal–music interactions.

2.5.3 Canine auditory perception studies

Much of the literature exploring canine vocalisations focuses on wild canid species (e.g., Mazzini, Townsend, Virányi, and Range 2013; Déaux, Charrier, and Clarke 2016). These studies suggest that chorus howling behaviours play an important role in the formation of

social hierarchy (Mazzini et al. 2013) and in distinguishing individual identity (Tooze, Harrington, and Fentress 1990; Déaux et al. 2016). They reveal that chorus howl behaviour is not a sign of distress (as some have suggested when I describe the premise of this project) but rather a multimodal social activity that aids in pack bonding. While an abundance of literature investigating interrogates other domesticated dog behaviours and their remarkable emotional sensitivity (e.g., Berns 2013; Colino 2021), scant literature explores vocalisations in domesticated dogs. My own experiences with my dog Mia as well as examples of vocalising dogs online demonstrate a complex mosaic of domesticated canine vocal capacity that interweaves with or intersects with human music.

Canids are not traditionally recognized as vocal learners; only humans, bats, cetaceans, elephants, and some bird groups are proven to acquire new sounds via imitation (Vernes et al. 2021: 2). Even so, the variety of canine vocal aptitudes documented on social media—dogs seeming to mimic rhythmic and melodic structures (e.g., various dogs "talking" (Kayleigh Rhian 2008), matching and recognizing discrete pitches (Indi the border collie singing back correspondent pitches modelled to her on piano in Mary Ann's Menagerie 2023) and a general musical enthusiasm and agency—suggest that more research could be conducted on domesticated canid species' vocal capacities.

In most studies investigating domesticated canine auditory perception or vocalisations, the word *music* is rarely mentioned. Instead, auditory capacities are typically described using non-musical language, and the stimuli used with dogs are framed in similarly non-musical terms. This patchwork tapestry of studies reveals a largely overlooked and underexplored range of human-like auditory and vocal capacities in dogs. These include the ability to recognise relative pitch (D'Aniello, Di Lucrezia, Giacoma, Pinelli, and Scandurra 2024), to discriminate between frequencies differing by as little as a third of a tone (Dworkin 1935), and to perceive the correlation between pitch and timbre in relation to either a male or female voice (Sturdy, George, and Smith 2022). In one study, only 11 out of 51 dogs surveyed used vocalisations as a means of expressing a need (e.g., food out of reach) (Gaunet, Savalli, and Legou 2022). However, the general consensus is that dogs primarily communicate—both with other dogs and with humans—through body language and scent. Dogs use vocalisations more infrequently in response to pain, as territorial displays, and in play. Mazzini et al. demonstrate that wolf howling is more strongly influenced by social affiliation and relationship quality than by physiological stress responses or an observably linguistic

function, suggesting a degree of voluntary control in vocal production and elastic semiosis (Mazzini et al. 2013). Their study provides experimental evidence that both emotional and cognitive mechanisms shape canine vocal behaviour, with implications for understanding the intentional and explicitly social use of vocalisations in canines.

Regarding domesticated dogs' semiotic understanding of vocalisations, few studies interrogate the responses of dogs to non-lingual stimuli. One study shows that domesticated dogs are responsive to the infant distress calls of both humans and dogs, and more responsive when the human cries match the frequency range of canine infant calls (Root-Gutteridge et al. 2021). Most practitioners agree that chorus howling is not comparable to human referential language, but an older study by Cohen and Fox theorizes that canid vocalisations are an "emotional language" where the canine "sound repertoire of emotional reactions and intentions is comparable to the intentionality expressed in non-vocal body postures and facial expressions" (Cohen and Fox 1976: 86). Déaux and Clarke note the problematic lack of uniformity in terminology and categorization of canine vocalisations within the discipline (Déaux and Clarke 2013: 92). Likewise, authors note the fluidity and morphing between vocal types, where one type of vocalisation rarely appears discretely within a chorus howling context. Given the prevalence of many different vocalisation types (and mixes between types) in my previous sessions with Mia, the potential association between bark type and meaning outside of territorial displays and distress signals seemingly disintegrates. Déaux and Clarke also note that during dingo chorus howls, almost all vocalisation types appear (Déaux and Clarke 2013: 90). This diverse use of vocalisation types in chorus howling contexts suggests that a universal semiosis for canine vocalisations does not exist; rather, meaning may be situationally imposed, relationally applied, or even learned.

In most scientific studies that explicitly interrogate "musicality" in dogs, primarily structural measures of sound and auditory capacity are used to define musicality, ignoring context as a variable in the definition of musicality. Many of these studies use binary measures of canine auditory capacity, asking if dogs have relative pitch (D'Aniello, Di Lucrezia, Giacoma, Pinelli, and Scandurra 2024), if they can discriminate between pitches (Dworkin 1935), and if there is a relaxing effect from musical forms of enrichment (Wells, Graham, and Hepper 2002). However, researchers appear to neglect a key component of human musicality: the social, interpersonal, and cultural context of music making. I will argue that music does not

occur in a vacuum; instead, a musical product emerges in a complex web of interpersonal relationships, cultural contexts (Small 1998), *and* biologically inherited capacities.

Relying upon a formalist definition of music, where the only variables examined to define musicality are the sonic product or the biological faculties necessary for perceiving that product, practitioners neglect the complex social and cultural phenomena surrounding that product: the phenomenological process of musicking. These social and cultural contexts shape our perception of sound and the semiotic value we place on a sound. Sounds and the associated faculties an individual uses to give meaning to that sound are used by animals in both musical and non-musical instances. To give a human musical example, a spoken phrase in conversation would not be considered musical, but if that same phrase appears in a rap song, that gesture takes on musical significance. Similarly, a dog's bark, devoid of context, would most likely interpreted as a territorial warning vocalisation, but theoretically, if this vocalisation type (that is structurally identical to the territorial warning vocalisation) occurs in response to a human musician and the dog does not display behaviours associated with a territorial bark, this vocalisation could be qualified as quasi-musical, given its context.

The dominant scientific paradigms treat most animal sounds as either musical or non-musical, functional or aesthetic. Instead, I, alongside other zoömusicologists, advocate for an approach that embraces multiplicity and considers the individual social and cultural contexts of sound and vocalisation. As in our semiotic perception of human music, a sound can be both musical and non-musical depending on where one hears that sound.

2.5.4 Evolutionary justification and human-canine coevolution

Emerging fields like zoömusicology and zoösemiotics challenge traditional views of all animal behaviour as enactments of evolutionary "fitness" by suggesting that animals have culture, creativity, and aesthetic sensibilities (De Waal 2001; 2016), behaviours that cannot be explained by fitness alone (Martinelli 2007). Equally problematic, Historically, human exceptionalism, rooted in biblical notions of human superiority, dismissed animal intelligence and agency and instead understood animals as instinct-driven beings (White 1967).

A key issue in evolutionary biology is whether all activities, including music, can be reduced to basic survival or "fitness." Some scholars propose that animal culture, often overlooked,

exists along a continuum between humans and animals (De Waal 2001; 2016; Laland and Janik 2006). These scholars argue that narrow evolutionary definitions exclude behaviours in animals that mirror multimodal cultural human activities. Evolutionary biologist Frans De Waal suggests that broad definitions allow us to consider a full range of phenomena, like language, which might exclude early developmental stages or precursors (De Waal 2001). Evolutionary biologist Richard O. Prum's theory of co-evolutionary aesthetics suggests that organisms evolve their aesthetic traits in relation to one another (a signal and a receiver), highlighting the complexity of interspecies life in nature and rejecting simplistic adaptationist views of art (Prum 2013). Darwin acknowledged animal musicality's role in species propagation, although he stopped short of framing it solely as a fitness function (Darwin 1871/1981). Prum's approach builds on this, calling for a more complex view of art that integrates both the creator (signal) and the audience (receiver) in the evolutionary process.

Practitioners have continually sought to justify all animal sound as a purely communicative utility or sensory byproduct of language, without applying the same rigour and culturally informed nuance that would be applied if similar sonic phenomenon occurred in humans. Pinker's assertion that "music is auditory cheesecake, an exquisite confection crafted to tickle the sensitive spots of at least six of our mental faculties" (Pinker 1997: 534) has been highly contested (Mithen 2005; Dunbar 2012).

Music and cognitive evolution researcher Ian Cross theorizes music and language as existing on a continuum of referential communication, where music, like language, facilitates social bonding (Cross 2005). Other researchers link music and language as a shared ancestral form of "musilanguage" that predates modern humans (Brown 2000; Bannan 2012). Evidence in language structure, like pitch and rhythm, further supports the connection between music and language (Brown 2000: 271). While this project does not fully delve into the communicative versus aesthetic functions of dog vocalisations, canine-human interspecies sound practices reveal that music is multimodally and socially entangled amidst canine-human coevolution.

Australian veterinarian and scholar David Paxton presents evidence of human-canine co-evolution and proposes a more ancient timeline for this process, suggesting our partnership with canines started 130 000 years ago, as compared with other scholars who place this figure at 20 000 years (Paxton 2011; 2021). Paxton theorizes that as *Homo sapiens* developed language and more dextrous enunciation, their facial anatomy changed in a way that

compromised their sense of smell. He suggests that as early humans' olfactory faculties got worse, a relationship with canines was established where dogs began living with humans in caves and acting as guard dogs, where the superior canine sense of smell was integral to early humans' survival. Paxton proposes humans and dogs as having "…coevolved complementary anatomies: Dogs developed a heightened sense of smell while humans developed flattened faces and elongated nasopharyngeal cavities," allowing for greater enunciative dexterity and lingual complexity that mutually benefitted both species (Paxton 2021: 581). In accordance with this theory that ties the development of language as a significant agent into human-canine coevolution, Paxton advocates for dog owners to be explicitly vocal with their dogs and for policy and research to consider the unique subjectivities of individual dog-human relationships. If one takes Paxton's theory alongside various scholars' theories of a prelingual/premusical ancestral "musilanguage" (Brown 2000; Mithen 2005; Bannan 2012), one could potentially conclude that the evolution and subsequent separation of music and language occurred alongside canine domestication.

David Ian Howe, a self-described ethnocynologist (a portmanteau of ethnology and cynology—the study of canines), studies dogs within past and present human societies. Howe's research, grounded in archaeology and anthropology, utilises data from archaeological artefacts and ethnographic studies with indigenous peoples to document human–dog cohabitation dating back 20,000 years (Howe 2023). Crucial to the discussion of dogs, humans and sound, Howe makes the point that undomesticated wolves do not bark as a domesticated dog does in response to an intruder (juvenile wolves tend to bark, but it is less common in mature individuals), going as far as to suggest that dogs were selectively bred to bark to warn people of danger (Howe 2023). It seems early humans needed and actively bred vocal dogs (as a form of biotechnology), and now that dogs are living in cramped city apartments, ironically, we punish them for using their voices, which were so prized evolutionarily. In a discussion on the podcast *Ologies* when asked the question "Do dogs enjoy music?", Howe recounts instances of his German shepherd enjoying Howe's guitar playing; Howe even began leaving NPR on for the dog when he went out (Ward 2025: 1:02:01). These entanglements of language and the evolution of auditory and vocal anatomy as described by Howe and Paxton point to a need to consider sound, music, and language as important variables within human-canine coevolution—variables that continue to manifest in human-canine relationships in the present day.

2.5.5 Towards an inclusive understanding of animal musicality

While this thesis does not seek to comprehensively examine the evolution of canine-human relationships or the role of music in this context, central to many disputes among evolutionary biologists is the question of whether all activities, including art, can be reduced to basic survival strategies or displays of "fitness." Some scholars argue for the existence of animal culture on a continuum with human culture (De Waal 2001; Laland and Janik 2006), suggesting that its significance has often been overlooked in favour of reductive, evolutionarily convenient interpretations of animal behaviour—interpretations that frequently exclude animal behaviours from being understood as analogous to human practices, limiting the scope of inquiry into the rich complexities of animal life. As De Waal cautions:

> Broad definitions have the additional advantage that they permit us to see the full range of phenomenon. For example, one could define language so narrowly that the babbling of a toddler does not fall under it, but does this mean that babbling has nothing to do with language? Narrow definitions neglect boundary phenomenon and precursors, and they often mistake the tip of the iceberg for the whole (De Waal 2001: 26).

Lestel highlights an important issue regarding the dominance of scientific practitioners in defining and discussing animal culture, which results in narrow, Eurocentric definitions of art (Lestel 2012). He also argues for studying animals as individuals whose behaviours reflect the intersections of phylogenetic history, culture, and personal agency, rather than treating them as homogenized species groups studied with binary parameters (Lestel 2012: 178). Understanding these phenomena requires recognizing the complex role music individually plays in human lives and its potential for fostering mutual enrichment and intimacy across species.

2.5.6 Animal individuality: ethology and entangled reflexive methodologies

Ethology, the scientific study of animal behaviour, has long focused on individual animals and their subjective experiences, leading to important insights into animal culture (Bekoff 2000 and 2007; De Waal 2001 and 2016). Konrad Lorenz, a key figure in early ethology, brought attention to the mental processes of dogs and their behaviour in relation to humans

(Lorenz 1959). His work, though groundbreaking, was shaped by a Eurocentric and androcentric worldview, which limited its scope and led to problematic assumptions about human-animal relationships. Renowned for his canine ethological research, Lorenz brought animal behaviour into mainstream twentieth-century consciousness (Lorenz 1959). His ideas about dogs were influenced by Freudian psychoanalysis, which he applied to theorize canine minds in relation to human psychology (Ogretir Ozcelik 2017: 38–39).

While Lorenz's work was crucial in unveiling how animal minds may function, often in ways similar to humans, his perspective was grounded in linear, hierarchical views of human societies and interspecies relationships, which led to notable limitations in his analysis. For example, Lorenz's writing lacks diverse viewpoints and fails to engage with alternative cultural perspectives. In his examination of the Australian dingo, he overlooks the longstanding, intertwined histories and knowledge of Australian Indigenous peoples (Lorenz 1959: 30). Such omissions contribute to outdated and problematic ideas about human culture, including binary distinctions between "savage" and "civilized" and rigid, anthropocentric interpretations of moral truths applied universally across species. Lorenz frequently imposed human moral judgments on dogs (as evidenced in his description of a dog's "promiscuous friendliness"), and his personal affections for his subjects visibly influenced his methodologies (Lorenz 1959: 24). Additionally, his use of euphemistic racial language has been critically linked to Nazi ideology (Kalikow 2020: non-paginated.). Another flaw in Lorenz's approach was his lack of reflexivity as a researcher. While he explored how human behaviour and influence (often his own) shaped dogs, he seldom considered how dogs' behaviour—historically or individually—might have impacted human habits and histories. Moreover, Lorenz made little effort to view the dog's perspective beyond its utility to humans, largely ignoring the concept of *Umwelt*, the species-specific way animals perceive and value their environment (Uexküll 1934), which limited the depth of his analysis.

The cognitive turn in ethology, which emerged in the mid-twentieth century, marked a shift toward recognizing the complex mental processes that shape animal behaviour, including reasoning, memory, and emotional experience (Griffin 1976). This paradigm shift allowed for a more nuanced understanding of animals, positioning them as individuals capable of cognition and emotional depth, rather than as instinct-driven machines. In shifting the focus from generalizing animal behaviour to understanding the specific species' experience, the

concept of "trans-species psychology" is relevant, as it encourages us to consider animals as individuals with their own unique perceptual and cognitive experiences, much like humans (Bradshaw and Marino 2007).

Behavioural ecologist and ethologist Marc Bekoff advocates for the use of a simple question when beginning research into animal behaviour: "what is it like to be a specific animal?" (Bekoff 2004: 495). Bekoff reconciles the rationed use of anthropomorphism with educated assumptions about animal behaviour that acknowledge the distinct, species-specific perceptual worlds of various species:

> When I study dogs, for example, I try to be a dog-o-centrist and practice dogomorphism. Thus, when I claim that a dog is happy, for example when playing, I am saying it is dog-joy, and that dog-joy may be different from chimpanzee-joy…it stresses that there are important species and individual differences in behaviour, cognitive capacities, and emotions, and that it is wrong and simplistic to claim that if animal joy is not like our joy then they do not have it (Bekoff 2004: 495).

Alexander Horowitz, a prominent animal behaviour researcher, focuses on understanding the cognitive and sensory experiences of dogs. She is known for exploring how dogs perceive and interact with the world, especially in terms of their sensory modalities like smell and hearing, which differ significantly from humans. Horowitz's research emphasizes the subjective experiences of dogs, challenging anthropocentric views by considering how dogs interpret their environment from their own perspective (Horowitz 2014). Her work highlights the complexity of canine behaviour and cognition, revealing that dogs' sensory experiences shape their understanding of the world in unique ways, and underscores the importance of recognizing these individualised experiences when studying animal behaviour.

Animal behavioural scientist, Irene Pepperberg's research carried out with Alex, an African grey parrot, demonstrates the value in studying animals as individuals within scientific methodologies, recognizing the affective and reflexive cognitive and emotional states of non-human subjects (Pepperberg 2009). Alex and Pepperberg developed a close bond over the time they worked together (nearly 30 years) through individually tailored, novel methodologies, Alex learned to use over 100 words and could apply them meaningfully to

identify objects, colours, shapes, and quantities. He did not merely mimic words but used them contextually, showing an understanding of their meanings. For example, Alex could identify and distinguish between objects based on attributes like size or colour, and answer questions such as “What colour is the key?” Alex demonstrated reasoning abilities, such as understanding the concept of “same” and “different,” as well as demonstrating a rudimentary understanding of numbers. These remarkable abilities emerged in a disturbed, humanly intervened setting, and the research itself was conducted within a deep emotional bond between Pepperberg and Alex.

Pepperberg refers to Alex in humanlike ways, inferring emotional states from his behaviour. She is unafraid to label him a unique individual with distinctive characteristics and behaviours. Anecdote is a key part of her practice, not just in her research methodology but in the way she communicates her research. In her interviews, she tells stories of encounters where Alex demonstrates novel behaviours such as Alex labelling an apple a “banerry” (an apple resembling the flavours and appearance of banana and cherry) or Alex saying “wanna go back” when at the vet. Despite these remarkable findings, even at the peak of her research, Pepperberg struggled with acquiring and sustaining funding, her work being outside of established scientific methodologies. Alex's behaviour revealed aspects of his individuality, cognitive complexity, and emotional sensitivity challenging the idea that animals are unemotive beings driven by instinct (as is disputed by Bekoff).

Further, Alex formed bonds with researchers and exhibited signs of complex emotional and relational capacities, such as attention seeking behaviours and expressing dissatisfaction when ignored. Before saying goodbye to Alex at night, Pepperberg even recounts saying, “I love you,” to which Alex reciprocated; Pepperberg emphasizes her own emotional attachment to Alex as integral to their work together. The extraordinary results of Pepperberg’s work relied on social interaction and human interference; their close relationship revealed animal traits unobservable in other models of laboratory animal studies. Their work offers a model of research that underscores the importance of subjective experiences in scientific methodology, challenging how we position animal subjects in relation to the researcher. This acknowledgment of individuality extends beyond cognitive abilities, reflecting the relational dynamics between humans and animals, which are central to any collaborative musical practices.

Utilising similar methodologies foregrounding animal individuality, naturalist and ornithologist Len Howard cohabitated with wild British birds over many years, recording their individually unique personalities and behaviours to compile “bird biographies” (Howard 1952). Howard’s scientifically unapproved methods were inclusive of subjective phenomena and anecdote and relied less on strict quantitative data. In relation to Howard’s method, sociologist Eileen Crist writes, “The truth yielded through detached, methodologically stringent, quantitative analyses of animal behaviour will distort the realities of animal life...” (Crist 1996: 33), suggesting a pressing need to methodologically account for the messiness of individual animal and human lives, instead of relying on statistically flattened scientific understandings of generalised animal behaviour. Likewise, Hollis Taylor, in her rigorous and extended research of pied butcher birds, homes in on individual birds and their individual capabilities, visiting the same places and the same birds year after year and observing changes in their vocalisations and behaviours (Taylor 2017). Taylor references the methods of animal cognition professor Francoise Wemelsfelder, who employs radically anthropomorphic emotional language to refer to the behaviours of individual animals, believing it useful in guiding animal welfare in farms and zoos (Wemelsfelder 1997); Taylor writes of Wemelsfelder, "She dares to study animals as whole sentient beings believing their subjective phenomena require their own descriptors" (Taylor 2017: 35). With Wemelsfelder in mind, Taylor does not back away from anthropomorphism, which most scientists are wary of; instead, she embraces language that recognizes the individuality of the birds, giving them names and utilising deliberately musical syntax that foregrounds the remarkable creativity of specific birds.

Pepperberg, Taylor, and Howard’s work (taken alongside Bekoff’s and Griffin’s critiques of scientific objectivity, methodological reductionism, and anthropocentric framing) suggest a pressing need to reimagine how animals are studied, represented, and engaged with in research. By recognising animals as individuals with distinct perceptual, cognitive, and emotional lives, and by acknowledging the inherently situated nature of our knowledge about them, we move toward more just and inclusive forms of inquiry. The call for reflexivity and relational ethics in science resonates with broader conversations about animal justice, which challenge us to move beyond utility and empathy alone toward recognition of animals as co-participants in shared worlds. In this manner, humans can better appreciate the complex,

multifaceted and individually distinct nature of animal vocalisations, including those of individual dogs, and interrogate their potential musicality within an appropriate social and cultural context. As the next section will explore, these epistemological shifts require a corresponding transformation in how animals are ethically positioned—both within academic and artistic disciplines and within the social and cultural systems they inhabit.

2.6 Interspecies Etiquette

Following the ethos laid out by Haraway, various practitioners outside of the sciences have advocated for alternate methodologies in studying animals, where individuality, agency, and ethics are foregrounded. Much like the "reflexive turn" in anthropology and ethnography—where, starting in the 1970s, researchers began critically examining their own positionality and the impact of their identities and biases on their research—the same logic has been applied to the study of animals. This has led to an expansion of disciplines beyond the sciences engaging with animals and interspecies relationships and the development of new interdisciplinary fields such as critical animal studies, trans-species psychology, and human-animal studies, which recognize non-human beings as agentive participants in knowledge production and culture rather than passive objects of inquiry.

Humanities scholar Debra Merskin extends the conversation around interspecies research ethics by combining participatory action research—an approach that emphasises collaboration and shared authority between researchers and participants—with trans-species psychology, which seeks to understand animals' inner lives and perspectives, as a way of engaging more fully with nonhuman experiences and co-creating a world that better serves both human and more-than-human communities (Merskin 2011). She emphasizes the need for methodologies that allow for subjectivity, acknowledging animals as individuals with unique histories and experiences, rather than reducing them to generalizable traits. These concerns are echoed in Critical Animal Studies (CAS), an interdisciplinary field that emerged in the early 2000s to challenge anthropocentric frameworks in philosophy, sociology, and cultural studies. CAS is distinct for its activist orientation: rather than merely studying human-animal relations, it seeks to dismantle speciesist structures and advocate for ethical, reciprocal relationships with non-human beings (e.g., Callarco 2008 and 2016; Warkentin 2010; Birke 2014).

Traci Warkentin brings these principles into methodological focus through her concept of "interspecies etiquette," which foregrounds the importance of attentiveness, respect, and agency in human-animal research interactions (Warkentin 2010). She critiques the objectification of animals in research and argues for approaches that support and recognize their individuality and allow them to exercise their agency and consent. As she writes, "the time appears ripe for a recognition of animals as complex, living beings, rather than as two-dimensional symbols, convenient metaphors, and passive objects of study" (Warkentin 2010: 102). In the context of dog-human collaborative music, such attentiveness involves a willingness on the part of the human musician to adapt their approach based on the preferences, moods, and expressive modes of their canine counterpart. Rather than imposing a rigid structure, ethical interspecies musical practice requires listening—both literally and metaphorically—to the ways in which a dog chooses to engage, whether through vocalisations, movement, or subtler forms of communication and behaviour. Building on this premise, psychologist Kenneth Shapiro proposes the term "kinesthetic empathy" to describe a three-pronged approach to studying and understanding the perspectives of animals and their behaviour in research (Shapiro 1990/2008). He illustrates this approach using his dog Sabaka as an example. The three parts of the process are bodily awareness (the animal's immediate bodily intentions and cues), social perceptions of the animal (and, therefore, how we as cultured beings interpret their behaviour), and individual animal history (Shapiro 2008: 33).

Similarly, in her guide on interspecies artistic collaboration, artist Lisa Jevbratt highlights the importance of mutual consent and comfort as the foundation for any meaningful creative partnership with an animal (Jevbratt 2009). Given the long history of exploitation and cruelty within animal-human "acts" (like circus animal shows), Jevbratt's approach emphasizes the human responsibility to foster respect, trust, and sensitivity in such interactions, rather than prioritizing predetermined aesthetic outcomes. Jevbratt argues that achieving concrete "results" or producing a homogenized outcome is not always the primary goal, an insight that resonates with the unpredictability and spontaneity inherent in dog-human musical interactions.

In discussing three recordings of interspecies collaboration including Jim Nollman's recording of live improvisation with orcas on his album *Playing Music with Animals:*

Interspecies Communication of Jim Nollman with 300 Turkeys, 12 Wolves and 20 Orcas (Nollman 1982: Track 12), Richard Sutherland underscores the moral responsibilities involved in engaging animals as musical collaborators (Sutherland 2014). He cautions against anthropocentric approaches that might exploit or misinterpret animal behaviours for human artistic purposes. Sutherland advocates for practices that respect the autonomy and wellbeing of animal participants, emphasizing the need for a form of consent, gauged through specific behavioural observations of individual animals, and the avoidance of causing distress.

Acknowledging animals as cultural beings (while prioritizing practical aspects of their welfare) also requires us to scrutinize the ethics of intercultural collaboration. The approach favoured by many composers throughout Western classical music has been to appropriate an animal sound (usually birdsong or an approximated version of it) and apply it in their own music without crediting the birds and without fully understanding that vocal culture (e.g., the works of Olivier Messiaen as critiqued by Taylor [2017: 55-61]). If one accepts that animal culture exists, as many authors have demonstrated (De Waal 2001; Byrne et al. 2004; Lestel 2002; Titon 2021), this process is akin to nineteenth-century European composers misappropriating Eastern cultures to invoke a sense of otherness and exoticism. This appropriative process assumes an anthropocentric view of music, where animal musics become ornate foreign set pieces in human idioms while failing to acknowledge the independent, multilayered significance or multimodal function of that music or sound in the lives of the more-than-human.

Human cultural and aesthetic hegemonies likewise play a part in how one considers the ethics of interspecies interactions, especially in art and music. In David Rothenberg's interspecies improvisational pursuits with birds, whales, and insects (Rothenberg 2005; 2008; 2014, respectively), some animals display remarkable collaborative enthusiasm; however, his clarinet playing style sits firmly within a contemporary jazz idiom, with a reliance on pure harmonically resonating tones and fast-moving melodic material. Regardless of the more-than-human material presented by animals (e.g., cicada drones, birdsong, or whale song), Rothenberg responds with stylised material that conforms to his background as a jazz musician. One could also argue that the mere presence of the clarinet as a genred product of Western art music narrowly imposes a human cultural barrier on these musical products and could instead be replaced in many interspecies musical pursuits by the use of voice, it being

the most "natural" form of sound making and analogous to how most animals primarily make sound.

Many online examples of dog-human musical collaborations demonstrate a rigid adherence to human genre conventions, where dogs vocalise but the human musicians rarely adjust their gestures in response. While such practices—including Rothenberg's influential work—offer valuable precedent, I will argue that greater stylistic sensitivity and flexibility in the modes through which one musically contributes can yield more genuinely collaborative outcomes, marked by reciprocal listening and mutual responsiveness. Rather than treating music as an exclusively human domain into which the dog is merely inserted, my own interest lies in positioning the dog as an active participant whose presence and responses shape both the musical exchange and the research process. This orientation reflects an emerging ethical framework for interspecies collaboration, one that resonates with broader calls for animal justice and more just modes of human-animal engagement.

2.7 Animal Justice and "Wonder"

A convoluted and oft-times ill-fitting university ethics procedure to gain permission to work with dogs (further discussed in Chapter 3: Methodology) prompted my engagement with broader philosophical questions—specifically, how might my work contribute to, and be informed by, the growing discourse around animal justice? While a comprehensive review of every philosophical framework on animal justice falls outside this project's scope, I outline below how working with dogs through music led me to reflect on the ethics of such engagement. I draw particularly on Martha Nussbaum's Capabilities Approach (CA), as presented in her monograph *Justice for Animals,* where she critiques dominant animal justice paradigms and proposes a new framework for understanding animal justice (Nussbaum 2022).

Originally developed with economist Amartya Sen during the 1980s to assess human welfare beyond aggregated GDP metrics, the CA prioritises individual "flourishing" and dignity as indicators of welfare for beings (Nussbaum 2022: 82). Nussbaum adapts this to animals, advocating for laws that account for their specific needs and capacities beyond basic welfare. Her approach emphasises not only the avoidance of suffering, but the active pursuit of pleasure, joy, and flourishing. She urges humans to cultivate "wonder and awe" at animal

lives, as such emotions can catalyse ethical concern and action (Nussbaum 2022: 63). My hope is that the interspecies musical practices I explore with dogs is a way of enacting and generating this kind of wonder in both audiences and collaborators, thus contributing to a broader understanding of animals' creative and relational lives.

2.7.1 A brief history of animal justice

As we all grapple with the ethics of interspecies coexistence in the twenty-first century, the philosophical lineages that have shaped our current legal, scientific, and cultural perceptions of animal worth are important to consider. Dominant Western frameworks have long separated humans from animals, limiting ethical consideration. Philosophers such as Descartes denied animals consciousness (Descartes 1646/1984); Kant, and later Cohen (in justifying medical research using animals) dismissed their moral status (Kant 1785/1996; Cohen 1986); and Christian teachings have tended to posit animals as soulless, spiritually inferior, and operating without the free will given to humans by God (White 1967). Such views persist today, influencing the continued marginalisation of animals within legal and moral discourses. I would add to this the assumption that animals cannot make or appreciate art—a perception increasingly challenged by scholars in zoömusicology, critical animal studies, and evolutionary biology (e.g., Lestel 2002 and 2014; Martinelli 2004; Calarco 2008; Warkentin 2010; Prum 2013; Lestel, Bussolini, and Chrulew 2014; Taylor 2017; Mundy 2023).

In seeking an ethical foundation for my work with dogs, examining how historical views influence contemporary frameworks that culturally frame animals appears vital. For instance, Aristotle was keenly interested in the commonalities between humans and animals, believing that animals have souls (Grumett 2019). Instead of assuming animals as automatons, as was a common view in Ancient Greece, Aristotle invested time in observing the cognitive sophistication of animals (especially farm animals). He proposed the concept *Telos*, defined as "the end or goal for which a being aims" (Grumett 2019: 321), or more simply put 'ends', and suggested that animals have their own unique *Teloi* that are less deliberate and more instinctive than that of humans'. Despite a progressive view of animal sentience, Aristotle still conceived of animals as existing for the utility of humans, as demonstrated by his view that domesticated and farm animals were happier than wild animals (Grumett 2019: 327). In

Aristotlean ethics, animals are still seen as means (*Techne)* to human ends (*Telos*), given that the animal is treated with respect in captivity. Such thinking continues to inform ethical double standards in how we treat companion versus wild animals.

Kant, on the other hand, argued that only beings capable of rational moral judgment (i.e., humans) could be considered ends in themselves; animals, lacking this capacity, were viewed as mere means (Kant 1785/1996: 429). This notion continues to influence everyday language, where animality is equated with amorality, instinct, and lack of control—terms like "feral," "beastly," or even "inhumane" imply a lack of moral structure. Yet many animals are credited with empathy, altruism, and emotional complexity (Benz-Schwarzburg, Bremhorst, and Monsó 2018). Kant's lingering problematic ideas invite a reconsideration of what who consider to be moral or ethical, whether human norms are appropriate measures of ethical capacity, and whether morality (or lack of it) is the measure we use to justify ethical consideration. Moral philosopher Christine Korsgaard works within a Kantian framework but adapts it to argue that animals, too, have ends of their own and therefore ought to be treated as ends, not merely as means (Korsgaard 2018). Her approach resonates with Nussbaum's emphasis on individual flourishing and dignity, though Nussbaum critiques Korsgaard's residual anthropocentrism. Rather than granting animals moral status because they are "like us," Nussbaum suggests we need a framework that accommodates their difference.

2.7.2 Beyond utilitarianism and human-likeness

Utilitarian thinkers like Jeremy Bentham hold that the key question is not whether animals can reason or exercise moral judgement but whether they can suffer (Bentham 1789). However, as Nussbaum argues, utilitarianism often flattens individuality, aggregating welfare in ways that ignore the unique lives and strivings of each animal. She critiques the "so like us" theory, which grants animals ethical consideration only insofar as they resemble humans (Nussbaum 2022: 28). Legal campaigns citing gorillas' use of sign language or dolphins' self-recognition rely on human-likeness as the metric for value. These examples, while well-meaning, overlook animals' unique ways of expressing intelligence, emotion, and social connection, regardless of whether they fit common analogously human frameworks. This critique also applies to music. As noted earlier, in zoömusicology and science, non-human sound is often assessed against Eurocentric standards—melody, metre, performance context—criteria rooted in human traditions (Lestel 2012).

Religious and scientific traditions have contributed to the persistent belief in human exceptionalism. The Judeo-Christian concept of the "Great Chain of Being" places humans between angels and animals, justifying dominance and exploitation (White 1967). Scientific approaches that reduce animals to instinctive automatons have similarly undermined recognition of their agency and intelligence. Animal justice scholar David Schlosberg proposes a pluralistic framework for environmental and animal justice that incorporates recognition, capability, and participation (Schlosberg 2007: 165).

Although Nussbaum critiques the "so like us" theory, Schlosberg and other scholars have challenged Nussbaum's approach to animal justice, particularly her reliance on "sympathetic imagining," which tends to privilege sentient beings most similar to humans (Celermajer et al. 2020). For instance, Katy Fulfer argues that this overlooks the ethical importance of less relatable organisms and the interdependent roles both sentient and non-sentient life play in sustaining ecosystems, systems that some argue deserve recognition as subjects of justice themselves (Fulfer 2013). This ecological perspective aligns with Baxter's idea of "communities of justice" (Baxter 2000) and Schlosberg's emphasis on including complex ecological systems as well as individual beings in justice considerations (Schlosberg 2007; 2012). Philosopher Jeremy David Bendik-Keymer suggests that Nussbaum's notion of wonder could be expanded into a more relational, intersubjective ethic that moves beyond individualistic and biocentric frameworks to account for complex interdependent ecological systems that additionally consider non-living objects that living beings rely on (Bendik-Keymer 2017). In evaluating Nussbaum's approach, Celermajer et al. advocate for art as a "a distinctive kind of engagement with other lifeworlds," asking "can research-based artistic practice, and the imaginative and technical means it harnesses, cultivate intimacy without mastery?" (Celermajer et al. 2020: 492).

2.7.3 The Capabilities Approach and multispecies justice

While these scholars take issue with some of Nussbaum's strategies, Nussbaum's Capabilities Approach nevertheless offers a useful framework for recognising and supporting the flourishing of all sentient beings that can be applied in the context of this project within an exploratory, artistic-led research practice as Celermajer et al. endorse. The CA outlines ten central capabilities that should be afforded to animals to enable their flourishing (Nussbaum 2022: 88–89). In the context of this project, three of these are particularly relevant: "Senses,

Imagination and Thought," "Relations with Other Species," and "Play." Through shared musical engagement, I aim to create environments where dogs can explore their senses, express curiosity, and build meaningful relationships with humans. Nussbaum highlights the importance of sensory stimulation and playful interaction for companion animals (Nussbaum 2022: 218). Improvised music, already shown to be enriching for humans (Aigen 2013), may be similarly affective in offering dogs avenues for social bonding and creative exploration. Nussbaum is clear that flourishing involves not just the absence of suffering but access to a rich array of experiences (including play) that allow for diverse sensory experiences, choice, agency, and relational depth (Nussbaum 2022: 56).

Nussbaum argues that play is not a trivial pastime but a deeply social and ethical phenomenon that shapes relationships across species. Ethologists have long emphasized that play functions as an inherently interactional process, signalled and sustained through gestures of trust, reciprocity, and shared intention (Pellis and Pellis 1996; Allen and Bekoff 1994). For dogs, play is a vital mode of social learning and bonding, not only with conspecifics but also with humans, and its signals—like the play bow—serve to create a space of "as if" where risk and conflict are suspended (Bekoff 2004). Philosophers of play, such as Roger Caillois (1958/2001), situate play as a core dimension of social life, one that enables creativity and mutual adaptation. Similarly, Patrick Bateson highlights its role in fostering innovation and flexible thinking, capacities essential for survival (Bateson 2015). Additionally, Bateson argues that playfulness is intrinsically motivated—that is, people (and animals) engage in play for its own sake, without needing external rewards (Bateson 2015), making the study of play difficult within ethological studies utilising operant conditioning models that probe binary parameters of animal behaviour. Providing opportunities for dogs to play, then, is not just enrichment but an ethical responsibility: it honours their agency, sociality, and communicative capacities. As biosemiotician Thomas Sebeok argues, play is a semiotic practice, a way of meaning-making through interaction (Sebeok 1981), while Wendy Wheeler extends this to frame play as a natural metaphor for relationality itself (Wheeler 2014). Denying dogs opportunities for play risks silencing one of their most profound expressive modes; conversely, fostering it affirms their status as creative, social beings with whom we share reciprocal bonds of care.

Nussbaum points to the ways in which children and intellectually disabled people are treated in the legal system as proxies and models for how animals could be legally advocated for.

While the legal status of children is a useful model for the logistics of implementing animal justice reform, I am reminded of the historic adage, "children should be seen and not heard." In modern human societies where noise is taboo, domesticated dogs have been discouraged from vocalizing, despite evidence of selective breeding for vocality in early human-canine coevolution (Howe 2025). Nussbaum refers to the practice of devocalisation or debarking in domesticated dogs, where animals have tissue from their vocal cords surgically removed to quieten or altogether remove their ability to vocalise. The existence of this cruel practice, which is legal in Australia only under strict conditions,[1] demonstrates a common (perhaps subconscious) view among people that dogs are only acceptable in human society if they can adhere to the strictures of quiet urban living. In a similar way that hypoallergenic breeds of dogs (like poodles) have become popular partly because they do not shed hair (therefore keeping furniture and carpets free of dog hair), dogs are often selected because of their acoustic suitability to cramped city living.

Canid species across the world vocalise. They vocalise in contexts beyond threat and pain. Among wild canid species, chorus howls are complex multimodal behaviours that scientists are still working to decipher (see Déaux and Clarke 2013 in relation to dingoes; Mazzini et al. 2013; Kershenbaum, Root-Gutteridge, Habib, Koler-Matznick, Mitchell, Palacios, and Waller 2016 in relation to wolves). Little work has been done in understanding the form and potential meaning of domesticated dog vocalisations, and much less work has been done in understanding the vocalisations elicited by dogs through novel human intervention. However, what seems clear from diverse sources is that canine vocalisations are important social behaviours for dogs and may help in achieving their goals of a flourishing life, including play. So, in discussing Nussbaum's central capabilities, I will consider if vocalising is a canine capability that must be met. Should dogs (and children) be seen *and* heard?

Dacher Keltner's monograph *Awe* presents awe as a biologically rooted, socially significant emotion that arises when we encounter something vast or beyond our understanding (Keltner 2023). Music, nature, moral beauty, and collective movement are all cited as awe-inducing.

[1] In NSW debarking is a prohibited practice; however, "A veterinarian may debark a dog (cl 21) if the veterinarian is provided with: a copy of an order issued under the *Companion Animals Act 1998* (s 21) requiring the owner of the dog (whether or not the existing owner) to prevent it from engaging in nuisance barking, and b. A statutory declaration by the owner of the dog to the effect of the following: i. All reasonable steps other than the operation, such as behavioural training or caging of the dog, have been taken, without success, to prevent the dog engaging in nuisance barking**,** and ii. Unless the operation is performed, the dog will be destroyed." (Veterinary Practitioners Board New South Wales 2018: n.p.).

While Keltner focuses on human experiences, his framework can be extended to consider animal experiences of stimulation, surprise, and social bonding. If awe fosters openness, connection, and cognitive expansion in humans, might we not also create conditions for similar states in animals? Dogs seem to demonstrate emotional responsiveness, curiosity, and attentiveness to music. This canine response appears to align with the broader goals of animal enrichment, which increasingly value novelty, complexity, social interaction, and positive arousal states. Nussbaum echoes this sentiment:

> We can and should envisage, and work for, a multispecies world in which all have opportunities for flourishing. And we should, I think, go even further, insisting that an ethical attunement to the lives of animals and a sense of wonder at their complexity and dignity is part of our humanity, without which human life itself is impoverished (Nussbaum 2022: 191–192).

In foregrounding the emotional and sensory dimensions of interspecies musical collaboration, these scholars seeks to honour animals' capacities for engagement, curiosity, and joy, beyond basic measures of welfare.

2.8 Sci-Fi Realities: Talking Dogs and Technology

The line between speculative fiction and present reality is increasingly blurred, particularly in the domain of human-animal relationships, communication, and expression. From dogs trained to use speech buttons to artificial intelligences framed as emotional companions, these sci-fi-adjacent phenomena invite serious philosophical and ethical inquiry into the nature of interspecies relationships in contemporary society. Dogs have repeatedly been framed as forms of historic biotechnology—genetically shaped, behaviourally programmed, and deployed to serve human needs across domains such as care, security, and companionship (Haraway 2008; DeMello 2012). This framing positions dogs not merely as companions but as living tools, products of human technological intervention and selective design, raising ethical questions about agency, autonomy, and the extractive logic that dictates how we conceive of animal lives. With recent viral headlines suggesting that canines have entered a new phase of evolution and domestication (Hare and Woods 2024), dogs appear to have become imprints of both imagined and real technological futures, and the idea of a "musical dog" may not seem so fantastical when contrasted with the ways in which dogs' roles in the world are shifting as they become entangled with technology.

Futurologist Ian Pearson has even suggested that dogs will be able to speak through technology by 2050, positing that "the big technology trend over the next 40 years would be a convergence of organic and electronic devices as our nervous systems and brains fused with computers" (Whipple 2016: non-paginated). Speculative fiction offers a valuable lens through which to interpret this cultural fascination with hyper-evolved and "talking" dogs. In the *Rick and Morty* episode "Lawnmower Dog," for example, Rick enhances the family dog's intelligence, leading to a dystopian future in which dogs revolt and enslave humanity (Rice and Roiland 2013). Similarly, in Pixar's *Up* (Doctor 2009), talking dogs wear voice-translating collars that vocalise their thoughts in real time. In both cases, dogs are imagined as the culturally decided heir apparent of human technological modification—symbolically and literally speaking to anxieties and hopes about interspecies communication and control. As Tsing (2015) and van Dooren (2014) both emphasize in their respective fields, our narratives—whether scientific, philosophical, or fictional—shape how we relate to and value other beings. Sci-fi, in this context, becomes a thought experiment in multispecies ethics, a space where the human-animal boundary is repeatedly breached, interrogated, and reimagined.

In the real world, human technology is increasingly being modified to enable canine expression and further cognitive understanding. Gregory Berns and his colleagues' work training awake, unrestrained dogs to undergo fMRI scans has demonstrated that dogs possess neural responses to human speech and emotional tone, indicating sophisticated levels of social and affective attunement (Berns, Brooks, and Spivak 2012). This speculative impulse towards talking dogs is echoed in the work of speech pathologist Christina Hunger, who trained her dog Stella to communicate using modular augmentative and alternative communication (AAC) buttons. Documented widely on TikTok and in her book *How Stella Learned to Talk* (2021), Hunger's work has sparked significant interest in alternative approaches to animal communication. Central to her philosophy is the idea of "assuming competence"—granting communicative tools to individuals, human or animal, who may not express themselves vocally, rather than limiting their expressive potential (Hunger 2021: 17). Her modular AAC system offers an open-ended form of interaction. Miriam Lind argues that this technologically mediated human-dog communication should be understood as semiotic assemblages, where meaning emerges not from individual signals but through dynamic, relational interactions between humans, dogs, and communication technologies (Lind 2024).

While Hunger's work demonstrates dogs' impressive capacity for symbolic, non-vocal language, there remain anatomical limitations that inhibit them from fully imitating human speech. Their vocal cords are similar to humans', but their lips and tongues differ in dexterity, making accurate articulation difficult. Nonetheless, many dogs have been trained to imitate the phonetic shapes of words like "I love you" ("Ay-ya-yoo") and "hello," as demonstrated in viral videos (Gardea 2008 and 2010; Kayleigh Rhian 2008), revealing a clear enthusiasm for mimicry and vocal interaction.

Although AAC button use has become a viral phenomenon—documented in hundreds of dogs, as well as in cats and even horses—it is not without critique. Włodarczyk, Harrison, Kruszona-Barełkowska, and Wynne argue that these systems, while well-intentioned and often playful, risk imposing an infantile and anthropocentric model of communication on dogs (Włodarczyk, Harrison, Kruszona-Barełkowska, and Wynne 2024). By privileging human speech as the benchmark for intelligence and expressive value, these practices may inadvertently overshadow dogs' own rich communicative repertoires, which include bodily behaviour, barking, whining, posture, and olfaction (Włodarczyk et al. 2024: 1). The authors trace this desire to "make dogs talk" back through a lineage of anthropomorphic attempts to reframe dogs in human terms—efforts that risk reducing attention to more subtle or uniquely canine signals. As they note, privileging spoken language risks presupposing that dogs naturally lack the means to express "rich internal mental states" through their own species-specific modalities (Włodarczyk et al. 2024: 2).

The AAC dog phenomenon differs markedly from the musical practices I explore in this thesis, yet the anthropocentric logic underlying both offers a meaningful point of comparison. While AAC buttons seek to translate canine thoughts into human words, the musical interactions I examine foreground vocality, gesture, pitch, and responsiveness as forms of relational expression that do not rely on linguistic meaning. In fact, the canine inability to speak human language with accuracy or referential intent allows us to more liberally frame these vocal exchanges as musical. Like the speculative dogs of fiction and the AAC-trained dogs of social media, musical dogs demonstrate ingenuity, creativity, and a clear desire to express themselves alongside humans. As Włodarczyk et al. suggest, turning our attention to "dog vocalities—barks, howls, and whimpers—may help to remind us of our duty to remain curious about dog subjectivity and to be open to their living alterity as we communicate and share our lives with these animals" (Włodarczyk et al. 2024: 12).

With the emergence of increasingly complex artificial intelligence technology, AI is being used to decode humpback whale song, with researchers applying machine learning techniques to identify patterns and potential structures in whale vocalisations (Chitre et al. 2021). While such technologies offer powerful tools for analysing vast datasets, they often carry the implicit assumption that whale song operates like human language, with semantic content or syntactic rules. This anthropocentric framing risks reducing the complexity and affective richness of humpback song to a set of translatable linguistic units, overlooking its possible function as a non-referential, aesthetic, or relational mode of communication (Allen 2022).

Composer Jennifer Walshe's recent work with artificial intelligence offers a striking example of how posthumanist frameworks—particularly those derived from Donna Haraway's concept of "companion species"—can be extended to non-biological beings. In an RTÉ radio interview, Walshe discusses her interest in reframing AI not as a threat or tool but as a possible "companion species," emphasizing the need to understand such intelligences on their own terms rather than exclusively through human-centred expectations (Walshe 2023). She advocates for genuine engagement with the network and views AI's cognitive patterns as offering alternative forms of intelligence, just as human-animal bonds have challenged us to expand our definitions of relationality, sentience, and responsiveness. This methodological and affective openness to posthuman companionship opens new pathways into how we might approach dogs as musical collaborators—creatures with rich subjectivities that do not always conform to human logics, yet who still seek and shape relationships with us.

Sociologist Sherry Turkle examines how the rise of robotic pets as technological companions further complicates the ethical terrain of human-machine-animal interaction (Turkle et al. 2006). Turkle describes how robotic dogs like Sony's AIBO offer affection without danger or loss: "It won't do dangerous things, and it won't betray you ... Also, it won't die suddenly and make you feel very sad" (Turkle et al. 2006: 351). The allure here lies not in realism but in predictability and control. However, Turkle warns that such relationships, while emotionally compelling, are ultimately deceitful interchanges that may shift our ethical capacities and alter the meaning of love and empathy. The implication for animal studies is significant: what happens when dogs are replaced or conceptually flattened into machines? Or conversely, when machines are anthropomorphised into "better" dogs? As Turkle puts it, "What will 'loving' come to mean?" (Turkle et al. 2006: 356).

This moment in history represents a shift in our understanding of more-than-human relationships and the proto-techno-human status of dogs, as science fiction, AI, and technology become entangled in both human and more-than-human lives. At their core, these technological and imaginative interventions—real and fictional—probe the same foundational questions raised throughout this thesis: How do we communicate and express across species? What kinds of meaning do we assign to non-human expressions? And how do power, bias, and imagination shape these interactions?

2.9 Creative Output as Zoömusicological Research

Artistic research in music, sound art, and performance, has increasingly been recognised as a legitimate and potent method of inquiry, particularly in fields such as zoömusicology and multispecies ethnography, where nonverbal phenomena like animal vocalisation resist conventional academic modes of representation. Scholars such as Burke and Onsman argue that artistic research occupies a unique methodological position: rather than treating creative work as mere illustration or output, it constitutes a form of knowing and investigation in itself (Burke and Onsman 2017). Similarly, ethnomusicologist Simon McKerrell has advocated for the development of practice-based research in ethnomusicology, where the act of making music, particularly across cultural boundaries, can yield insights not accessible through observation or writing alone (McKerrell 2022). Xu, Lamers, Van der Heide, and Verbeek explore how interactive art is shifting toward a "more-than-human perspective" by incorporating non-human participants, and propose using a relational model, initially designed for human co-located interaction to better account for these interspecies dynamics (Xu, Lamers, Van der Heide, and Verbeek 2025). They find that this model not only effectively analyses and accounts for more-than-human interactions in interspecies artworks but also "…uncovers patterns in the roles of human and non-human elements," thereby revealing novel possibilities for future more-than-human interactive art. They additionally comment on the ascendant and problematic tendencies to "to cast non-human organisms as passive participants and humans as active" (Xu et al. 2025: 301) within existent artistic practices.

Zoömusicology has historically attracted scholars with an interest in composing as well as studying music, hence the discipline has always foregrounded creative ways of presenting findings. Practitioners increasingly present their research in non-written creative formats and on platforms outside of the academy. I share percussionist and researcher Vanessa

Tomlinson's interest in creating and presenting work as research as equally valid research outputs and modes as analysis and interpretation (Tomlinson 2024). Given that the research subject (sound) is durational and auditory, it follows logically that a creative output might communicate more effectively to a public audience than a written thesis alone. Much of what dogs "say" musically through howls, whines, barks, or non-vocal behaviour is more fully apprehended through listening and observing than reading; hence, performance, sensory experience, and sonic documentation are not auxiliary but central to this research practice.

David Rothenberg's and Hollis Taylor's extensive fieldwork and compositions involving birdsong offer further examples of this principle. Rothenberg's performances with nightingales and whales blur the line between improvisation and interspecies dialogue (Rothenberg 2016), while Taylor and Rose's *Night Songs* project meticulously transcribes pied butcherbird song and recomposes it for human musicians (Taylor and Rose 2022). Unlike more romantic or ornamental appropriations of bird music in classical repertoire, Taylor's approach emphasises faithful structural translation, treating the birds as compositional collaborators rather than sources of inspiration. Her works, which combine field recordings and live ensemble performance, are embedded in an ethical project that asserts music as a practice not exclusive to humans but distributed across species (as seen in her website that catalogues written research alongside musical compositions [Taylor 2025]). Carola Bauckholt's vocal work *Instinkt* similarly engages in sonic translation, this time drawing on recordings of wolf chorus howls (Bauckholt 2007-2008). Rather than merely imitating these sounds, Bauckholt transcribes their formal qualities and develops a choral work for human voices that preserves the structure of the original recording. This approach shows how creative output can sensitively recontextualise animal vocality without stripping it of its affective and ecological specificity.

The tradition of using audio-centred artistic output to communicate animal research has deep roots in acoustic ecology, especially in the work of Hildegard Westerkamp, Barry Truax, and Bernie Krause. These pioneers recorded and presented environmental soundscapes not only for preservation but as a means of communicating the subtle structures of ecological interdependence. Krause's concept of the "acoustic niche hypothesis"—that animal species evolved to vocalise within distinct frequency ranges to be heard among others (Krause 1992)—is both theorised and artistically demonstrated. His collaboration with United Visual Artists, *The Great Animal Orchestra*, is a multisensory installation combining spectrogram

visualisations and field recordings of threatened ecosystems (Krause and United Visual Artists 2016). The immersive format (270-degree video projections displaying real-time sonograms of the soundscape) shows how animal voices are interwoven within their ecological communities and how fragile those sonic worlds are.

Krause's aesthetic philosophy builds on this, suggesting that human musical sensibilities have evolved in relation to the spectrally rich environments we inhabit. "It is my hunch that the development of our sound arts owes at least as much to the 'noise' of our natural environments," he posits (Krause 1987, 2). By abstracting a single species' call out of its context, we lose the relationality and sonic ecology in which that voice is meaningful. Krause notes, "Abstracting the voice of a single creature from a habitat and trying to understand it out of context is a little like trying to play Samuel Barber's *Adagio for Strings* absent a violin section as part of the orchestra" (Krause 1987, 2). Such projects offer important precedents for my own work. As with Krause, my goal is not to isolate and interpret dog sounds as isolated specimens, but to explore how they function within a shared acoustic and social environment with humans. Presenting this work through performance allows those interactions to be experienced directly, rather than interpreted through description.

The gallery has become a particularly rich site for communicating zoömusicological work outside of academia. Marcus Coates's *Dawn Chorus*, for example, takes field recordings of birdsong and uses time-stretched audio to train human performers to replicate them. He then films the singers—ordinary people from everyday locations—performing the slowed-down songs in synchrony with their real-time counterparts (Coates 2011). The result is both humorous and strangely moving, revealing how birdsong is structured and how it stretches human vocal and temporal expectations. Coates' work blurs the boundary between field recording, performance, and speculative anthropology.

Julian Klein's work on practice-led research in the arts emphasises how artistic processes can generate unique, embodied forms of knowledge not available through traditional methodologies. Percussionist Vanessa Tomlinson echoes these sentiments in stating that "…artists *are* researchers, and our ways of knowing and doing are understood as contributing to new knowledge" (Tomlinson 2023: 357). This resonates in zoömusicology, where the non-verbal, improvisational, and sensorial nature of the subject matter lends itself to musical or

performative communication. Art historian Jessica Ullrich's writing on dogs and contemporary art further reinforces this. In *Contact Zones—Where Dogs and Humans Meet*, Ullrich identifies a historical and contemporary artistic preoccupation with human-canine entanglement. From myths of origin in which dogs serve as divine messengers or ancestral spirits to contemporary works that depict human-animal hybrids and surrogate maternal relationships, Ullrich argues that the figure of the dog destabilises rigid human/animal binaries and opens space for affective and political questioning (Ullrich 2019: 54–57).

In this sense, the creative works discussed in this section do more than illustrate research—they are research. They generate knowledge through doing, through listening, and through multisensory engagement. They expand the audiences and affective registers through which academic ideas can be encountered. Similarly, my public performance work *Dog Choir* will present not only findings from my ethnographic and musical collaborations with dogs but also serve as a research site in itself—one in which audiences can witness, and perhaps participate in, emergent interspecies musicking. In summary, practitioners—whether transcribing birdsong, collaborating with dogs, or mounting gallery installations—treat creative output not as an add-on but as the primary means to document, interpret, and share complex more-than-human sound worlds. In zoömusicology, such creative methods invite us to listen differently, attend to non-human expressions on their own terms, and explore relationships grounded in sound rather than language.

Having traversed an expansive body of interdisciplinary literature, this review positions my research within a converging landscape of zoömusicology, ethnomusicology, animal studies, ecomusicology, and creative practice. Across these disciplines, a common theme emerges: the need to decentre the human in definitions of music, expression, and research methodology. Whether through Taylor's meticulous transcription of birdsong, Haraway's "companion species" ethics, or the ethical frameworks laid out by Nussbaum, the literature reveals a consistent call to listen across species boundaries with greater humility, attentiveness, and openness. Central to this project is the proposition that dogs—animals embedded in our daily lives, social rituals, and emotional landscapes—possess the curiosity, responsiveness, and affective attunement that underpin musical practices. While dogs have historically been omitted from serious zoömusicological inquiry, the emerging body of work on their auditory perception, vocal capacity, and emotional cognition invites reconsideration.

My research responds by asserting that canine musicality may not conform to traditional Western forms but nevertheless thrives in relational, improvisational, and affective modes.

Crucially, this literature review has foregrounded the importance of relationality and collaboration, not only between species but between disciplines and methods. The writings of scholars like Rose, Plumwood, and Calarco situate interspecies interaction within broader ecological and ethical frameworks, reminding us that creative work with animals is never outside the reach of political, environmental, or historical forces. Tsing's idea of "contaminated diversity" resonates deeply with the messy, interdependent, and improvised nature of my canine collaborations. Likewise, Haraway writes, "Once again we are in a knot of species co-shaping one another in layers of reciprocating complexity all the way down. Response and respect are possible only in those knots, with actual animals and people looking back at each other, sticky with all their muddled histories" (Haraway 2008: 42). This "sticky" entanglement is precisely the terrain of this research. Music, in this context, becomes more than art or communication: it is a relational tool, a co-creative medium for ecological advocacy, and a trace of mutual presence and history.

By drawing on creative outputs as legitimate research practices, this project follows in the methodological footsteps of artists and scholars who translate multispecies sound worlds into performances, installations, and public interventions. These practices are not secondary to academic work—they are epistemologies in their own right. They invite different modes of knowing, grounded in multisensory experience and shared presence. As Titon insists, we must imagine "a sound commons for all living creatures" (Titon 2020: 219). This is not only an aesthetic proposition but an ethical one: to hear and to make music with the more-than-human is to take seriously their subjectivity, agency, and creativity.

The ensuing methodology chapter elaborates on how I approach this inquiry: through an iterative, practice-led design that weaves together fieldwork, improvisation, interviews, archival research, and public engagement. Rather than pin down a definitive definition of canine musicality, I will seek to chart its development, explore its co-creative processes, and amplify its significance through both scholarly and artistic modalities.

Chapter 3: Methodology

This chapter details the iterative methodology I developed in response to both the novel subject matter and the limited methodological precedents that exist within the still-emerging field of zoömusicology. Drawing additional tools from ethnomusicology, animal behaviour studies, environmental humanities, and creative arts research, I outline a fluid, multi-pronged approach involving direct fieldwork with dogs, archival and media research, interviews with dog carers, and the development of the public-facing participatory workshop, *Dog Choir*.

3.1 Research Stages

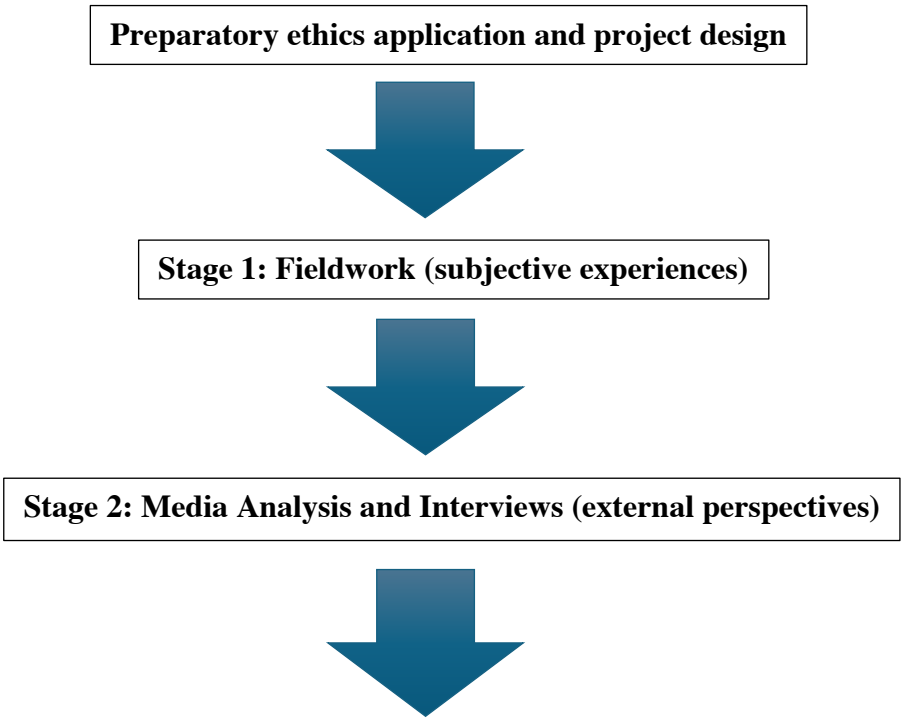
The approach unfolded in three key stages (preceded by a preliminary design phase to ensure the project adhered to university animal ethics committee standards), each building on insights from the previous stage to refine the next:

> **Preparatory ethics application**: design of musical sessions with dogs to adhere to stringent university animal ethics committee requirements that assumed purely scientific methodologies. In consultation with an animal welfare veterinarian, I implemented measures and monitoring methods that ensured the dogs' welfare throughout the project.
>
> **Stage 1: Fieldwork**: initial exploratory sessions of *in situ* interactions with dogs and their people in settings familiar to the dogs, involving musical improvisation (attempts at "musicking" [Small 1998]) and close observation unfolding in settings familiar to the dogs. Data from these sessions includes audio recordings, spectrographic analysis, detailed field and behavioural notes of the dogs' responses, and personal reflections on my experience.
>
> **Stage 2: Media Analysis and Interviews**: a qualitative investigation that contextualised and broadened the findings. I conducted semi-structured interviews with dog carers who engage in musical practice with their dogs to gather personal narratives and insights into dog–music engagement. In parallel, I undertook an investigation of archival media (print, screen, and social media) depicting musical dogs to provide a broader cultural backdrop to the fieldwork undertaken in Stage 1. I examined discourse and content of the interview transcripts and archival media to

identify recurring themes, metaphors, and societal perceptions of—and approaches to—canine interspecies music.

Stage 3: Public performance workshop, *Dog Choir*: A culminating participatory workshop brought dogs and their human carers into a live musical performance to synthesise and communicate findings from the previous two stages. Informed by three preliminary workshops (at Canberra International Music Festival, Bondi Festival in Sydney, and Art Farm Birchs Bay in Tasmania) utilising the premise of Laurie Anderson's *Concert for Dogs* (Anderson 2016), this sixty-minute workshop—which was professionally filmed—functioned as both experimental performance and research exercise, combining structured activities and free improvisation to invite an "interspecies chorus howl." In my dual role as facilitator and participant-observer, I documented the dynamics, behaviours, and interactions throughout the workshop. The recording of *Dog Choir* underpinned further analysis of canine and human responses, and participants later shared reflections via online feedback forms.

This methodological stance enabled me to critically survey, document, and discuss the diverse musical outputs and settings that emerge from collaborative dog–human musicking. Each of these stages allowed me to probe the phenomenon through my own and external perspectives:



Stage 3: *Dog Choir* (artistic product synthesising and relaying both external and subjective experiences)



Comprehensive thesis documenting entire research process and findings

The methodology employed context-specific tools within a multi-stage, multimodal design. As I came to recognize how people engage in distinctive, culturally situated musicking with their dogs, I shaped the later stages around participants' own perspectives and accounts. By broadening my lens to include external perspectives and experiences, I situated my encounters with dogs within a wider network of actors, agents, and contexts (Latour 2005), in service of classifying these practices as forms of musicking. Throughout these stages, a suite of tools and methods supported data collection and analysis, reflecting the project's blend of disciplinary approaches. Below—and in the subsequent chapter—I describe the tools and approaches deployed throughout the project. Since each research context presented unique, fluid circumstances requiring me to adapt and build rapport with dogs I had not met before, I will outline the specific procedures in each corresponding chapter. Throughout the project's various stages, I employed the following tools and strategies:

- Musical improvisation and performance practice – engaging creatively with dogs in sound-making, treating these playful musical sessions as both data and artistic exploration;

- Spectrographic examination of audio recordings – visualising and analysing the frequency patterns and rhythms of dog vocalisations and musical sounds to determine how dogs' contributions compared or responded to human musical elements;

- Participant observation and fieldnotes – collecting contextual details, atmospheres, and non-verbal cues that might have escaped more formal data collection, variously documented from fieldwork to workshop;

- Discourse analysis – interpreting the language and narratives from interviewees and media to reveal how humans made sense of dog-human musical experiences and what cultural meanings were ascribed to them;

- Qualitative interviews – gathering first-person perspectives to enrich my understanding of subjective experiences and cross-verify my observations with human participants' own interpretations.

A commitment to interspecies ethics was central at every step: I prioritised the wellbeing and agency of the canine participants, seeking methods that were respectful, stress-free, and mutually enjoyable. This ethical stance influenced practical decisions (such as using positive reinforcement, allowing dogs to opt out of activities, and obtaining carer consent) and ensured that the research treated dogs as willing collaborators rather than mere subjects.

I triangulated and compared data from the three methodological stages to build a comprehensive picture of the dog–human music phenomenon, incorporating personal experiences, external perspectives, and broader cultural depictions. The study followed an *iterative design* principle, meaning each stage informed adjustments to the next. For example, animal ethics considerations shaped the design and logistics of the sessions with individual dogs and guardians, early fieldwork observations shaped interview questions, and interview insights guided the design of the workshop. I also adopted the notion of situated listening in the same spirit as Haraway's "situated knowledges" (Haraway 1988), acknowledging that listening—by both humans and dogs—is deeply influenced by context, environment, and relationship—so the project paid close attention to setting and individual history in interpreting its findings.

3.2 Animal Ethic Procedures and Welfare Considerations

3.2.1 Navigating scientific ethics frameworks in humanities-based animal research

The university animal ethics process assumed that any project involving animals followed a scientific research paradigm that necessarily exploited them for research purposes. This project posed a negligible threat to the animal's wellbeing and, in fact, strove to enhance it. To deepen my bond with each dog beyond our musical work, I spent time with them in non-musical settings—taking them for walks and fostering mutual comfort and trust. However,

the animal ethics application and the assessing committee required projects to adhere to a rigid scientific model of research, where aims, methodologies, and logistics relating to the experiments were concretely determined before the project had been conducted and strictly enforced during the process. Animal ethics procedures made ethnographic, context-responsive research significantly more difficult, since even minor changes—such as holding dog sessions outdoors rather than indoors—required modification applications that took weeks for committee approval.

The animal ethics procedure imposed by the university was shaped by the *Australian Code for the Care and Use of Animals for Scientific Purposes* (8th ed., 2013), which prescribes a framework rooted in the expectations of conventional scientific research design. For example, Clause 1.15 of the Animal Code stipulates that regardless of potential benefits, research must "be scientifically valid, feasible, well designed, and carefully conducted so that the aims can be reasonably achieved" (Australian Code for the Care and Use of Animals 2013: 10). In my case, the Committee required a detailed account of the project's "scientific design"—including the specific animal-based measures to be collected, how results would be analysed, and the metrics by which the aims would be assessed. This requirement reflects a model of research that privileges quantifiable variables, statistical analysis, and large data sets while assuming that validity arises solely from replicable results observed across high numbers of animals.

The premise of this project fundamentally conflicted with that framework. Rather than working with a statistically "significant" sample, the research was designed to examine in depth the creative and musical behaviours of a small number of individual dogs and people. This approach deliberately resists binary measures (e.g., responsive/unresponsive) and instead situates canine vocal and musical behaviours within the broader social, cultural, and relational contexts in which they occur. Clause 1.21 of the Animal Code mandates using the minimum number of animals needed to meet objectives and ensure "good statistical design." The Committee, reading my application through a statistical lens, questioned whether five dogs could constitute a sufficient sample and sought clarification on inclusion and exclusion criteria, as well as the possibility of needing to "screen" dogs before their participation. My position was that the project's aims were not served by statistical design but by sustained,

relational engagement with a small cohort, in which the variability between individuals is not noise to be eliminated but the very focus of the inquiry.

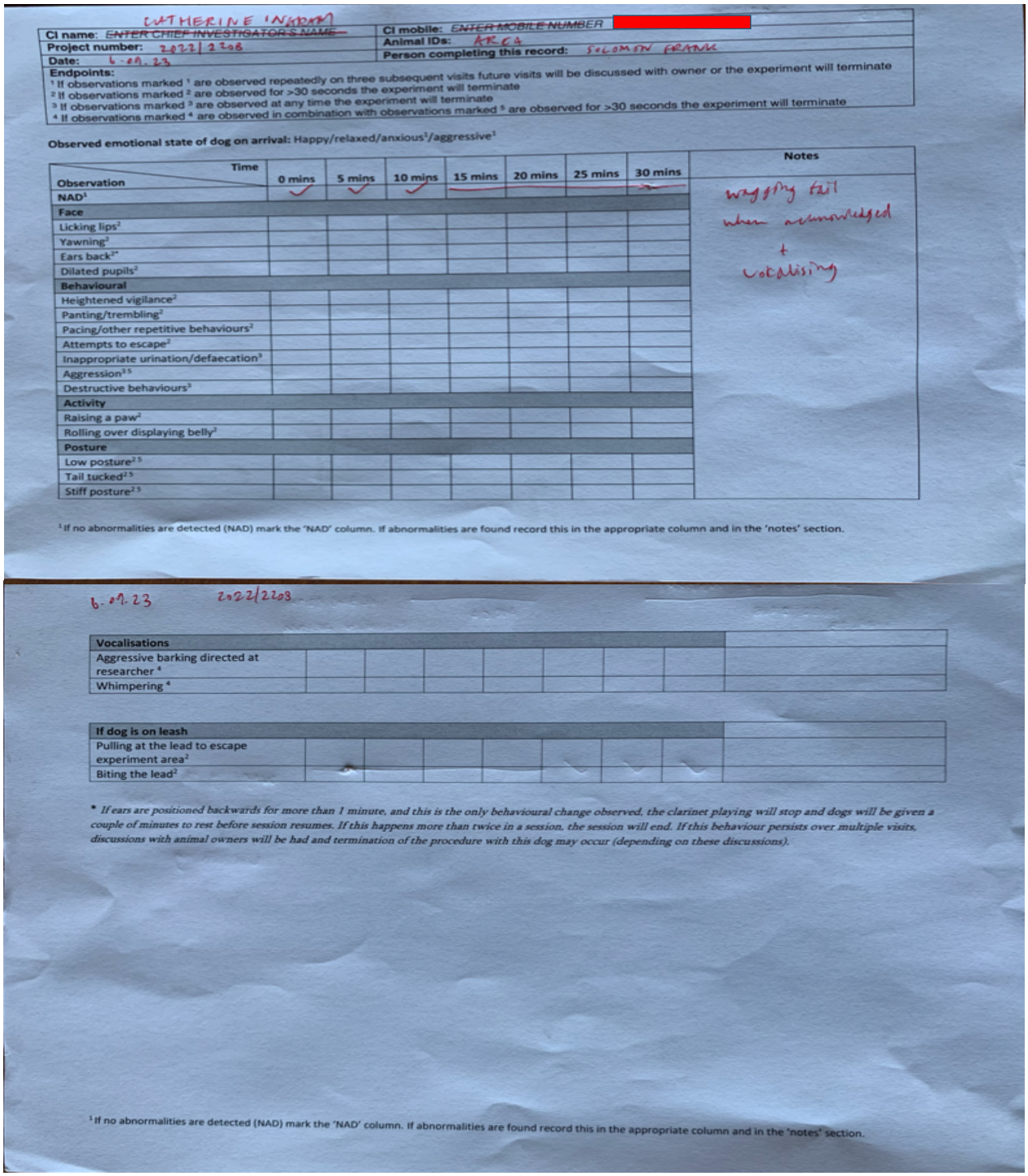
The Committee also expressed concerns under Clauses 1.10 and 1.11 of the Animal Code, which recognise animals' capacity for pain and distress and require measures to safeguard wellbeing. They specifically queried whether the clarinet's volume, duration, or timbre might startle or distress the dogs, recommending consultation with a veterinarian or canine behaviour specialist and the development of monitoring sheets to document positive and negative responses. While such measures are essential for ensuring welfare, they also revealed the assumption—embedded in the Code—that novelty in animal experience is more likely to be harmful than enriching, an assumption this project sought to question by framing musical encounters not as imposed stimuli but as mutually co-created, responsive, and, hopefully, enthusiastically engaged in by the animals.

In essence, animal ethics procedures built around scientific research models leave little room for qualitative, context-driven methods—such as zoömusicology, more-than-human geography, or critical animal studies—that foreground narrative, cultural interpretation, and individual animal experiences. This mismatch exposes a structural divide between scientific and cultural paradigms in human-animal research.

3.2.2 Canine welfare measures

In designing the fieldwork for this project, I took multiple steps to minimize distress and harm to the dogs throughout the process. In this first stage of the project, all sessions took place in the dog's regular place of residence or in a space familiar to them, and the dogs' primary carers were present for at least the first part of the first session with each new dog. Throughout the sessions, I assessed unusual behaviour in communication with each dog's carer, and sessions were cut short if any discernible distress was observed (as determined by the welfare monitoring sheets). Figure 3 shows an example of a completed monitoring sheet pertaining to a session with Arca on 6 September 2023. With the generous assistance of the University of Sydney Animal Welfare Veterinarian, we designed the monitoring sheet to include common canine distress signs (low posture, heavy panting, tucked tail, ears back, pacing, aggressive behaviours, and so on—the full list is displayed in Fig. 3). As per the

monitoring sheet, if one or more of these distress behaviours were observed for more than 30 seconds, sessions would be halted. The dogs were never restrained except when sessions took place outside. In these cases, dogs were on a leash, and I watched for signs of distress using the criteria outlined in the monitoring sheet. A dog would be allowed to leave the space if they displayed signs of distress or behaviours indicating they wanted to leave the space (e.g., pawing at the door or remaining near it) for more than 30 seconds.



CATHERINE INGRAM
CI name: ~~ENTER CHIEF INVESTIGATOR'S NAME~~
Project number: 2022/2208
Date: 6.09.23
CI mobile: ~~ENTER MOBILE NUMBER~~ [redacted]
Animal IDs: ARCA
Person completing this record: SOLOMON FRANK

Endpoints:
[1] If observations marked [1] are observed repeatedly on three subsequent visits future visits will be discussed with owner or the experiment will terminate
[2] If observations marked [2] are observed for >30 seconds the experiment will terminate
[3] If observations marked [3] are observed at any time the experiment will terminate
[4] If observations marked [4] are observed in combination with observations marked [5] are observed for >30 seconds the experiment will terminate

Observed emotional state of dog on arrival: Happy/relaxed/anxious[1]/aggressive[1]

Observation \ Time	0 mins	5 mins	10 mins	15 mins	20 mins	25 mins	30 mins	Notes
NAD[1]	✓	✓	✓					wagging tail when acknowledged + vocalising
Face								
Licking lips[2]								
Yawning[2]								
Ears back[2*]								
Dilated pupils[2]								
Behavioural								
Heightened vigilance[2]								
Panting/trembling[2]								
Pacing/other repetitive behaviours[2]								
Attempts to escape[2]								
Inappropriate urination/defaecation[3]								
Aggression[3,5]								
Destructive behaviours[3]								
Activity								
Raising a paw[2]								
Rolling over displaying belly[2]								
Posture								
Low posture[2,5]								
Tail tucked[2,5]								
Stiff posture[2,5]								

[1] If no abnormalities are detected (NAD) mark the 'NAD' column. If abnormalities are found record this in the appropriate column and in the 'notes' section.

6.09.23 2022/2208

Vocalisations									
Aggressive barking directed at researcher [4]									
Whimpering [4]									

If dog is on leash									
Pulling at the lead to escape experiment area[2]									
Biting the lead[2]									

* *If ears are positioned backwards for more than 1 minute, and this is the only behavioural change observed, the clarinet playing will stop and dogs will be given a couple of minutes to rest before session resumes. If this happens more than twice in a session, the session will end. If this behaviour persists over multiple visits, discussions with animal owners will be had and termination of the procedure with this dog may occur (depending on these discussions).*

[1] If no abnormalities are detected (NAD) mark the 'NAD' column. If abnormalities are found record this in the appropriate column and in the 'notes' section.

Figure 3. Completed animal welfare monitoring sheet from 6 September 2023 with Arca.

To ensure the study did not harm the dogs' hearing, I carefully monitored my sound levels—avoiding excessive volume or duration—and limited each session to 30 minutes. I define excessive as a dynamic level beyond what the animal would typically encounter in day-to-day life. Thus, the unamplified dynamic level of the clarinet would not constitute excessive. While dogs can hear pitches far higher than humans (the human range of frequency is approximately 20 - 20000 Hz), in general, dogs and humans have similar auditory anatomy and thus experience hearing damage in similar conditions (Garvey, Stella, and Croney 2016). The frequency range of the clarinet is approximately between 146 Hz and 1864 Hz, while the frequency hearing range of dogs is 40 Hz - 60,000 Hz. Garvey, Stella, and Croney report that "in humans, hearing loss has been reported at 85 dB; exposure to sounds greater than 90 dB for longer than 8 hours can result in serious hearing damage. Exposure to sounds above 140 dB can cause immediate damage and physical pain. Sound levels ranging from 85-100 dB are common in dog kennels" (Garvey, Stella and Croney 2016: 2). The usual amplitude range of the clarinet is 85dB - 114 dB. Like humans, the main cause of hearing damage in dogs is prolonged exposure to high amplitude sound. Given the short periods spent with the dogs and the medium volume level of the musical stimuli, the veterinarian and I concluded that the project posed negligible risk of causing the participating dogs to experience hearing damage. Outside of our sessions, the dogs continued to receive their standard daily care. This constitutes being fed nutritiously, being provided with ample water, and being exercised. The human participants were also given the opportunity to withdraw their, and the dog's participation at any point throughout the project.

Despite a few months delay in beginning the fieldwork due to the complexity of this ethics approval process, ultimately, the animal ethics application process was key in refining the goals and premise of the research—though not always by clarifying them in ways aligned with the project's aims. Rather, it illuminated the prevalence of scientifically dominated frameworks in animal-related research, frameworks that often prioritise statistical validity and controlled variables over individual specificity and cultural and social context. Negotiating these requirements sharpened my commitment to methods that foregrounded the creative agency of individual dogs, even when this meant working outside the conventions the Committee expected. This negotiation stage laid the conceptual groundwork for my first stage of fieldwork, where these methodological commitments were tested, enacted, and adapted in practice.

3.3 Stage 1: Fieldwork

3.3.1 Participants

The aim of the individual fieldwork with dogs was to explore the responses of dogs to music in a variety of contexts and with a variety of animals, broadening the scope of my interrogation of dogs and music, since my previous experiences involved only one dog—Mia—who was well acquainted with me. This new fieldwork—originally the project's primary focus—comprised regular musicking sessions with dogs and their carers to investigate music's role as an agent in interspecies relationships. These early experiences formed an exploratory phase that shaped the project's subsequent methodological components. In this stage, I investigated the feasibility and potential of initiating musical collaborations with dogs previously unfamiliar to me.

These sessions with dogs took place over the course of a year, in which time I regularly visited two dogs and their guardians in domestic settings:

1. Tilly and Chloe (16 recorded sessions);
2. Arca and Verity (6 recorded sessions).

To gauge the responses of a broader set of varied individuals, I additionally conducted sessions in an animal shelter (Monika's Doggie Rescue) where I met ten dogs, whom I conducted fewer sessions with:

1. Mango (5 recorded sessions);
2. Finn (3 recorded sessions);
3. Gizmo (1 recorded session);
4. Jarrah (1 recorded session);
5. Zara (1 recorded session);
6. Theodore (1 recorded session);
7. Alex (1 recorded session);
8. Arnold (2 recorded sessions);
9. Fay (1 recorded session);

10. Spirit (1 recorded session).

I videoed all sessions and took detailed fieldnotes recounting my experiences as well as the dogs' responses to my dual social and musical engagement. These recordings and fieldnotes form the dataset I utilise to analyse and discuss the forms and contexts of canine-human musicking I participated in. In Chapter 4's case studies, I commence each section by describing the dogs' individual histories, or in the third case, give an overview of the context of the dog shelter and the larger number of dogs I worked with there. I elucidate these histories and contexts with an understanding that manifestations of animal identity (human and non-human) exist at the collision of three histories: evolutionary, cultural, and individual (Gigliotti 2022). By spending time and playing music with a small number of individual dogs and their human carers, the goal was to gain initial insights into the impact of music and sound on individual dogs' behaviours, emotions, and wellbeing, and to enact my approach to engaging in musical practices with dogs.

3.3.2 Canine selection criteria

When selecting dogs for Stage 1: Fieldwork, I understood that not every dog would be an enthusiastic participant in the musical sessions I was planning. Not every dog vocalises in response to sound, and some dogs are actively distressed by musical instruments—as evidenced by negative and apathetic canine responses to music anecdotally reported by friends and colleagues. Table 1 displays my selection criterion for dogs, formulated to opt for dogs with observed musical curiosity—that is, exhibiting active listening and vocalising behaviours (and not signs of distress) in response to sound and music. While distress is a valid canine response to unfamiliar sound sources—like a clarinet— I specifically selected dogs that showed genuine enthusiasm for musical participation. As per the exclusion criteria and monitoring sheet, I did not pursue further musical collaboration with the dogs who were distressed, as I did not want to cause undue harm in the hope that an enthusiastic form of participation eventually emerged. Of the ten dogs I met at the shelter, two dogs displayed behaviours indicative of distress. In these cases, the sessions were cut short at the point that distress signs were observed for more than 30 seconds. The negative and mixed behavioural responses to my musical engagements are further discussed in Chapter 4.4.

Table 1. Exclusion and inclusion criteria formulated to select dogs suitable for the project.

Criteria Type	Question	Inclusion/Exclusion Trigger
Exclusion*	Does the animal show visible signs of extreme distress or anxiety around strangers?	Exclude if Yes
Exclusion	Does the animal show signs of aggression around strangers?	Exclude if Yes
Exclusion	Does the animal show visible signs of extreme distress or anxiety when exposed to loud sounds?	Exclude if Yes
Exclusion	Does the animal show signs of aggression when exposed to loud sounds?	Exclude if Yes
Inclusion**	Is the animal well socialised with strangers?	Include if Yes
Inclusion	Does the animal show a curiosity in relation to music or sound (i.e., do they perk their ears up, actively listen or investigate music/sound when they hear it)?	Include if Yes
Inclusion	Is the animal vocally reactive to sound/music (vocalisations that do not signify stress or anxiety)?	Include if Yes
Inclusion	Is the animal especially vocal in its day-to-day life (as discussed with owner/shelter)?	Include if Yes

*If the answer is yes for any of the "exclusion" questions, animals will be *excluded* from participating in the project.

*If the answer is yes to any of the "inclusion" questions, animals will be considered for *inclusion* as participants in the project

When recruiting participants for the project, I put the word out through my social circles that I was interested in meeting and working with musically curious dogs in domesticated settings. I eventually selected Tilly (cared for by Chloe and Jimmy) and Arca (cared for by Verity) as participants. Chloe is a personal friend, so I was aware of Tilly's vocal tendencies before the project began. I reached out to Verity and Arca after Chloe described Arca's well documented vocal proclivities. Tilly and Arca were selected because of their history of musical curiosity and vocality, and because it was logistically feasible for me to visit and spend time with them regularly. At Monika's Doggie Rescue, I met a larger number of dogs; however, I was not able to spend extended or repeated periods with individual dogs at the shelter. Adoptions often ended planned ongoing sessions, and while some dogs I met over several weeks or months, others I saw only once. My access was governed by the shelter's logistics: I met dogs at the driveway entrance with little control over whom I worked with

each day, as avoiding dog–dog conflicts, the timing of returned walks, and volunteers' prioritizing dogs in greatest need dictated which animals were available (these logistical challenges will be further discussed in section 4.4).

3.3.3 Session location and protocols

Since each musical encounter's dynamics were unique to the individual dog and its context, these processes emerged as a key analytical parameter and will be explored in depth in the relevant chapters. Each session varied in length but typically, when I arrived for each visit, 10-15 minutes was devoted to building and maintaining a social bond with each dog and their associated person (greeting animal owners, patting the dog, sometimes going for a short walk with a lead, and so on.). I would play music with each dog for 10-30 minutes within a space familiar to them or while on a walk outdoors nearby their home. These enclosed spaces included living rooms, bedrooms, and enclosed porches. The individual circumstances of each dog and their carer required me to be flexible in choosing an appropriate place to engage in musical activities. These locations emerged as significant, shifting parameters that warrant and receive further interrogation alongside other extra-musical factors influencing the sessions.

3.3.4 Equipment

When recording my encounters with dogs, I utilised a Zoom H5 portable recorder with in-built stereo microphones arranged in an X Y configuration to record audio, as well as a stationary iPhone 10 on a small tripod to record video. As a clarinet player, I primarily used the B flat clarinet to engage musically with the dogs. I supplementarily vocalised and played a 37-key Hohner melodica when appropriate. I deemed clarinet and melodica to be productive instruments to utilise with dogs because of each instrument's sonic resemblance to certain canine vocalisations. In the following section, I examine my approach to playing the clarinet and other instruments through the lens of interspecies philosophical ethics.

3.3.5 Interspecies philosophical ethics

Central to my process was observing and evaluating dog and human behaviours with sensitivity, attunement, and empathy (Warkentin 2010), recognizing that I cannot know each dog's history and therefore must not assume they will respond positively to music or behave

as others have. This stance is not merely part of my process—it's a pivotal instrument in my methodological toolkit. Much of zoömusicology's (and other disciplines like critical animal studies') objectives relate to dispelling a belief in animal simplicity, where all animal behaviour outside of basic survival is interpreted to be an automaton-like display of Darwinian/Wallacian fitness (Martinelli 2004; Lestel and Taylor 2013; and Callarco 2016). As is the case with many zoömusicologists, my research begins with framing animals as uniquely socially and culturally shaped agentive beings with complex and multi-dimensional behaviours that should be interrogated with the same rigour and open-mindedness as creative human behaviours. This perspective guides how I document and respect each animal's experiences and aesthetic agency, allowing me to explore their unique subjective nuances and habits without resorting to simplistic or anthropomorphic assumptions. Just as with human cultures to which I do not belong, when entering into more-than-human cross-cultural collaborations, I had to be conscious of my own cultural context, biases, and preconceptions.

In recognizing my background as a Western classical and experimental improvising clarinet player, I was cognizant of others' efforts to improvise with animals that adhered rigidly to genre conventions of Western and human music As in earlier experiences with my dog Mia, I refrained from imposing these strict genre conventions or aesthetics upon beings who have their own aesthetic vernacular informed by their biologically unique vocal capacities.

3.3.6 Approaching improvisation through an interspecies lens

With my previous experiences playing music with Mia as a foundation, I developed an improvisational vernacular on clarinet that was context-specific to playing music with dogs. I employed clarinet extended techniques and phrase structures that had historically proved successful in initiating vocal responses from Mia. Since I established this improvisational vocabulary in response to Mia's vocalisations, many of the common gestures I utilise on clarinet structurally resemble canine vocalisations I observed in Mia. In Figure 4, a spectrograph registers common gestures I utilised on clarinet throughout the fieldwork (and as part of *Dog Choir*), many of which I will refer to in descriptions of musical sessions in Chapter 4. This inventory of musical phrases and extended techniques is bespoke to my practice of musicking with dogs; however, it is by no means fixed. While it could be argued that the mere presence of the clarinet as a genred product of Western art music narrowly

imposes a human cultural barrier on these musical products, I approached my clarinet and broader sound-making practice with deliberate stylistic irreverence and flexibility, positioning my work as a negotiated space between existing human instrumental traditions, my own taste as an improvising musician, and canine vocal expression. Rather than striving to demonstrate human-centred virtuosity or adherence to genre conventions, I adopted an exploratory mode that embraced timbres with high noise content and irregular phrase structures, evoking some elements of canine vocal vocabularies. Consistent with this goal of exploration, I expanded my sonic palette beyond the clarinet in both the initial fieldwork and the *Dog Choir* project. Despite limited formal training in voice and certain instruments, I incorporated singing, melodica, harmonica, and laptop-generated electronic sounds, allowing the practice to remain adaptive, responsive, and inclusive of sonic modalities not limited to human instrumental expertise.



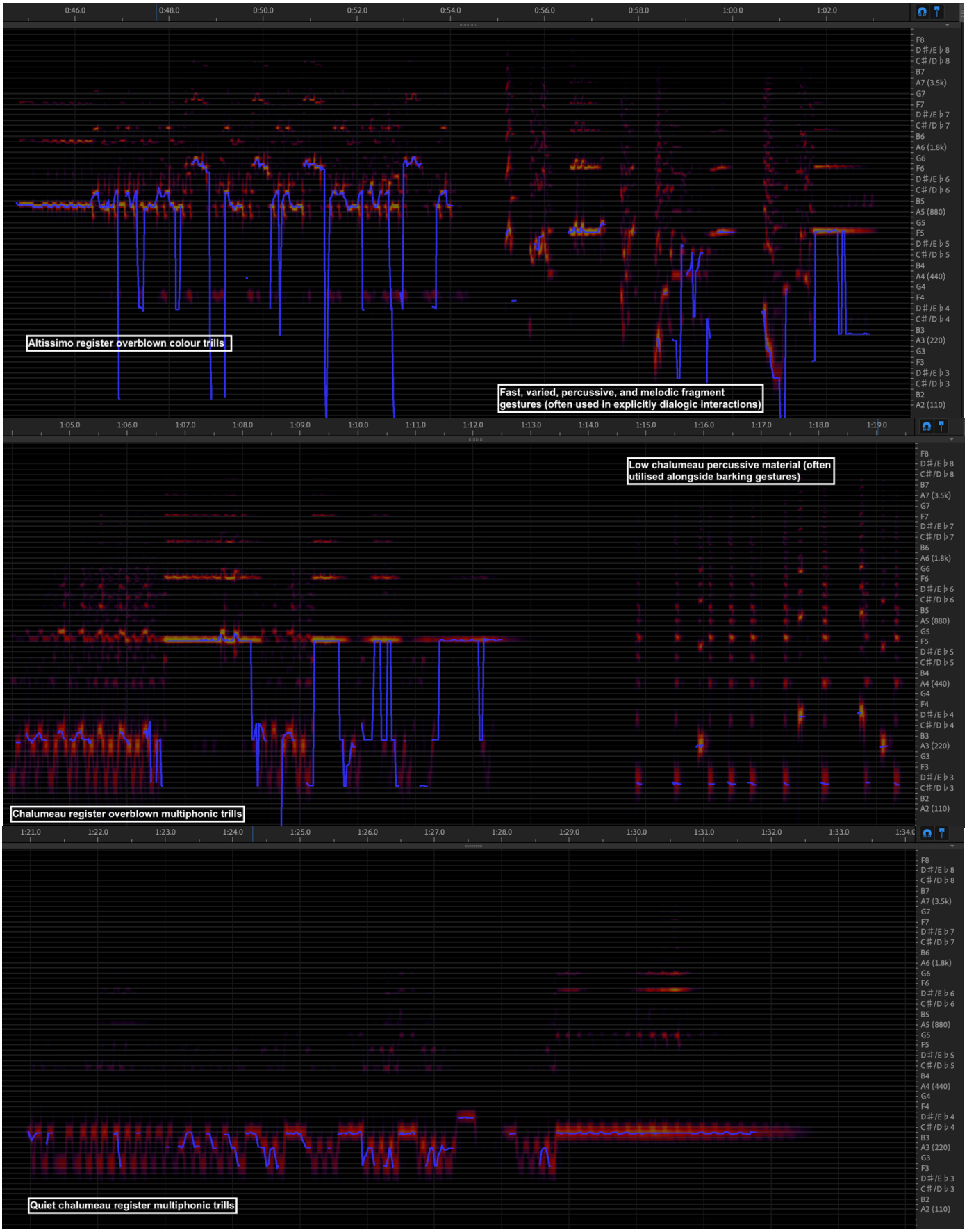


Figure 4. Spectrographs displaying eleven of the common clarinet gestures I utilised playing music with dogs in this project, an improvisational vernacular I first developed playing music with Mia (Frank 2018), corresponding with Track 1.

When introducing musical material and responding musically to the dogs, I privileged a mode of playing that was gestural and approximate rather than explicitly tonal, scalic, or regularly rhythmic (as reviewed in the case study chapters). I approached improvising with the dogs in a way that is structurally analogous to conversation: call and response. To begin, I would offer up a gesture (perhaps a long low resonant tone, a short high-pitched approximately melodic fragment, or a noisy trilled multiphonic) and wait for a response. If no obvious response came, I would repeat the material and again wait. If they repeatedly offered nothing in return, I would either (1) proffer new material or (2) stop playing and take it as a sign that they were not in the mood to participate. When the dogs did vocalise, I would attempt to respond with a gesture that either (1) structurally matched/mirrored that vocalisation (e.g., a descending canine whine was matched with a high note bend gesture) or (2) contrasted their vocalisation (e.g., a repeated set of barks was accompanied by a long tone). Within extended improvisational exchanges, my approach became more fluid, intuitive, and less about adhering to this binary decision between mirroring or contrasting gestures. I avoided material that too closely adhered to recognisably human genres; rather, I thought about gestural directions. This involved a heavy dose of bends, slides, deliberate overblowing, and wide vibrato. Likewise, I used "noisy" sounds (broad-spectrum sounds that are not harmonically resonant or stably pitched) such as vocal growls, multiphonics, and heavy staccato, all in attempts to mirror noisy canine vocal types like barks, yelps, and growls.

As well as playing melodica myself, this instrument was often taken up by the dogs' carers to integrate the musical practices they pursued independently with one another into the collaborative practice I aimed to create. Since Arca's vocalisations tended towards stably pitched long tones, I found the melodica to be a useful instrument to match this vocal quality. Additionally, because the melodica requires little musical training, both Verity and Chloe were able to play this instrument during some of our sessions. Understanding that music, movement, and dance are evolutionarily bound together in humans and other animals (Merker 2014), I allowed physical gesture to be a parameter I could experiment with, observe, and accompany with sound. This stylistic flexibility and open-mindedness in the human musical component of these interspecies practices expresses my respect for the unique, potentially musical, and vocal idioms of dogs. In adhering to these goals of respecting and acknowledging the potential existence of a canine musical culture, crucial beyond all else was astute listening, keen observation, and sensitive responses to vocal and behavioural cues, especially if they signified distress.

While this project consistently resists formalised training protocols and operant conditioning as primary means of eliciting musical behaviour, seeking instead to avoid instrumentalising dogs into producing pre-specified sonic outcomes, this position does not reject Haraway's more nuanced account of positive reinforcement as a generative site of becoming-with. In *When Species Meet*, Haraway situates reward-based training with her dog Cayenne Pepper not simply as behavioural control but as a relational technology that can cultivate attentiveness, mutual responsiveness, and emergent improvisation, observing that "positive reinforcement, properly done, sets off a cascade of happy anticipation and inventive spontaneous offerings for testing how interesting the world can be" (2008: 212). I take seriously Haraway's claim that such practices, despite their asymmetrical power relations, may open spaces for co-invention that would not otherwise arise. However, my methodological choice to minimise explicit conditioning (particularly by using food as a reward) reflects the specific aims of this research: to foreground dogs' self-initiated response to music, timing, proximity, and withdrawal as communicative acts rather than as responses shaped by reward contingencies, and to cultivate a listening practice attuned to subtle, mostly unsolicited forms of participation. Rather than positioning this as an ethical opposition to positive reinforcement per se, I frame it as a calibrated methodological constraint designed to reduce the risk of shaping behaviour toward anthropocentric musical expectations, while remaining open to the possibility—acknowledged by Haraway—that structured reinforcement can, in other contexts and projects, productively scaffold improvisatory capacities and relational attunement. I also acknowledge that I enacted forms of conditioning through verbal and physical encouragement, these being equally potent motivators in encouraging conditioned behaviours in dogs, given their immense emotional sensitivity to human emotional states (Colino 2021). In this way, the project aligns with Haraway's broader commitment to situated, accountable multispecies practices, even as it adopts a different tactical emphasis in how novelty, agency, and co-creation are invited to emerge.

3.3.7 Musical and behavioural analysis tools

I assessed the videos of sessions aurally and visually. I generated spectrograms from audio in the videos via Adobe Audition 2014 using the spectral pitch display function. The FFT (Fast Fourier Transform) size was 2048, while the window setting was Blacking—both Audition default settings. Each spectrogram has a frequency scale on the right-hand Y axis of the diagram (displayed as pitch names i.e., A4, A#4, and so on), while the duration range is

displayed on the top X axis (expressed in minutes and seconds—i.e., 2:26). The displayed frequency and duration ranges of each spectrogram differ in each instance to allow for ease of interpretation. Using the image editing software Preview (version 11.0), I annotated the spectrograms by adding text labels and coloured lines to indicate who produced each sound.

My approach mirrors the observational character of multispecies ethnographic and ethological practice. I present rhythmic and pitch correlations and patterns through spectrograms and accompanying descriptions, while gesture and behaviour typologies are conveyed via fieldnote observations. Most spectrograms are paired with corresponding audio excerpts, labelled by track number (link to download tracks and track details can be sourced in front matter titled "List of Audio Tracks" [page xxiv]). Given the unconventional musical form of many dogs' vocalisations, textual supplements are often the most effective way to convey key concepts. Screenshots from the video documentation of sessions also prove useful aids in communicating particularly extra-musical behavioural observations. These screenshots are referenced with the date of the session, the "play" number (some sessions included up to three separate recorded plays), and the time code at which the screenshot was captured (see Fig. 5, which is discussed in detail in Chapter 4.3.7).



Figure 5. Verity using her finger pinch gesture to signal "quieter" in Play 1 of Session 6 on 19 January 2024 (screenshot captured at 6:13).

Example of referencing format of screenshots.

Formulating a morphology of canine vocal gestures was a useful tool to find patterns and to communicate my findings in written form, in the same manner that some animal behaviour scientists employ this method; for instance, Cohen and Fox catalogued "twelve basic canid sound types …including whines (and longer softer whimpers), short yelps, yips, screams, barks, coughs, growls, coos, howls (or yowls), mews, grunts and guttural 'clicks'" (Cohen and Fox 1976: 79-80). Scientists tend to demusicalise the language used to describe animal vocalisations; instead, opting for vocabulary that presumes purely communicative and non-aesthetic functions for animal sound (e.g., "call" instead of "song" or "vocalise" instead of "sing"). However, in my effort to frame and analyse these behaviours through a distinctly zoömusicological lens, I endeavour to apply musical terms where relevant. For instance, by framing a howl as a melodic contour, we can more clearly observe nuance in individual gestures, which are so easily perceived as structurally homogenous phrases through human ears.

I was initially hesitant to enforce generalised analytical parameters on the responses of dogs, as each animal perceives and responds to music and the presence of humans who are not their primary carer in ways unique to their personal history and to their relationship with both me and their primary carer. To depict the diverse and often mixed ways dogs responded to and participated in musicking, my analysis focusses on: each dog's overall vocality in response to musical stimuli, their reactivity to shifting sonic parameters of the human music (i.e., pitch, amplitude, pulse, musical gesture), any behavioural signs of "active listening," the extent to which their gestures seem to match or mirror human gestures and in what way (dynamically, in a pitch-based way, or physically), behaviours signifying emotional affectation (e.g., excitement, relaxation, or distress), and the role their primary carers' presence or absence plays in their willingness to vocalise. Additionally, I draw attention to the dogs' (and their humans') social and geographic contexts to further interrogate their responses to music. I decided on these broad areas of analysis because each example I discuss brings forth case-specific phenomena evidencing a diversity of canine approaches, perceptions, and responses to musical interventions.

3.4 Stage 2: Media Analysis and Interviews

In the first stage of this project, I documented my own subjective accounts of musical interaction with dogs. The analysis of behaviours observed during my sessions with the dogs during Stage 1: Fieldwork was further enriched by casual interviews I recorded with the

dogs' primary carers (Chloe and Verity) at various points throughout the fieldwork. These discussions enabled the dogs' most intimate companions to advocate for and provide context to certain behaviours I encountered and illustrate the distinctly relational function of their vocalisations. Beyond the interviews, to broaden the scope and capture the varied ways music acts as an agent in other human–dog relationships, I conducted a media investigation and interviewed two other practitioners with experience making music with their dogs.

These external perspectives became an important means of contextualising and triangulating the Stage 1: Fieldwork within a wider investigation of the phenomenon. For instance, in surveying archival print and digital media pertaining to canine-human musical practices, the objective was to compare the perspectives gathered through my interviews with broader historical and contemporaneous perceptions of the dog-human musicking phenomenon. These two established modes of inquiry (a media survey and interviews) form the basis of Chapter 5: Perspectives on Dog-Human Music in the Media and Chapter 6: People and Their Dogs: Bespoke Practices.

3.4.1 Sourcing media examples

In seeking out historical precedent for the phenomenon, I accessed the National Library of Australia's online archive *Trove* (Trove 2025) to locate print media accounts—dating from the late 1800s onward in newspapers and magazines—documenting vocal and musically curious dogs. Some articles were reprints of stories from overseas, but most were originally published in Australia. With similar objectives, the digital media examination additionally serves to further show the widespread nature of, and contemporary understanding/framing of, the phenomenon. Furthermore, I discuss the role of digital technology and social media as a creative, propagative agent in dog-human musical practices. The data sourced from digital media comes from YouTube, TikTok, and Instagram as well as some clips first seen on television, then republished online. All directly referenced print media articles are itemised separate to the other literature bibliography in the section titled "Archival Print Media Bibliography" while the online videos cited are listed in the section titled "Social Media Bibliography." When referring to archival media examples, in the absence of a credited author, I cite examples using the publication, the year of publication, and the page number—for example, (*Richmond River Express* and *Casino Kyogle Advertiser* 1925: 6). When referring to social media videos in this chapter, I cite the account and the year of publication—for example, (Gardea 2008). In the Archival Print Media Bibliography,

references are listed in alphabetical order according to publication while in the Social Media Bibliography, references are listed in alphabetical order according to the publishing account.

3.4.2 Media and language analysis

To enhance the understanding of how people have perceived the dog-human music phenomenon both contemporarily and historically, I document and discuss media relating to musical dogs. Snape and Spencer describe discourse analysis as "Examining the way knowledge is produced within different discourses and the performances, linguistic styles, and rhetorical devices used in particular accounts" (Snape and Spencer 2003: 200). At times, I drew on such an approach to understand how the language employed across this media enacts social and cultural perspectives and identities (Gee 2025) vis-à-vis dogs and music. My analysis of media seeks to understand how the language authors utilise to discuss musical dogs reflects prevailing and changing attitudes to the role of domesticated dogs and music in human lives across the nineteenth, twentieth, and twenty-first centuries.

I exploit these guiding questions to analyse the linguistic content of archival news and print media (headlines, captions, and body text) and social media videos (titles, captions, comments, and any text added in post-production editing). The investigation considers the rigid ways in which language is used to determine perceived binaries between human and non-human, between domesticated and wild (a wild animal is regularly referred to as "it," while a human or a domesticated animal is referred to as "he/she/they"), and between music and noise (singing versus vocalising); it also explores the ways authors/publishers utilise language to subvert or reinforce these binaries in their depictions of dogs participating in musical practices. My discussion and analysis scrutinize the use of overtly musical language that potentially positions these practices as musical in the minds of audiences. Additionally, I probe the plainly emotional and subjective interpretations of canine vocality and musicality apparent in the choice of language, revealing tendencies to anthropomorphize dogs that presume human emotional and semiotic functions for canine vocalisations. The linguistic trends revealed in this archival media investigation aid in contextualizing the experiences musicking with dogs discussed by interview participants in Chapter 6.

3.4.3 Media in cultural context and underlying algorithmic mechanisms

In approaching this examination of canine–human music in the media from a methodological standpoint, I deemed it imperative to remain acutely aware of my own cultural context,

particularly in relation to the digital media under review. My set of digital data (the videos) would be partly dictated by the algorithmic mechanisms that underpin my personalised YouTube/TikTok/Instagram profile's recommended videos and suggested search terms. I must acknowledge my own choices that feed the algorithms that then dictate my path. Choosing a suggested video branches my path, the platform learns my taste, and I see content that would not appear if I had picked another option (Airoldi 2021). As articulated across ethnographic and humanities disciplines, assuming I possess an objective stance on the field is fraught (Haraway 1988; Nettl 2005), given both my position as a complex blend of cultural identities and histories that inform my choices and the content algorithms underlying social media systems, which further complicate my time in this part of "the field." Similarly, Rogowska-Stangret describes how Haraway disputes historically self-professed objectivity as hiding "a very specific position (male, white, heterosexual, human) and thus makes this position universal" (Rogowska-Stangret 2018; non-paginated). Thus, my own situated knowledge is implicit in shaping my understanding and discussion of the dog-human phenomenon in the media, and it by no means constitutes a chronicle of each Internet user's multifarious and diverse digital experiences of interspecies musics.

Likewise, in discussing the methods I utilised in sourcing this content, my own culturally positioned place in this investigation must be acknowledged, particularly my limited capacity to source newspaper articles, social media accounts, videos, and trends outside of the Australian English-speaking media sphere, and therefore is beyond the scope of this project. In the case of online examples, as a result of the algorithms underlying the "recommended videos" list (YouTube) and "for you" page (Instagram and TikTok), I am fed and become aware of particular videos and accounts, while other less popular or obscure content may be missed. This recommended content is compiled partly due to my browsing history on each of these platforms, which is entirely within the Anglosphere, so I may inadvertently be excluding exceptional examples of musical dogs in other parts of the world that caption their content in other languages. Examples of this phenomenon may exist on social media platforms that are not commonly used in the West, like Qzone, Weibo, and WeChat (Chinese platforms used predominantly by Chinese users), as well as VK (Russia's Facebook alternative). As such, my chosen online examples are unavoidably skewed towards the English-speaking parts of the world.

Given the often-unclear welfare settings of the dogs depicted in this media, I understand the digital content I used as documents (articles, videos, news stories, and social media accounts) are curated and mediated by the human uploaders and could imply the presence of off-screen coercion that may have motivated these behaviours. While I have previously made clear that I am not studying the "natural" undisturbed behaviours of dogs, I acknowledge that potential coercion by way of human intervention may be a factor in the prevalence of this phenomenon.

3.4.4 Interview methods

Interviews allowed me to examine the diverse roles of music and sound in the lives of dogs and their human companions. I reached out via email to two people who each engaged with sound and music as part of their relationship with their dogs: composer and drummer Alon Ilsar and Razzly, and zoömusicologist Emily Doolittle and Idris. By engaging with people whose unique, intimate musical practices lay beyond what I could replicate within this project's constraints, I aimed to enrich my field insights.

In following the lead of contemporary ethnomusicologists and ethnographers who emphasize dialogical approaches after the reflexive turn, the interviews included structured, semi-structured, and unstructured interview methods to engage with the participants in a way that actively acknowledged my non-neutral positionality. With my own experiences musicking with dogs, I was cognisant of how my presence and interpretations shape the knowledge produced through these ethnographic interviews. I had a list of nine open-ended questions that organically led into discussions of related topics. To record these sessions, I used a Zoom H5 microphone (with an iPhone recording audio as a backup), which I later transcribed for analysis. Full interview transcripts are located in Appendix A.

I compiled these questions to stimulate further discussions:

> *Do you play music for or make music with your dog?*
>
> *How does the dog behave when you engage in this musical practice?*
>
> *Does the dog vocalise and do you notice patterns or musical reactivity in their vocalisations?*

Is the practice habitual and does it occur the same way each time?

Is the musical practice you engage with together an enriching experience for you and your dog?

How did the practice emerge?

Has the practice changed overtime?

Do you believe your dog enjoys the practice you have together?

How does your and the dog's individual history play into the music you make together?

Throughout the second stage of my methodology, I employed interviews and media analysis to interrogate prevailing cultural perceptions of the interspecies musical phenomenon. This expanded scope of inquiry ultimately shaped the project's final artistic outcome, *Dog Choir*, which serves as a synthesis, embodiment, and public expression of the research.

3.5 Stage 3: Public Performance Workshop *Dog Choir*

The third stage of the project communicates and further situates the research through a public performance workshop—*Dog Choir*—where participants engage sonically with their dogs in social and sensory play. After presenting a musical performance work called *Concert for Dogs* (in the spirit of Laurie Anderson's work of the same name [Anderson 2016]) several times as part of my performance practice (at Canberra International Music Festival 2022, Bondi Festival 2023 [Sydney], and Art Farm Birchs Bay [Tasmania]), I arrived at the idea of *Dog Choir*: a participatory workshop performance giving a platform for people to present musical works with their dogs, for an audience of dogs and people. Throughout Stage 1 and 2, as I met people who were genuinely "musicking" with their dogs, I sought a way to publicly share and further triangulate my findings in a non-expert forum that would involve and showcase the very people and dogs I had worked with throughout the project. As well as performances by three dog-human duos, I included a version of the participatory improvisational work that I had prototyped at the various iterations of *Concert for Dogs*. In Chapter 7: *Dog Choir*, I will more fully describe the background, precedent, prototyping, and justification for creating the participatory workshop performance as a key component of this research.

3.5.1 Dog Choir *recruitment and planning*

Professionally filmed by videographer Steve Wilson-Alexander, *Dog Choir* took place on July 21, 2024, in the upstairs courtyard and performance space of 107 Projects in Redfern, Sydney. Three dog guardians (Verity, Chloe, and Alon) agreed to present musical performances with their respective dogs, while I facilitated an interactive improvisation activity similar to the *Concert for Dogs* performances I had previously presented in Canberra, Bondi, and Tasmania. To recruit both human and canine audiences for the event, I spread the word using a poster I created (Fig. 6) via my social media channels (Instagram and Facebook). I also reached out to friends and colleagues with dogs, encouraging them to share the information with others who might be interested. Additionally, I created an online Humanitix event listing for people to register their attendance—both human and canine—allowing them to include any crucial information regarding their dogs' individual needs that required accommodation. In total, forty people and thirteen dogs attended *Dog Choir* as audience members, in addition to the three dogs and their human companions who performed.



Figure 6. Poster used to promote *Dog Choir* event on 21 July 2024 (photo used courtesy of Bondi Festival and Chloe Abdelnour).

3.5.2 Animal welfare considerations for Dog Choir

Before the event, I liaised with the attending humans to ensure that all dogs were well-socialized, not anxious or likely to be distressed by noise or music, and had no history of aggression toward other dogs or people. Additionally, in the event reminder email sent to registered attendees, I forewarned participants about the chaotic and experimental nature of the event, emphasizing that there would be loud noises, numerous other dogs, and a large crowd. The venue I selected—the upstairs courtyard at 107 Projects in Redfern—featured a tiled indoor space that opened onto an outdoor rooftop garden. This setup allowed both dogs and people the option to exit the louder enclosed indoor space for sonic and social relief. The speakers used for the microphones and electroacoustic sounds were set at a medium-low level, ensuring that the volume was not excessively louder than what dogs typically experience in day-to-day life. As the facilitator and MC of the event, I aimed to create a relaxed performance environment—unlike a traditional concert—to accommodate unexpected reactions or complications from dogs in attendance (e.g., aggressive behaviours or distress caused by sound or environment). In the event reminder email, attendees were instructed to monitor their dogs' behaviour and take responsibility for attending to their individual needs.

3.5.3 Event structure

Dog Choir opened with an informal social period in the outdoor terrace space, allowing staggered arrivals, spatial acclimatisation for the dogs, and casual interaction among human and canine participants. This phase established a relaxed, non-performance atmosphere and positioned the event within the social logic of a dog meetup.

Participants were then invited into an indoor performance space for the opening address, where I outlined the research premise, event structure, and participation guidelines. This address framed the event as an experimental, process-oriented space in which dogs could engage vocally or behaviourally without prescriptive expectations, and emphasised listening and observation as valid forms of participation.

The central portion of the event comprised three sequential canine–human performances, each involving a different dog–human duo (or trio). Before each performance, I conducted a short conversational interview introducing the pair's history and musical practice, situating their work within the broader ethos of the project. The performances were framed as demonstrations of co-created interspecies practices, rather than conventional musical recitals.

The event concluded with a guided improvisation piece, framed by a manifesto-style statement on canine vocal agency. In this segment, I conducted the participatory group piece involving humans, dogs, and simple handheld instruments given out to the audience (slide whistles, harmonicas, party blowers, train whistles, a miniature toy piano, a whirly tube, and brass goblets). I taught the audience basic conducting cues, and participants were encouraged to respond to their dogs' comfort and interest, ensuring the improvisation remained non-coercive and adaptive. I facilitated this final section—an interspecies chorus howl—with the goal of bringing together the human and canine participants in a shared sound-making process, reinforcing the event's emphasis on collaborative exploration and interspecies play.

This structure, and details related to the items presented at the event, will be more fully described in Chapter 7; the design of the event relates specifically to earlier experiences in Stage 1, Stage 2, and the various iterations of *Concert for Dogs*. To explicitly illustrate the structure and content of the event, I include a short, edited video of the event (Video 1. *Dog Choir* edited highlights 21 July 2024 videography by Steve Wilson-Alexander). I gathered additional written responses and reflections from human *Dog Choir* participants through a post-concert online survey (using Google forms) (see Fig. 7 for survey questions). The recordings and experiences of people at the event proved useful as another data set to triangulate with the data gathered in the first two stages of the methodology. I will contrast the responses of the dogs at *Dog Choir* with the those of dogs in private settings while reflecting on the successful and unsuccessful components of the event. Moreover, I suggest additional ways this research, and the musical practices showcased as part of *Dog Choir*, might be communicated and platformed.

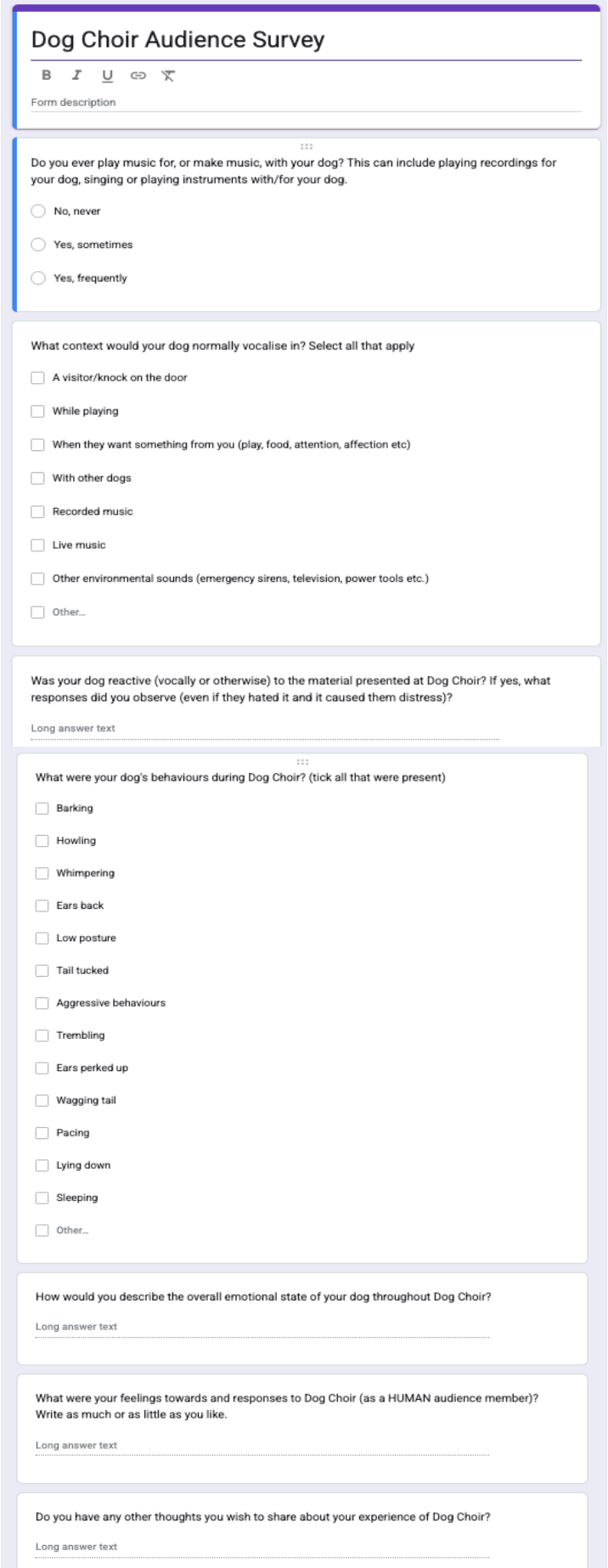


Figure 7. *Dog Choir* post-event participant Google Forms survey.

3.6 Conclusion: Methodologically Accounting for a Complex Phenomenon

This chapter has outlined the iterative, multimodal, and ethically grounded methodology underpinning this research. Faced with a phenomenon with limited academic attention and few methodological precedents, I drew on tools from zoömusicology, ethnomusicology, animal behaviour studies, environmental humanities, and creative arts research to develop a three-stage approach: (1) exploratory fieldwork with dogs and their carers, (2) qualitative interviews and media analysis to broaden the scope and triangulate findings, and (3) the public participatory workshop *Dog Choir*, which synthesised and shared insights through artistic practice. These various methodological means serve to interrogate the dog-human musical phenomenon as it occurs through my subjective experiential lens, the first-hand perspectives of other individuals, and cultural representations of similar practices. This research draws on theories and precedents from the study of human music to deepen our understanding of this phenomenon as a legitimate *musical* practice. By consciously employing terminology and methodologies from disciplines investigating human musical and cultural phenomena to thoroughly examine more-than-human musics, this project advocates for interspecies music as a means of building deeply responsive and empathetic bonds.

The methodology I developed was deliberately fluid and context-responsive, acknowledging that musical engagement with dogs is highly individualised and relational. Across all stages, a commitment to interspecies ethics guided my choices: I prioritised canine agency, wellbeing, and consent, allowing dogs to opt in or out of musical participation, adapting my playing to their cues, and employing methods that were stress-free and mutually enjoyable. Tools such as musical improvisation, spectrographic and behavioural analysis, fieldnotes, and discourse analysis enabled me to capture both the sonic and social dimensions of interspecies musicking. Additionally, developing an adaptive catalogue of clarinet extended techniques specific to the context of canine musical collaboration was a key step within the methodology. By integrating experiential, practice-led insights with external perspectives and public engagement, this methodology has allowed me to construct a multifaceted understanding of canine–human musical collaboration.

Chapter 4: Case Studies

This chapter presents three case studies in which I formed musical relationships with dogs across different contexts: with Tilly and her human carer, Chloe; with Arca, a dog already engaged in musical practice with his carer, Verity; and with several dogs within the context of an animal shelter (Monika's Doggie Rescue). These case studies document the simultaneous emergence of social and musical relationships. My discussion will recount the developing sonic, structural, and behavioural form of these shared experiences as well as the iterative, relational processes that shaped each musical practice. The discussion also draws attention to previously overlooked canine auditory and vocal aptitudes that anecdotally emerged during certain moments of this initial fieldwork; these potential aptitudes challenge established understandings of canine musical and vocal capacities.

4.1 The Precedent of Mia

Although not part of the data collected for this project, my past and ongoing experiences playing music with Mia, my family's staffie-cattle dog, are an important precedent to outline. This ongoing practice and my relationship with Mia have significantly shaped the way I engage in attempts at interspecies musical collaboration. My investigation of Mia's vocal responses to the clarinet laid the foundation for the approach I adopted during this thesis project with Tilly and Arca and with dogs I met at Monika's Doggie Rescue. These experiences with Mia first prompted me to pursue zoömusicological lines of inquiry, questioning the human uniqueness of musicality.

After five years of informal musicking with Mia, where I played clarinet and she vocalised, as part of my undergraduate honours work (see Fig. 8), I conducted a series of structured improvisations with her. These focused on exploring the potential for non-human musical agency and mutual responsiveness. Across ten recorded sessions, I devised two improvisatory "pieces" designed to test Mia's gestural and rhythmic responses to the clarinet. In "Piece 1," I alternated between two contrasting clarinet gestures—such as high, sustained tones versus low, percussive ones—to examine whether Mia would vary her vocalisations accordingly. In "Piece 2," I introduced a rhythmic ostinato to see if she might entrain to a regular pulse or mimic individual rhythmic motifs. In both settings, Mia demonstrated patterns of vocal

response that were neither random nor purely functional; she adapted her howls, whines, and barks in ways that roughly corresponded with my musical gestures, suggesting a form of deliberate gestural modification. In forming new practices with the dogs I met during this project, I did not impose the same rigid structural musical forms; instead, I approached each session with the intention of freely improvising and attuning to the unique responses of the dogs.



Figure 8. Mia and I in a recording from 2016 (author photograph).

Significantly, this process was never about training or coercion; Mia and I co-created sound in a space that allowed for mutual influence and improvisational spontaneity. Sometimes I initiated or sometimes she did, and eventually she even appeared to anticipate the ritual of our sessions. This idea of a shared musical ritual shaped my belief that interspecies musical interaction can function as a co-authored, dynamic event, where the dog is not merely reacting but also shaping the trajectory of the music. Over time, Mia's participation, nurtured within a domestic context of trust and familiarity, underscored the significance of long-term relational immersion in fostering such musical dialogue.

These insights directly influenced my approach during this thesis. Mia's collaborative spirit shaped my conviction that interspecies music is not defined by perfect synchrony or melodic

coherence, but by attentiveness, reciprocity, and the mutual shaping of sonic events across species boundaries. However, I can also acknowledge that the way in which Mia and I built a musical practice together is but one potential approach people might choose in interspecies musicking.

A note on the fieldwork recordings: the recordings I made with the dogs discussed in the following section are casual, messy, and meandering; therefore, descriptive recounting sections of the following chapter reflect the unstructured, informal nature of these sessions. The recordings and the music we made were never intended as "performances" or "works"; instead, these sessions were framed as experiments, acts of co-creation, and play. As in any collaborative musical practice, shared structures, features, and working methods emerge across multiple instances. The following sections outline the forms, contexts, and evolution of the practices and relationships I developed with dogs.

4.2 Tilly and Chloe

My sustained musical engagement with Tilly unfolded over sixteen sessions between March 2023 and July 2024, interspersed with informal visits that strengthened our familiarity and trust. Across this period, Tilly's responses evolved from cautious curiosity into a distinct and varied vocal repertoire, shaped by the relational dynamics between herself, her guardian Chloe, and me. These sessions were not approached as training or performance, but as co-created spaces where Tilly's vocalisations could emerge on her own terms—sometimes as brief, punctuated "woowoo" barks and at other times as extended, melismatic howls and growls. What follows is a detailed account of this evolving practice, tracing the contexts, structures, and relational cues that shaped Tilly's participation and revealing how her vocality became both an expression of social presence and a collaborative musical act.

4.2.1 Background to Tilly and Chloe

Before beginning this project, I had met Tilly on several occasions through her guardian, artist and disability support worker Chloe Abdelnour. Tilly, a large sandy coloured mix breed (Fig. 9), was familiar with me as a casual presence in her world, but we had not spent significant time together. My interest in working with Tilly for this project emerged from

Chloe's descriptions—and my observations—of her distinctive and expressive vocal habits in social contexts. Now an elderly dog (10 years old at the time of our fieldwork), Tilly was first adopted as a rescue puppy by Chloe and Jimmy during their marriage and now divides her time between them following their separation.



Figure 9. Tilly and Chloe at the beach (author photograph used with permission from Chloe Abdelnour).

What drew me to Tilly was Chloe's repeated characterisation of her as a "talkative" dog—one who uses her voice in nuanced and intentional ways to engage with her human companions. In my initial discussions of the project with Chloe, she described Tilly's vocalisations not as noise or annoyance, but as relational acts: efforts to communicate, participate, and connect. Chloe explained the nuance of Tilly's conversational vocalisations as distinctive and functionally separate to her territorial warning barks:

> The bark is more of a deep growl to other dogs when it's someone at the door. It's a similar sort of deeper warning sound like, "Mum, someone's at the door. Who is it?", or like a growl to sound scary to whoever's outside the door. That's really different to

> how she is when she's talking to you. It feels a lot more excited and a different tone, she's not using her throat to growl (Abdelnour 2023, personal communication).

Chloe's observation of Tilly's conversational tone as markedly distinct from the bark or growl she deploys in defensive or territorial situations suggests that her vocalisations in social contexts are not merely utilitarian but perhaps expressive and considered. Chloe described scenarios where Tilly would vocally insert herself into group settings—like joining in on a chorus of *Happy Birthday*—in ways that seemed to affirm her desire to be included as an equal participant, utilising vocalisation as a vehicle to express this desire. This context for canine vocal engagement in human musical practices is frequently documented online (Prafeston 2007; Waggletv 2016; Beautybuygen 2023).

Despite some instances of Tilly vocalising in distinctly human musical contexts, Chloe initially expressed hesitation about my proposal to engage with Tilly in structured musical sessions. She was wary of training Tilly to "perform," equating it with teaching tricks for entertainment, which clashed with her view of Tilly as an autonomous being rather than a pet to be shown off. Chloe explained to me:

> Something I've never really done with Tilly is teach her any tricks. She knows how to shake a hand, but I never really do that with her, because I don't really believe that she's my object. She's not something I just show off as a trick pony to people. I've never really taught her to do tricks, that's not her. She's her own person … So, I feel like in some ways trying to get her to learn to sing along to music is almost like getting her to learn a trick if she doesn't necessarily want to do it. And so, it just doesn't feel authentic for me to try to get that out of her (Abdelnour 2023, personal communication).

For Chloe, music-making risked feeling inauthentic if it did not come from Tilly's own volition. Yet, while Chloe resisted the label of "music" to describe Tilly's vocal expressions, she acknowledged that these behaviours were fundamentally social and deeply rooted in Tilly's desire to bond and be involved in the activities of the people around her. I was buoyed by Chloe's repeated claims that Tilly's vocalisations were an attempt to be socially involved. Chloe asserted, "I think that's what vocalising is for Tilly; it's relational, like it's not

necessarily music" (Abdelnour 2023, personal communication). As stated, my advocacy for dogs as valid subjects within musical discourse consistently emphasises music's interpersonal function, rather than defining it solely through structural elements or functional interpretations of a resultant product.

Chloe's interpretation of Tilly's vocal habits aligned closely with my own approach, shaped by earlier interspecies collaborations with Mia. I did not begin with the assumption that canine vocalisations must conform to human ideas of musical structure to be meaningful. Instead, I strove to treat my interactions with Tilly as expressive exchanges emergent within a broader relationship—forms of sonic bonding that, regardless of whether one calls them music, constitute acts of shared co-creation and expression. Chloe's emphasis on respect and authenticity deepened my sensitivity to how these musical interactions should be framed: not as imposed structures, but as co-created spaces where the dog's agency is not only acknowledged but central. In this way, Chloe's respectful treatment of Tilly became an ideal context for exploring musicality as something emergent from relational dynamics, rather than something that needs to be taught as a trick, coerced, or clearly labelled.

4.2.2 Chloe's respectful interpretation of Tilly's conversational vocality

Chloe's understanding of Tilly's vocalisations is shaped by a deeply respectful framework that views her sounds not as noise or annoyance, but as deliberate, socially motivated communication. Rather than interpreting Tilly's vocal output through the lens of obedience or training, Chloe reads these behaviours as attempts to engage in dialogue—what she describes as "talking." For Chloe, Tilly's voice is conversational, personal, and specific. "Her habit vocally is to use her voice to talk to me," Chloe explains. "It's usually pretty obvious what she's trying to tell me ... move over I want to sit next to you on the couch ... or you guys are having a fun time, and I want to join in, can I dance with you?" (Abdelnour 2023, personal communication).

Chloe's framing appears to find analogy with the way prelingual babies babble to mimic the rhythm and structure of speech—producing what might sound like gibberish but which is deeply relational in intent (Goldstein and Schwade 2008). In much the same way, Tilly's short, punctuated vocal bursts—distinct from alarm barks or warning growls—are, according

to Chloe, “an attempt to replicate the way that we talk.” She holds that Tilly does not seek merely to make noise; she seeks to join: “She’s just trying to bond by talking.” Tilly’s vocal interactions also seem to mirror the energy and emotion of social contexts. Chloe remarks, “She definitely likes being part of the group dynamic ... she likes feeling like she’s equal to everyone basically because she is.” This sentiment reflects not only Tilly’s confident personality but also the way Chloe chooses to relate to her. Tilly is not a passive recipient of attention or instruction, but an active, conscious participant in the shared experiences of her human companions. “She’s like, ‘I know what’s going on and I’m part of this conversation and if you guys are experiencing something together, then I’m going to join in and experience it too’” (Abdelnour 2023, personal communication).

Chloe’s choice to respond to Tilly’s vocalisations with speech, rather than with mimicry or howling, is emblematic of this orientation. “I respect her enough to see it as talking,” she says, “so I just talk back to her ... I don’t want to treat you like a dumb dog, like you’re trying to be part of this, so I’m going to talk to you like you’re part of it.” In her view, to howl back would feel inauthentic, patronising even. This framing is further reinforced by Chloe’s effort not to suppress Tilly’s vocality, even in the often-silencing environment of urban pet-keeping, stating: “I try not to do that (silencing) with Tilly, so I think that’s why she’s quite confident using her voice” (Abdelnour 2023, personal communication).

In recognising and affirming Tilly’s vocal attempts as genuine efforts at communication and bonding, Chloe models a deeply respectful interspecies ethic—one that does not reduce animal vocality to imitation, annoyance, or performance, but instead sees it as a meaningful expression of social presence and subjectivity. Building on Chloe’s interpretation of Tilly’s vocalisations as socially motivated and conversational, my intention in engaging with Tilly in musical contexts was not to override or reframe her voice as “music” in a strictly human sense but to create conditions that might amplify her sense of inclusion and agency. Therefore, rather than imposing a musical structure onto her, I sought to listen to and play with her vocal gestures as relational offerings—extensions of her ongoing effort to join in, to participate, and to be heard. In this way, my sessions with Tilly were grounded not in a desire to produce a recognisably “musical” output, but in a commitment to deepening our interspecies relationship through sound and music—where musical improvisation might serve as a shared language of reciprocity, presence, and mutual curiosity.

4.2.3 Shared musical sessions with Tilly

Table 2 catalogues the sixteen sessions I conducted with Tilly including logistical and behavioural details pertaining to location, people present, time of day, level of vocal responsiveness, periods of vocality, and instruments used. To begin this account of our practice, I describe in detail the first two sessions I had with Tilly. In recounting these early sessions, I illustrate the emergence of a distinct set of musical behaviours that became apparent and relatively consistent in later sessions. Throughout the fieldwork, Tilly's vocal responses varied—at times, she did not vocalise at all sometimes, at times she offered an initial vocal gesture and then remained silent, and in other instances she engaged in extended vocal dialogues, occasionally initiating these on her own accord.

Table 2. A catalogue of my musical sessions with Tilly.

Session	Date	Location	Time of day	Play no.	People present	Vocal response Y/N	Period(s) of vocal reactivity	Length of play	Instruments used	Vocal responsiveness
1	31.03.23	Chloe's livingroom	11:13am	1	Chloe, Solly	N	N/A	22:21	clarinet	absent vocality
2	12.05.23	Chloe's livingroom	1:48pm	1	Chloe, Solly	Y	2:45-4:17, 7:31-7:45,14:26-14:37, 15:59-16:45,17:58-18:13	19:48	clarinet, melodica (Chloe)	medium vocality
3	18.05.23	Chloe's livingroom	10:38am	1	Chloe, Solly	Y	3:30-3:40, 8:55-9:45, 13:17-14:20, 16:50-17:50	22:56	clarinet, melodica (Chloe)	low vocality
4	5.07.23	Solly's livingroom	11:33am	1	Solly	Y	1:38-1:45, 7:50-9:23	10:55	clarinet, voice	medium vocality
5	6.07.23	Solly's livingroom	11:23an	1	Solly	Y	1:07-2:30, 3:52-4:07, 5:11-5:51	6:15	party blower, clarinet, voice	medium vocality
6	7.07.23	Solly's livingroom	11:29am	1	Solly	Y	0:54-2:43, 3:31-5:09	7:18	party blower, clarinet, voice	high vocality
7	20.09.23	Solly's livingroom	12:13pm	1	Solly	Y	1:54-2:20, 6:24-6:34, 10:35-12:05	12:32	clarinet, voice	low vocality
7	20.09.23	Solly's livingroom	5:57pm	2	Solly	Y	0:13-2:25, 4:01-4:05	4:45	clarinet, voice	high vocality
8	4.10.23	Solly's livingroom	10:58am	1	Solly	Y	1:05-2:13, 3:37-4:15	4:38	clarinet, voice	low vocality
8	4.10.23	Solly's livingroom	5:07pm	2	Solly	Y	2:40-4:13	6:36	clarinet, voice	high vocality
9	11.10.23	Solly's livingroom	10:07am	1	Solly	Y	0:35-2:35	3:50	clarinet	high vocality
10	18.10.23	Solly's livingroom	11:10am	1	Solly	Y	1:30-1:53, 2:34-3:25, 3:48-4:05	4:43	clarinet	medium vocality
10	18.10.23	Solly's livingroom	6:05pm	2	Solly	N	N/A	1:51	clarinet	absent vocality
11	1.11.23	Solly's livingroom	11:54am	1	Solly	Y	1:54-4:49	5:48	clarinet, voice	high vocality
11	1.11.23	Solly's livingroom	12:02pm	2	Solly	N	N/A	3:06	clarinet	absent vocality
12	8.11.23	Solly's livingroom	11:11am	1	Solly	Y	1:33-2:52	4:07	melodica, voice	high vocality
12	8.11.23	Solly's livingroom	2:36pm	2	Solly	Y	0:06-0:42, 1:55-2:55	3:27	melodica, voice, clarinet	high vocality
13	15.11.23	Solly's livingroom	12:59pm	1	Solly	Y	1:43-5:10, 5:39-6:34	6:45	clarinet, voice	high vocality
14	20.12.23	Solly's livingroom	11:10am	1	Solly	Y	5:10-7:10	7:52	clarinet, voice	absent vocality then short period of high vocality
15	10.01.24	Solly's livingroom	12:22pm	1	Chloe, Solly	Y	6:01-6:29, 9:29-9:35, 10:40-10:52	12:34	clarinet, melodica (Chloe)	low vocality
15	10.01.24	Solly's livingroom	5:49pm	2	Solly	Y	0:49-1:27	1:59	clarinet	medium vocality
16	18.07.24	Solly's livingroom	11:40am	1	Chloe, Solly	Y	0:51-1:37, 2:39-3:50	5:39	clarinet, melodica (Chloe)	medium vocality

4.2.4 First visit: attuning

On the first visit (31 March 2023), Tilly offered no vocal responses to my clarinet playing. This initial session took place in Chloe's share house in Sydney's inner West—a familiar, comfortable environment for Tilly, where she had previously encountered me during social visits unrelated to the project. I positioned myself on the couch in the living room and, as I set up the clarinet, she sniffed the case and settled attentively at my feet. The camera was arranged to capture the couch where I sat and the nearby floor where Tilly lay. I began by playing the mouthpiece alone—a series of short, pure, high-frequency tones—to which she perked her ears and met my gaze. Her attention was clear, her ears shifting in response to changes in volume and duration. After these initial tonal offerings, I placed the mouthpiece and clarinet on the floor, allowing her to investigate the instrument in an effort to convey its lack of threat and to signal a form of sonic and physical permission (Fig. 10).



Figure 10. Tilly investigating the clarinet with a sniff during Session 1 on 31 May 2023 (screenshot captured at 2:17).

Next, I played the fully-assembled clarinet, introducing long chalumeau tones (D3-B3) interspersed with soft, slurred melodic material in the clarino register (A4-Bb5)—material similar to that which had previously elicited vocal responses from Mia. Tilly demonstrated similar curious and engaged listening behaviours (eye contact, ears forward, and head tilted at points), but my sudden increase volume and the introduction of material in the altissimo register (B5-G5) at 3:23 prompted her to stand up and move a few metres away, closer to Chloe, who was positioned behind the camera. She then lay on the carpet, resting her head and showing a lessened interest as I continued to play, offering meandering and varied material. As her attention waned, I halted my clarinet playing, and Chloe joined me on the couch. Given Chloe's presence next to me, Tilly quickly took her place between us. In this musical pause Chloe shared that Tilly often vocalised in response to dancing and movement. We tried it—Chloe and I danced—to which Tilly enthusiastically stood up, vigorously wagging her tail and shifting her gaze between us. During this period, Tilly offered a single "woowoo" bark-howl vocalisation, consistent with the way Chloe had described such vocalisations as attempts to "be involved" in a human activity and an overflowing of excited energy. Although Tilly did not respond vocally to the clarinet in the way I had anticipated (I had expected a similar dialogue to my sessions with Mia), a seed had been planted for future visits.

4.2.5 Second visit: conversational structures emerging

On our second visit (12 May 2023), given Chloe's descriptions of Tilly's vocality as attempts at participation in the activities of the people around her, I attempted to create a more conversational musical context for her to be a part of. With a duet in mind, I gave Chloe a melodica to create a situation in which Chloe and I would engage, prompting Tilly–through a sense of exclusion—to join in with her vocalisations. While this did not constitute traditional forms of operant conditioning (as described in animal studies surveyed in Hoeschele et al. 2015), I acknowledge that this fostering of an exclusive activity represents an oblique form of coercion. Playing clarinet alongside Chloe's melodica, we engaged in a rudimentary call-and-response, with me initiating short musical phrases on clarinet and Chloe replying in kind on melodica. The structure was loosely dialogic and quasi-conversational in form, reminiscent of a musical "babble." I would offer a note or melodic fragment on clarinet, and Chloe would respond with a gesture on melodica. The music, somewhat by accident, took on a twentieth-

century serial aesthetic, due in part to Chloe's non-musical background, as she played the melodica keyboard without regard for the "correct" key or consonant harmony. Between these exchanges, we prompted Tilly with eye contact and verbal encouragement. Tilly first observed closely, shifting her gaze between us, and to my delight, after about 2 minutes of playing, Tilly began interjecting with her signature "woowoo" vocalisations, seemingly expressing her intent to be involved in our musical exchange (Fig. 11), resulting in a dialogical trio.



Figure 11. Tilly's first vocal responses to the conversational clarinet melodica duet I engaged in with Chloe (pictured right) during Session 2 on 12 May 2023 (screenshot captured at 3:01).

This call and response structure, typical of these early vocal engagements with us, is visualised in Figure 12 (spectrogram showing 3:07-3:29, corresponding to Track 2). Tilly's initial vocalisations mostly adhered to a consistent structure, a "woowoo": the same vocal structure she utilised in non-musical distinctly relational contexts, like greeting us and attempting to signal our attention. After these initial "woowoo" vocalisations (Track 2), Tilly began to produce more varied vocal gestures, including longer, melismatic material. At 4:01, she first vocalised her typical "woowoo" gesture and then, in response to my sustained wide-vibrato clarino register playing, offered extended melismatic howls that slid up and down

melodically (Fig. 13, corresponding with Track 3). These longer and more varied howl and bark vocalisations—heard again at 5:30 and 6:12—corresponded with sections of sustained clarinet and melodica material.

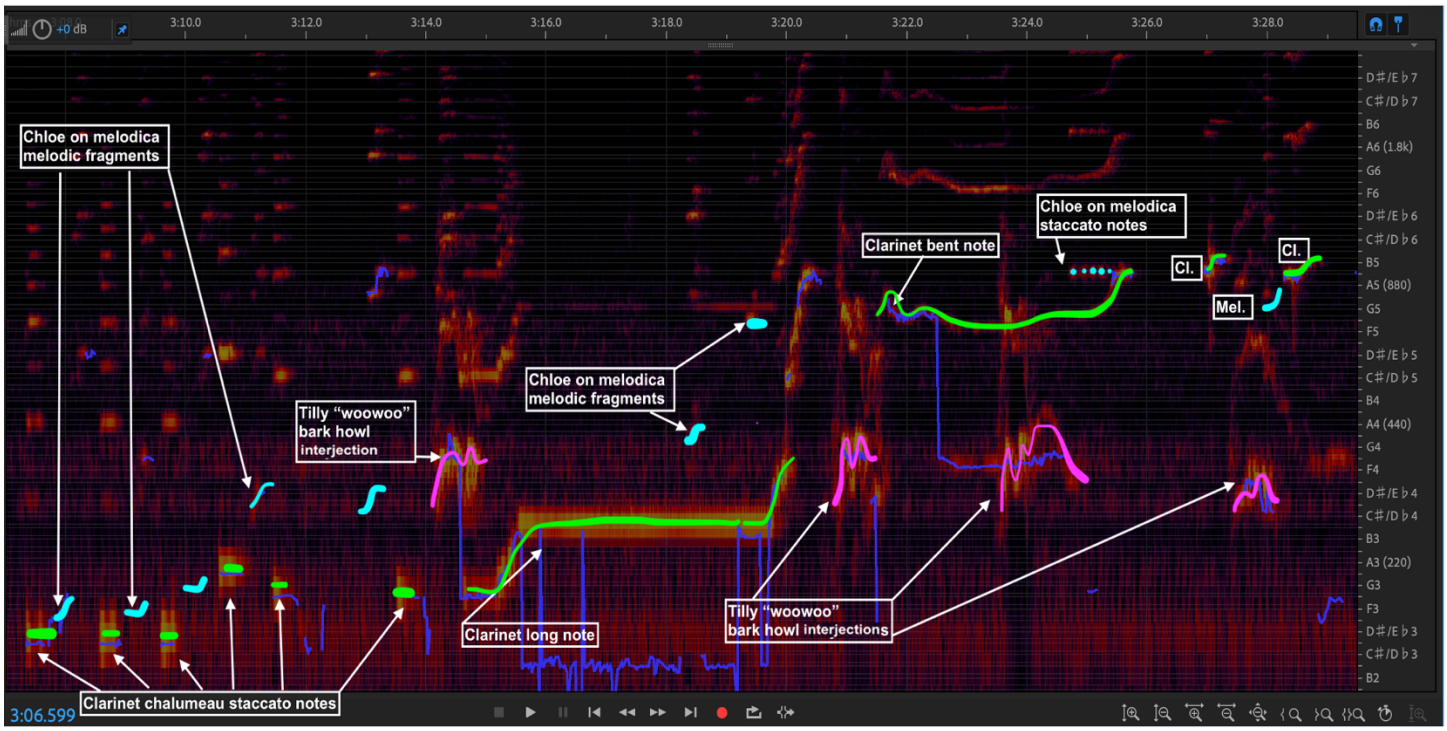


Figure 12. Spectrogram showing the three-way call and response structure (clarinet displayed in green, melodica in aqua, and Tilly vocalisations in pink) evident in Tilly's vocal engagements during Session 2 on 23 May 2023, corresponding to Track 2, generated from audio captured at 3:07 on 23 May 2023.

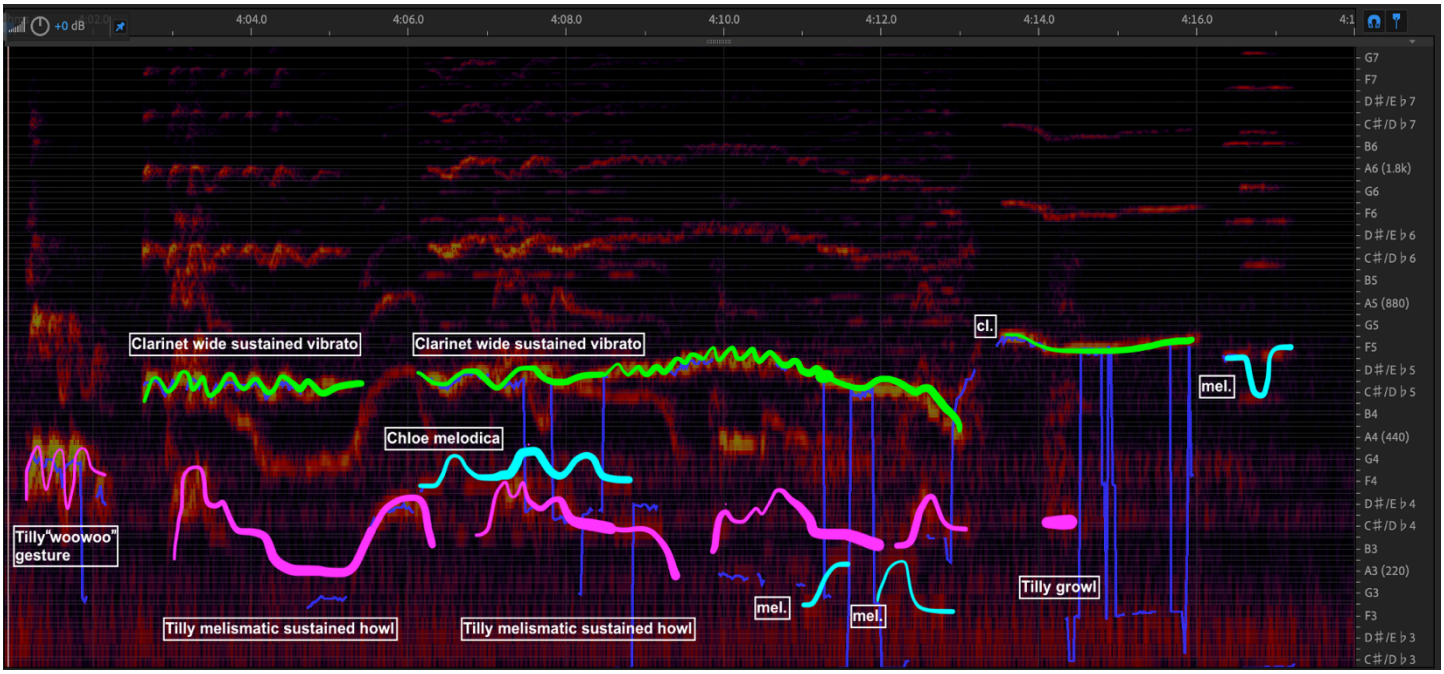


Figure 13. Spectrogram displaying Tilly's varied sustained melismatic vocalisations alongside sustained wide vibrato clarinet gestures, corresponding with Track 3, generated from audio captured at 4:01 on 23 May 2023.

Despite these few instances of a more varied vocal vocabulary, Tilly responded intermittently and most often with her structurally consistent “woowoo” vocalisation. In periods of non-vocality, she stayed engaged, shifting her gaze between Chloe and me as we exchanged musical phrases. As the session approached about seven minutes, her vocal responses became less frequent, and she eventually settled on the couch in a relaxed manner and stopped vocalising. We took a small break in the music where we each gave Tilly encouraging pats and verbal affirmation. Then, given her response to movement at the end of our last session, Chloe and I initiated a more physical musical play—playing our instruments while dancing. In response to this physicalised duet, Tilly appeared alert, with her tail wagging and offering longer, varied howls (Fig. 14). Tilly seemed to demonstrate a more consistent and intensified vocal response to Chloe’s and my duet when accompanied by physical movement.



Figure14. Tilly demonstrating a more consistent vocal response to Chloe’s and my duet when accompanied by physical movement during Session 2 on 12 May 2023 (screenshot captured at 16:09).

Tilly's heightened enthusiasm and vocal participation during our duet in this second session seemed to support Chloe's view that her vocalisations were a way of engaging in human relational acts and asserting her presence. Chloe's presence was clearly key to her initial involvement—Tilly was most vocally expressive when Chloe and I interacted musically, as if her interjections were bids for inclusion.

4.2.6 Evolving familiar relationship and the "woowoo" bark

By the third visit (18 May 2023), the consistency of Tilly's vocal engagement had increased, and I began to sense that a shared vocabulary was forming, distinct from her use of the "woowoo" vocalisation in other contexts. However, the most significant breakthrough moments came during Sessions 4, 5, and 6, which took place in my apartment while I cared for Tilly while Chloe and Jimmy were away:

> I've been looking after Tilly for the week, and we have evidently developed a close bond. She came into my room early this morning and slept beside me, her body against my legs. When I go out, she has a habit of taking one of my shoes from the closet and sitting with it on her bed. I checked in via text message with Chloe and she told me, "That's her way of having something of the people she loves while she's home alone" (my fieldnotes from 7 July 2023).

As evidenced in my fieldnotes, it was during this time that Tilly and I formed a more intimate bond. Also, during this period, I was also able to observe Tilly's vocal habits outside of our musical sessions. I noted the ubiquity of the "woowoo" bark specifically with a communicative intent (as Chloe had described) or in contexts charged with excited or agitated emotion: when I returned home, when we danced, when she wanted something like food or to go outside. These vocalisations seemed to be an overflowing of emotion, her bodily comportment reflecting this, since "woowoos" were often accompanied by excited pacing and tail wagging. For Tilly, vocalisation seemed necessary when her body alone could not carry her feelings. Figure 15 shows instances of this structurally consistent "woowoo" vocal gesture from across the sessions.

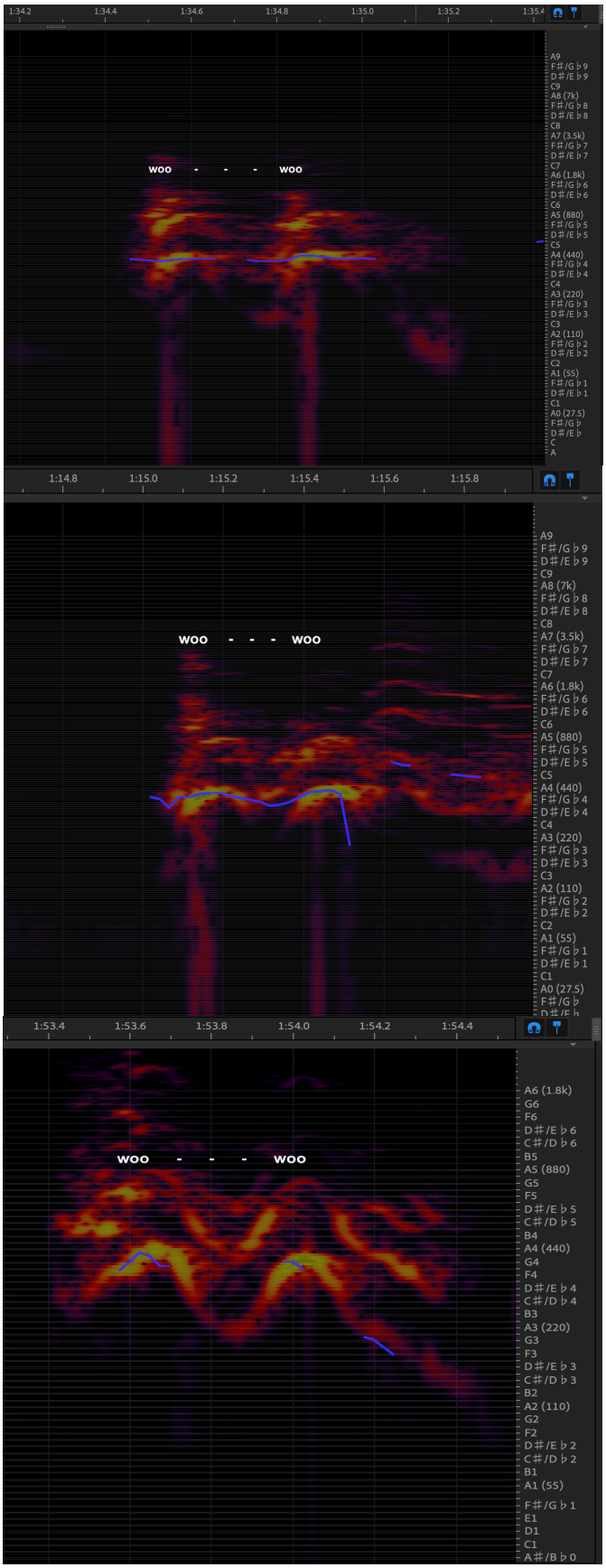


Figure 15. Three instances of Tilly's "woowoo" alert bark in Session 4 on 5 July at 1:34 (top), Play 1 of Session 5 on 6 July 2023 at 1:15 (middle), and Play 2 of Session 7 on 20 September 1:53 (bottom), corresponding with Tracks 4, 5, and 6.

Other contexts for this gesture appeared to function as a way of attracting my attention; for instance, early on the morning of 5 July 2023 she came into my room while I was sleeping, wagging her tail and vocalising her "woowoo," which I interpreted as a means of communicating to me that she was ready to get up and she wanted breakfast. During those July sessions where I was caring for her at my home, she often displayed the same attention-seeking vocal behaviour if I was generally not paying attention to her for extended periods, such as times when I was looking at my phone or computer.

During this one-on-one extended time with Tilly, her vocal reactivity increased, and the structural diversity of her vocal responses likewise grew; her vernacular included melismatic howls, low frequency grunts, sliding growls, high frequency whines, barks, and fluid morphing between each of these gestures. Alongside her widening vocal gestural range, I began to experiment with my own vocalisations as a further prompt for her vocal participation and as a tool for accurate mimesis. During Session 4 on 5 July 2023, I attempted to vocally mimic her "woowoo" gesture, to which she was especially vocally reactive; we entered into an extended call and response structure that more resembled my initially anticipated outcomes with Tilly. I vocalised and played clarinet at the same time to create a multiphonic sound so as to demonstrate to Tilly the similar functioning of my voice and the clarinet. I also developed a highly physical way of playing where I would accompany my clarinet playing with exaggerated bodily movements that explicitly visually communicated the beginnings and ends of phrases. In these sessions, she sometimes vocalised in response to the clarinet, but she seemed most receptive and willing to vocally contribute in response to my own vocalisations. Her enthusiasm to vocalise often ended with a yawn and her lying her head down to rest. When she lost interest in vocalising or engaging with me, she would move to the other side of the room or lie on her bed and correspondingly show me minimal attention. Also during this period, I observed clear and consistent non-vocal behavioural signals of both enthusiastic musical/vocal engagement (eye contact, wagging tail, vocalising, pacing, and standing up) as well as intentional non-participation (ceasing vocalising, lying down, and moving away from me/the sound source).

Despite my initial goals in not setting my sessions with Tilly up as forms of "training," I acknowledge that my affectionate interactions with Tilly—such as praise or gentle pats in response to her vocal engagement—operated as forms of positive reinforcement.

Subsequently, her increasing vocal reactivity over the sessions could be understood as a somewhat conditioned response. While conditioning and positive reinforcement may have played a role in the evolution of a consistent shared musical practice between Tilly and I, her wider vocal repertoire, her evident enthusiasm for the activity, and clear behaviours signalling non-participation in a session point to a level of intentionality on Tilly's part.

In September 2023 (7 months after the first session), Chloe, Jimmy, and I arranged to make Wednesdays with Tilly a regular weekly fixture, since both Jimmy and Chloe worked all day Wednesdays. During these weekly sessions, I opted for shorter plays with Tilly, noticing her tendency to lose interest after about 7 or 8 minutes. This regular time together cemented our friendship, and she became deeply familiar with both me and my apartment, allowing me to better contextualise her behaviours during our musical sessions within her broader life. Chloe began referring to me around Tilly as "uncle Solly," while Jimmy dubbed me "Tilly's best friend" (as distinct from her primary carers). As our practice emerged and our relationship deepened in these sessions in my apartment (without the presence of Chloe), her vocal responsiveness increased, and she more consistently displayed a diverse range of vocal gestures distinct from her "woowoo" bark vocalisation.

4.2.7 Session 13 on 15 November 2023: emergent, co-created, dialogic improvisational vernacular

During our thirteenth musical session (on 15 November 2023, roughly 8 months after our first session) at my apartment, I recorded a session with Tilly that typified the kind of attuned, structurally diverse, and exploratory play that manifested in our later sessions. This session offers a particularly vivid example of the emergent co-created improvisational vernacular of dialogic gestural exchange shaped through sustained musical and social engagement with Tilly.

Following a relaxed morning walk and a visit with a friend, Tilly (slightly tired but evidently content) entered my apartment and settled in comfortably on the couch, demonstrative of the high degree of familiarity that we had developed at this point in our relationship. I began playing at approximately 1:00pm, introducing long clarino-range tones coloured by wide vibrato and accompanied by bodily gestures exaggerating my breath to physically communicate sonic gestural structures (a useful way of heightening the intentionality of my

musical gestures). Despite her initial quietness, Tilly, who had been sitting by my feet (unlike earlier sessions where she showed a preference for being further away from the clarinet), began vocalising one and half minutes into the play with intermittent melismatic yowls that coincided with extended eye contact and arched head movements—hallmarks of her attentive, responsive state (Fig. 16).



Figure 16. Tilly's head arched back physical gesture accompanying a vocalisation in close proximity to the clarinet (screenshot captured at 2:17 during Session 13 on 15 November 2023).

A period of greater vocal reactivity began at 2:44 (see Fig. 17, corresponding to Track 7). I had been previously playing sustained, trilled clarino register gestures that Tilly had been vocally unresponsive to. After taking a break to breath I offered four short noisy melodic fragment bursts, to which Tilly responded to with three punctuated bark-howl hybrid vocalisations (2:45-2:48). My gestures then became more sustained (pulsing vibratro clarino tremolo gestures), and Tilly likewise vocalised with more sustained and melismatic howl gestures that were less spectrally noisy than her preceding bark-howls (2:48-2:57). In this instance, Tilly appeared to roughly tailor her gestures in response to my tremolo wide vibrato

clarinet material, in her matching of volume and intensity and in the complex rapidly gliding contours of her howl vocalisations with greater harmonic purity.



Figure 17. Tilly's short punctuated noisy bark-howl gestures morphing into more sustained and harmonically pure howl gestures (annotated in pink) with trilled clarinet gestures (annotated in green) (annotated spectrogram, corresponding to Track 7, generated from audio captured at 2:44-2:58 during Session 13 on 15 November 2023).

Consistent with what I anecdotally observed in my practice with Mia, Tilly seemed to adhere to rough patterns of gestural mimicry wherein she often (but not always) roughly matched the dynamic and durational qualities of my playing (e.g., quieter shorter clarinet sounds result in soft whimpers and growls, whereas loud sustained notes result in more intense and durational howls). A notable section of mutual engagement occurred at 3:08 (Fig. 18, corresponding to Track 7), where we engaged in a typical call-and-response structure. It began with my loud, sustained, wide-vibrato material (annotated in green), to which Tilly (annotated in pink) responded with similarly loud, gliding howl structures (3:02–3:11). This exchange then evolved into a hocket-like pattern consisting of quieter, repeated F5 staccato notes on clarinet, while Tilly replied with short, punctuated soft whines and growls (3:11–3:22). This section offers an example of Tilly adapting her vocality in response to my clarinet gestures both dynamically—as my volume decreased, so too did hers—and gesturally—as my clarinet

gestures became shorter, so too did hers.



Figure 18. A call and response structure starting with my loud sustained wide vibrato material (in green) with Tilly (in pink) responding with similarly loud gliding howl structures (3:02-3:11) evolving into a hocket-like pattern consisting of a softer repeated staccato F5 on clarinet with Tilly replying with short punctuated soft whines and growls (3:11-3:22) (annotated spectrogram, corresponding to Track 8, generated from audio captured at 3:01-3:22 seconds during Session 13 on 15 November 2023).

At 3:35, despite my interpretation that I was "leading" in the minute preceding, Tilly abruptly broke this quieter punctuated gestural exchange with a loud, insistent bark, demonstrating her agency and capacity to redefine the parameters of our musical structure. A similar example of this turn-taking hocket pattern recurred at 4:25 (Fig. 19, corresponding with Track 9). In this instance, we again traded short, rhythmically interlocking gestures that were dynamically matched at a quiet volume (as compared with earlier louder and more sustained sections,

where Tilly utilised more intense howling and barking gestures) with Tilly's vocal gestures morphing into longer melismatic howls.

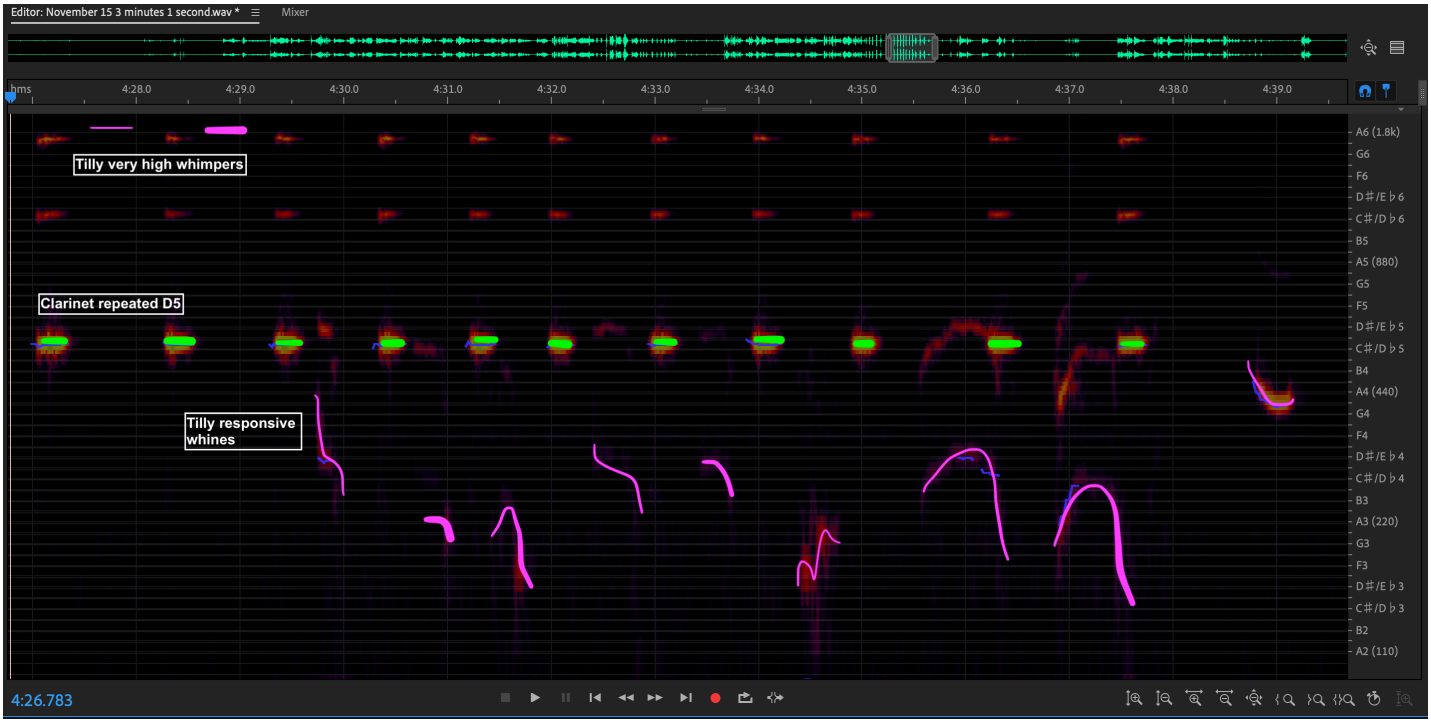


Figure 19. A call and response hocket-like structure consisting of short repeated F5 notes on clarinet and Tilly answering with short quiet whines and growls morphing into louder howl gestures (annotated spectrogram, corresponding to Track 9, generated from audio captured at 4:26-4:39 during Session 13 on 15 November 2023).

At the five-minute mark, Tilly rested her head on the carpet and stopped vocalising. Interpreting this as a cue of disengagement, I paused to offer her affection and verbal reassurance, which was met with tail wagging—a behavioural sign of pleasure or contentment. I then initiated a section of purely vocal improvisation at 5:40, abandoning the clarinet in favour of sung phrases accompanied by expressive hand and arm movements. Tilly responded vocally with renewed enthusiasm, her tail wagging and her gaze fixed intently on my face. This was arguably the most emotionally charged and expressive moment of the session, underscoring the importance of multimodal and affective cues in our interspecies musical language.

Another similar call-and-response exchange occurred at 6:05, once again featuring hocket-like alternations of sound between my voice and Tilly's vocalisations. This sequence reinforced the impression of a shared musical grammar—a flexible but recognizable structure forged through repetition and mutual attentiveness across sessions. These moments exemplify

what could be described as a mutually agentive improvisational exchange—moments where neither party leads nor follows in a strict sense.

Moreover, these improvisational structures (evident in Session 13) suggest an emergent co-created vernacular—one that, while not fixed or formalised, exhibits a discernible pattern of turn-taking, rough gestural tailoring, and affective modulation where the practice is distinct within our routine of behaviours together. The hocketed exchanges at 3:08 (Fig. 18), 4:25 (Fig. 19), and 6:05 are particularly rich examples of this.

4.2.8 Session 13 as illustrative of broader patterns and trends in our practice

What stands out in this recording is how it captures the dialogic, conversational quality that became increasingly central to our later musical plays. In contrast to earlier sessions—when Tilly's signature "woowoo" alert bark, structurally consistent across both everyday and musical settings, typically signalled excitement, happiness, or a bid for attention (such as demanding breakfast, asking to go outside, or greeting someone at the door), was here primary vocal offering—this session showcases the more varied vocal palette characteristic of our later plays. Here, her utterances included whines, whimpers, growls, and hybrid bark-howls that emerge as distinctly responsive, highly expressive, and structurally diverse—vocal structures and patterns of response not observed in other contexts Thus, unlike her seemingly functional use of "woowoo" vocalisations in everyday contexts, the complex, expanded improvisatory vernacular evident in this and other later sessions suggests a non-functional, responsively exploratory use of vocalisations within a distinctly demarcated musical setting.

The shift from the predominantly declarative "woowoo" vocalisation toward a more diverse and structurally responsive set of sonic gestures aligns with the broader arc of our sessions. Early encounters often relied on exaggerated physical gestures on mine and Chloe's part to encourage Tilly's vocal engagement, and her vocal responsiveness was intermittent, most often drawing on the "woowoo" gesture. While I still utilised some physical gestures to signal the beginnings and ends of sounds (similar to how chamber musicians physically signal to each other), by this later session, however, Tilly exhibited increased vocal responsiveness without the need for such exaggerated cues as we used in the first two sessions, suggesting a deepening familiarity and confidence within the distinctly shared vocal

environment we had cultivated. Simultaneous to these developments in the formal qualities of our practice, Tilly and I had developed an intimate and familial bond. Session 13 demonstrates the emergence of a situated, improvisational vernacular grounded in call-and-response structures, a level of gestural responsiveness, on a bedrock of interspecies intimacy harvested over many months. Tilly's engagement in this session reaffirms the central thesis of this project: that dogs, given the space, time, and attention, are capable of co-authoring musical practices that challenge anthropocentric conceptions of music, performance, and creativity.

4.2.9 Varying degrees of vocal participation

Despite some instances of enthusiastic vocal engagement (as illustrated above) and some kind of vocal response in 13 of the 16 recordings we made, on some occasions, Tilly demonstrated little or no interest in vocalising in response to musical stimuli. On 20 December 2023, Tilly displayed vocal reactivity for only two minutes of an eight-minute recorded session (5:10-7:10) and only responded vocally to my vocalisations, as opposed to the clarinet. Similarly, during Session 1 on 31 March 2023, Play 2 of Session 11 on 1 November 2023, and Play 2 of Session 10 on 18 October 2023, Tilly produced no vocal response to my clarinet playing or vocalisations. In Play 1 of Session 15 on 10 January 2024, despite Chloe also being there, Tilly demonstrated a similarly low responsiveness to our musical duet, unlike Session 2 where she exhibited a high level of vocality, seeming to express her intent to be involved in mine and Chloe's duet. In other instances, after a period of enthusiastic vocal reactivity, Tilly's overall vocal responsiveness would decrease, and she would cease to respond vocally (as in Session 2 on 12 May 2023, Session 9 on 11 October 2023, and Session 10 on 18 October 2023).

In cases where Tilly chose not to respond vocally, she still opted to be near me, Chloe, and the music (in every setting the sessions took place, Tilly had the option to retreat to a different room), indicating that she was not distressed by the sounds being presented to her. Correspondingly, she exhibited non-vocal signs of excitement (tail wagging), and behaviours significant of alert auditory attention, what I term "active listening"[2] (ear position shifting in

[2] I will elaborate on my use of this term in Section 4.4.1 with regard to the responses of dogs encountered at Monika's Doggie Rescue.

response to sounds and eye contact shifting in response to the location of sounds), and, in some cases, relaxation (laying down with head on the floor). Her willingness to be close by indicates the intended dual function of these sessions as simultaneously social and musical, where vocally responding is not the only behaviour that constitutes musical participation. Similarly, these periods of non-vocal participation while physically close to us align with Chloe's interpretation of Tilly's general tendencies to want to be "included" and "involved" in human activities.

4.2.10 Tilly and Solly: reflections on a shared practice

My sessions with Tilly affirm the proposition that improvisational interspecies music-making can evolve into a collaborative idiom that is co-authored, formally distinct, and embedded in familiar relationships. Over the course of our sessions, Tilly's vocalisations emerged not merely as instinctive responses to environmental cues, but as relational offerings—utterances shaped by the social, spatial, and sonic context that we co-inhabited. Her vocal responses were seldom predictable but often timely, marked by a growing vocal responsiveness and expanding vocal structures over the course of the sessions, as well as a consistent attentiveness and demonstrated curiosity to our musical offerings and physical cues. The relationship between us was not static; it evolved through repeated sessions, everyday interactions, and shared environments. This relational unfolding was mirrored in the music itself, which shifted over time from non-vocal curiosity to a more conversational and vocally reactive interplay. The earlier prominence of her "woowoo" gesture—punctuated and rhythmically discrete—gave way to less frequent usage, replaced by more nuanced and varied vocal expressions that responded directly to our improvisatory cues.

Tilly's vocal practice defies neat categorisation; it cannot be reduced to a set of conditioned responses. Instead, it occupies a space that is multimodal, intersubjective, and highly variable. The structure of our later musical sessions often resembled call-and-response, but without fixed roles of initiator and responder; each session was a shared negotiation of dialogic phrases and other behavioural cues. Central to this practice is neither sonic precision nor formal replication but the intention of relationality: the mutual attentiveness and respect required within any musical collaboration.

Further discussion of Tilly and Chloe in relation to their performance at *Dog Choir* appears in Chapter 7.

4.3 Arca and Verity

This section explores my evolving relationship with Arca and his human guardian, Verity, through a shared musical practice. Initially an outsider, I observed and later became part of an already established vocal practice between the pair. Outlining Arca's history and his relationship with Verity will contextualise the development of my relationship and practice with the duo. The discussion then turns to Arca's recurring behavioural patterns, musical structures, and vocalisations, analysing their significance as markers of a shared, socially situated practice—one that is both habitual and mutually collaborative. I argue that this constitutes a distinctly musical practice, warranting inclusion in musical and zoömusicological discourse. I also reference Arca and Verity's participation in *Dog Choir* and how this public performance underscores the distinctiveness and replicability of their practice across contexts.

4.3.1 Background to, and perceptions of, Arca and Verity's practice

Arca is a small white dog of unknown provenance and breeding lineage: a classic rescue mutt (Fig. 20). He bears some resemblance, and is similar in size, to a Jack Russell terrier. When I first met him (July 2023), Arca was a middle-aged dog, roughly 6 years old. Verity adopted him from the RSPCA shelter in Orange (in rural NSW) when he was roughly a year old. His history before that point is unknown; however, Verity explained ingrained biases and aggression he displays towards tall men, perhaps indicative of a history of mistreatment by a similarly sized figure in his past, as is common among rescue animals. While Verity, an artist, costume designer, and stylist, has no formal musical training, she loves singing in the car and in her home, a common setting for her collaborative musical practice with Arca. Before meeting them, Verity had shared videos of these behaviours on her social media and Chloe—who alerted me of Verity and Arca's practice—encouraged me to reach out to her to be involved in the project.



Figure 20. Arca enjoying a moment in the sun (photograph courtesy of Verity Mackey).

Verity explained that Arca had a "repertoire" of songs that they performed for friends, including *Amazing Grace* and *Happy Birthday*. Just as Chloe reported with Tilly, Verity recounted repeated instances of birthday parties where *Happy Birthday* was sung in chorus while Arca enthusiastically vocalised in response.

In describing Arca's perceptibly "musical" vocalisations, Verity detailed her first observation of this behaviour when Arca was a puppy growing up alongside a Rhodesian ridgeback and his harmonica-playing human carer:

> In that first house we lived in, there was an older man that lived downstairs with a big ridgeback Wes, who was kind of like his (Arca's) first brother, and I think taught him a lot of behaviours. I discovered it because Pete, the older guy would play harmonica and Wes, the ridgeback would howl along. And one day I got home. I was like, "where's Arca?," and then realised they were downstairs, all playing harmonica, and the two dogs were howling together. And Peter, the guy was like, oh, he howls in the perfect key of G (Mackey 2023, personal communication).

Having observed dogs who seemingly lack interest in vocalising alongside musical stimuli, the potentially taught/learnt nature of Arca's vocalising behaviour is worth considering; these howling behaviours (distinct from "functional" vocalisations like alarm and territorial barks or whimpers in response to pain) rarely seem to occur in social isolation; they present in response to human stimuli (live and recorded sound), or other dogs. Similarly supporting this socially situated and motivated setting for Arca's vocalising, Verity explained that in settings like the *Happy Birthday* chorus howls, his habit would be to visit, and "check in" with every person in the room to ensure they are also vocally participating. Since this initial observation of Arca's howling as a puppy, Verity has cultivated and encouraged his vocality, specifically noting Arca's preference for wind instruments—including harmonica and bagpipes—and female singing.

Verity values the catharsis that comes from chorus howl sessions with Arca. She describes situations where she actively facilitated sessions with Arca and other friends with the goal of emotional release:

> I know friends are going through a hard time, I'm like, "let's fucking go to the cliffs and have a howl with Arca." You just feel like you need to scream at the world. We'll just go and have a howl with Arca …I've definitely done that by myself with him. I think it's like quite a sweet offering because there's something very cathartic. It's kind of witchy (Mackey 2023, personal communication).

Verity allows these moments of interspecies vocality to be outlets for emotions, similar to the way other human musical experiences offer forms of psychological catharsis (DeNora 2000). Furthermore, she recounts instances during the 2020-2021 COVID lockdowns where Verity and her housemates engaged in a "group morale howl," and shared footage of these behaviours on social media:

> I remember one of my housemates, who is a dear friend who Arca loves, posted a story of howling being, "like group morale howl," you know, "lockdown group morale howl." So, it is also I think from a human aspect, this kind of almost primal release (Mackey 2023, personal communication).

These moments of collective vocalisation blur the lines between human and animal expression, revealing the "howl" not simply as a canine behaviour but as a cross-species mode of affective communion. Verity's framing of the howl as "witchy" gestures toward a kind of ritual potency—an embodied spell or invocation that draws on a perceived ancient, more-than-human spirituality. In this framing, Arca becomes an initiator and facilitator of emotionally charged vocal exchanges. The howl operates as both emotional exorcism and relational bonding, allowing Verity and her friends to externalise internal affect in a form that is raw, loud, and uncoded by linguistic precision. This emotional catharsis framing of their practice resists a definitively musical categorisation; instead, for Verity, its power lies in its non-lingual form, where emotion is embodied through intentionally howl-like—and therefore canine—improvisation. Verity understands her role in this behaviour as a deliberate simulation of canine vocal vernacular. When one uses the word "howl" to describe a human vocalisation, the emotional implication is one of pain—*howling in pain*—but here, the howl becomes multivalent, suggesting catharsis, connection, defiance, and play.

While catharsis and emotional release form one powerful dimension of Verity and Arca's vocal practice, an equally vital—and often simultaneous—aspect is the presence of joy and laughter. In our conversations, Verity frequently bursts into laughter when recounting their musical encounters, especially moments where Arca's timing or vocal choices seem serendipitously absurd, humorous, or theatrically well-timed. Laughter is a consistent and audible presence across multiple recordings, often punctuating the ends of vocal exchanges. Likewise, Arca's joy is repeatedly observed in the form of his wagging tail and the repeated display of his play bow behaviour (discussed further below). Rather than detracting from the seriousness or aesthetic integrity of the practice, this laughter enlivens it, underscoring the mutual delight that structures much of their interaction. Joy, in this context, emerges from the shared unpredictability and playful reciprocity of mutual sound making. This aspect complements, rather than contradicts, the cathartic reading: theirs is a practice expansive enough to hold grief, joy, and everything in between. In these moments, I see echoes of what Keltner describes as awe: a profound emotional state that arises when one encounters vastness and novelty beyond their current understanding (Keltner 2023), here provoked by the relational presence of a dog's voice woven into human musical exchange.

To begin my discussion of my involvement in Arca's and Verity's already existent musical practice, using portions of the fieldnotes I took, I describe the first encounter with Arca. This account illustrates the initial reaction I had from Arca, as well as showing the steps I preliminarily took in attempting to collaborate with him and Verity.

4.3.2 First encounter with Arca: notes from Session 1 on 13 July 2023

I visited Verity and Arca for the first time on a sunny winter's morning in her apartment in the inner west of Sydney. Upon arriving, after an initial alarm bark, Arca was largely uninterested in, if not a little wary of, me. Arca had a reputation as both an enthusiastic vocalist and a misandrist. He had been described by Chloe as a strange and sometimes unfriendly dog, especially towards other dogs (like Tilly) and men. I am often drawn to dogs who are initially withholding of their affection. Arca was not a dog who displayed the "promiscuous friendliness" (Lorenz 1959; 24) of the barrel shaped labradors so often soliciting pats from strangers at the park.

After a chat discussing Arca's history, Verity demonstrated Arca's reactivity to her high singing voice, resulting in me joining for a short vocal trio. Verity initiated this chorus with a high pitched "howoo," to which Arca immediately responded with a similarly pitched descending howl. Verity and Arca's voices were both pitched within the same soprano range. The two entered into a dialogue of sustained descending howl gestures, to which I joined in, attempting to match their register. Arca demonstrated active and enthusiastic participation with a persistently wagging tail, and while vocalising, he sustained eye contact with Verity and, less frequently, me. His vocalisations mostly consisted of high frequency pure sliding howl tone interspersed with less noisier barks, growls, and whimpers.

Each vocal gesture most often began as a bark and morphed into a sustained howl. The longer howls descended as they decreased in volume. Verity threw her head back while maintaining eye contact with Arca and vocalised long melismatic "howooos." It was immediately apparent that the two were engaged in a mutual dialogue where Verity was responding to and matching Arca's gestures, and vice versa. It appeared the pair had a level of ensemble coordination wherein, often, the duo would crescendo and decrescendo as an ensemble. Likewise, their physical gestures were matched, with both utilising a head titled back gesture

that they exaggerated in tandem with louder, more intense vocal gestures, as well as maintaining eye contact with each other. Immediately, I felt like an outsider—both as a stranger unfamiliar with their practice, which appeared to be established and habitual, and as someone with a baritone voice who could not quite match the soprano range of Verity and Arca. Verity and Arca, in observing each other's body language, were seemingly able to communicate to each other that they were each finished, and our short vocal trio ended after about two minutes.

As Arca bowed for us while still wagging his tail, Verity was keen to point out his "proud" behaviour after a vocal session. She explained how, after a vocal chorus, he often visits each person in the room, wagging his tail, to receive his praise. In this instance, we both offered him generous vocal praise ("Good boy, Arca!").

Next, I took the clarinet out of its case. I gave the mouthpiece a short blow to which Arca raised his ears and tilted his head (a commonly observed reaction in many dogs). He did not immediately vocalise; instead, he wagged his tail and looked expectantly at Verity, then me. After a few mouthpiece-only sounds (high-pitched toots), I added the lower joints of the clarinet while demonstrating to Arca the sound as each new piece was added. Like I had done with Tilly, in between sounds, I allowed Arca to sniff the instrument, to establish the non-threat of this foreign object. With the clarinet fully constructed, I played sustained and slurred phrases in the clarino range (a similar range to the vocalising I had witnessed earlier). Arca, despite remaining visibly curious and wagging his tail, was not vocally reactive until Verity vocally modelled an imitation of one of the long phrases I was playing, to which he responded with a high pitched "awoo" howl. Verity's involvement initiated a period of sustained vocal response from Arca with a variety of vocal gestures (barks, howls, whimpers, and low gliding growls). At first, he vocalised from his sun-drenched perch on Verity's bed, but as our howl chorus became more intense, he joined us on the floor where we were both sitting.

It was unclear whether he was merely responding to Verity's vocalisations (as he had been in the previous vocal trio) or my clarinet playing. However, later in the session, in the absence of Verity's vocal input, he briefly vocalised with my clarinet playing while making direct eye contact with me (12:03-12:22). After our vocal trio organically concluded (as negotiated

between us with body language), Verity and I had an informal conversation about Arca's history and the emergence of these vocal tendencies. She explained his specific affinity, and repeated performances of, *Amazing Grace*. From her phone, Verity played a YouTube recording of *Amazing Grace* played on bagpipes (Bagpipe Master 2016), a recording she had utilised repeatedly. Arca, clearly recognizing the audio, immediately reacted by leaping from his lying position on the bed to be next to Verity and intensely vocalising. His melismatic howls and whimpers were approximately in the same frequency range as the recording (hovering around the G4-G5 frequency range). The pair locked eyes during this performance, and Verity sang along in tune with the recording, seeming to direct him with hand gestures communicating intended shifts in volume and frequency (Fig. 21).

Arca was the most curious and engaged dog I had met at this point in the project. He exhibited overt excitement and inquisitiveness both when we sang and when I played clarinet. Although he was hesitant to vocalise without Verity's encouragement and vocal input, this first session established a solid precedent for the pursuit of an explicitly musical practice over subsequent months.



Figure 21. Arca enthusiastically vocalising in response to *Amazing Grace* bagpipes (Bagpipe Master 2016) alongside Verity directing him with her own voice and hand gestures during Session 1 on 13 July 2023 (author photograph used with permission from Verity Mackey).

4.3.3 Forming a new practice

Over the subsequent months that I visited Arca and Verity (six sessions in total over six months), a distinct practice emerged. A notoriously withholding dog, Arca began to show affection for me and displayed his vocal tendencies with less explicit encouragement and involvement from Verity. Whereas in earlier sessions he relied heavily on Verity's presence to engage vocally, by the later sessions he would respond directly to me, indicating a relational shift as well as a growing sense of musical familiarity.

Unlike Tilly, Arca showed a marked preference and reactivity for singing and melodica over clarinet; he consistently displayed less vocal response to clarinet material. Across the sessions, a typical macrostructure emerged: beginning with a call-and-response format—initiated by either Verity or myself using sung phrases or wind instruments—then progressing into a sustained chorus-style howling. Not unlike in a free improvisation ensemble, once Arca's vocal intensity waned or the ensemble seemed to sense a natural resolution, the play would finish. Initially, Arca would only sing when Verity participated, but over time, he became more confident in responding to me directly. This demonstrates a growing sense of trust and perhaps recognition of me as a musical partner. Table 3 catalogues our sessions together including logistical and behavioural details pertaining to location, people present, time of day, level of vocal responsiveness, periods of vocality, and instruments used.

Table 3. Catalogue of musical sessions with Arca.

Session	Date	Location	Time of day	Play no.	People present	Vocal response Y/N	Period(s) of vocal reactivity	length of play	Instruments used	Vocal responsiveness	Notes
1	13.07.23	Verity's livingroom	10:30am	1	Verity, Solly	Y	0:07-1:30	1:40	phone audio playback, voice (Verity)	high vocality	*Amazing Grace* Singalong
1	13.07.23	Verity's livingroom	11:00am	2	Verity, Solly	Y	0:52-1:33	2:16	clarinet, melodica (Verity), voice	medium vocality	
2	6.09.23	Verity's backyard	1:42pm	1	Verity, Solly	Y	4:36-4:53, 5:50-8:03	10:08	clarinet, voice	high vocality	
2	6.09.23	Verity's backyard	1:52pm	2	Verity, Solly	Y	0:16-2:26	3:04	phone audio playback, voice (Verity)	high vocality	*Amazing Grace* Singalong
3	18.09.23	The park	12:00pm	1	Verity, Solly	Y	1:17-4:00, 5:40-7:30, 8:17-9:55, 10:20-12:10	13:21	clarinet, melodica (Solly), voice	high vocality	
4	30.10.23	Verity's livingroom	11:22am	1	Verity, Solly	Y	2:06-2:52, 5:06-5:40, 6:30-8:20, 10:34-10:54, 12:04-16:40	16:55	clarinet, melodica (Solly), harmonica (Verity), voice	high vocality	
5	16.12.23	Verity's backyard	1:44pm	1	Verity, Solly	Y	1:14-2:35, 3:16-3:50	5:10	voice	medium vocality	
6	19.01.24	Solly's livingroom	12:16pm	1	Verity, Solly	Y	1:52-3:28, 6:02-7:39	9:10	melodica (Solly), harmonica (Verity), voice	high vocality	
6	19.01.24	Solly's livingroom	12:26pm	2	Verity, Solly	Y	0:07-1:14	3:29	clarinet, harmonica (Verity), voice	medium vocality	
6	19.01.24	Solly's livingroom	12:31pm	3	Verity, Solly	Y	0:01-1:00	3:03	melodica (Solly), voice	medium vocality	

4.3.4 Increasing familiarity

A parallel could be drawn between when I first met Arca (when he was socially unsure of me, avoided touch, and was hesitant to vocalise without Verity's involvement or encouragement) and his unwillingness to engage musically, as evidenced in the later sessions. As Arca shifted socially from a total stranger to a familiar friend, his musical engagement likewise shifted.

> Fieldnotes from Session 4 on 30 October 2023:
>
> In Verity's words, I was "officially in" with Arca. On 15 October 2023 (two weeks prior), I made a social visit to Verity's house for her birthday party. Late in the night, Arca, on his own initiative, jumped up on the bench beside me and then sat on my lap for ten minutes. According to Verity, this is a very positive sign of his affection for someone, with Arca famously withholding affection and, at times, being aggressive (as I saw that night—he seems to take issue with masculine figures). So, this long physical cuddle session with Arca seemed to give me the foot-in-the-door that I needed, wherein he now trusted me to pat and cuddle him without the explicit intervention of Verity.

> When I arrived on 30 October 2023, for the first time that I could observe, he was noticeably happy to see me—something Verity remarked upon. Before we began our musical session, we went for a walk to get a coffee. I took Arca on the lead on the way back, which he seemed totally comfortable with. The walk was interspersed with lots of pats and physical touch, which he had historically avoided from me.

Alongside this new physical intimacy, his enthusiasm to vocalise in response to me seemed to increase over the course of the sessions. While earlier sessions were dependent on Verity's vocal modelling and imitation of my gestures to initiate his responses, later encounters revealed a dog who was confident vocalising in direct response to my clarinet, voice, or melodica. This vocal reactivity was evident in Session 6 on 19 January 2024:

> Fieldnotes from Session 6 on 19 January 2024:
>
> Arca and Verity visited me at my home in Cammeray, the first time they had been there and a completely unfamiliar environment for Arca. We met outside my apartment and started with a walk in the bush, followed by a vigorous run in the dog park, then a dip in Middle Harbour. When we got back to my apartment, he appeared tired and relaxed. It seems I've reached a point now with Arca where he seems calm, confident, and unafraid of me.
>
> Before we started the "play," Verity asked the question, "Do you think he associates you with music?" This question was potentially answered when, at one point, Arca came into the living room and vocalised without us prompting him and well outside of our "play" times.

At the beginning of this session, unusually, Arca began vocalising (with the high melismatic howl gestures distinctive to our musical sessions) without any initiation from Verity or myself. This moment was striking, as it seemed to affirm that Arca was not only aware of our musical practice but willing to autonomously initiate it, demonstrating an emergent sense of participation and memory beyond simple stimulus-response behaviour.

At this point in the project, this spontaneous vocalisation—performed in the absence of direct cues—suggested a meaningful association between my presence and the musical practices we had developed together. Just as I observed in Tilly, Arca's vocal responsiveness to me seemed to increase as we got to know each other better. By the later sessions, Arca appeared to have invited me into his practice with Verity.

4.3.5 Arca's vocalisations

In general, compared with other dogs I document in this project, most of Arca's vocalisations tend more towards pure harmonically resonating howls, as opposed to spectrally diffuse barks, growls, and whines. The most common phrase structure that Arca uses is a melismatic, harmonically resonating howl pitched between G4 and G5 that rapidly ascends, then slowly descends—what I have approximated phonetically as "awoo." Often following this "awoo" gesture is a similarly contoured hybrid bark-howl gesture ("uhroor"), which typically occurs in response to louder stimuli.

Unlike Tilly, Arca rarely utilises discrete barks in the sessions. If Arca barks, the gesture is usually hybridised with a sustained howl or punctuated within a howl. For example, in one instance (Session 6, Play 2, 19 January: 1:03), he responded to a noise outside the apartment with a series of barks and growls typical of territorial display, marking a sharp contrast to his more "musical" "awoo" howl or "uhroor" bark-howl hybrid. Although some howled phrases begin with a noisy hard attack (like a bark) that morphs into a more melodic howl tone, many of the "awoo" type howl gestures have soft phrase beginnings, more so than other dogs I had worked with. Unlike Tilly, who displayed only one formally consistent vocal gesture—the "woo-woo" bark—Arca produced multiple vocal structures that remained broadly consistent across many instances.

4.3.6 Typology of vocal gestures

Although Arca's vocalisations are structurally diverse, I have catalogued his most prevalent vocal gestures below, providing phonetic approximations alongside audio excerpts that are paired with corresponding spectrograms. Most of his vocal responses can be classified as one of the following vocal types, or as hybrids combining two or more of these types.

The five vocal gestures most observed in "musical" contexts are a melismatic howl ("awoo"), a hybrid bark-howl ("uhroor"), a high-frequency whine ("roor"), a bark ("rooff"), and a growl-bark hybrid ("rr-rooff"). They sound thusly:

- "Awoo" – harmonically resonating melismatic howl with soft attack (Fig. 22);

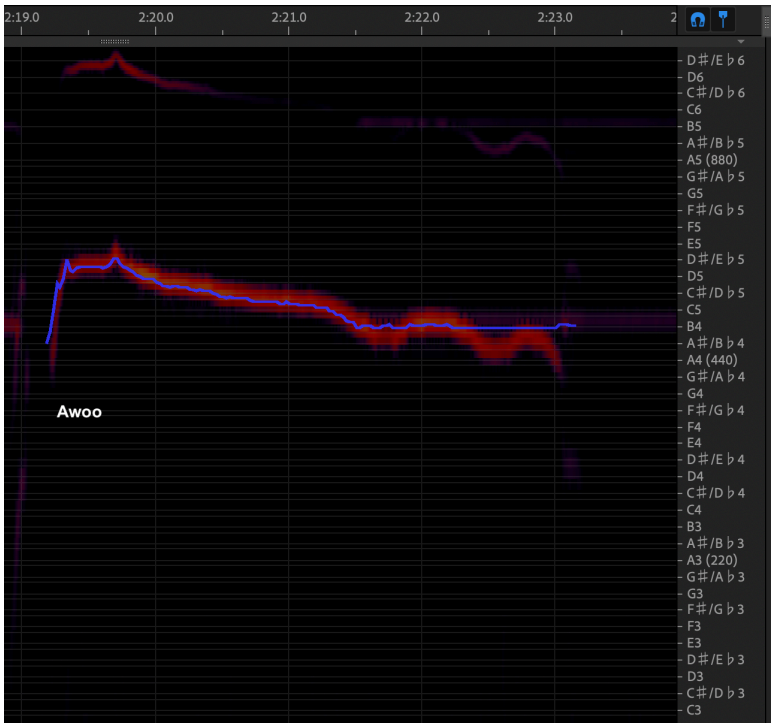


Figure 22. "Awoo" gesture captured during Session 3 on 18 September 2023 at 2:19, corresponding with Track 10.

- "Uhroor" – hybrid bark-howl with some noisier growl components (Fig. 23);

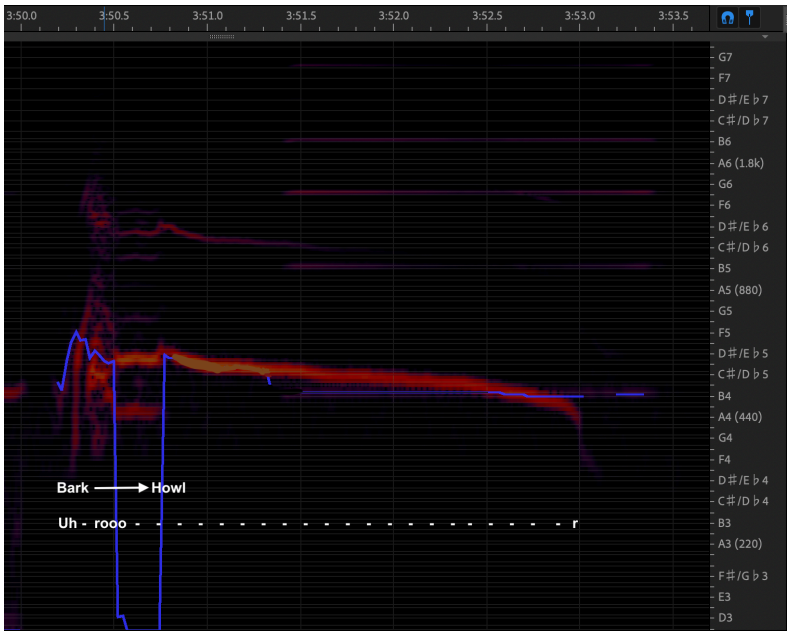


Figure 23. "Uhroor" gesture captured during Session 3 on 18 September 2023 3 min 50 seconds, corresponding with Track 11.

- “Roor” – high frequency whine (Fig. 24);

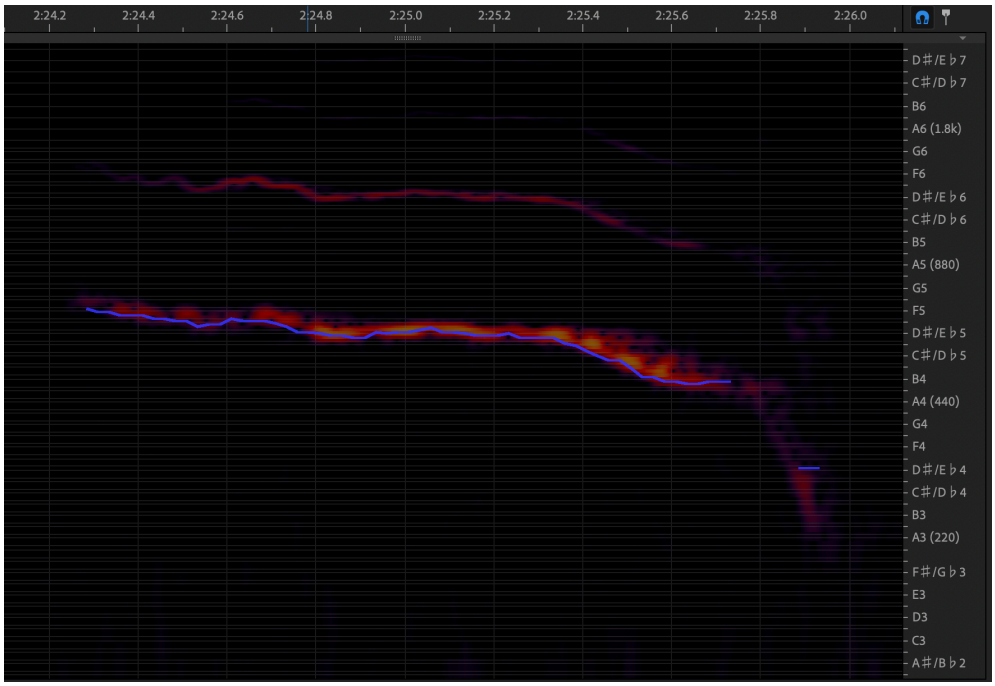


Figure 24. “Roor” whine gesture capture during Session 2 on 6 September 2023 at 2:23, corresponding with Track 12.

The vocalisation types that were more common in territorial displays, but less frequently appeared during the musical sessions (and were often discouraged by Verity) included:

- “Roof” – punctuated noisy bark (Fig. 25);

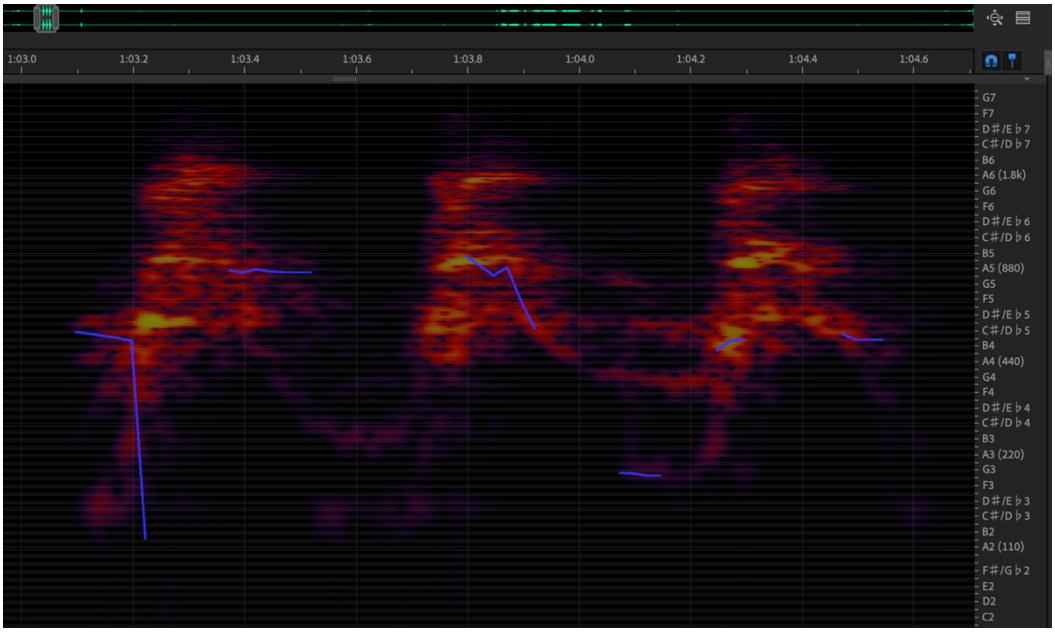


Figure 25. “Roof” punctuated bark gesture captured during Play 2 of Session 6 on 19 January 2024 at 0:26, corresponding with Track 13.

- "Rr-rooff"– Growl to bark hybrid (Fig 26.).

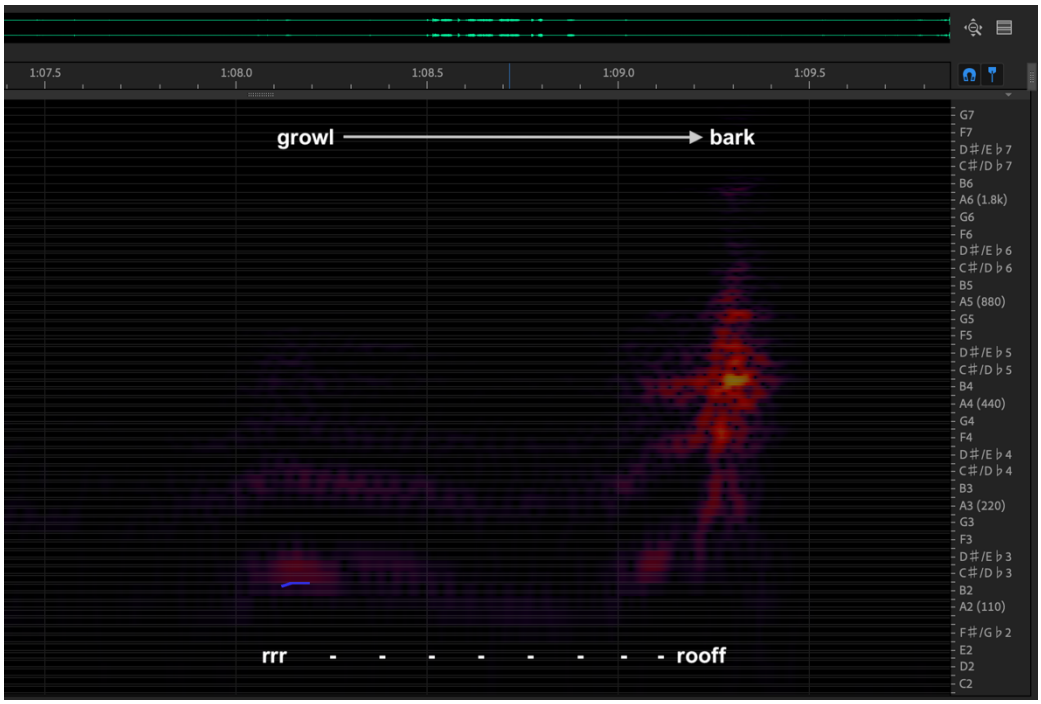


Figure 26. "Rr-rooff" growl to bark gesture captured during Play 2 of Session 6 on 19 January 2024 at 1:07, corresponding with Track 14.

As with Tilly, Arca's vocalisations as performed during the musical sessions were distinct from those he used in other contexts (e.g., intruder alerts). Additionally, Verity actively discouraged purely bark type vocalisations, often gently scolding him in these sessions, saying, "Hey, that's just barking!" (as seen at 0:46 during Play 3 of Session 6 on 19 January 2024). Arca's predisposition for sustained, harmonically resonating howl tones (like the "awoo" gesture) inadvertently places his vocalisations closer to sounds that have historically been classified as "musical," as opposed to other dogs' vocalisations that are more spectrally diffuse; therefore, would more readily be placed in the unmusical "noise" category (Sangild 2002). Perhaps due to Verity's preference for howl-like gestures, Arca's musical vernacular is, by and large, tonal, and Verity appears to somewhat curate his output. As with human vocal expression—where speech and involuntary/functional vocalisations (e.g., laughter or crying) are typically more "noisy" and spectrally diffuse—it seems Arca's "functional" vocalisations are noisier and more punctuated, while his vocalisations in "musical" contexts are predominantly pitched and sustained.

4.3.7 Physical gestures and verbal cues

Just as with ensemble playing of any type, Verity and Arca appear to have developed an associated physical vernacular prior to my involvement. This adaptive set of physical cues, as well as some accompanying verbal prompts from Verity, seems to enable their mutual collaboration. Just as Western unconducted chamber musicians breathe together and move in sync to maintain a shared tempo, Verity and Arca have come to rely on a set of specific gestural cues unique to these musical sessions. Verity explained the types of physical gestures and verbal cues she consciously employed to guide Arca's vocalisations:

> I have really noticed my physicality affects him. So, if I throw my head back with my howl, he throws his head back with my howl, and if I, you know, do like, "OK, we're gonna go quiet and we're gonna go." You know, he makes his howl small and a little bit more delicate. But if I'm really big in my physicality and in my own howl, he matches that (Mackey 2023, personal communication).

Verity's head-throwing gesture, a dramatic tilt backward used to intensify her vocalisation (Fig. 27), serves both as an invitation for Arca to respond and as a mirror of his own behaviour. Arca often throws his head back during louder or more animated vocalisations, occasionally even adding a small hop with his front legs. This shared physical vocabulary—where gestures move fluidly between dog and human—creates a performative feedback loop.



Figure 27. Verity displaying the head back gesture in Play 2 of Session 6 on 19 January 2024 at (screenshot captured at 1:02).

Similarly, Arca often directs his gaze toward Verity before vocalising, as if seeking reassurance or permission. Reciprocally, Verity raises her chin while maintaining eye contact with Arca to signal attention (Fig. 28). This subtle but consistent gesture functions less like a command and more like an invitation to co-attune. Arca frequently mirrors this behaviour, lifting his own head and holding eye contact in moments of vocal exchange, both with me and Verity (Fig. 28).



Figure 28. Verity displaying her chin up with eye contact gesture on Play 1 during Session 2 on 6 September 2023 (screenshot captured at 6:43).

Each physical gesture is typically paired with a vocal model and/or verbal cue. For example, to encourage Arca to lower his volume and intensity, Verity uses a pinching motion with her fingers sometimes accompanied by the verbal cue, "little," as well as a modelling quieter vocalisation (Fig. 29)—much like the verbal command "sit" is often combined with a hand up gesture and "shake" or "high five" is amalgamated with a hand forward in expectation. These visual-auditory pairings provide Arca with a clear, multimodal cue to follow. However, many of these gestures act more like prompts than instructions, allowing for interpretative variation rather than binary obedience.



Figure 29. Verity using her finger pinch gesture to signify a decrease in volume in Play 1 of Session 6 on19 January 2024 (screenshot captured at 6:13).

Another gesture Verity frequently uses is the index finger pointed upward (Fig. 30, 31, and 32), intended to elicit a higher (or more "accurate") pitch from Arca. However, rather than matching the pitch literally, Arca often seems to treat this gesture as a cue to experiment—trying a different contour, register, or affective tone. The gesture prompts an exploratory reaction rather than a fixed response.



Figure 30. Verity using her index finger pointed up gesture at 6:50 in Play 1 of Session 6 on 19 January 2024.



Figure 31. Verity using her index finger pointed up gesture during Session 3 on 18 September 2023 (screenshot captured at 8:38).



Figure 32. Verity using her index finger pointed up gesture during their performance of *Amazing Grace* bagpipes (Bagpipe Master 2016) at *Dog Choir* on 21 July 2024 (photograph by Steve Wilson-Alexander).

As I became entangled in Arca and Verity's practice, I learnt to utilise some of these physical cues (especially the head tilted back gesture). My integration of these cues into my improvisational vernacular became an important step in forming a musical practice with the pair. Similarly, I later incorporated exaggerated physical gestures to accompany musical engagement into my instructions for human participants of *Dog Choir*.

Verity and Arca have together codified a set of physical cues that communicate musical instructions. Arca appears to be highly responsive to these embodied signals where the interplay of gesture and voice is integral to the practice that they have developed. While this system of gestural cues may initially resemble a traditional human-dog training dynamic, where the human commands and the dog obeys, close observation reveals something more mutual and nuanced. Verity also takes cues from Arca, responding to the direction and intensity of his howls, sometimes choosing to follow his lead rather than imposing her structure. She often follows him; sometimes, if he goes louder and more intense, Verity will follow, or if Arca decides he's finished, Verity also winds up. Likewise, the gestures that Verity uses are more interpretative and ambiguous than other simple binary commands, like "sit" or "stay"; Arca does not respond in exactly the same way each time. Their interactions are better understood as co-regulated improvisations rather than mechanical executions of pre-trained behaviours.

This intersubjective responsiveness demonstrates a depth of mutual attentiveness that defies simplistic models of animal obedience. Rather than viewing these gestures as commands, I would argue that they function as shared signals within a flexible communicative system within their musical practice, reinforcing the mutually negotiated relational foundation of their collaboration.

4.3.8 Arca's body language as a sign of affect

In addition to his vocal gestures, Arca's body language provides an important window into his emotional state and musical engagement. Often subtle but nonetheless consistent, these behaviours offer cues about his attentiveness, enthusiasm, and comfort in the context of these shared sound-making sessions.

One of the most encouraging indicators Arca displays is the tail wag. While tail wagging can signify a range of emotions in dogs—from anxiety to aggression (Lindell, Llera, and Buzhardt 2024)—the context and accompanying signals are crucial to nuanced interpretation. During our musical sessions, Arca's tail wagging is generally loose, mid-height, and unaccompanied by signs of distress (such as a tucked tail, bared teeth, or tense posture), suggesting an affective state of excitement or pleasure. Verity affirms this interpretation, noting his "…quick, little feet… darting around" (Mackey 2023, personal communication) as further evidence of his positive engagement.

Another distinct signal is the previously discussed head-tilt or head-throw. Much like Verity's head-tilt cue, Arca often raises his head back during extended or intense vocalisations (Fig. 33 and 34). This motion—potentially a biomechanical adaptation to allow for louder and more resonant howls (Allen 2023)—parallels the projection techniques used by human musicians (e.g., a trumpeter lifting their bell for greater sound dispersion). The greater the tilt, the more intense or elongated the vocalisation tends to be, often accompanied by small front-paw hops that convey enthusiasm (Fig. 33).



Figure 33. Arca displaying his head back and hopping front legs gesture during a rendition of *Amazing Grace* bagpipes (Bagpipe Master 2016) during Session 1 on 13 July 2023 (screenshot captured at 0:09).



Figure 34. Arca displaying his head back gesture during Play 2 of Session 6 on 19 January 2024 (screenshot captured at 0:33).

One striking behavioural pattern (previously mentioned) involves Arca "checking in" with participants prior to vocalising. Whether in large gatherings (like a *Happy Birthday* chorus) or more intimate sessions with just Verity and me, Arca often performs a circuit around the room before starting to howl. This sequence, documented in Session 3 on 6 September 2023 (3:50–4:20), Play 1 of Session 4 on 30 October 2023 (4:50–5:04), and Session 5 on 16 December 2023 (0:33–0:46), usually unfolds as follows:

1. Verity or I vocalise or play an instrument;
2. Arca acknowledges the sound with a tail wag, eye contact, and/or head tilt;
3. He walks up to each participant, maintaining eye contact or sniffing briefly;
4. Only after this "roll call" does he vocalise.

This pattern appears ritualistic, a form of embodied consent or social confirmation. It mirrors his behaviour at birthday parties, where Verity described him checking in on each singer

before howling along with the *Happy Birthday* chorus—suggesting a learned and habitual mode of participatory etiquette. Additionally, Arca often directs his gaze toward Verity (or me) before vocalising, particularly at the beginning of sessions. This recurring glance seems to seek affirmation or validation, reinforcing the role of social support in his willingness to participate.

4.3.9 The play bow

Perhaps the most compelling indicator of Arca's enthusiastic orientation toward these musical engagements is his consistent exhibition of the play bow. In every recording we made, Arca performs at least one play bow—sometimes at the start of a session, sometimes as a way to punctuate its end, and often in response to verbal praise from Verity or myself (Figures 35-40). The play bow is consistently accompanied by tail wagging, further reinforcing Arca's positive association with our practice,

Ethologist Marc Bekoff describes the play bow as a reliable signal that "rarely occur[s] outside of the context of social play" and tends to occur "at the beginning or towards the middle of playful encounters" (Bekoff 2014: 64). This aligns with the structure of our sessions, in which Arca's play bows tend to bookend the more intense phases of vocal engagement. Bekoff further argues that "We train too much and play too little.… Whenever you are playing together, you and your dog learn the most important rules of social interaction: mutual trust, accepting the limitations of the other individual, and dealing fairly with each other" (Bekoff 2010: 331).

Arca's repeated instances of the play bow suggest that he perceives these musical exchanges as intrinsically social, enjoyable, and playful. Far from being a trained trick or conditioned behaviour, the bow functions as an invitation and response—signalling mutual recognition of the session as play and underscoring the inherently relational circumstances of the interspecies collaboration.



Figure 35. Arca's play bow during Session 1 on 13 July 2023 (screenshot captured at 1:57).



Figure 36. Arca's play bow at start of play during Play 1 of Session 2 on 6 September (screenshot captured at 4:02).



Figure 37. Play bow in response to praise during Session 4 on 30 October 2023 (screenshot captured at 16:47).



Figure 38. Play bow at the start of our play during Play 1 of Session 5 on 16 December 2023 (screenshot captured at 0:33).



Figure 39. Play bow midway through our play during Play 1 of Session 6 on 19 January 2024 (screenshot captured at 6:33).



Figure 40. Arca demonstrating play bow after his performance, and in response to praise, during Arca and Verity's performance at *Dog Choir* on 21 July 2024 (photo by Steve Wilson-Alexander).

4.3.10 Potential aptitudes: pitch matching

As my sessions with Arca continued and he began to be more responsive to me without needing Verity's explicit encouragement, I began noticing more instances of Arca demonstrating the ability to approximately, and sometimes accurately, vocally replicate pitches we sang or played for him. This potential ability to match pitch was especially evident in Session 3 on 18 September 2023, where preceding the more improvisational segment of the session, Verity and I "tested" his aptitude for accurately replicating discrete modelled pitches.

We trialled a process where I played discrete ascending pitches on the melodica that Verity echoed with her voice—similarly structured to Mary Ann Redmond's viral videos showing her Border Collie Indi seeming to accurately sing back pitches modelled by Redmond on piano and with her voice (Mary Ann's Menagerie 2023). Picking notes within Arca's usual vocal range, I played a sustained B4 on the melodica (Figure 41 at 2:12), Verity reproduced the same pitch vocally (Fig. 41 at 2:13), and I echoed this pitch with my voice (Fig. 41 at 2:18). Arca responded with harmonically resonant, melismatic "awoo" howls (Fig. 41 at 2:19) that glided around the pitch we gave him, often stabilising within a semitone of our modelled pitches. His howls began with a rapid ascending slide followed by a slower descending glissando, as if "searching" for the matching pitch (Fig. 43). Often, the melodic contour became shallower as Arca's pitch aligned closely with the one introduced. His vocalisations tended to briefly stabilise around the modelled pitch before steeply tapering off. This melodic contour is evident across all five vocal gestures represented in Fig. 41, corresponding to Track 15.



Figure 41. Spectrogram of 2:10-2:49 in Play 1 of Session 3 on 18 September 2023 showing Arca appearing to attempt to match the pitches of the melodica and voice, corresponding with Track 15.

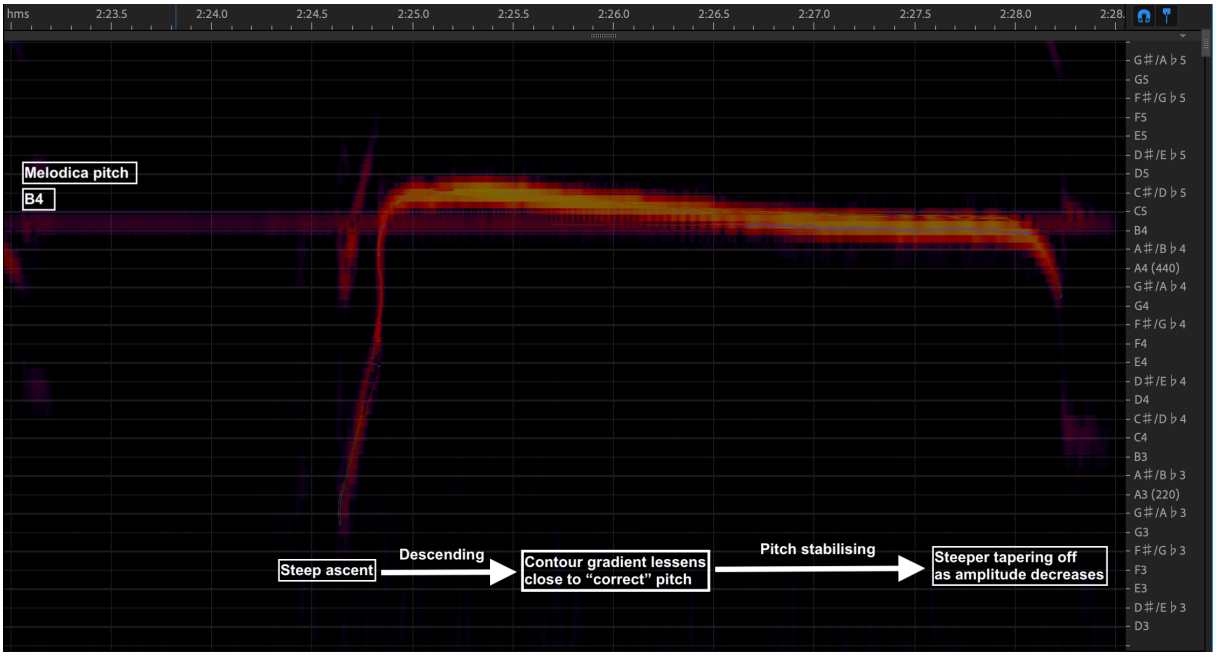


Figure 42. Spectrogram of individual gesture at 2:24 in Play 1 on 18 September 2023 showing Arca appearing to attempt to match the pitches of the melodica and voice, corresponding with Track 15.

Later (Session 6, Play 1, 19 January 2023), Verity and I attempted a similar trial (Fig. 43, corresponding to Track 16). At 0:45, we modelled a B4 with melodica and voice (Fig. 44), to which Arca responded with a melismatic “awoo” howl stabilising close to B4 within a semitone. He then appeared to follow our ascending scale at 0:47 (B4), 0:53, 0:58 (C5), and 1:02 with a bark-howl hybrid “uhroor” (D5) (Figures 44-47). These vocalisations share the same rough melodic contour seen in Session 3, suggesting some consistency in his auditory response in the context of this trial.

We conducted similar call-and-response trials during Session 4 (30 October 2023) and in Play 3 of Session 6 (19 January 2024), explicitly aiming for pitch matching. Arca repeatedly demonstrated the ability to approximate pitches within the B4–E5 range within a semitone. When he sang a pitch close to the one modelled, Verity and I offered verbal praise, which appeared to reinforce his participation. His eye contact and clear patterns of turn-taking further demonstrated attentive listening. However, this aptitude only consistently emerged within clearly structured and positively reinforced frameworks. Outside these conditions, his vocal responses were more variable, suggesting that structure and social cues play a critical role in eliciting pitch-matching behaviours. Furthermore, the musical material Verity and I offered outside of these “trials” was far more varied and melodically complex, potentially obscuring instances where Arca may have attempted to replicate pitches he heard.

These discrete pitch-matching sequences offer compelling evidence of Arca’s attentive engagement and a potential canine aptitude to vocally replicate heard pitches (an ability with some precedent online [Schlauwauwau 2011; RighInTwo 2014; Mary Ann's Menagerie 2023]). His melodic contours—gliding, stabilising, and tapering—indicate more than random vocalisation; they hint at some kind of auditory-motor coordination, shaped by repetition, praise, and joint attention. Still, Arca’s musical engagement cannot be reduced to pitch alone. He also appears to approximate rhythmic and melodic structures, challenging binary distinctions in vocal learning capacities established in scientific literature.



Figure 43. Spectrogram of 0:43-1:12 in Play 1 of Session 6 on 19 January 2024 showing Arca appearing to attempt to match the pitches of the melodica, corresponding with Track 16.

Spectrograms showing shape of each phrase (all corresponding to Track 16):

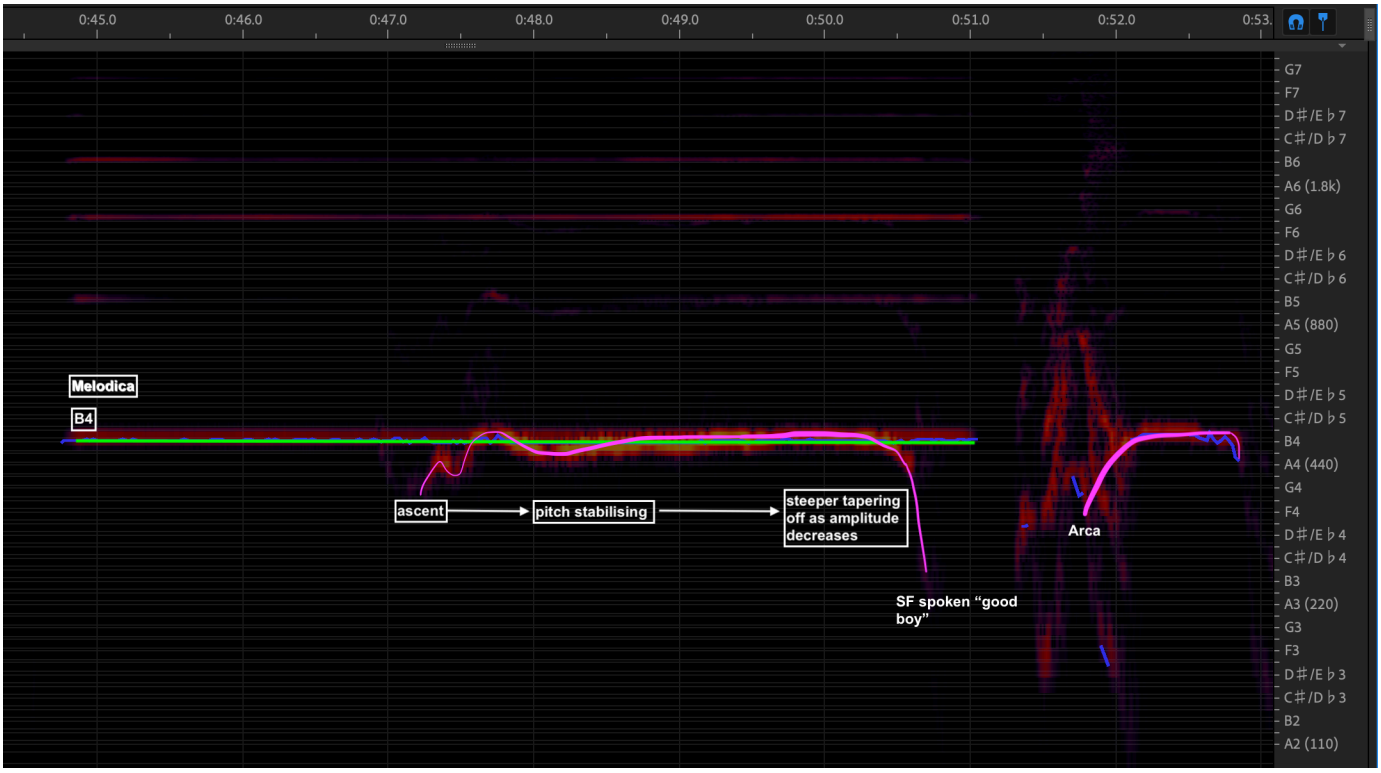


Figure 44. Arca matching the B4 Melodica pitch at 0:47 during Play 1 of Session 6 on 19 January 2024.

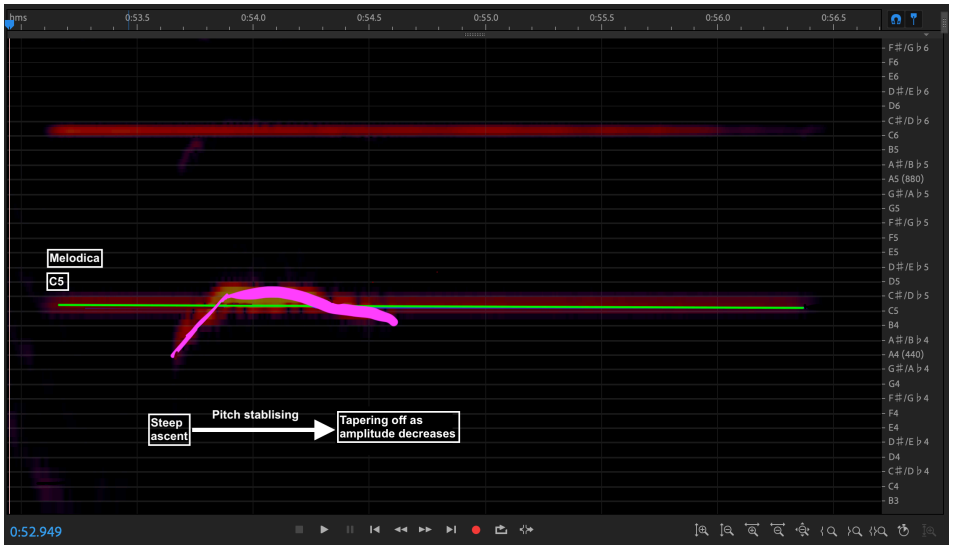


Figure 45. Arca vocally matching the C5 melodica pitch at 0:53 during Play 1 of Session 6 on 19 January 2024.

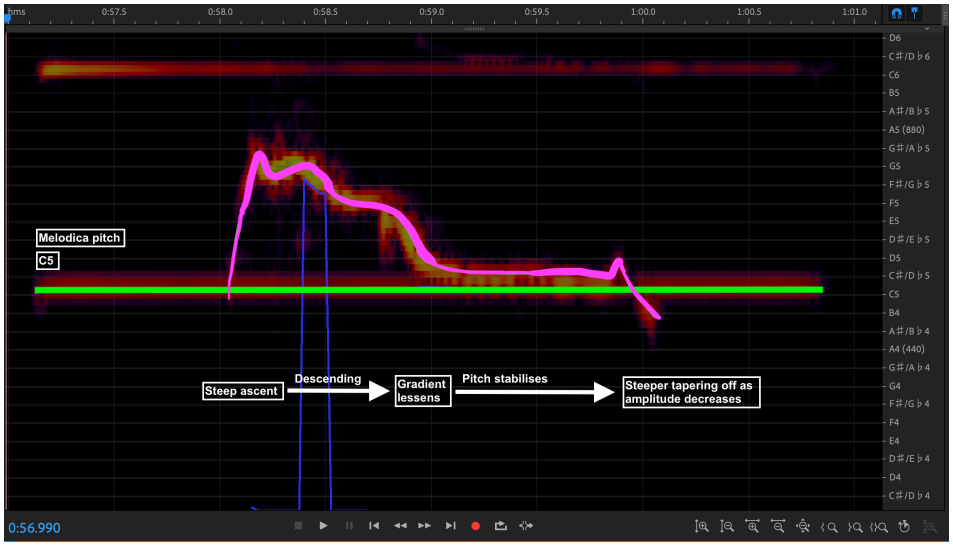


Figure 46. Arca again approximately matching the C5 melodica pitch at 0:57 during Play 1 of Session 6 on 19 January 2024.

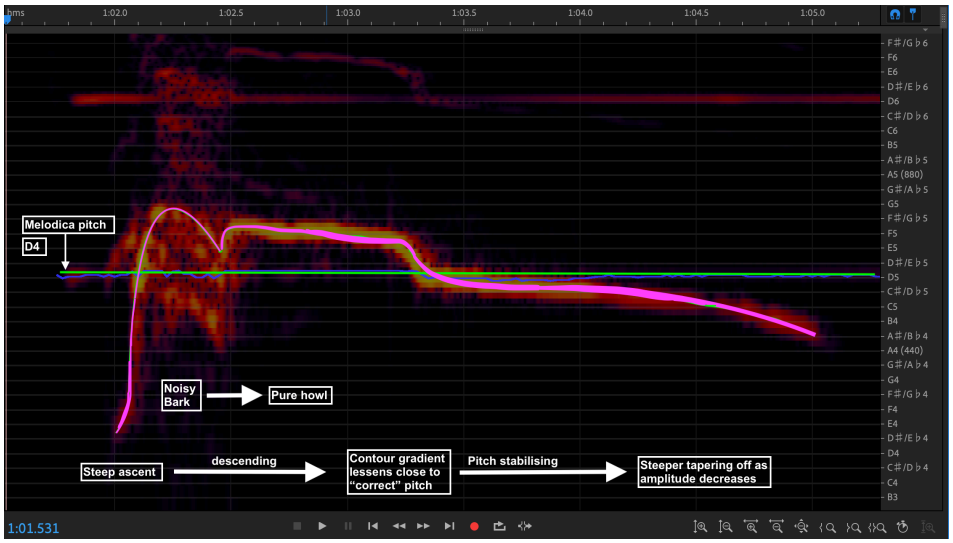


Figure 47. After a noisy bark, Arca's howl approximately stabilising in pitch very close to the melodica D5 pitch, captured at 1:02 during Play 1 of Session 6 on 19 January 2024.

4.3.11 Potential gestural mimicry

In some instances, Arca seemed to demonstrate the ability to produce rough vocal gestures that approximated the contours, frequencies, and rhythms of human-modelled sounds. These examples (and others encountered online) suggest some canine imitative capacities. These moments of rough gestural mimicry indicate a more fluid boundary between species traditionally categorized as "vocal learners" and those credited without such imitative vocal abilities, opening space for reconsidering the relational and co-created dimensions of canine musicality.

In Session 2 on 6 September 2023, Verity repeatedly modelled a vocal melodic motif ("uwoo") hoping for Arca to respond with an imitation of this gesture. After a few demonstrations without a response from Arca, at 5:58 he vocalised similarly contoured howls pitched at approximately the same frequency (Fig. 48, corresponding to Track 17). Though Verity subsequently introduced more syllables to her gesture (first "uwoo-uwoo" then "uwoo-uwoo-uwoo"), Arca still adhered to the contour of the first gesture within the same frequency range.

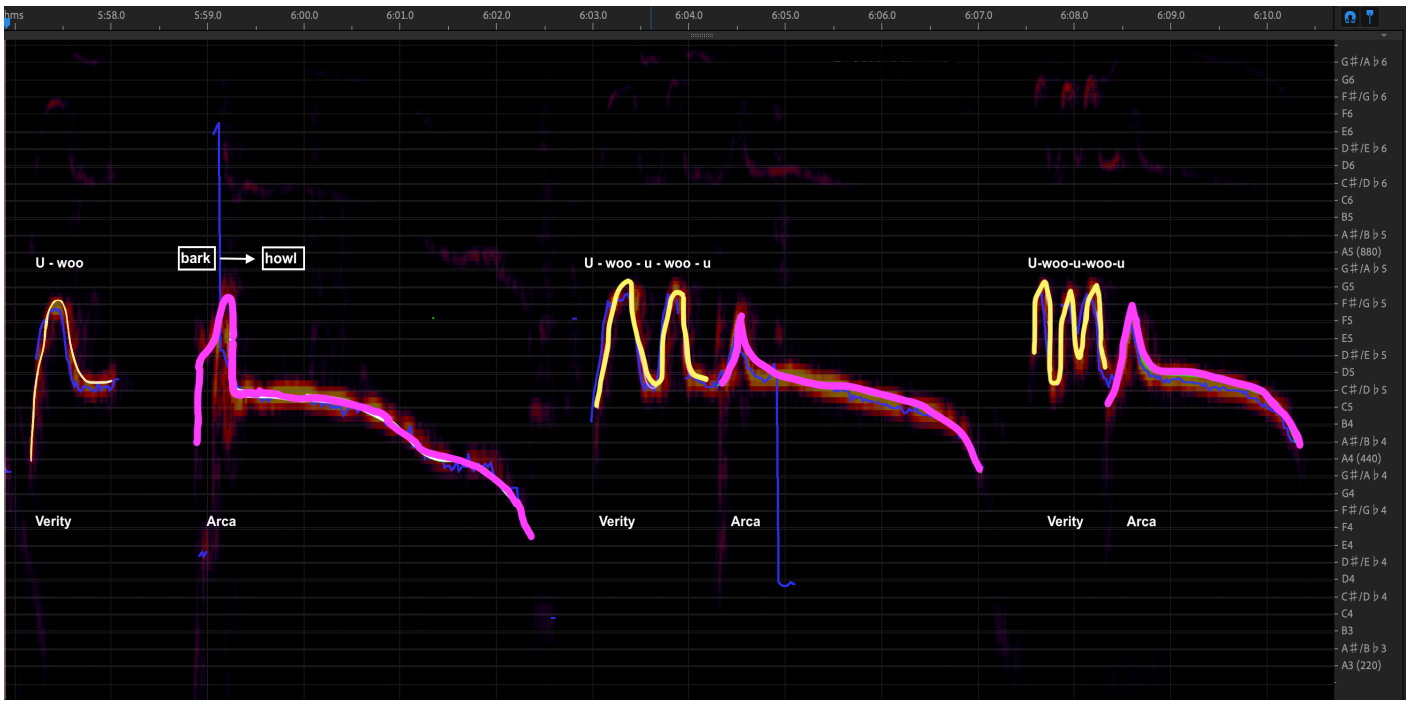


Figure 48. Spectrogram showing Arca's potential approximate gestural mimicry (annotated in pink) of Verity's "uwoo" vocalisation (annotated in pale yellow), captured during Session 2 on 6 September 2023 at 5:57, corresponding with Track 17.

Similarly, during Session 5 on 16 December 2023, I modelled a similar vocal two note "woo-woo" gesture; he responded with a melodically accurate imitation of this gesture (2:25 in Fig. 49, corresponding to Track 18). Although these examples of potential gestural mimicry occur within informal sessions of musical experimentation, and I have not structured a systematic study of Arca's gesturally mimetic abilities with regard to statistical significance, given Arca's varied repertoire of vocal gestures, these examples demonstrate potential approximate mimetic and imitative canine abilities that mirror similar examples online of dogs mimicking melodic and rhythmic structures of speech (like Maya the Siberian Husky seeming to imitate the words, "good morning," "hello," and "gorgeous" [Mayahusky 2022]).

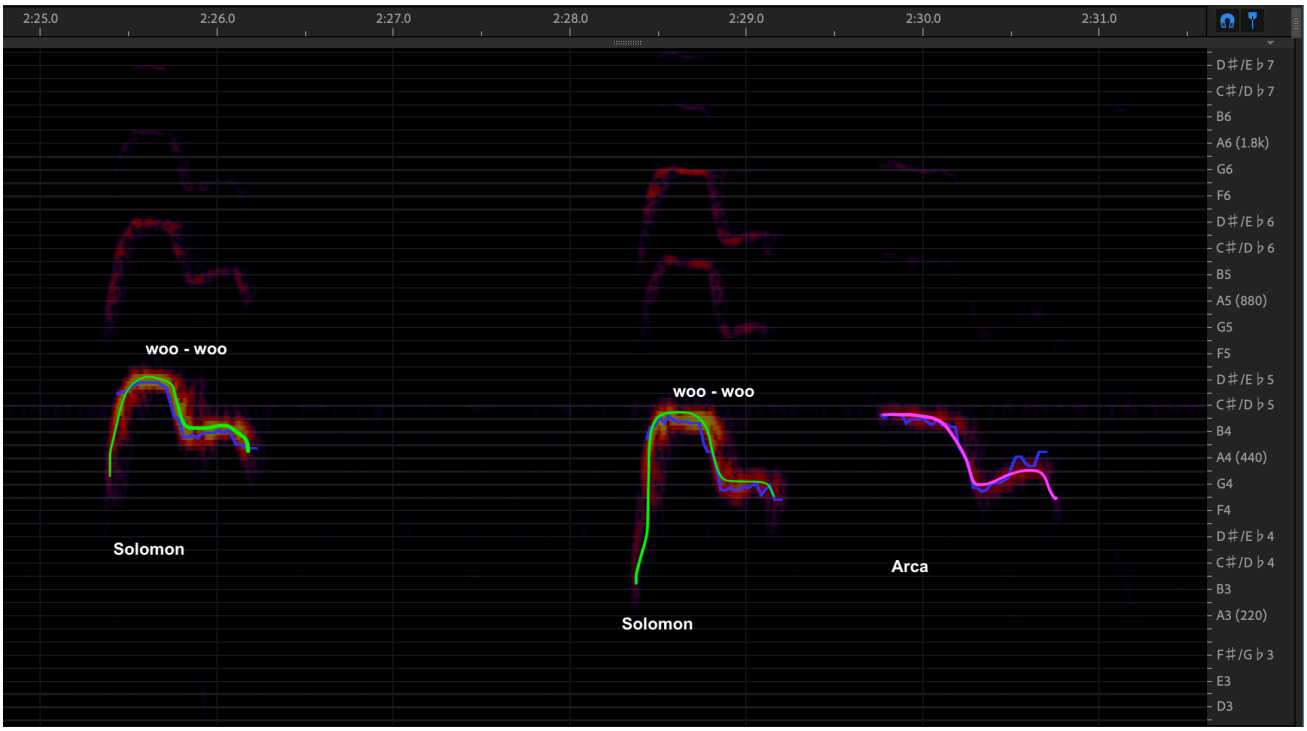


Figure 49. Spectrogram showing Arca's melodically accurate gestural mimicry (annotated in pink) of my "woo-woo" vocalisation (annotated in green), captured during Session 5 on 16 December 2023 at 2:25. corresponding with Track 18.

In these each of these instances of seeming gestural mimicry, the mimesis appears to be mutual, where Verity and I also attempt to copy some of Arca's vocal structures. Knowing the most common frequency range that Arca's more pure howl vocalisations sit within (G4 to G5), we deliberately pitched our modelled gestures within this same range. Likewise, in the moments where we more systematically probed Arca's abilities to accurately match pitches, the notes we played also sat within this same range.

In some situations, Verity intentionally appropriated gestures from Arca's vocabulary to prompt a renewed enthusiastic vocal engagement, often leading to a longer or more intense period of vocal and sonic exchange. In one such instance (Session 2 on 6 September 2023 at 7:39), after 30 seconds of Arca not vocally responding to our sounds (me on clarinet and Verity vocalising), to establish a renewed participation, Verity vocalised a loud deliberately canine-like "ar-ar-aroo-uhr." Arca responded with a homologous sequence of punctuated barks morphing into a descending howl (Fig. 50, corresponding with Track 19). After this section of Verity and I using vocalisations deliberately mimetic of Arca's bark-howl structures, the dialogue morphed into a more diverse exploration of less obviously canine-like sonic structures, where I reintroduced the clarinet and Verity vocalised with purer, stably pitched tones. These initiative imitations of canine vocal gestures became a way of communicating to Arca our intention of entering into a new session of collaborative musical exchange.

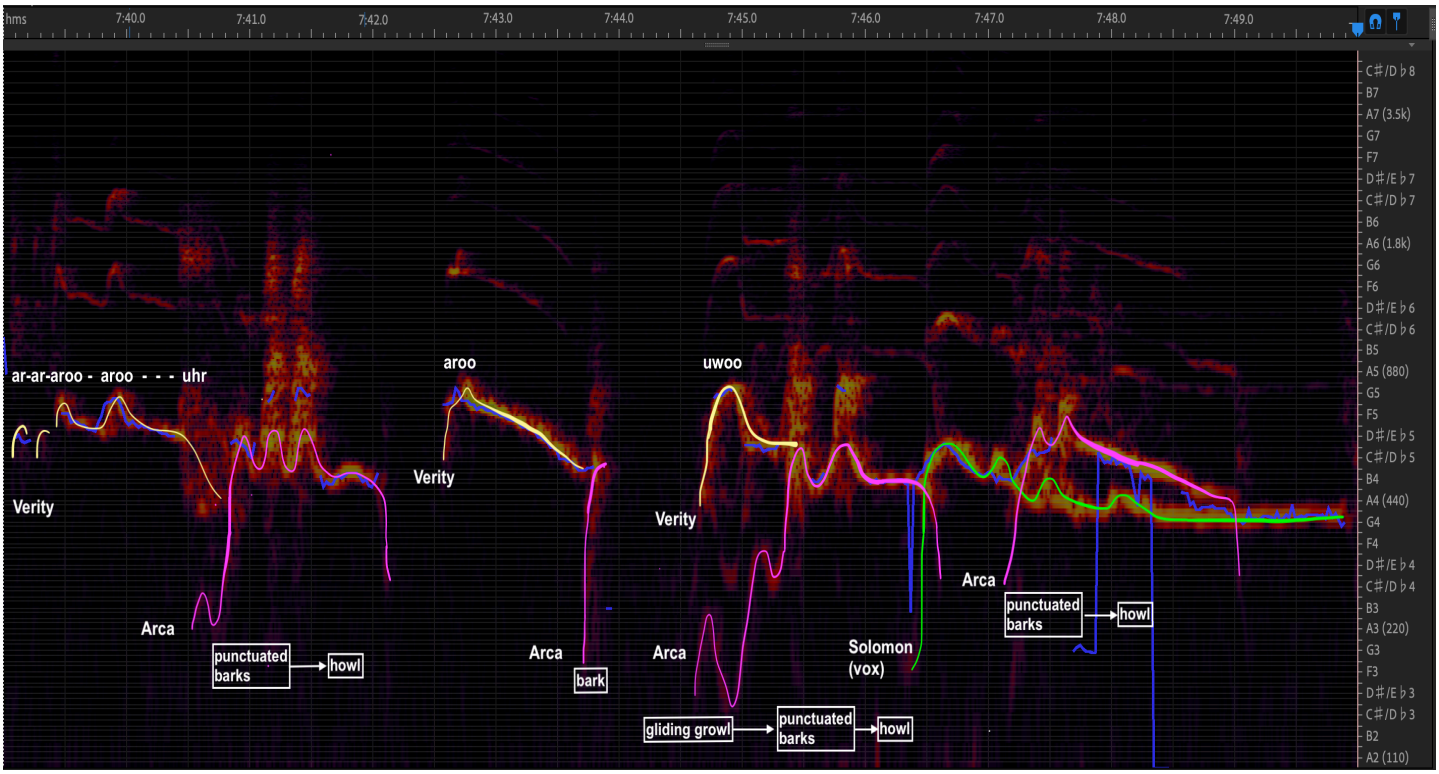


Figure 50. Annotated spectrogram showing Verity initiating a period of sonic exchange with a loud canine-like "ar-ar-aroo-uhr"(at 7:39 with Verity's vocalisations shown in pale yellow) to which Arca responded with a structurally similar sequence of punctuated barks morphing into a descending howl (7:40-7:42 with Arca's vocalisations shown in pink) followed by a chain of vocal call and responses (my vocalisations shown in green), audio captured from Session 2 on 6 September 2023 at 7:39, corresponding with Track 19.

Instead of disproving Arca's potential mimetic capabilities, this mutual exchange of mimesis affirms the co-created and inherently blurred authorship of our collaborative musical practice; musicians exchange and reinterpret material in an ever-evolving dialogue that results in a product that is unique to that collaborative context. Our endeavours with Arca were not about systematically testing his potential musical aptitudes; instead, we created a context in which his musicality emerged organically within the context of play, experimentation and socializing.

4.3.12 Verity, Arca, and Solly: reflections on a shared practice

The practice shared between Arca and Verity was already vibrant and deeply embedded with affective meaning by the time I entered the frame. Yet what unfolded across our sessions together was not a static documentation of an existing relationship but a dynamic, expanding trio. As I became more familiar to Arca—first through cautious observation and later through touch, sound, and shared attention—I was gradually folded into their sonic world. This was not a process of training nor simple inclusion, but of mutual attunement. Our collaboration emerged through playful, iterative improvisation, scaffolded by social trust and a growing embodied knowledge of each other's gestures, preferences, and rhythms. My experiences with Arca and Verity constitute an example of interspecies collaboration that is socially situated, habitual, and mutually enriching. Arca's vocalisations, primarily characterized by harmonically resonant howls that range between G4 and G5, display a remarkable sensitivity to pitch, tonal quality, and vocal structure. Furthermore, Verity and Arca exhibited an already existent, complex, and fluid code of physical gestures that mutually communicated musical intentions.

Over time, I ceased being a visitor or outside facilitator. Instead, I became a co-musician within a living interspecies ensemble. The music we made—sometimes structured, often messy, always responsive—illustrates how musicality can surface and evolve in contexts of shared play and experimentation. Arca was not simply reacting to us; he was initiating, enthusiastically participating, and actively shaping the musical outcomes. Instances of canine mimetic exchanges, pitch matching, and embodied rituals like the play bow, lead me to categorize our practice as a distinctly musical one; our sessions came to reflect the kind of musicking that Christopher Small describes: a process, not a product; a way of being together, not merely of sounding together.

I further discuss the replicability of Arca and Verity's musical practice through their involvement in *Dog Choir* in Chapter 7.

4.4 Monika's Doggie Rescue

In parallel with my ongoing visits with Arca and Tilly, I regularly spent time at Monika's Doggie Rescue, meeting and playing music with dogs housed there. Over the course of a year, I engaged with ten different dogs at the shelter, observing and documenting a wide range of responses to both musical and social engagement. My aim at Monika's was to explore the potential for musical engagement with a wider range of dogs with whom I had no prior relationship. The shelter environment offered a valuable opportunity to interact with a diverse group of dogs—each with their own unique background, temperament, and physical characteristics. As with all aspects of this project, my sessions at the shelter were as much about fostering social connection as they were about musical exchange. I approached each session as a socially situated form of interaction, where listening and presence were as important as interactional sound. Additionally, I aimed to ensure my work at the shelter was contributing to the welfare of the dogs and the overall running of the shelter; alongside musically interacting with the dogs, I was fulfilling the need for dogs to be exercised and socially engaged.

While my work with Tilly and Arca allowed for deep, sustained engagement over time, my experiences at Monika's Doggie Rescue expanded the project's scope with a larger number of dogs but with less frequent visits. These shorter-term encounters enabled me to cast a wider net, exploring how dogs from a broader range of contexts might respond to live music in individually tailored settings.

4.4.1 Non-vocal responses: active listening as musical engagement

Among these diverse responses, some dogs demonstrated a complete apathy to the clarinet and music, others showed visible signs of distress, and some individuals appeared to exhibit signs of curiosity, attentive listening, and contentment in response to music. Notably, none of the dogs I encountered at the shelter responded vocally to the clarinet or any of my musical prompts, as had been anticipated as part of the premise of the project. This lack of canine vocality forced me to rethink the forms of interspecies musical participation I was probing. In

reevaluating how dogs could participate in music beyond vocalising, I began to observe subtle behavioural cues that clearly signified forms of active listening; Small emphasises the role of listening as integral to the process of musicking (Small 1998).
In human communication, the term *active listening* has been used to describe a highly attentive, empathetic, and engaged mode of listening. While it has primarily referred to the perception of spoken language—most often within the disciplines of education (Rost 2013), linguistics (Friston, Sajid, Quiroga-Martinez, Parr, Price, and Holmes 2021), and psychology (Rogers and Farson 1957/2015)—I found it a useful term in this context to describe highly engaged modes of non-human responses to non-lingual sound and music. In human settings, alongside reciprocal verbal responsiveness, active listening also encompasses bodily forms of reactive engagement, such as eye contact and body language that convey attentiveness (e.g., nodding, posture, some physical touch, and empathetic facial expressions). Despite these applications of active listening foregrounding an attention to linguistic meaning, the concept can be readily linked to forms of musical listening and other concepts related explicitly to musical listening.

Consider two listeners in a human musical setting, say a rock band playing in a pub with two listeners, listener A, who is standing by the front of the stage watching intently, bobbing their head, dancing, and applauding (active listening) and listener B, who is seated by the bar, paying little attention to the band, chatting to their friend, and eating a meal (passive listening). The form of active listening displayed by listener A is not inherently linguistic; rather, they are attentive to the full range of structural sonic elements as they relate to aesthetics and semiosis.

Composer Pauline Oliveros' concept of "Deep Listening," an intentional and heightened form of auditory attention to music, which draws heavily from meditation practices (Oliveros 2008), closely aligns with the idea of active listening, as both emphasize presence, receptivity, and a conscious engagement with sound and its relational context. This echoes many different Indigenous peoples' approaches to listening that are grounded in deep respect for land, non-human beings, and ancestral knowledge—modes of listening that are inherently relational, reciprocal, and often interwoven with ethical responsibilities (Robinson 2020). For instance, in many Indigenous epistemologies, listening is a reciprocal act that involves not just receiving sound (without making distinctions between language, music, and

environmental sound) but being in right relation with those one listens to—including animals, landscapes, and spirits (as is evident in Papua New Guinean Kaluli listening and musical practices [Feld 1982] and the Australian Ngan'gikurunggkurr peoples' place-based listening practice of *Dadirri* [Ungunmerr-Baumann 1988]). These practices often prioritize silence, patience, and attunement to more-than-human voices: qualities that are also central to Oliveros' Deep Listening ethos. While Oliveros developed her practice in a contemporary, experimental music context, and other scholars use active listening in relation to language, these approaches resonate with Indigenous ontologies that regard listening as a reciprocal form of knowing and being-with, rather than a passive sensory experience. While my initial intention with the shelter dogs was to co-create interactional musical practices including canine vocalisations (as with Tilly and Arca), their non-vocality forced me to contemplate and observe alternative forms of musical participation that included varying forms of listening, including what I observed to be canine active listening.

During my time with dogs, I observed many canine-specific signs of bodily attentiveness, in both vocal and non-vocal responders, that, rather than suggesting attention to linguistic meaning; instead, seemed to signal attentiveness to musical and instrumental sound. Correspondingly, in my own approach, I attempted to enact a form of active listening by closely observing and responding to the nuanced reactions of each dog.

Signs of active listening I observed in dogs across the contexts in which I engaged with them included eye contact, ears perked up/shifting position in reaction to sound, head tilted, physical closeness, and changes in bodily comportment in response to changing sonic material (e.g., a change in register resulted in the dog looking in the direction of the sound). My purposeful observation of these bodily signs was in keeping with Warkentin's ethos of interspecies etiquette (Warkentin 2010) and Shapiro's notion "kinesthetic empathy," which emphasises the need to "sense or empathize with the bodily movements or intentions of the animal" (Shapiro 2008: 108).

When observing signs of non-vocal active listening in dogs, Small's emphasis on listening as a vital component in the relational and phenomenological theorizing of "musicking" (Small 1998) becomes important to consider. Small asserts that listening is not a passive act but an active, relational process through which participants co-create meaning in the musical event.

He argues that all who engage—listeners included—are involved in a social ritual that explores and affirms relationships, making listening a fundamental act of participation (Small 1998: 9). Building on Small's insistence on the inherently social nature of musicking, my experiences with the shelter dogs highlighted how musical encounters can serve as simultaneously social and musical exchanges, each enriching the other. As with human musical engagement, one must evaluate non-human participation in music in a much broader sense than just mutual sound making, where collaborative interspecies musicking includes practices of listening and sociality.

4.4.2 Shelter background and logistical challenges

Monika's Doggie Rescue is a no-kill animal shelter located in the northern suburbs of Sydney. The shelter operates as a charity and relies heavily on the support of volunteers, along with a small number of paid staff. In my initial meeting with Monika, the founder of the shelter, she expressed enthusiasm for my project and readily gave her approval. She also related how the handlers—both volunteers and staff—had, over time, noticed a calming effect on the dogs when classical music was played in the evenings. This existing use of music as a soothing tool helped establish a precedent for the shelter staff to understand the goals of my work. I explained to them the premise of my research: exploring interactional, live forms of music making with dogs to evoke diverse emotional and behavioural responses (including vocalisation). This approach differs from more passive uses of prerecorded music in enrichment settings for captive animals, where the primary goal is to induce calm (Lindig, McGreevy, and Crean 2020).

During my initial conversation with Monika, I emphasized my intention to integrate into the daily operations of the shelter without disrupting its routine. Given the shelter's reliance on a delicate balance of volunteer availability and limited space, Monika suggested I conduct my musical sessions as part of the dogs' regular walks. This not only ensured that the dogs were in a familiar and comforting context, but also eliminated the need for a separate enclosed space—something the shelter struggled to offer due to spatial constraints and the challenge of managing dogs with behavioural or compatibility issues.

By conducting my sessions during dogs' daily walks, I was contributing directly to the shelter's operations. Each dog's exercise needs were being met, and the time spent together served both practical and research purposes. Initially, I would take the dogs out for a walk, leading them into a quiet bush clearing off the main road. It was in these outdoor settings that I conducted my early sessions: spending time with each dog (on the lead), playing clarinet, and observing their reactions.

However, I began to encounter limitations with the outdoor environment. While peaceful, it proved to be overly stimulating for many of the dogs. Surrounded by a flood of scents, sights, and sounds, their attention was often diverted away from me and the music. Additionally, keeping the dogs on a lead while managing the clarinet was physically awkward and restricted both their movements and mine. This setup made it difficult to foster the kind of relaxed, reciprocal interaction I was hoping for—such as those that were possible with Tilly and Arca.

Responding to these challenges, and following the advice of several handlers, I began conducting the sessions in the back seat of my car. The handlers explained that most of the dogs had developed a positive association with car rides, as these often led to outings at the local dog park. This shift in environment proved to be a turning point. In the car, the dogs were noticeably more relaxed and engaged. The enclosed space—far from feeling restrictive—allowed the dogs to move freely about the cabin, and my hands were freed up from managing the lead. The acoustic environment of the car also made it easier to capture audio and video recordings of the sessions with greater clarity and consistency.

Despite these improvements, there were inherent limitations to my time at the shelter. Unlike my work with Tilly and Arca, where I could develop a relationship over multiple sessions, I was not able to spend extended or repeated periods of time with individual dogs at the shelter. The structure of the shelter's schedule and the unpredictable nature of adoptions meant that some dogs I worked with repeatedly—and intended to continue working with (as will be explained with Mango and Finn)—were adopted, bringing our ongoing sessions to an end. This made my data collection a little patchy; however, this is unimportant when considering the noble aims of the shelter in getting rescue dogs adopted into loving homes. Some dogs I met repeatedly over several weeks or months, while others I only encountered once.

My access to the dogs was also mediated by several logistical variables imposed by the structure of the shelter. I would typically meet the dog at the driveway entrance to the shelter, and I had limited control over which dogs I could work with on a given day. Several factors influenced this:

- Which dogs were already out on a walk and who I might encounter along the way (to avoid potential dog-dog conflicts);
- Which dogs were waiting by the driveway to return to their enclosures;
- The availability of volunteer dog walkers and the priority of which dogs needed walking most urgently.

These considerations underscored the importance of flexibility in my approach. My work had to adapt to the rhythms of the shelter, which in turn shaped the nature of the relationships I was able to form with each individual. This led to interactions that were markedly different to the experiences I had with Tilly and Arca. Nonetheless, these constraints became part of the fabric of the project, grounding it in the lived realities of shelter life and the improvisational care that such environments demand.

4.4.3 Categorizing shelter dog responses

The following accounts of ten individual dogs I met are divided into three sections that encompass the variety of canine responses I observed:

1. Positive responses: dogs who predominantly demonstrated signs of active listening, contentment, excitement, and/or curiosity (Mango, Finn, Gizmo, and Jarrah);
2. Neutral and mixed responses: dogs who showed limited and mixed interest in my musical offerings (Zara, Theodore, Alex, and Arnold);
3. Negative responses: dogs who displayed mostly behaviours significant of distress in response to the clarinet (Fay and Spirit).

Using the fieldnotes and recordings I made at the time, below I recount the specific interactions and behavioural responses of each dog, within the dually social and musical sessions I conducted.

4.4.4 Positive responses to musical stimuli

Mango: 21 March 2023, 28 March 2023, 4 April 2023, 9 May 2023, and 17 May 2023 (five sessions)

Mango, a female Shar Pei cross with a highly affectionate and energetic temperament, initially exhibited a wary and even fearful response to the clarinet. Despite this early apprehension, her openness to social interaction allowed for a gradual and meaningful transformation in her perception of musical engagement. Over the course of five sessions spanning three months (our sessions did not continue beyond this because she was adopted), Mango transitioned from a state of sonic distrust to one of relaxed and attentive listening, particularly when supported by gentle physical contact. Her evolving responses serve as an example of how patience, social bonding, and sustained exposure can shape a dog's relationship to unfamiliar musical stimuli.

Our first session took place outdoors on 21 March 2023. In the beginning, Mango appeared curious—tilting her head and directing her gaze toward the clarinet—but quickly displayed signs of distress once I began playing. She physically moved away from the sound source, indicating discomfort or fear. Nonetheless, she remained highly affectionate and repeatedly returned for pats and cuddles, even after retreating from the clarinet. This juxtaposition of sonic aversion and social eagerness laid the groundwork for an important dynamic: the clarinet might be tolerated, even reconsidered, when paired with comforting physical interaction. As I had noted with Tilly and Arca, she was particularly attentive to the clarinet mouthpiece, often tilting her head and perking up her ears when I played the mouthpiece on its own. By the end of the session, she began to permit my playing only when I maintained physical touch—placing my hand on her back as I played. At various points throughout this first session, I also allowed her to sniff the instrument to demystify the foreign object and communicate that it posed no threat (as I had done with Tilly and Arca). Her engagement was intermittent, additionally influenced by the distractions of the outdoor environment.

The second session on 28 March 2023 (also conducted outdoors) marked a distinct shift in Mango's behaviour. Upon seeing me, she greeted me with tail wagging and face licking—clear signs of recognition and excitement. Notably, she no longer moved away from the clarinet. Instead, she remained at my feet, calm and observant, as well as displaying an initial curiosity towards the instrument (Fig. 51). A significant period occurred midway through our session (8:30-10:30), during which Mango sat contentedly by my feet while I played a sustained colour trill in the clarino register (Fig. 52). I rested my other hand gently on her torso to reassure her, and this dual sensory engagement—auditory and tactile—appeared to soothe her. This simultaneous tactile soothing alongside my playing also occurred later in the play (12:57-13:49) (Fig. 53). She remained still, her ears relaxed, and her breathing even, indicating a state of calm attention. On several occasions, she wagged her tail in response to eye contact made while I played, suggesting she was beginning to develop a positive association between the clarinet and social interaction.



Figure 51. Mango showing less apprehension towards the clarinet by being closer to and directing her gaze towards the clarinet with her ears pricked up (screenshot captured at 5:24 during Session 2 on 28 March 2023).



Figure 52. Mango appearing far more relaxed as I played high register sustained notes while physically soothing her during our second session (screenshot captured 8:40 during Session 2 on 28 March 2023).



Figure 53. Mango during another period of simultaneous physical touch and sustained melismatic clarinet playing (screenshot captured at 13:14 during Session 2 on 28 March 2023).

Though Mango still startled at certain abrupt or percussive gestures, her general demeanour was far more composed than during our initial meeting. This session offered strong evidence of a shift: the clarinet was no longer seen as solely threatening but was increasingly accepted as part of our shared interaction.

Session 3 on 4 April 2023, followed a similar pattern. Mango remained excited to see me and was clearly comfortable in my presence, demonstrated by a relaxed walk during which she defecated—a common indicator of bodily ease in your presence. While she was more distracted during this session—sniffing trees, chewing sticks, and nibbling on grass (seen in Fig. 54)—there were still two significant periods, each over a minute long, in which she sat close to me calmly while I played and simultaneously stroked her back. Her bodily stillness and relaxed ears during these moments suggested she was engaged in relaxed listening, albeit within the broader context of environmental exploration.



Figure 54. Mango appearing more interested in the sensory stimuli of the surrounding environment than in my clarinet playing (screenshot captured at 4:16 during Session 3 on 4 April 2023).

After a short pause in our sessions while I awaited an amendment to my animal ethics approval, I resumed working with Mango on 9 May 2023. This fourth session yielded results similar to the third: some distraction, but also moments of settled presence and active listening. She occasionally pricked up her ears in response to specific registers or gestures (most often louder material in the altissimo or clarino registers) and remained physically close to me throughout. Her continued willingness to stay near the clarinet and the consistency of her affectionate behaviour indicated that the instrument had become a familiar—and more tolerable—component of our time together.

The most profound session, however, occurred during Session 5 on 17 May 2023, when I conducted our session inside the car—a more enclosed and controlled environment that limited external distractions. Mango was notably more focused, affectionate, and calm. She climbed into my lap during the session and remained there contentedly as I played quiet, sustained multiphonic trills. The close physical proximity, coupled with her relaxed bodily posture and unbothered response to the clarinet, suggested a reframing of her relationship with the instrument. No longer something to avoid, the clarinet had become embedded within a context of social comfort and trust. Her steady presence and lack of startle responses underscored this change.

Mango's evolving responses across these sessions highlight the power of repeated exposure, tactile reassurance, and gentle sonic interaction in transforming a fearful reaction into one of curious, relaxed, and active engagement. My time with Mango is a reminder that musical participation—especially interspecies participation—does not always begin with obvious mutual enjoyment but can evolve into it through patience, empathy, and attunement to the other's needs. While it was bittersweet news for me that Mango was adopted, I was ultimately delighted that this strange, curious, and affectionate little creature had found a home.

Finn: 24 May 2023, 30 May 2023, and 11 July 2023 (three sessions)

Finn, a black-and-white American Staffy cross, was described by shelter handlers as "…a little bit anxious and reactive around other dogs but very friendly towards people." This is a commonly observed trait in Staffies, who are known for their affectionate nature toward

humans but can display nervous, sometimes aggressive behaviours towards dogs in other contexts. Over the course of three visits (before his adoption), I observed Finn's tendencies towards active, attentive, and engaged listening alongside his positive responses to social engagement. The handlers mentioned that Finn would "talk" to them when he was either anxious or seeking attention—vocalising through grunts, whimpers, and other sounds, anecdotally similar to behaviours I had observed in Tilly. Given these reported vocal behaviours, I was initially interested in whether music could serve as a tool for engagement and possibly elicit vocal responses, which had so far eluded me with the dogs I had met at the shelter. In my observations of Finn outside of the explicitly musical portion of our sessions, I noted that Finn whimpered and grunted when anticipating treats or when he was intent on interacting with other dogs we encountered on our walks. These instances demonstrate his tendencies to use vocalisations as a communicative tool (much like I had observed with Tilly's "woowoo" gesture). My goal with Finn was to facilitate a context in which he felt comfortable vocalising in a positive exploratory, rather than anxious or explicitly functional, context.

Each of the three sessions with Finn followed the same structure: we would take a half-hour to hour walk around the neighbourhood before getting into my car, which functioned as a familiar and contained environment for focused musical engagement. Though Finn was free to move around within the limited cabin space, given his affectionate (if not a little anxious) tendencies, he often preferred to be close to me in the back seat, reinforcing his need for social connection (Figure 55 demonstrates Finn's affectionate positioning next to me in the back seat during Session 2 on 30 May 2023).

Despite these indications of vocal tendency, in Session 1 on 24 May 2023 Finn did not vocalise in response to my musical interventions (clarinet playing and vocalising). He did, however, demonstrate clear signs of active and engaged listening throughout this session. His behaviours—including changes in ear positioning, sustained eye contact, tail wagging, and both physical relaxation and alertness—indicated that he was attuned to and affected by the sounds I was producing. Over the three sessions, his increasing physical comfort and affectionate behaviour further suggested that he was forming a deeper connection with both me and the musical sessions themselves.

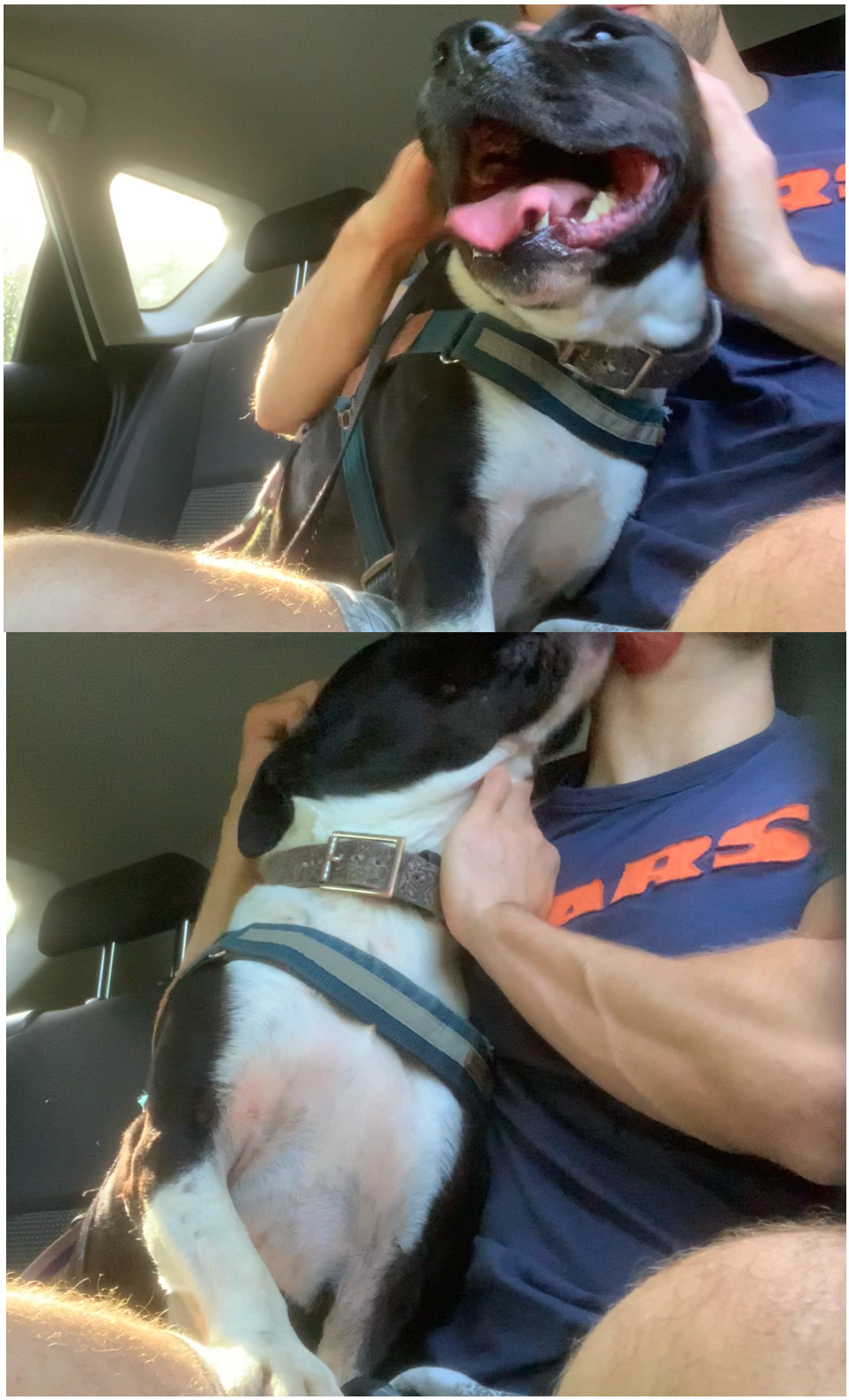


Figure 55. Finn showing an immense enthusiasm for a cuddle (top) with a lick to the face (bottom) during our second session (screenshots captured at 2:37 and 2:41 during Session 2 on 30 May 2023).

During our second session, on May 30 2023, when I offered my first musical gesture, a high-pitched warbling tone using the clarinet mouthpiece, he immediately responded by wagging his tail while facing away from me: a common sign of trust and comfort (Fig. 56). This suggested that he was registering the sound and associating it with a positive stimulus, even if he did not directly look at me in the moment. As the session progressed, Finn repeatedly moved to the front seat of the car (where he knew the treat bag was placed) but he eventually settled beside me in the back seat with my hand resting on his belly, like Mango in her desire for physical touch alongside the clarinet.

At 7:22, I played a multiphonic trill gesture on the clarinet, sliding between overtones. Finn's ears moved in direct response to the changes in pitch—perking up when the higher overtones emerged and relaxing as the sound shifted downward. This pattern of ear movement, combined with his physical stillness, strongly suggested that he was attentively processing the nuances of the sound rather than simply reacting to my presence. Later after this period of alertness, he rested his head on the seat without looking up at me, which indicated a state of relaxation, while still choosing to be close to myself and the clarinet.



Figure 56. Finn wagging his tail alongside my warbling mouthpiece gesture (screenshot captured at 0:51 during Session 2 on 30 May 2023).

Later in the session, Finn demonstrated an even more striking example of active listening: for over a minute (13:17-14:25), he stood (and later sat) very close to me, maintaining steady eye contact while intermittently wagging his tail as I played the clarinet (quiet altissimo colour trills and clarino glissando whine-like gestures) (Fig. 57). The duration and intensity of this gaze suggest more than casual attention—he was deeply attuned to both my presence and the sound I was producing on clarinet. This behaviour and his sustained eye contact seemed to signal attentiveness, trust, and an attempt to decode auditory stimuli.

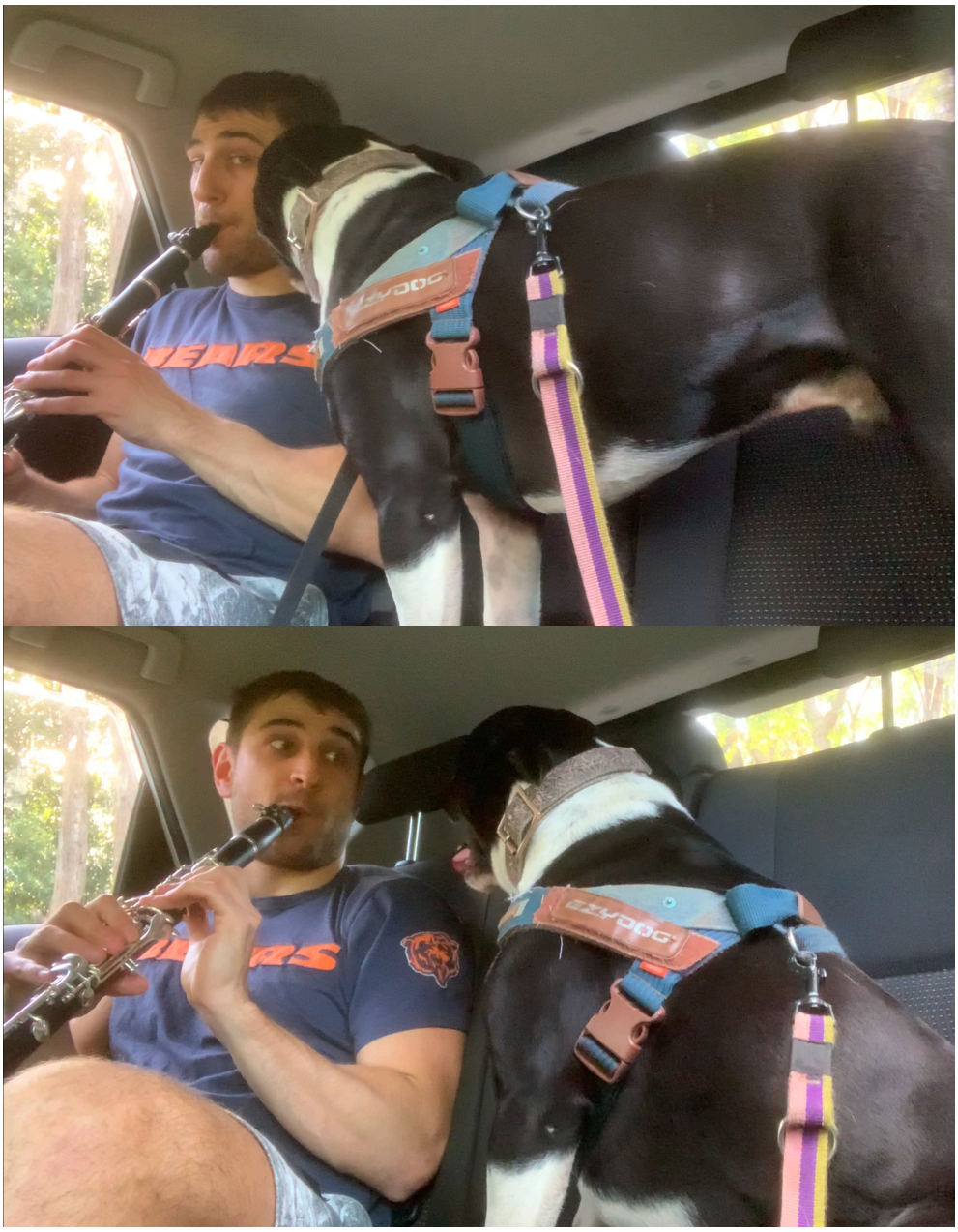


Figure 57. Finn showing signs of active listening during Session 2 on 30 May 2023 with eye contact, intermittent tail wagging, and physical closeness while standing (screenshot captured at 13:21) (top), then while sitting (screenshot captured at 13:51) (bottom).

Finn's enthusiastic response to my arrival for my third visit on July 11, 2023 (tail wagging, licking, and jumping up) definitively confirmed that he both remembered and positively related to our previous encounters. His excitement upon seeing me was notably more intense than his reactions to strangers, on par with the affection he showed toward familiar shelter handlers. Our initial half-hour walk was punctuated by frequent stops for cuddles and pats; our bond had grown over the visits, so much so that I found myself tempted to adopt him for myself (a temptation that was arrested after he was later adopted by someone else).

When we transitioned to the car for the musical component of the visit, Finn exhibited increased physical affection, frequently climbing onto my lap and licking my face. While he showed distinct interest in my clarinet playing, I experimented with a wider variety of sonic stimuli using my recordings played from my laptop. Finn subsequently displayed a heightened sensitivity to some of the pre-recorded sounds played from my laptop, including high pitched alarm sounds and other animal noises, but showed particular attention in response wolf howl recordings. His ears perked up and his panting momentarily halted in response to these howls, indicating that he was not only hearing the sound but also processing it with heightened attention. Like with the clarinet, these behaviours suggest a level of auditory discrimination and interest beyond passive listening.

I also experimented with vocalising dog-like howls (as I had tried with Arca and Tilly) in an attempt to encourage Finn to join in vocally. Though he did not immediately vocalise alongside me, he exhibited other social and communicative behaviours, such as wagging his tail and pawing at my hand, which I interpreted as signs of engagement and a desire to interact, at least socially. These responses suggest that he was not only hearing my vocalisations but was also actively considering how to respond within the social dynamic of our interaction. After my third visit, Finn was adopted; I was relieved that this beautiful anxiously loving dog had found a home, even if I was a little sad that I'd never see him again.

By integrating musical stimuli into our time together, my aim was to channel Finn's reported vocal tendencies into a structured and expressive form, which was not fully realized. His responses—ranging from ear movements and eye contact to tail wagging and stillness—illustrate an attentive and engaged listening process. While he did not vocalise, his

behaviours suggest that he was actively processing the sounds, demonstrating curiosity, and forming associations between the musical stimuli and our shared social experience.

Finn's case exemplifies how musical engagement with dogs is not solely about eliciting vocalisation but also about recognizing and interpreting more subtle markers of active listening. His ability to attune himself to musical sounds, register pitch changes, and remain physically engaged throughout our sessions highlights the potential positive enrichment effect of interspecies live musical interaction (beyond the intended calming effect of recorded music investigated in existing canine auditory enrichment studies [Kogan, Schoenfeld-Tacher, and Simon 2012; Lindig, McGreevy, and Crean 2020]). As with Mango, his increasing comfort and willingness to remain close to me during these sessions suggest that music played a role in reinforcing our social bond, further supporting the idea that musical interaction can be an enriching and engaging experience for both human and non-human participants. Finn's behaviours—his sustained eye contact, ear movements, and bodily responsiveness—position him as an active musical participant rather than a passive observer, reinforcing the idea that listening itself is a meaningful and dynamic part of musical experience.

Gizmo: 25 May 2023 (one session)

Gizmo, a large black dog with possible Rottweiler lineage, demonstrated overtly enthusiastic responses to a musical session during our session together on 25 May 2023 in the car. From the moment I began playing, he was visibly excited: his ears pricked sharply in response to sound, and his gaze fixed intently on the clarinet. His heavy panting, as a result of the walk we just undertook, would pause momentarily each time a new or particularly interesting (to him) sound emerged, suggesting moments of attentive listening.

Gizmo's response to the clarinet was inseparable from his excitement about our social interaction. Throughout the session, he wagged his tail vigorously and repeatedly attempted to climb into my lap, often to lick my face or to get closer to the clarinet itself (Fig. 58). His movements were animated but not anxious—his overall demeanour was one of happiness, alertness, and high engagement.

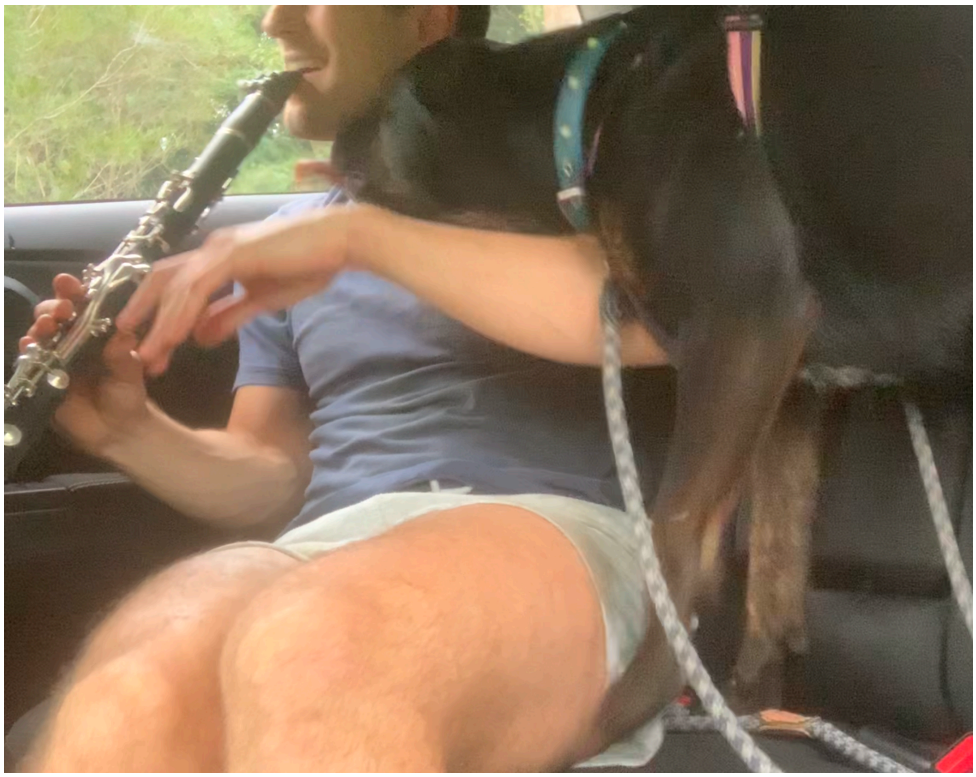


Figure 58. Gizmo enthusiastically attempting to lick my face mid clarinet playing (screenshot captured at 4:11 on 25 May 2023).

The confined yet familiar space of the car seemed to support this dual engagement: it allowed for close social interaction while also directing his attention toward the musical source. Gizmo's behaviour throughout the session—his physical closeness, sustained eye contact, tail wagging, and responsive listening—suggested a genuine enjoyment of both the musical and interpersonal elements of the encounter.

Jarrah: 25 May 2023 (one session)

Jarrah, a medium-sized sand coloured staffie mix breed with a cautious but inquisitive temperament, initially presented as wary and slightly nervous during our first few moments together in the car. Unlike the overt excitement shown by dogs like Gizmo or Finn, Jarrah's engagement was more subdued yet undeniably attentive. Despite his early hesitance, he chose to remain physically close to me throughout the session.

As I began to play the clarinet (at first playing quiet throat notes so as not to initially spook him), I noticed clear indicators of active listening. His ears subtly shifted in response to

changes in register and articulation, and his eyes moved from my face to the clarinet and, notably, to my fingers as they moved along the instrument (Fig. 59). His panting, initially constant, would cease entirely during particularly engaged moments of listening, suggesting heightened focus, often accompanied by his head tilting and his ears pricking up (also evident in Fig. 59). While he never initiated physical affection, Jarrah's quiet attentiveness, sustained eye contact, and bodily responsiveness to the clarinet seemed to convey a deep, if understated, engagement with both the musical and social aspects of the encounter.



Figure 59. Jarrah responding a loud clarino register clarinet phrase with his gaze directed towards the clarinet, his head tilted, and ears pricked up during our session (screenshot captured at 11:43 on 25 May 2023).

Though he remained somewhat cautious around the clarinet itself, never moving too close to the object when I offered it to him to have an investigative sniff, his continued proximity and lack of withdrawal indicated a positive association. His response was marked less by exuberance and more by a calm, sustained curiosity—an example of a different yet equally valid mode of interspecies musical participation.

4.4.5 Canine active listening amongst the shelter dogs

Mango, Finn, Gizmo and Jarrah showed sustained and consistent positive responsiveness to my clarinet playing and social engagement, suggesting the appeal of live musical

interactional enrichment beyond the first moments of novelty. These dogs exhibited varied and changing responses throughout the course of singular sessions where there were periods of relaxed listening (exemplified by behaviours including lying down, ears relaxed) as well as alert and excited listening (typified by eye contact, ears pricked up, tail wagging, licking, and ears shifting in response to changing sonic stimuli). Together, the responses of Mango, Finn, Gizmo, and Jarrah demonstrate a common form of canine listening behaviours and the potential of live clarinet playing to facilitate forms of interspecies connection grounded in attentiveness, curiosity, and affect. While each dog responded differently—ranging from Gizmo's exuberant physical engagement to Jarrah's quiet, sustained gaze—what united them was a shared attentional orientation toward sound and the social presence of the player. These varied expressions of active listening support the idea that music, even in the absence of shared linguistic meaning, can act as a site of mutual encounter and curiosity. In attending to the bodily cues, rhythms of engagement, and shifts in energy across these moments, I was attempting to model of form of musical interaction not as a performance to an audience but as a co-constituted, relation act of musicking. These moments of positive non-vocal canine musical engagement served as early indicators of the kind of engagement I would later attempt to cultivate and communicate in *Dog Choir*.

While the accounts related in this section documented positive responses to the clarinet, below I provide accounts of shelter dogs I engaged with who showed mixed and apathetic responses to the clarinet.

4.4.6 Mixed and neutral responses to musical stimuli

Zara: 21 March 2023 (one session)

Zara, a white American Staffy cross, initially demonstrated an excited response to the sound of the clarinet. Upon hearing the first notes I offered—detached clarino trills and melodic fragments—she perked her ears, wagged her tail, and made eye contact with me (Fig. 60). I complemented the clarinet playing with verbal reassurances ("What do you reckon, Zara?") and gentle physical touch, such as head pats and strokes along her back (as had been successful with Mango). While it is unclear whether her excitement was in direct response to the clarinet, the physical affection, or the verbal attention, these initial moments were

enriching and exciting for both of us. However, as the session progressed, Zara's interest in the clarinet waned. She became increasingly preoccupied with the bushland environment, sniffing the ground and tracking distant sounds. No signs of distress were observed, but the musical interaction gradually faded into the background, overtaken by the sensory richness of her surroundings. This visit, like many at the shelter, was both social and musical—Zara's initial signs of active listening were fleeting, while the social component remained central.



Figure 60. Zara showing an initial curiosity in the novel sound of the clarinet (screenshot captured at 2:07 on 21 March 2023).

Theodore: 10 January 2023 (one session)

Theodore, an elderly brown mixed-breed dog (Fig. 61), also showed limited engagement with the clarinet. At the start of the session, he responded with a curious glance upward when I introduced the sound, but this initial interest quickly dissipated. For the remainder of our time together, Theodore was far more invested in receiving pats and verbal attention. He wagged his tail intermittently and leaned into my touch, clearly enjoying the social aspect of our encounter. Much like Zara, Theodore appeared calm and comfortable but was largely unresponsive to and uninterested in my clarinet playing. The natural stimuli of the

environment—distant rustling, scents on the breeze—captured more of his attention than the music I offered.



Figure 61. Theodore on his walk preceding our musical session (author photograph).

Alex: 10 May 2023 (one session)

Alex, an elderly golden retriever mix (Fig. 62), was a gentle and affectionate dog who responded positively to physical closeness and eye contact but was largely apathetic to my musical offerings. Upon hearing the first high-pitched warbling notes from my mouthpiece, Alex leaned in for a brief sniff, showing initial curiosity. However, beyond that moment, he exhibited no sustained interest in the clarinet or signs of active listening. Shortly after I began playing, Alex lay down beside me, his posture relaxed and unbothered. He continued to respond positively to touch but remained indifferent to the musical aspect of the session. Eventually, the appeal of the surrounding environment pulled his attention away entirely—he stood up and began to explore a nearby scent trail, tugging gently at the lead and pulling me out of my playing position.



Figure 62. Alex irreverently ignoring my attempts to set up my clarinet ahead of our musical session on 10 May 2023 (author photograph).

Arnold: 10 May 2023 and 16 May 2023 (two sessions)

I conducted two sessions with Arnold, a medium-sized mixed breed, one outdoors and one in the car where he displayed more focussed attention despite generally mixed responses to the clarinet in both instances. Arnold exhibited a lively and inquisitive temperament during our Session 1 on 10 May 2023 and the walk preceding it. When I introduced the clarinet, he immediately approached and began investigating the instrument with animated sniffs and physical signs of curiosity (eye contact and head tilted). He was particularly reactive to the high-pitched sounds produced by the mouthpiece, responding with alert body language—ears pricked and eyes focused intently on the source of the sound.

However, this initial curiosity did not persist. As this outdoor session progressed, Arnold became increasingly distracted by the surrounding environment, often turning his attention to the sensory stimuli of the outdoor setting. At moments, he appeared unsure or wary of the

clarinet, physically attempting to distance himself from me and the clarinet and at other times displaying a pacing behaviour (often indicative of distress). These subtle avoidance behaviours suggested a level of discomfort or uncertainty with the clarinet. Despite these mixed reactions, Arnold remained affectionate towards me and responsive to social engagement through gentle touch and verbal reassurance.

During our second session in the car on 16 May 2023, Arnold was less distracted by the environmental stimuli but still showed a hesitation towards the clarinet. At times, he did demonstrate behaviours indicating active listening (similar to Finn) including moments where his gaze shifted between the source of the sound and me (Fig. 63), as well as instances where he came in close to the source of the sound to investigate with his nose and mouth (Fig. 64). As in our first session, he showed an acute reactivity to the high sound of the mouthpiece. Despite some fleeting signals of active listening and a generally relaxed disposition, for most of the session Arnold directed his gaze out the window away from me and the clarinet (Fig. 65).



Figure 63. Arnold responding to a staccato low register note with ears perked up and eye contact directed towards the source of the sound during our second, more focussed session, in the car (screenshot captured at 3:04 during Session 2 on 16 May 2023).



Figure 64. Arnold appearing alert and stimulated by the warbling high-pitched sound of the mouthpiece (screenshot captured at 5:26 during Session 2 on 16 May 2023).

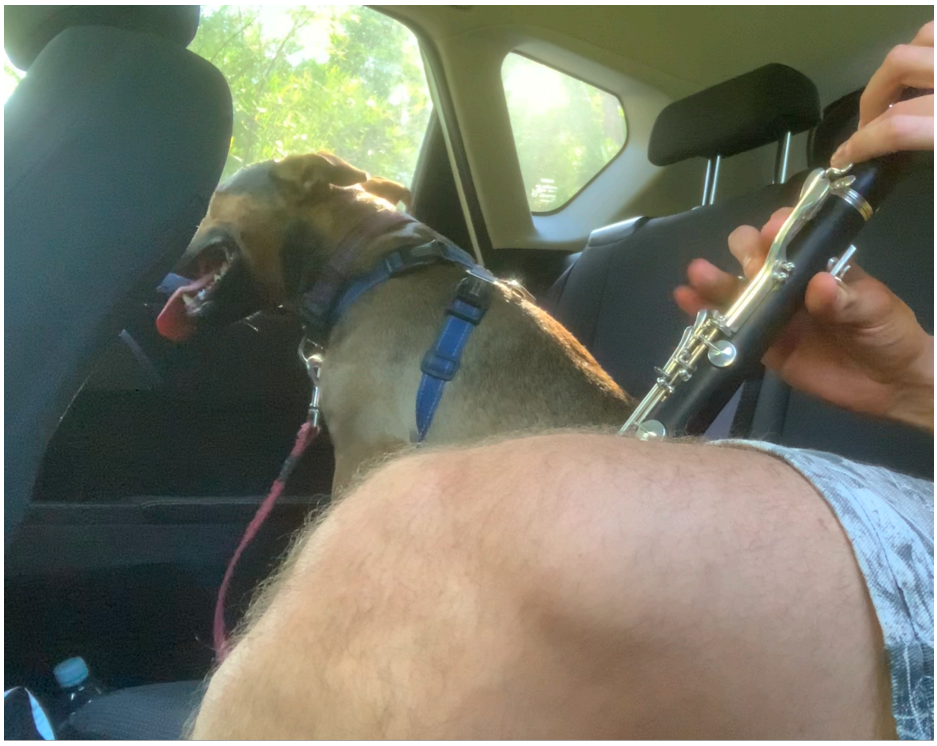


Figure 65. Arnold directing his body away from me, and the clarinet (screenshot captured at 1:26 during Session 2 on 16 May 2023).

Like many of the dogs I met at the shelter, his relationship to the musical stimulus was complex and shifting—he was at times intrigued, at times cautious—underscoring the importance of attuning to each dog's emotional state and sensory thresholds during these encounters.

In each of these cases (Zara, Theodore, Alex, and Arnold), the dogs exhibited an early, mild and/or intermittent curiosity in response to the clarinet—often expressed through ear movements, head tilts, or brief glances—but quickly shifted focus to the social and environmental elements of the encounter. Zara, Theodore, and Alex all appeared to prioritize tactile interaction and verbal engagement over the musical sounds themselves.

4.4.7 Negative responses to musical stimuli

Fay: 10 January 2024 (one session)

Fay, a female Staffy mix breed I met only once on 10 January 2023, exhibited an active dislike of the lower chalumeau register of the clarinet. When I played short notes in this low register, she pulled away from me and exhibited a low posture, indicating fear. Once given an opportunity to investigate the clarinet with her nose, she appeared less apprehensive and more engaged. When I introduced sustained clarino register material, she initially perked up her ears and tilted her head inquisitively but then showed little subsequent interest. Repeated trials with the low chalumeau register notes yielded the same fearful response in Fay, while higher notes elicited neutral minimal responses. Despite her unease in response to my low register clarinet playing, overall, she did not appear particularly distressed by the situation. Fay was consistently affectionate with me and eager for physical touch; when arriving back to the entrance of the shelter, she enthusiastically plonked herself in a plastic tub of water to cool off (Fig. 66).



Figure 66. Fay appearing content while cooling off after our musical session on 10 January 2023 (author photograph).

Spirit: 17 January 2023 (one session)

Monika's Doggie Rescue had a large number of Siberian Huskies whom they took in after an illegal Husky breeder was shut down. Having encountered documentations of highly vocal and vocally dextrous huskies online (there is a wealth of examples of Huskies mimicking the voices of their people such as "Mishka says 'Hello'" [Gardea123 2010] and "Husky has an Italian accent" [MelissaB 2024]), I was keen to explore a musical relationship with one of the Huskies living at the shelter.

After talking to one of the workers at the shelter about this idea, I was presented with Spirit, a young female Siberian Husky. The shelter worker explained that due to their traumatic history before the shelter, living in squalid conditions and being underfed, this group of huskies had complex behavioural issues including aggression and anxiety. Setting off on a walk with Spirit, she was not well trained on the lead; she pulled then suddenly stopped and

would not go further unless coaxed with treats. She was nervous, skittish, and uninterested in physical touch. We went to the clearing in the bush next to the road I had visited before, and I put my clarinet together. During this setup, Spirit was restless and unwilling to sit still, distracted by the surrounding environment.

I stood up and played a soft chalumeau register G to which she looked up at me and perked her ears up (Fig. 67). I next tried a slightly louder clarino register E to which she also perked her ears up. Despite these early signs of curiosity, I next played a fast descending melodic passage that startled her and she walked further away, pulling on the lead in the opposite direction from me and the clarinet. After giving her an opportunity to smell the clarinet, in subsequent attempts to engage Spirit with the clarinet, she emphatically pulled away and at two points she scurried in circles, clearly indicating distress.



Figure 67. Spirit showing an initial curiosity in the clarinet with ears perked up and eyes locked on me (screenshot captured at 1:56 on 17 January 2023).

Despite an initial curiosity towards the sound of the clarinet, Spirit was apprehensive and alarmed by the clarinet. This distressed response was understandable, given Spirit's nervous disposition as a result of her history. After two further attempts to demonstrate that neither I

nor the sound posed a threat (coaxing her with treats), I gave up on the clarinet and took her for a walk up the hill. My experience with Spirit illustrates a negative reaction to live music.

These negative responses from Fay and Spirit offer an important counterpoint to earlier, more positive examples of canine engagement with live clarinet music. While some dogs appeared soothed, curious, or even enthusiastic in response to certain sonic elements or musical interactions, the cases of Fay and Spirit highlight the importance of individual history, temperament, and sensory sensitivities in shaping musical receptivity. Fay's aversion to the low chalumeau registers and Spirit's overall anxiety in response to sound suggest that musical engagement cannot be universally presumed to be positive or therapeutic; in these cases, withholding sound appears to be the most appropriate ethical response, at least without a longer period of engagement and relationship building with each dog. These moments emphasize the necessity of attuning closely to each dog's affective state and responses—an approach aligned with both Deep Listening (Oliveros, 2005) and Christopher Small's notion of musicking as relational (Small, 1998). Understanding and respecting these responses reinforces the ethical dimension of multispecies music-making, where listening is as much about withholding sound as it is about offering it.

4.4.8 Reflections on my experiences at Monika's Doggie Rescue

My work at the shelter was valuable as an exploratory stage, allowing me to trial ideas with dogs who had no prior association with me or live music. These encounters provided insight into how unfamiliar dogs, many with traumatic pasts, might respond to music in varied and often non-vocal ways. Such responses became integral to designing later stages of the project, especially in anticipating the behaviours of diverse groups of dogs within the participatory setting of *Dog Choir*.

At the same time, the shelter context revealed important limitations. The restricted time I could spend with each dog, combined with their unfamiliarity with me, likely contributed to the predominance of non-vocal or hesitant responses. This contrasted with the gradual vocal engagement I observed in Tilly and Arca once trust and intimacy had been established. The negative, non-reactive, or cautious responses of shelter dogs underscored both the individuality of canine vocal behaviours and the central role of ongoing relationships in

cultivating musical exchanges. Neuroscientist Laura Elin Pigott, in writing about the remarkable emotional sensitivity of dogs, suggests that dogs need relationships with people to fully develop these emotional sensitivities (Pigott 2025). The wary responses of many of the shelter dogs likely reflects the traumatic backgrounds of some animals, where they may have missed out on key relationship-building opportunities with people in their lives.

Reflecting on this experience, I came to see meaningful participation in interspecies music as extending beyond mutual sound-making. Listening, presence, and responsiveness—human as well as canine—proved equally significant. While I could not always build sustained connections in the shelter, the breadth of responses I observed offered a valuable reminder of the diversity of canine musical engagement, shaped by temperament, history, and circumstance. These insights ultimately affirmed the importance of longer-term, trust-based relationships in fostering collaborative musicking, while also highlighting the potential of live, reciprocal sound-making to enrich canine experience in ways that surpass pre-recorded auditory enrichment.

4.5 Stage 1: Fieldwork Conclusion

The Stage 1: Fieldwork has revealed a tapestry of diverse canine responses in which each dog's musical behaviour was inseparable from their lived histories, emotional temperament, and the evolving tenor of our relationship. As I proceeded with this fieldwork in the varying forms and contexts, it became evident that the quality of my relationship with each animal was fundamental to any potential musical collaboration. In previously assuming that dogs would immediately display their vocal or musical tendencies to me (a stranger), I was naïve to the apparent importance of an intimate and familiar relationship with each animal, this being reflected in Warkentin's interspecies etiquette protocols (Warkentin 2010). While many of the dogs showed behavioural cues displaying attentiveness and curiosity, before the dogs who did vocalise began exhibiting these vocal behaviours (beyond certain quotidian vocalisations, like barking at an intruder or vocalising in response to pain), the dogs had to be comfortable with me before they began singing and to be relaxed alongside the novel stimuli of live music. This was demonstrable with Tilly and Arca, dogs with a documented history of vocalising in response to musical stimuli, where each of them was at first hesitant to vocalise in my presence but as our relationship became more familiar their vocality increased.

Arca's exuberant display of the play bow and his roughly mimetic pitch and gestural responses, Tilly's dialogic and relationally intentioned vocal tendencies, and some of the shelter dogs' demonstration of active listening behaviours, all illustrate that musical engagement seems to individually emerge and evolve in tandem with the relationships they have with other beings (both human and canine) thus informed by each dog's unique history. When the animals felt safe enough to experiment, some dogs seemed displayed overlooked musical capacities, rudimentary vocal mimicry, some accurate pitch matching, and emergent dialogic phrasing that complicate any simplistic view of canine vocalisations as mere reflex or instinct or purely functional communication. Crucially, their listening was perhaps just as agentive as their vocalising: drawing on Christopher Small's concept of musicking, we can see how attentive ear-cocking, gaze, and bodily orientation formed an equally potent part of the performance ecology. These sessions were thus simultaneously social occasions, forging intersubjective bonds while re-enacting Warkentin's interspecies etiquette: trust, consent, and mutual attunement became the ethical ground on which musical collaboration could unfold (Warkentin 2010). It is in these spaces—at once messy and joyful—that the boundaries of what music is, and who gets to make it, can be meaningfully reimagined.

Recognising that each encounter was shaped by individual circumstances yet resonated with broader patterns, Stage 1: Fieldwork compels me to situate these findings within a wider cultural landscape. The next chapter therefore turns outward, to media archives, viral videos, and practitioners who cultivate dog-human musics beyond the confines of my own field sites, to trace how external observers document, interpret, misinterpret, and sometimes sensationalise similar phenomena. By juxtaposing the intimate, relational insights gleaned from Arca, Tilly, and the shelter cohorts with public narratives and parallel practices, Stage 2: Media Analysis and Interviews will examine whether the emergent principles of relational musicking, play, dialogic and distinctly musical structures, active listening, and ethical etiquette identified here hold across contexts, while also illuminating how popular and scholarly discourses together shape the possibilities of canine-human music-making.

Chapter 5: Dog-Human Music in the Media

Buddy Mercury, an elderly "bagel" (beagle/basset hound) wearing a bow tie, leaps onto his back legs and places his front paws on the piano's lower register. He begins rapidly pawing at the keys in the bottom half of the keyboard (Fig. 68). As the pawing rhythm decelerates, a slower phrasal structure emerges. Buddy limits his exploration of range, committing to a narrow pitch set between octaves 4 and 5. He paws the keys—most often producing seconds, thirds, or suspended second triads (missing the fifth)—while alternating between left and right paw. Almost exclusively, he strikes the white keys, showing little interest in, or awareness of, the black keys. Simultaneously, he melismatically howls with each cluster of notes, producing discrete vocalisations that correspond to the pawed clusters. Buddy appears right-paw dominant, while his left often serves mainly for balance. At first, Buddy's repeated howls seem structurally consistent, but closer attention uncovers subtle variations—each punctuated howl possesses a unique melodic contour, with most following a descending trajectory. As both the piano pawing and vocal gestures slow, the howls lengthen, and the "performance" concludes with Buddy stepping down from the piano. Glen, one of Buddy's primary carers, praises him saying, "Buddy, that might be the most amazing song I've heard you play," to which Buddy wags his tail.

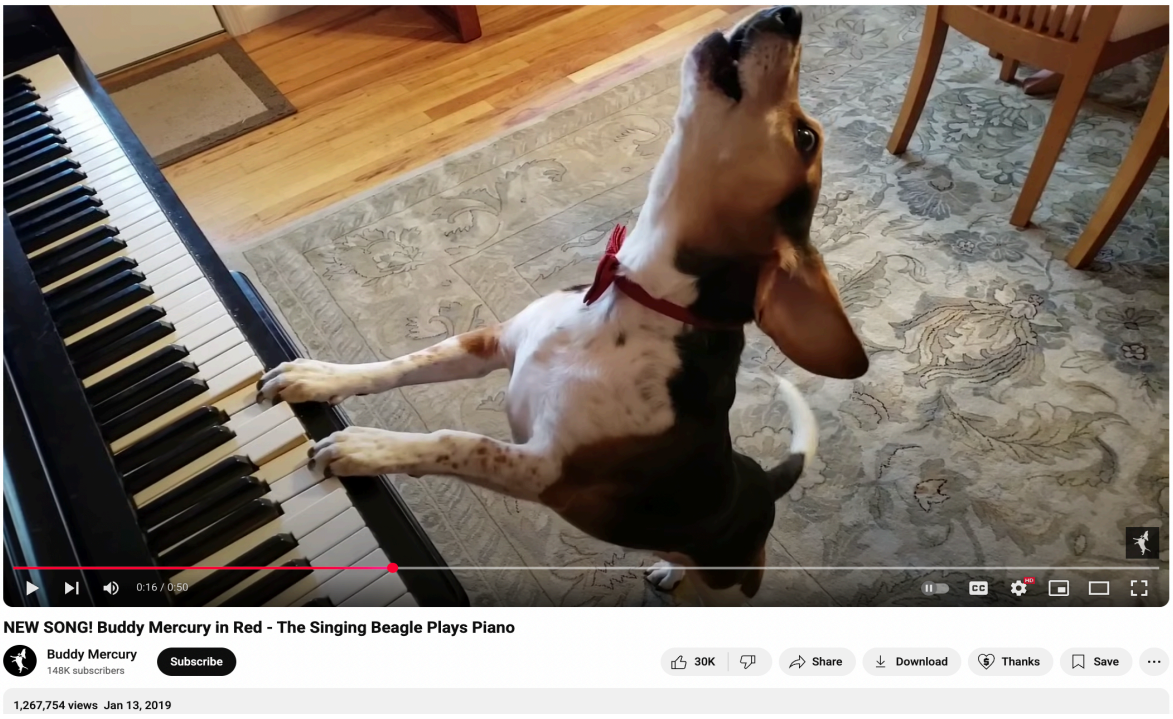


Figure 68. Buddy Mercury playing piano and vocalising (screenshot taken from Buddy Mercury 2019: 0:16).

* * *

Buddy Mercury, whose YouTube channel (Buddy Mercury 2025) hosts 369 videos at the time of this writing, commands the limelight among the piano-playing dogs of social media. His dominant Internet presence documents a habitual and structurally consistent musical practice. Buddy's viral fame—framed and propagated by Glen and Laurie Wolfe, his human companions and publishers of his content—microcosmically mirrors the mechanisms underlying Internet celebrity culture and musical commodification. The positive audience responses to Buddy's videos demonstrate a surprising willingness to accept his practice as music, as well as a widespread online appeal for interspecies musical collaboration. This acceptance of canine vocal practices as music is evident across much of the media documenting and discussing canine participation in music: Buddy Mercury is just one among thousands of documented instances of musical dogs from the past two hundred years.

5.1 Interspecies Practice in Context

Anecdote has long been recognised within ethnographic and humanities research as a valuable form of data, offering situated and partial yet richly textured insight into lived experience. However, scientific methodologies most prominently utilised to investigate animal behaviours prioritise statistically significant data sets, frequently dismissing anecdotal evidence. Nonetheless, Bekoff asserts that the "…the plural of anecdote is data" (Bekoff 2008: 880), suggesting that repeated instances of outlier behaviour can be utilised to interrogate animal behaviours, framing animals as individuals with uniquely complex lives, echoing similar sentiments expressed by philosopher Heather Browning (Browning 2017). In the context of canine-human music, anecdotal accounts provide an important counterweight to rigid behavioural or scientific framings, foregrounding the social, emotional, and cultural dimensions of interspecies practice within everyday lives.

Recognising the value of the ongoing, mutually informative relationship between external examples of canine-human musical phenomena in the media and my own practices with dogs, Stage 2 of the methodology examines external perspectives and accounts of people and dogs engaged in musical practices, drawing on media research (Chapter 5) and interviews (Chapter 6). By situating Stage 1: Fieldwork in conversation with the diverse examples and

documentations of co-created dog human music in the following two chapters, this thesis can more broadly interrogate dog-human music as a significant cultural phenomenon. It asks: how do people make music with their dogs in ways that respond to historical precedents and cultural hegemonies that frame these practices through the lens of comedy and novelty? This widening of the investigative lens consequently informs the later artistic outcome of the project *Dog Choir*, a synthesis, enactment, and communication of this research.

In this chapter, I consider representations of musical dogs in archival and contemporary media, where anecdote circulates widely through news stories, social media, and popular entertainment. These external accounts of canine-human music offer a corpus of material through which to contextualise and triangulate my fieldwork. By analysing print articles from the nineteenth and twentieth centuries alongside modern digital platforms such as YouTube, Instagram, and TikTok, I examine how canine musicality has been documented, interpreted, and often trivialised within public discourse, while also showing how the phenomenon has also been explicitly framed and received as musical.

Media coverage has been instrumental in shaping public perceptions of dog–human musical practices (discussed in relation to canine pianistic practices in Altizer 2021). Given the vast differences in media landscapes before and after the advent of digital platforms—where the Internet has enabled mass-commercialised media in all forms (written, audio, video) to be globally accessed, shared, and created—I have divided my media investigation into two sections, following media historian Marshall Poe's approach of organising his analysis according to historically prevalent forms (Poe 2011):

1. Old Media: examining print sources such as newspaper articles, photographs, and archival materials from the nineteenth and twentieth centuries;

2. New Media: analysing digital content published on social media platforms in the twenty-first century, including television, Instagram, YouTube, and TikTok.

5.2 Dog-Human Music in Old Media

The notion that dogs have an intrinsic curiosity about and engagement with music is not merely a modern Internet phenomenon but one with deep historical roots evident in print media throughout the nineteenth and twentieth centuries. In my examination of archival print

media, I found evidence substantiating the claim that dogs have long been observed participating in human musical practices. Using the online archive Trove and search terms such as "dogs and music," "singing dog," and "piano playing dog," I found a wealth of articles supporting my claim that dogs have historically been active participants in, and curious observers of, human musical practices. I closely examined 26 print media articles as samples of this wider phenomenon.

Strikingly, the same themes and keywords that populate today's viral YouTube videos—such as "Dog Singing and Playing Piano" (cpd2066 2010), "I Taught My Dog to Play the Piano" (Liam Thompson 2020), and "Singing Dog Wins America's Heart" (America's Got Talent 2018) were prevalent in Australian newspapers of the late nineteenth and early-to-mid-twentieth centuries. Just like the kinds of click-bait headlines one sees across social media today, the headlines to these articles read, "Scottish dog pianist is dead" (*News* 1950: 9) and "Clever dog at Tivoli smokes, sings and plays piano" (*Herald* 1950: 1), often appearing on the back pages of newspapers amidst local business promotions, classifieds, and other "puff" pieces. Despite their less-than-prestigious placement within these publications—and the kind of comedic framing echoed in social media examples—closer examination of this print media content reveals evidence of individualised interspecies musical practices as well as indicating a prevalent historically situated understanding of such practices.

5.2.1 Writing style

The writing style of early twentieth-century media accounts of musical dogs reveals as much about human cultural attitudes as it does about canine sound, often marked by sensationalism, exaggeration, and the projection of human emotions onto animal behaviour. These articles most often focused on a single exceptional "musical" dog and their owner, appearing in both Australian regional and metropolitan newspapers. Some took the form of op-ed style pieces, in which authors speculated about the relationship between dogs and music, or more broadly about the effects of music on animals. To a twenty-first century reader, the tone of these articles appears sensationalist, overly subjective, and often exaggerated, particularly in their claims about the abilities of individual dogs. In a pre-Internet world, many stories were reprinted from overseas sources, especially Britain, Europe, and North America. These include the death announcement of a British "singing collie" (*Queensland Times* 1935, 9) and

an account of a Pekingese in Hampstead, London said to possess a vocal range "beyond the reach of most amateur singers" (*Richmond River Express* and *Casino Kyogle Advertiser* 1925: 6). Several articles also describe dogs performing specific repertoire: Ginger, a red kelpie from Sawtell, reportedly sang *O Sole Mio* (*Coffs Harbour Advocate* 1951: 1); "a singing and talking dog named Jake" performed *Little Sir Echo* at a Launceston variety show (*Saturday Evening Express* 1948: 9); and Carla, a dog in Frankfurt, attempted *When You and I Were Young, Maggie* in 1950 (*Daily Mirror* 1950: 10).

The accuracy of these reports is highly questionable, and their sensational tone suggests that they were often framed for comedic effect or commercial appeal by both reporters and owners. Nevertheless, they reflect a persistent cultural fascination with the idea of dogs as musical performers and reveal how canine vocalisations were frequently cast as spectacles within popular entertainment. Authors employed flowery, distinctly musical, and emotive language to paint a picture of these scenes. A particularly vivid and distinctly musical account of a pre-dawn canine chorus howl appears in the *Henty Observer and Culcairn Shire Register* in 1944:

> After a prolonged orgy of harmonised howling, there is dead silence and you are hopeful the concert is over, and that the dogs have gone to rest; but such is not the case. There has only been a ten bars rest whilst the soloist is clearing his throat! Just as you have made up your mind to go to sleep, the solo artist renders his song of sorrow, which commences with a long, dismal whine, and rising in a smooth crescendo until he attains a perfect mezzo soprano top note, to make sure that everybody will have a chance of hearing him, he repeats his melancholy dirge several times. As soon as he has done his worst, all his cobbers join in, and they combine in community singing until the light of dawn appears on the horizon (*Henty Observer and Culcairn Shire Register* 1944: 6).

Despite the author's use of overtly musical language—for editorial, dramatic, and perhaps comedic effect—their framing of canine vocalisations in this manner produces unintended consequences. Historically, canine sounds have been relegated to unmusical "noise" or reduced to purely functional signals of species-specific needs (intruder alerts, pain, distress, hunger). Yet by describing them through a musical lens—using phrases such as "harmonised

howling," "rising in a smooth crescendo," and "community singing"—the author inadvertently conveys the expressive nuance, collaborative qualities, and deliberate intentions of the dogs as they vocalise in chorus. Furthermore, by layering these howls with human semiotic and emotional subtext through culturally specific terms such as "dirge" and "concert," the author overlays human emotional assumptions onto canine vocal idioms, casting them as "dismal whine," "melancholy," or "song of sorrow."

The presumption that canine howling signifies distress, sadness, or crying is pervasive across the media I have surveyed, likely stemming from a failure to distinguish between the contexts in which distress vocalisations and chorus howls occur. Many articles interpret dog vocalisations through this reductive lens of pain and suffering. For instance, one 1914 article recounting various cases of dogs reacting vocally to music asserts: "It is a popular belief that when a dog howls at night death is seeking someone. Another notion is that dogs howl at night because they see the ghosts of long dead dogs walking about" (*Maryborough Chronicle, Wide Bay and Burnett Advertiser* 1914: 2). Such cultural adages illustrate the ways human observers have historically projected their own emotional frameworks onto canine sound, imposing anthropocentric readings of grief, sorrow, or fear onto vocal behaviours that may serve entirely different social, expressive, or communicative functions for the dogs in question.

This mournful anthropomorphising of dog vocalisations (especially howls) emerges repeatedly throughout my investigations and animal sounds of all kinds are humanly (and often incorrectly) interpreted frequently in many cultural contexts. Consequently, the recurrent human semiotic overlay of distress onto canine vocalisations can be viewed as indicative of broader anthropomorphism shaped by language, media, and culture.

5.2.2 Imposed human semiotics: "dismal whine"

While from a purely sonic perspective, canine distress vocalisations do bear some structural similarities to the vocalisations within chorus howling contexts, the emotive language of these archival newspaper articles reveals a tendency to impose human emotional inferences onto canine vocalisations (especially relating to sadness, pain, and distress) with little regard for contextualising these behaviours. This is also true for animal sound more generally—for example, the use of "laughing" to refer to the calls of the kookaburra, or the widespread

perception of whale song as inherently relaxing, as evidenced by the appropriation of whale song in yoga/meditation backing tracks and New Age ambient music. Furthermore, when I have shared my recordings of dogs with some people, the most common initial response is to suggest that the vocalisations signify distress and to question whether the sounds might hurt the dogs' ears, given that these canine yowls and howls superficially resemble both human and canine pain vocalisations. People are generally poor at discerning the contextual significance of canine vocalisations, a difficulty compounded by the expectation that domestic dogs in crowded urban environments remain quiet. Consequently, many are unaccustomed to hearing the chorus howls that wild canid species routinely perform.

If one were to compare the sonic qualities—stripped of context—of a *human* female loudly crying in distress with that of a mezzo soprano singing an aria or pop star Olivia Rodrigo shout-singing one of her pop punk hits, striking spectral similarities would emerge, both in terms of frequency range and phrasing. Additionally, humans—and mammals more generally—are evolutionarily predisposed to initiate caregiving behaviour and experience empathy upon hearing an infant cry or a structurally similar sound (Raine 2016), despite being demonstrably poor at accurately identifying the specific "eliciting situation" from which an emotional infant vocalisation arises (Lindová, Nováková, and Špinka 2015: 1). Deer mothers have been shown to react to infant distress vocalisations of diverse mammalian species including seals, cats, and humans (Lingle and Riede 2014). As Rain explains, "Mammals all descended from the same common ancestor, so the mammalian larynx (which produces pitch) is remarkably similar across species until puberty, when species-specific environmental pressures lead to major differentiation along sex and species lines in voice characteristics and vocal repertoires" (Raine 2016: non-paginated). Emotional reactions and readings of vocalisations that resemble mammalian distress vocalisations—like canid howling—are evolutionarily encoded in many mammals, and by extension, humans. Despite our presumptive habits, by paying closer attention to the "eliciting situation" in a canine vocalisation, in this research encourages humans to reconsider these contextually uninformed tendencies to interpret such sounds as expressions of distress.

When people interpret dogs' vocalisations in response to music as indicators of pain or distress, I suggest that additional biases are at play beyond an evolutionarily encoded reaction. It may be that people unconsciously cling to, and defend, comfortably human boundaries for musical and collaborative capacities. Further complicating these perceptions

of canine vocalising, as already noted, such vocalisations do not align with Eurocentric aesthetic musical sensibilities: dogs rarely stabilize their longer howls on discrete pitches, they favour noisy timbres that lack harmonic resonance, and they appear largely uninterested in adhering to a regular pulse. By including canine vocalisations in musical discourse, we disrupt established norms, challenge perceived "universal" human interpretations of animal sound and behaviour, and in doing so, unsettle humanity's position atop its anthropocentric intellectual throne.

5.2.3 Political implications of emotional language used to describe animals

In the same vein as the "laughing" kookaburra, it is pertinent to draw attention to other animal vocalisations and behaviours onto which humans project emotional, semiotic, and even political interpretations—a tendency likewise evident in historical readings of canine vocalisations. Take the channel-billed cuckoo (*Scythrops novaehollandiae*), which resides on Australia's east coast over summer. Their call—a very loud gargling "kawk"— when heard through the filter of human vocalisations, can resemble a loud scream. Alongside, these vocalisations, which seem to draw the ire of many Australians (as demonstrated by their near universal unpopularity in online birdwatcher forums [Lawrence 2023]), CBCs are migratory brood parasites, meaning they lay their eggs in the nests of other Australian species. The chicks then eject the host's biological offspring before eventually flying back to Papua New Guinea for the winter. Artist and scholar Blake Lawrence critiques the way CBC behaviour is humanly interpreted through political lenses by suggesting the birds' brood parasitic behaviours and migratory patterns elicit "violent anxieties that emerge when the Western, nuclear, settler-symbolic Family is troubled" (Lawrence 2023: non-paginated). Lawrence critiques human interpretations of CBC behaviour and bodies (like the cuckoo's "sinister red eyes") using human specific emotional and cultural markers, rather than engaging with the morality and semiotics of that specific species or individual. Given their other behaviours, which transgress human-heteronormative moral frameworks, the CBC's call, when heard through human ears, becomes a signifier of xenophobic anxieties about migrants disrupting established Eurocentric norms. This can be seen in the racially coded rhetoric used by people on Australian birdwatching Facebook groups (Lawrence 2023, non-paginated). One can also observe parallels between the framing of the CBC and the way canine vocalisations are squeezed through a human emotional semiotic lens. Rather than considering the eliciting context and the semiotic framework of the canine itself, people often interpret these

vocalisations as indicative of distress based solely on sonic structures that superficially resemble human and mammalian distress vocalisations.

Other interpretations of animal behaviour through culturally imposed lenses have served to poetically inform human ways of understanding both animals and the geographies in which both more-than-human and human beings inhabit. Włodarczyk and Harrison comment on the way in which the American coyote and their vocalisations have become signifiers of American identity: "Coyotes are not only trickster figures in Indigenous traditions and the embodiment of resilience in the face of anthropogenic change. Through their adaptation to urbanization, they also force us to reexamine the binary distinctions of 'the wild' and 'the tame' that have structured myths of American Identity. Coyotes have mastered the art of Adaptation…" (Włodarczyk and Harrison 2024: 18). This highlights how cultural framings of canid vocality oscillate between metaphorical readings of wilderness and identity, and more intimate recognitions of their affective or therapeutic potential within everyday human–dog relationships.

Despite this dominant historic and contemporarily lingering reading of canine howling as melancholic or as a response to distress, my survey of archival media also revealed numerous examples of people who recognised and harnessed the positive effects of music and vocalising for their dogs. Echoing a similar sentiment to Laurie Anderson and the therapeutic benefit of piano playing for an aging dog (Cathy Grier 2010; Romney 2016), a headline from the *Sydney Sun* from 1938 reads, "Blind Dog Enjoys Life" accompanied by of a photograph of a schnauzer-like dog vocalising in response to piano playing (Fig. 69). Meanwhile, the caption reads: "Cairo, a dog that has been blind for two years, is shown here with his mistress, Mrs. Collier, of North Harbor, enjoying a sing-song" (*Sun* 1938: 2).



Figure 69. Mrs. Collier and Cairo the blind dog at the piano (*Sun* 1938: 2).

Similarly offering alternative more positive readings of canine vocalisations, one author in the 1936 *Wagga Wagga Daily Advertiser* puts forward a more balanced perspective, employing a human analogy to interpret a dog's vocal reaction to human sounds:

> After all, a dog must give audible vent to his pleasant emotions somehow, and for all we know these apparent signs of distress may be outward symptoms of an agreeable, thrill in the inner dog. A parallel could be drawn from some of the human habitues of highbrow concerts. From their expressions and contortions, one might assume that they were wracked with pain; but actually they must be enjoying themselves or they would not be season ticket holders (*Daily Advertiser 1936*: 3).

This analogy shifts the frame from distress to pleasure, suggesting that outward signs of strain may mask genuine enjoyment. By doing so, the author opens space for alternative interpretations of canine howling that resist purely negative readings, much as I concluded with Mia, Tilly, and Arca. In this case, the canine zeal for howling is understood as evidence

of enjoyment, even while the interpretive lens remains filtered through human semiotics. Most of these accounts, however, lack specific information pertaining to the eliciting situation of these vocalisations and/or musical behaviours, as well as neglecting to detail other accompanying canine non-vocal behaviours that I deliberately observed in efforts to ethically engage with dogs in my fieldwork.

5.2.4 Realities obscured by journalistic interests

Alongside human emotional inferences of, humorous positions of, and overtly musical and florid language used to detail these instances of vocalising dogs, some authors' sensationalist tones may conceal the true circumstances under which the behaviours have emerged. To illustrate the prevalent attitudes underlying these documentations, I consider it important to acknowledge the forces shaping perceptions of these dogs and people—both from my perspective as a present-day reader and from that of the original intended audience. The phenomenon being documented—vocalising/musical dogs and their humans, which we are unable to actually hear or watch (as we can with online examples)—was shaped and framed by a succession of individuals and organisations whose agendas may have compromised the possibility of less flamboyant, unbiased, and more "dog-o-centric" (Bekoff 2004: 495) accounts. In these print media depictions, a reader's understanding of the original canine behaviour was framed and mediated through at least three layers of people and institutions:

1. **Human "owners"** may have been selective with what canine behavioural responses and human coercive behaviours they displayed and recounted to reporters. For instance, they may have concealed cruel, fear-based conditioning or poor living conditions for the dog, or exaggerated the musical abilities of their dogs;
2. **Reporters** appear to have sensationalised and embellished their accounts, playing up the musical or, in some instances, non-musical elements of dogs' vocalisations. Given the brevity of these articles—often only a few sentences are wedged between other more "serious" reports, opinion columns, and advertisements—their consistent tone and length strongly suggests that reporters were incentivised to amplify the absurdity of these stories by anthropomorphising the dogs and foisting human emotions onto their vocalisations and behaviour;
3. **Media institutions** were likewise similarly incentivised by commercial gain. This suggests that a publishing structure may have been in place where articles were edited

> and sensationalised to attract people's attention to particular newspaper pages—often those dominated by advertisements, a primary source of revenue for the publications. Furthermore, given the importance of maintaining advertiser presence, articles may have been further adjusted to fit the page layout, ensuring that available space was filled in a way that complemented the surrounding commercial content.

These materials reveal a highly mediated presentation of a "musical" dog, different from the way similar dogs can be documented in the twenty-first century through videos and social media, where dogs' primary carers can self-publish home videos and explicitly document the behaviours in question. We are unable to listen to the music made by these print media documented dogs; therefore, we can only rely on these embellished descriptions and staged photos of these dogs and their people. Despite this limitation, many authors' uses of overtly musical terminology to describe the sounds produced by dogs and their companions suggests a surprising willingness to frame these practices as music. Their acceptance of the dogs' audience appeal is further evidenced by detailed descriptions of the public performances in which these "musical dogs" participated.

5.2.5 Performance platforms

Many of these articles report dogs performing on stages for audiences; variety shows, sideshows, and theatre revues were the most common platforms where so-called "musical dogs" were presented. The contextualisation of these performances within established entertainment traditions helps cement the notion that their behaviours were being interpreted as somewhat musical by people of the time. In the 1870s, Austrian performer and trainer Frans Patek toured Europe with his three dogs, one of whom, Frieda, was reported to "play *God Save the Queen* on piano and sing parts from Italian operas" (Bondeson 2011: 32) (Fig. 70). Decades later, in 1948, Jake—a stray border collie/kelpie mix adopted and trained by Mr. B. Fiddes—appeared in the *Stage Door Revue* at Launceston's National Theatre, performing to raise funds for the St Giles' Home for Crippled Children (*Saturday Evening Express* 1948: 9). Another 1950 report recounts Lieutenant Alles in Frankfurt rejecting an offer for his singing dog Carla to appear in an Airforce variety show (*Daily Mirror* 1950: 10).

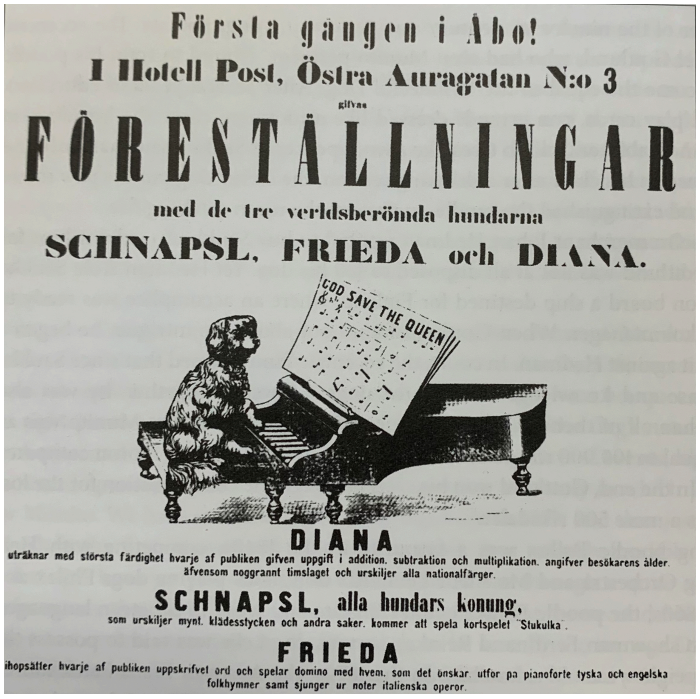


Figure 70. A Finnish poster advertising Frans Patek's dogs Schnapsl, Frieda, and Diana (as printed in Bondeson 2011: 32).

These variety show appearances demonstrate not just the widespread occurrence of this phenomenon but also the popular historical appeal of musical dog acts. One 1907 article recounts an act in a theatre where a piano player attempted to elicit vocal responses from a gathering of dogs and dog owners (*Richmond River Express and Casino Kyogle Advertiser 1907*: 9). Perhaps in an equally experimental attempt to stage a canine-tailored "concert," akin to Laurie Anderson's *Concerts for Dogs* (Anderson 2016) or my *Dog Choir*, the convenor, Mr. Walter Passmore, "sat at the piano on the stage playing the accompaniment to his song for each of the would-be vocalist dogs…" (*Richmond River Express and Casino Kyogle Advertiser* 1907: 9). Despite Passmore's enthusiasm for the project, "only two of them showed any attention to the music or took the slightest notice of the instructing figure. Some wanted to make friends with Mr. Passmore, but their barking instincts were dormant" (ibid.: 9). Passmore's results somewhat echo my own investigations during Stage 1: Fieldwork, where I found that some dogs were entirely uninterested in vocalising alongside music (and more interested in socialising or listening), while others are eager vocalisers.

A similarly pianistic act was reported in the *Herald* in Melbourne in 1915, in which Lucky the dog performed at the Tivoli Theatre alongside his owner, Jack Sterzelly. Lucky "played the piano" and sang "two verses in its own language," in addition to smoking cigars and drinking wine (*Herald* 1915: 1). Archival representations of "musical dogs" suggest that such performances circulated across multiple social registers rather than belonging to a single class or demographic, appearing variously in fairground spectacles, vaudeville programmes,

domestic parlour entertainments, and popular illustrated newspapers. This breadth indicates both working-class accessibility (through travelling shows and penny press culture) and middle-class domestic consumption (through sheet-music covers, family magazines, and amateur music-making), positioning canine musicality as a flexible novelty that could be mobilised across distinct publics. At the same time, the human companions accompanying these dogs were rarely neutral figures: "trainers" and "owners" were frequently framed through idioms of technical mastery, discipline, and entrepreneurial ingenuity, aligning the dog's musicality with logics of skill, control, and spectacle, Reading these materials through a sociohistorical lens thus reveals that "musical dogs" functioned not only as curiosities of sound but also as sites where classed access, and human–animal power relations were negotiated and normalised in popular media cultures. Often in these revue-style settings, music (or, in this case, the piano specifically) was presented as just another "human" behaviour for the dog to amusingly mimic. In such instances, audiences were encouraged to marvel at the novelty of an animal doing something recognisably human, with little attention paid to the actual musical product (namely, the sounds produced by a dog playing the piano).

These performances were chiefly positioned as comedic acts or these performances were predominantly presented in a comedic light: audiences were invited to laugh at a dog—cast as the non-human, unmusical "other"—enacting what was presumed to be an exclusively human behaviour. These same tendencies echo in today's viral videos of dogs "doing human things" online (e.g., the trends of dogs being fed with knives and forks [Volvo Dea66 2014] or chihuahuas in drag on the TikTok account Calorietiktok). In both historical and contemporary examples, this coercion of dogs into performing human activities casts the canine as "other," producing a crude imitation of humanness rather than an exploration of canine expression.

5.2.6 Encouragement, coercion, and cruelty

Depictions of dogs doing human activities (like music), but not in the way we do them, can be understood as instilling a sense of intellectual superiority and dominance over the subject. Retrospective consideration of other musical dog acts exposes a dynamic of cruelty and coercion, where dominance is explicitly performed, and the aim is less to evoke wonder at a discovered more-than-human talent than to belittle and demean the canine participants. Mr Lavater's Dog Orchestra performed around Europe during the 1890s. This group of six dogs were "gorgeously dressed and provided with specially made instruments" (West 1897: 728).

Mr Lavater's Dog Orchestra seems more akin to the historic tradition of circus animal acts, where elephants, tigers, and other animals were tamed and trained to perform or merely put on show for spectacle in "menageries": collections (that often toured) of animals kept in captivity for exhibition. Across the twentieth and twenty-first centuries, the use of animals in circuses has faced persistent opposition from animal welfare organisations, resulting in a fragmented legal landscape in which some jurisdictions prohibit all animal acts, while others restrict only the use of wild species (Four Paws 2025).

Throughout the history of animals in circuses, animals have been repeatedly mistreated, confined to tiny cages, and trained through methods rooted in fear and punishment, all in service of audiences' thirst for novelty and spectacle. Susan Nance refers to the circus elephant as "a powerful mascot for the menageries and circuses in selling experiences of animal celebrity to a broad consumer audience in the nineteenth century" (Nance 2013: 208). Dogs were often placed alongside more "exotic" creatures, often serving as secondary props in larger animals' acts, like dogs trained to jump over the backs of panthers (Tait 2011: 20). In an age before animal documentaries and TikToks of uncanny animal friends (e.g., a monkey and a rabbit sharing a bed [Filmdramadive 2025]), these menageries and circus shows would have been a rare opportunity for European and Western urban audiences to observe wild animals beyond illustrations and photographs. Popular media has long condemned the cruel treatment of animals in circuses where authors and storytellers "often sentimentally espoused the noble qualities of animals and animalised the trainer instead" (Tait 2011: 36); think of Disney's 1941 film *Dumbo* (Sharpsteen 1941) or the 2011 film *Water for Elephants* (Lawrence 2011), based on Sara Gruen's 2006 book of the same name (Gruen 2006), where cruel "ringmasters" torment both the animal and human characters.

Lavater aptly embodies the caricature of the villainous ringmaster trope in his 1897 *Strand Magazine* interview, where his pragmatic and ethically dubious approach to recruiting dogs is explained. He "…went to the Dogs' Home in the Danish Capital and paid five Kroner for a nondescript cur. He took that cur home, fastened a stick on his paw, and persuaded him to beat a tea-tray," before getting "rid of him on account of his pugnacious disposition" (West 1897: 728). The distress imposed on the dogs by Lavater is clear: the author reports how the animals "…came out reluctantly" and "were dazed by the glare of the footlights before Prince (one of the dogs) fell over his big drum. The others got up and tore aimlessly about the stage, scared by the trailing of their instruments behind them, and to crown all Jack, the trombone

'man', fell into the (human) orchestra" (West 1897: 729). Lavater appeared to give no thought to the musical outcome of the act. Instead, Lavater imagines the audience "hysterical with merriment" (West 1897: 729) at the anthropomorphic spectacle of dogs dressed in human clothes, with their failure to convincingly imitate human behaviours—such as playing instruments designed for human anatomy—framed as comedic. This reinforced notions of human intellectual superiority by ridiculing the dogs' inability to meet impossible expectations.

5.2.7 Historical perceptions of canine musicality

The collection of old media that documents instances of, and perspectives on, the entanglements of dogs and music manifests evidence of dogs throughout history participating in human musical practices. However, this evidence is presented through highly mediated documentation, where articles are often sensationalised for commercial effect within the competitive attention economy of the newspaper advert page. Even when filtered through the florid comedic and sensationalist rhetoric of these accounts, evidence emerges of some dogs voluntarily participating in musical practices. The language used in framing these accounts often reflects a tendency toward anthropocentric anthropomorphism, where animals are viewed as intellectually inferior by behaving in ways "other" to human; this perception of animals—both historically embedded and persisting into the present—is articulated by numerous authors throughout the literature I have surveyed (White 1967; Crist 1998; Lestel 2014; Taylor 2017, 2018; Nussbaum 2023). In particular, many of these historical accounts of musical dogs reflect a predominant reading of canine vocalising as signs of pain, sadness, or distress—an interpretation that overlooks the possibility of howling or chorus vocalisations functioning as collaborative or affective social practices that vary in function based on context and history. Despite the prevailing tendency to treat such phenomena as mere novelty or ridicule, some authors—through the use of overtly musical language—highlight the aesthetic, collaborative, and potentially pleasurable qualities of canine chorus vocalisations and their responses to music. In contrasting these old media accounts of musical dogs with more contemporary documents, we see parallels in how people perceive and cast canine participation in music: some accounts—such as the *Strand Magazine* account of Lavater (West 1897)—denigrate the intellectual capacities of animals, while others—like the articles pertaining to Mrs Collier (*Sun* 1938: 2) and Walter Passmore (*Richmond River Express and*

Casino Kyogle Advertiser 1907: 9)—emphasise the positive potential of consenting canine collaborative musicality.

5.2.8 Pre-Internet video documentations of dog-human music

One notable example of a musical dog documented outside of print media before the Internet age is the Australian Kelpie Molly, whose talents were immortalised in the 1983 film *Molly* (Lander 1983). The film, based on the eponymous real-life singing cattle dog cared for by Phillip Roope (one of the screenwriters), also starred the 11-year-old Claudia Karvan. Beyond the film, Molly appeared on numerous television talk shows, including *Hey Hey It's Saturday* in 1983 and *The Don Lane Show* in October 1980 with Phil Latterly (later reposted on YouTube by Steve Gwapo Australian Kayaking and Vlogs 2023) (Fig. 71). Molly also released a single with Australian vocalist Mic Conway (cover shown in Fig. 72), coinciding with the release of the film.



Figure 71. Molly and Phil Latterly (on the right) performing their single *Howl on Australia* on *The Don Lane Show* in 1983 (screenshot taken from YouTube repost [Steve Gwapo Australian Kayaking and Vlogs 2023: 5:32]).

In the film's narrative, Molly's singing abilities attract the attention of the villain Jones (played by Garry McDonald), who repeatedly attempts to kidnap her for commercial exploitation. At one point, after capturing Molly, Jones takes her to a flamboyant singing coach, who unsuccessfully tries to coax her into performing. Throughout the story, Molly only sings when she feels safe and surrounded by trusted companions (like Karvan's character and Molly's elderly owner), reinforcing the link between her musical agency and social relationships. This framing inadvertently mirrors the tendencies I observed in dogs like

Arca and Tilly, who became more vocally reactive as familiarity and trust deepened. In the scenes where Molly sings, she produces long melismatic howls pitched approximately at the same frequency as the top melody line of the human music—first accompanying a country-style acoustic guitar in a pub setting, and later joining a vaudeville-style big band with a male vocalist in a circus tent.



Figure 72. Single cover for *Molly - The Singing Dog* performed by Mick Conway, Reg Lye, and Molly (1983), released alongside the film *Molly* (1983).

Before the film was made, Molly and Phil Latterly appear on *The Don Lane Show*, singing the song *Howl on Australia* (released by Latterly in 1980 separate to *Molly*), a ballad-style, country-inspired track in which the chorus lyrics promote canine vocality: "Howl on Australia, right across the land… vizslas and foxies, and dachshunds, heads back, sing a song, don't end up in the pound" (Latterly 1980). While Latterly sings these lyrics, Molly arches her head back, enthusiastically howling pure sliding tones that intensify during the louder chorus sections. Molly's portrayal in both film and live performance not only emphasizes the expressive potential of canine vocality but also demonstrates a distinctly

musical framing of canine vocalising long before the mainstream dispersal of "singing dogs" on social media and TV talent contests.

During the 1980s in America, jazz pianist Kirk Nurock cultivated an interest in animal musical collaboration and in what he described as "natural sound," characterized by rhythmic sounds generated by untrained voices (human and animal) without reliance on musical notation. He created multiple works involving dogs (and other animals) that he showcased in concert venues and on television. These works included compositions such as *Howl* for piano and three dogs, his inaugural piece for dogs (Nurock 1980), as well as *Expedition* for Siberian Husky and jazz trio (Nurock 1984). A version of *Howl* was featured on *The David Letterman Show* in 1983 with two (instead of three) dogs. In this performance, Nurock plays a chordal piano piece while singing tonally resonant pitches alongside two dogs who also vocalise (Kirk Nurock 2011 [YouTube repost of 1983 *Letterman* footage]).

In his interview with Letterman, Nurock elaborates on the recruitment process, stating that he "auditioned" 32 dogs before selecting three to perform the work at Carnegie Hall. A few months after this Carnegie Hall performance and his first appearance on *Letterman*, he returned to the show with a new piece for jazz trio and guinea pigs. The performance extended his exploration of non-human musical collaborators, although he admitted that the high squealing sounds of the guinea pigs "…aren't quite as diverse and variegated as the dog sounds were, but fascinating nonetheless" (Nurock 1983/2011).

In the second half of the twentieth century, as television and film became ubiquitous forms of media, dog-human musical practices continued to be profiled. Likewise, many viral Internet dogs have subsequently featured on similar talk show and panel television platforms (like the various singing dogs on TV talent contests discussed in the next section). What differentiates these screen depictions of musical dogs (both the cited examples above and the following online examples) from the previously discussed print media representations is the capabilities of video media in presenting the actual phenomena in question, allowing audiences to more autonomously interpret human-canine musicking with fewer layers of sensationalism and semantic interpretation. In examining historical media accounts of musical dogs, our interpretations of animal vocalisations appear to be heavily shaped by human biases, sensationalism, and anthropomorphism. Whether portrayed and/or interpreted as a novelty act, a sign of distress, or a remarkable display of musicality, these historic accounts highlight the complex ways in which dogs and humans have engaged with sound and music throughout

the last two hundred years. While modern platforms such as social media allow for more direct and unfiltered documentation of these interspecies interactions, they, too, often reflect similar patterns of anthropomorphism and entertainment-driven comedic framing. Ultimately, acknowledging the influence of these historical and cultural lenses enables a more nuanced understanding of subsequent documentations of dog–human musical practices, as well as those I have personally participated in and observed throughout this project.

5.3 Dog-Human Music in New Media

As dogs have become entangled agents within the human "hyperobject"—vast, multifaceted, amorphous "things," including ideas, cultures, ecologies, and histories connected through networks of relationships (Morton 2016)—that is the Internet, canine–human musical practices have attained unprecedented visibility. Viral social media videos sustaining online accounts, and appearances on reality TV talent contests bring wider attention to dogs as collaborators in sound and music-making. Following on from my investigation of historical media documentations, this section examines twenty-first-century examples of dog-human music as documented and circulated through online platforms.

The rise of the Internet, particularly platforms such as YouTube (launched in 2005), Instagram (launched 2010), and TikTok (launched 2016), has radically expanded the ways canine musical practices are disseminated and framed. Thousands of videos now chart moments of canine sonic engagement—from dogs howling in response to children practicing instruments, to "singing dogs" competing on talent shows, to canine vocalisations edited, autotuned, and remixed into whimsical songs. Unlike ephemeral print accounts, sustained digital archives dedicated to individual dogs reveal repeated, consistent, and behaviourally distinct musical practices, demonstrating that these are not one-off novelties but forms of habitual, individualised musicking. As McLean argues, the expansion of self-publishing and readily accessible media has not only amplified visibility but also transformed the ways humans and non-humans interact within digital geographies (McLean 2019).

As previously described in Chapter 3, the online examples of canine–human musical collaboration I selected for this section emerged through an organic, highly individualised process shaped by my personal viewing habits, as well as the algorithmic recommendations of Anglophone platforms like YouTube, TikTok, and Instagram. As a result, the digital media I engaged with was not a comprehensive dataset but a reflexive, iterative journey shaped by my interactions and tastes as well as the limitations of my position within the English-speaking digital sphere. I focus on examples of

dogs demonstrating extraordinary musical abilities that challenge traditional notions of music as a uniquely human trait, together with examples that typify prevalent trends within the media.

The sampled videos are grouped into four main identifiable categories, each reflecting a distinct thematic or stylistic focus:

1. Dogs playing piano;
2. Dogs vocalising with humans;
3. Ambient dog music;
4. Postproduction and digitally aided canine co-composition.

In researching historical print media, I found evidence of practices corresponding to the first two categories, whereas ambient dog music and postproduction and digitally aided canine co-composition appear to be phenomena largely unique to the twenty-first century and the era of social media. In the last 10–20 years, video/audio recording equipment and editing software have become inexpensive and widely available, and editing capabilities are now built directly into platforms such as Instagram and TikTok. These categories highlight common trends in the genre and can be analysed in the context of broader global dynamics and attitudes influencing the lives of both humans and non-humans.

In viewing musical dogs as a culturally important yet often trivialised phenomenon, I argue that the selected videos showcase dogs engaging in explicitly relational forms of creative expression, demonstrating multimodal aesthetic sensitivities, and displaying a willingness to collaborate musically. However, as with examples cited in print media, some videos demonstrate ethically questionable and anthropocentric approaches. Additionally, this content supports anecdotal evidence of often-overlooked canine perceptual abilities—such as pitch sensitivity and approximately mimetic vocal behaviours, similar to some behaviours I observed in Tilly and Arca—that challenge long-held assumptions about the musical capacities of dogs. More broadly, this discussion of external examples highlights the role online platforms play in facilitating the global spread and visibility of dog-human musical interactions.

5.3.1 Category 1: dogs playing piano: pianistic autonomy

In this section I examine select video examples of dogs engaging with the piano, indicative of a broader catalogue of pianistic dogs on social media. The plethora of videos of dogs playing

piano offer the possibility of understanding the piano not solely through its human cultural value, but as a site of more-than-human interaction, inviting audiences to reconsider animals' capacity for independent creative agency and challenging the notion that their artistic activities are merely human-directed. In numerous cases, dogs appear to engage with the piano without direct human prompting, suggesting a form of independent musical initiative rather than conditioned responses. While some examples clearly involve reward-based training, many portray dogs seemingly exploring the instrument on their own terms. The following examples of pianistic dogs suggest a wide field of expressive possibility and raise new questions about how musical agency and authorship might be shared and understood across species.

My aim in exploring these canine pianistic engagements is to take these videos seriously, not just as curiosities, but as examples of emergent musical practices that involve both the dogs and their human environments. Autonomy appears across a spectrum in these videos. Some dogs perform independently, captured by discreet, dashcam-style recordings with no human presence, while others engage in piano playing as a trained trick, motivated by rewards such as treats. Nevertheless, even in the most clearly human-mediated examples, the piano emerges as a technological interface, a human cultural object repurposed in multispecies contexts with new meaning and function for non-human beings. In this sense, canine engagement with the piano can be seen as a form of cross-species cultural exchange, akin to a person from one tradition learning an instrument from another. Dogs, too, bring their own embodied knowledge, preferences, and affective responses to the interaction.

While these performances are frequently consumed as humorous or novel digital content, what makes this phenomenon particularly compelling is the apparent autonomy displayed by many of the dogs. Across the videos, dogs demonstrate unique and individualised aesthetic sensibilities in both their seemingly autonomous pianistic gestures and accompanying vocalisations. For instance, a video by Khush Madhwani (Fig. 73) features a small white dog using a rapid, digging motion to produce percussive bursts of notes (Khush Madhwani 2015), punctuated by sharp howls and stretches of silence. In contrast, a performance shared by Poke My Heart (Fig. 74) captures a larger white dog playing in a slow, deliberate *Adagio* style, using extended melismatic howls and carefully spaced key presses that stretch across the instrument's range (Poke My Heart 2011).



Figure 73. A small white poodle engaging with the piano percussively with a “digging” motion while vocalising (screenshot taken from Khush Madhwani 2015: 0:00).

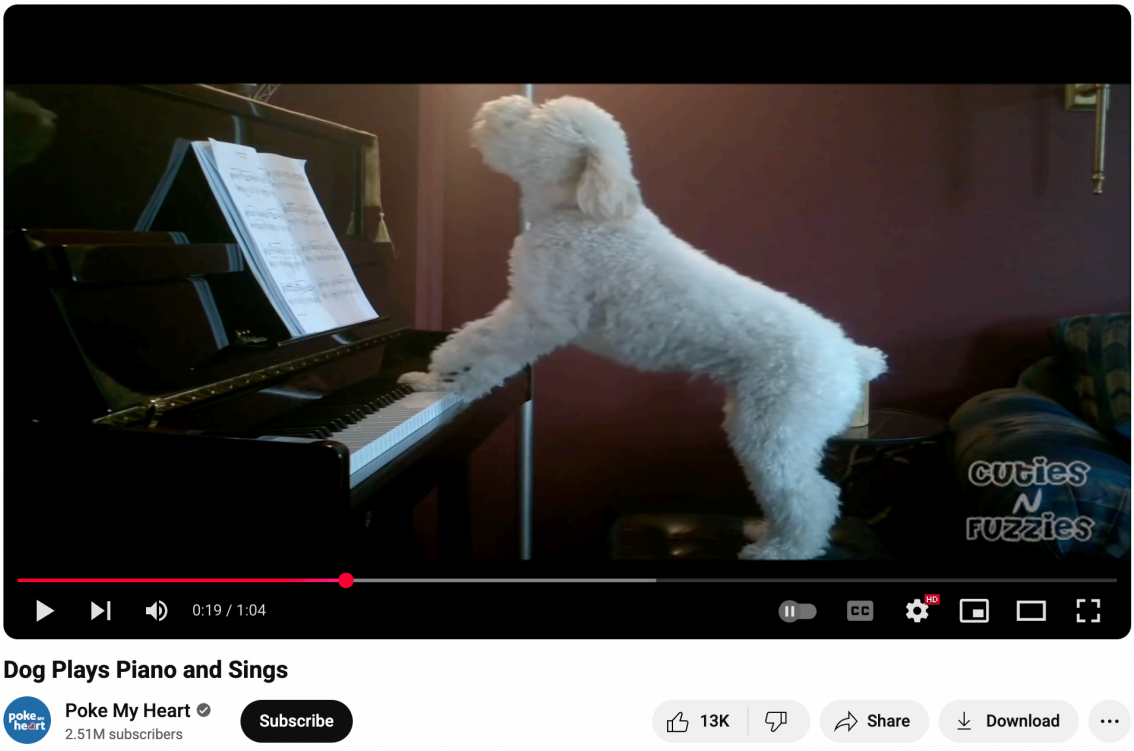


Figure 74. A larger white dog utilising slower phrasing and longer duration melismatic howls than the individual in Figure. 74 (screenshot taken from Poke My Heart 2011: 0:19).

Buddy Mercury, the "bagel" mentioned in this chapter's introduction, stands out as one of the most prolific piano-playing and vocalising dogs. He and his human companions have shared nearly 400 videos across multiple social media platforms. Buddy's prolific Internet presence documents a habitual musical practice and reinforces the assertion that, just as with humans making music, time and repetition are implicit in constructing a personalised musical identity. His pianistic behaviours exhibit an identifiable practice with structurally consistent features and individualised forms of expression documented throughout his catalogue. Given that many of these musical dogs have had their behaviours recorded repeatedly and shared via dedicated accounts, one can identify analogous instances of habitual, music-like practices—much as an improvising musician's evolving style becomes evident across a body of recorded work.

5.3.2 Encouraged pianistic practice

Some dogs engage in piano playing with apparent self-direction, while others require encouragement, often in the form of treats offered by their human companions. This is clearly visible in the many online videos where dogs are prompted to play piano as part of a reward-based routine. While these instances may seem less expressive of independent canine creativity, they still produce musical outputs that deserve consideration and raise important questions about how we understand instruments like the piano from a more-than-human perspective. Dismissing these interactions as mere coercion or operant conditioning (similar to commands like "sit," "stay," or "drop" incentivised through rewards) risks overlooking the parallels with human musical education, which frequently employs similar carrot-and-stick techniques. The image of a child practicing scales in exchange for a sticker is arguably no more musically autonomous than a cavoodle rewarded with liver treats for tapping keys. In such cases, the piano functions as a tool of conditioned performance, often perceived by humans more as a novelty trick than a legitimate act of musicking.

Zoömusicologist Jack Harrison examines the role of music in animal-related sports such as freestyle disc dog (Harrison and Kruszona 2024) and equine freestyle dressage (Harrison 2020). Despite the evident training practices that reinforce hierarchical human–animal structures and explicitly utilise operant conditioning, Harrison suggests these sports can nonetheless be understood as complex sites of interspecies musical collaboration—oscillating between pre-designed roles and flexible, emergent processes of agentive exchange. He argues

that these sports foster meaningful forms of musically mediated connection and joy. Parallels can be drawn here with humanly encouraged and promoted forms of canine piano playing.

Take, for example, Megan, the stroller-bound poodle cross featured on YouTube by cpd2066. Megan plays piano on command and vocalises on cue ("play" and "sing," respectively), all in anticipation of a treat (Fig. 75). Though her focus remains fixed on the reward and her pawing appears indiscriminate, the resulting sound nonetheless displays a lilting, serial-like phrasing and includes both black and white keys—a rarity among canine performers. Her tail wags throughout, and her companion praises her effort as "the performance of a lifetime!" (cpd2066 2019: 0:21). While the performance is clearly human initiated, this does not preclude the act from being enriching or enjoyable for the dog. Megan's evident comfort and repeated participation suggest a willingness to engage. However, framing piano playing as a trick reinforces the anthropocentric assumption that dogs are only capable of producing arbitrary, non-musical sounds. As I attempted to explore in my own practices, with patience, ethical engagement, and adaptations for individual taste and canine physiology, more nuanced and rehearsed musical interactions may emerge, revealing latent musical capacities and enthusiasm in dogs that extend beyond novelty.

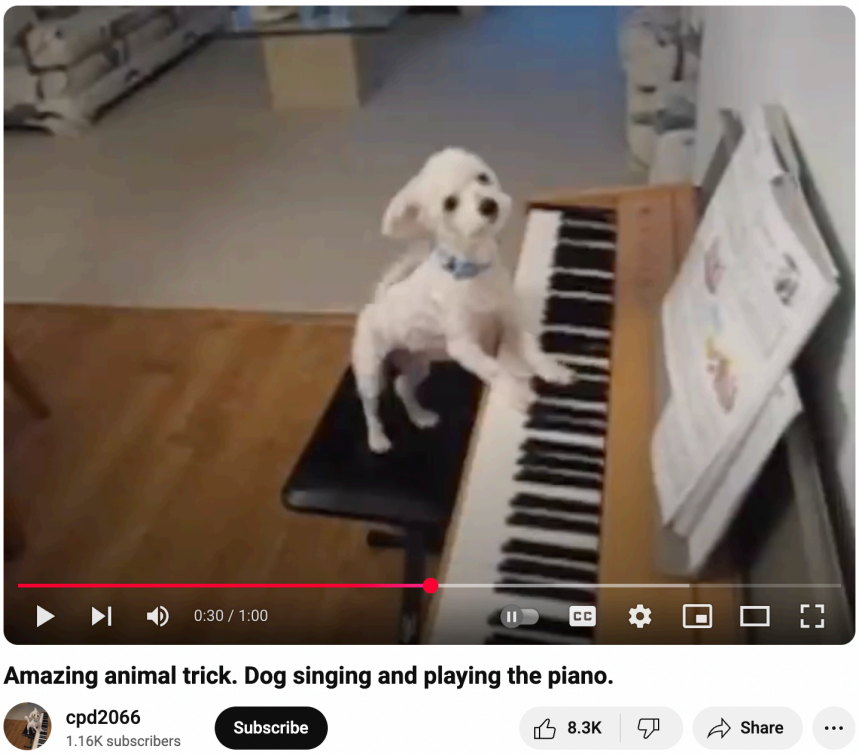


Figure 75. Megan playing piano and vocalising in response to her human companion's commands (screenshot taken from cpd2066 2009: 0:30).

Regardless of direct human involvement, the piano itself represents a technological intervention in the lives of dogs. Canine interaction with this instrument can be seen as a form of cross-species cultural exchange, much like a Westerner learning to play the Chinese erhu. Both dogs and humans bring their own cultural perspectives and understandings to their engagement with the piano, enriching the meaning and value of these interactions.

Zoömusicologist Kate Altizer compares the piano to a tennis ball—an object designed for human use that takes on an entirely different, often playful, function for a dog (Altizer 2021). Just as a tennis ball becomes a source of amusement through chewing, fetching, and coveting, the piano, though culturally coded for human musical practice, may inspire dogs to develop their own patterns of interaction. While dogs may lack awareness of the piano's human-defined role or technique, their engagement with it can still be seen as purposeful, even if its meaning remains speculative. Martinelli frames this shift in perspective through Uexküll's concept of *Umwelten* (species-specific ways of perceiving the shared world) as applied to zoömusicology (Martinelli 2004). From a canine perspective, the piano is not an instrument for sonatas but a stimulus for physical and possibly expressive engagement and play.

Whether these actions qualify as "music" is maybe a futile discussion; as previously discussed, definitions of music are slippery and often shaped by Eurocentric expectations. These canine engagements with the piano often elicit an anthropomorphic response from viewers, who interpret these behaviours as deliberate and expressive musical acts (as demonstrated in the many comments on this content praising the dogs' "compositions" and "songs"). When animals are included in musical settings, they become participants, regardless of their intent. Rothenberg notes, "Music is immediately meaningful even if we cannot translate it, so once heard as music, the world of animal communication is immediately accessible, emotional and interesting" (Rothenberg 2013: 11). In this sense, the piano—like the tennis ball, the howl, or any other everyday object or shared behaviour—reminds us that meaning is not fixed but contingent, and that dogs, humans, and other beings continually reframe these objects in ways that expose the plurality of worlds we inhabit.

5.3.3 Technological intervention

Several online accounts showcase dogs being actively taught to play piano in ways that differ from improvisational exploration, focusing instead on the reproduction of discrete pitches,

rhythms, and even melodies. These training-based practices often involve technological modifications to the instrument to accommodate the physical limitations of canine anatomy and to improve the accuracy of the dog's musical output. Unlike the spontaneous cluster-based playing seen in more autonomous performances, these approaches aim for precision and control.

For example, the YouTube channel Schlauwauwau features two golden retrievers trained to identify and reproduce specific pitches, a skill associated with perfect pitch (Schlauwauwau 2014). To facilitate this, the human trainer constructed a dog-friendly keyboard from modified organ pedals (Fig. 76), allowing the dogs to trigger single tones with each paw press. The dogs demonstrate remarkable accuracy in playing back the pitches they hear, suggesting a potentially overlooked canine pitch sensitivity. Similarly, content creator Liam Thompson documents his efforts to teach his dog Max to play *Old MacDonald Had a Farm* (Liam Thompson 2020). Recognising the challenges Max faced when navigating standard piano keys, Thompson adapted the keyboard so that only one note could be played at a time, simplifying the interface and making canine participation more targeted (Fig. 77). Thompson's overarching aim was to create a musical duet structured around a call-and-response format—he would play the phrase "Old MacDonald had a farm," and Max would respond with "Ee i ee i o."

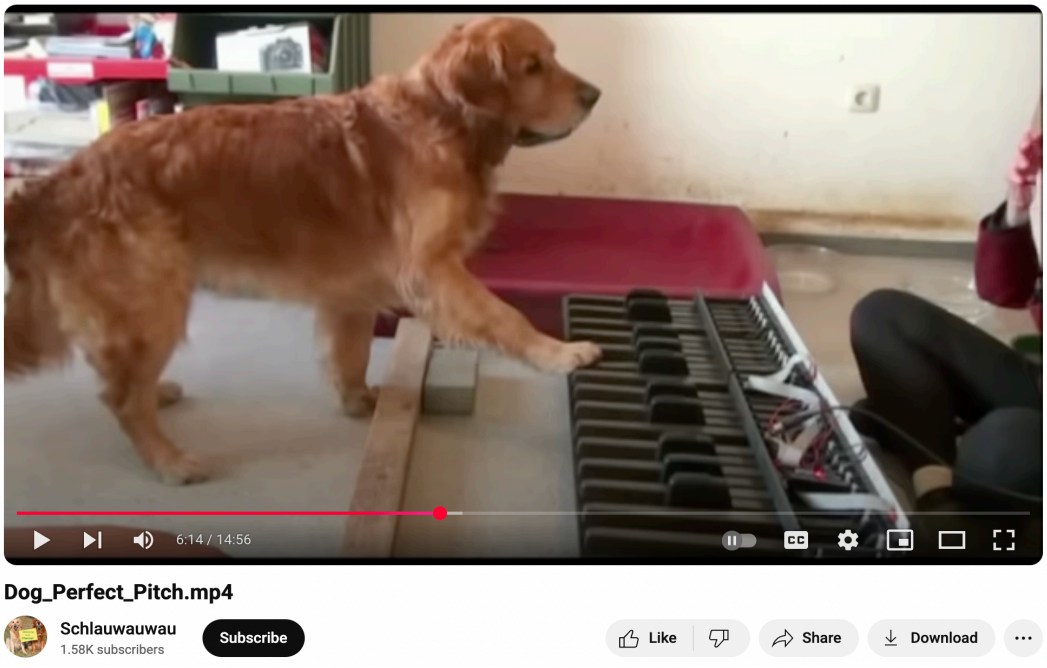


Figure 76. Schlauwauwau's modified organ foot pedals used to teach and test canine perfect pitch abilities (screenshot taken from Schlauwauwau 2011: 6:14).

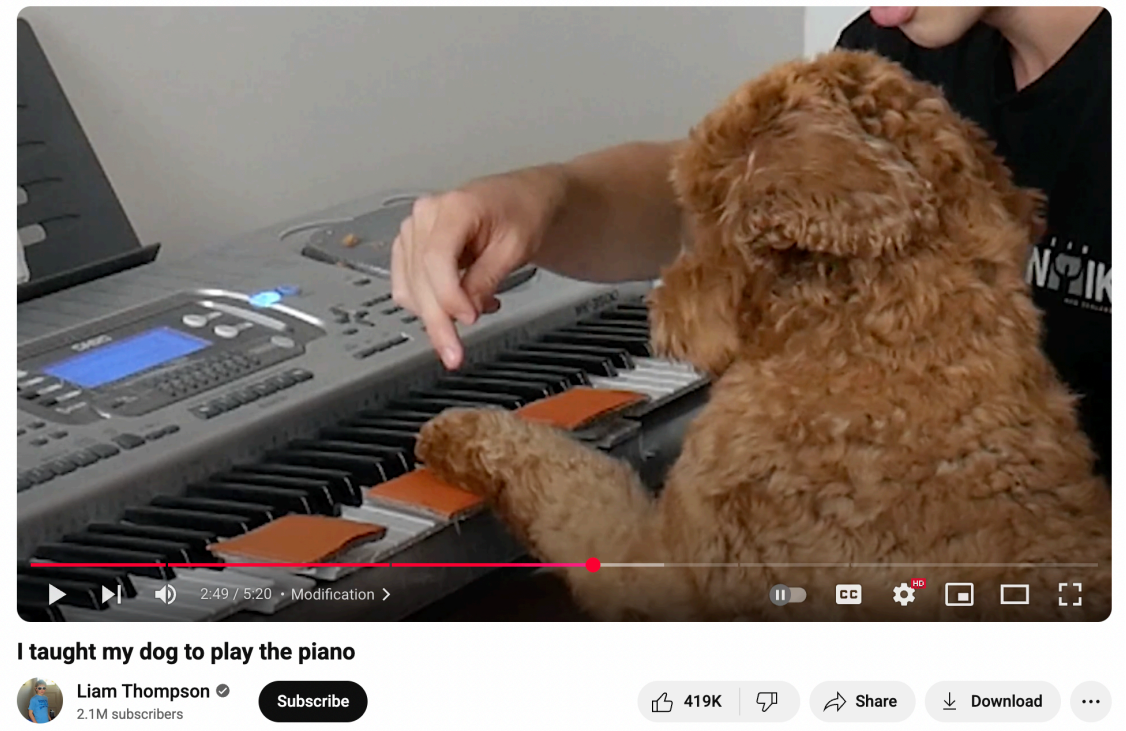


Figure 77. Liam Thompson's canine-specific modified keyboard utilised to teach Max the tune *Old Macdonald Had a Farm* (screenshot taken from Liam Thompson 2020: 2:49).

These technologically assisted scenarios blur the lines between training, collaboration, and design, highlighting how human intervention can shape the possibilities of more-than-human musicking. In doing so, this content expands notions of interspecies authorship, access, and the role of instrumental interfaces in enabling interspecies musical expression. In Chapter 6, I further untangle these issues with regard to Alon Ilsar's approaches to technologically-aided interspecies practice with Razzly.

The modifications made to human instruments in these examples reflect an awareness of animals' distinct physical capacities and limitations. These adaptations suggest an attempt—albeit a limited one—to engage with a more-than-human *Umwelt*, primarily through a physical lens rather than a deeper perceptual or cognitive one. In cases like Schlauwauwau and Liam Thompson, such adjustments guide animals toward specific, culturally shaped musical goals, particularly those rooted in Western tonal harmony and metrical rhythm. By doing so, the human designers inadvertently constrain the animal's creative agency, depicting their output within narrowly defined human expectations of musicality, namely consonant pitch relationships and conventional melodic structures.

Yet, even within these imposed boundaries, animals often subvert or reinterpret human musical conventions, producing unexpected and idiosyncratic results, such as is evident in the

distinct musical output of conservationist Richard Lair and musician and neuroscientist Dave Soldier's Thai Elephant Orchestra project who trained elephants in Northern Thailand to play oversized percussion and wind instruments with the goal of providing enrichment for captive elephants while creating music that foregrounded their agency (Lair and Soldier 2000). The results were several recordings of improvisatory, loosely structured pieces, where elephants struck gongs, drums, and harmonicas, producing sonically rich, often unpredictable textures that challenged human-centered notions of music and authorship (Thai Elephant Orchestra, Lair, and Soldier 2002). Just as any instrument's physical design, such as the twelve-tone layout of a piano or the number and type of instruments included in a drum set shapes the music it can produce, so too do these adaptations channel animal expression in particular stylistic directions. If the goal is to nurture genuine animal musical agency, humans must be willing to create space for forms of expression that may not conform to familiar aesthetic frameworks. This requires rethinking our definitions of music to allow for more open-ended, relational, and species-specific forms of sonic exploration.

Piano-playing dogs prompt compelling questions about the role of the piano in canine lives and the potential for domesticated dogs to develop pianistic behaviours. These animals can and do establish piano-playing practices—repetitive, recognisable, and often highly individualised ways of engaging with the instrument. How we interpret and support these behaviours is shaped not only by the dogs' actions but also by our own culturally embedded notions of music, creativity, and animal intelligence. The range and number of videos and the diversity of dogs involved suggest a potential aptitude and, more importantly, an enthusiasm for engaging with the piano, if not musically, then at least expressively. If piano-playing dogs reveal how canines adapt to and reframe a human instrument, then dogs vocalising with humans (in ways similar to how I interact Mia, Tilly, and Arca) highlight an even more immediate and relational mode of musicking—where canine voices intertwine directly with human ones in dialogic, collaborative exchanges.

5.3.4 Category 2: dogs vocalising with humans

In this section, I review documented instances of dogs interactively vocalising with humans and human initiated stimuli, evidencing the widespread occurrence of collaborative interspecies sound making practices similar to my experiences with Milly, Mia, Arca, and

Tilly. The phenomenon of dogs dialogically vocalising with humans resembles less a humanly initiated and encouraged practice—like piano-playing dogs—and more often appears to begin accidentally, later becoming ritualised, as in my formative experiencse with Milly and Mia. Numerous online videos capture people expressing surprise at their dogs' spontaneous "singing," despite this behaviour being commonly reported, particularly among children learning instruments. As a clarinet teacher, I frequently hear anecdotes from students whose dogs vocalise alongside their practice. In one such video, "Blues Dog," a dog howls long, bluesy tones over a colleague's saxophone licks, to the audible amusement of the videographer (RighInTwo 2014). Another clip shows a dog howling in apparent response to a busker's jazz saxophone, catching both musician and audience off guard (ViralSnare Rights Management 2020).

These videos highlight the accessibility of interspecies musical play, where dogs and humans of varying musical skill levels can engage without extensive training. Across many videos, dogs are most reactive to high, sustained tones, and common forms such as call-and-response emerge. Yet human musicians often remain fixed in genre-specific habits, rarely adapting to their dogs' contributions. For instance, in one video, a man continues a rigid rendition of *Heart and Soul* despite his husky's complex and expressive, melismatic howling (John Clancy-Tone 2014) (Fig. 78). Similarly, Oscar the springer spaniel seems to mimic the phrasing of *Don't Stop Believin'*, the 1981 song by the American band Journey but is unresponsively met with an assertive rendition of the song by the human piano player (WooGlobe 2021).

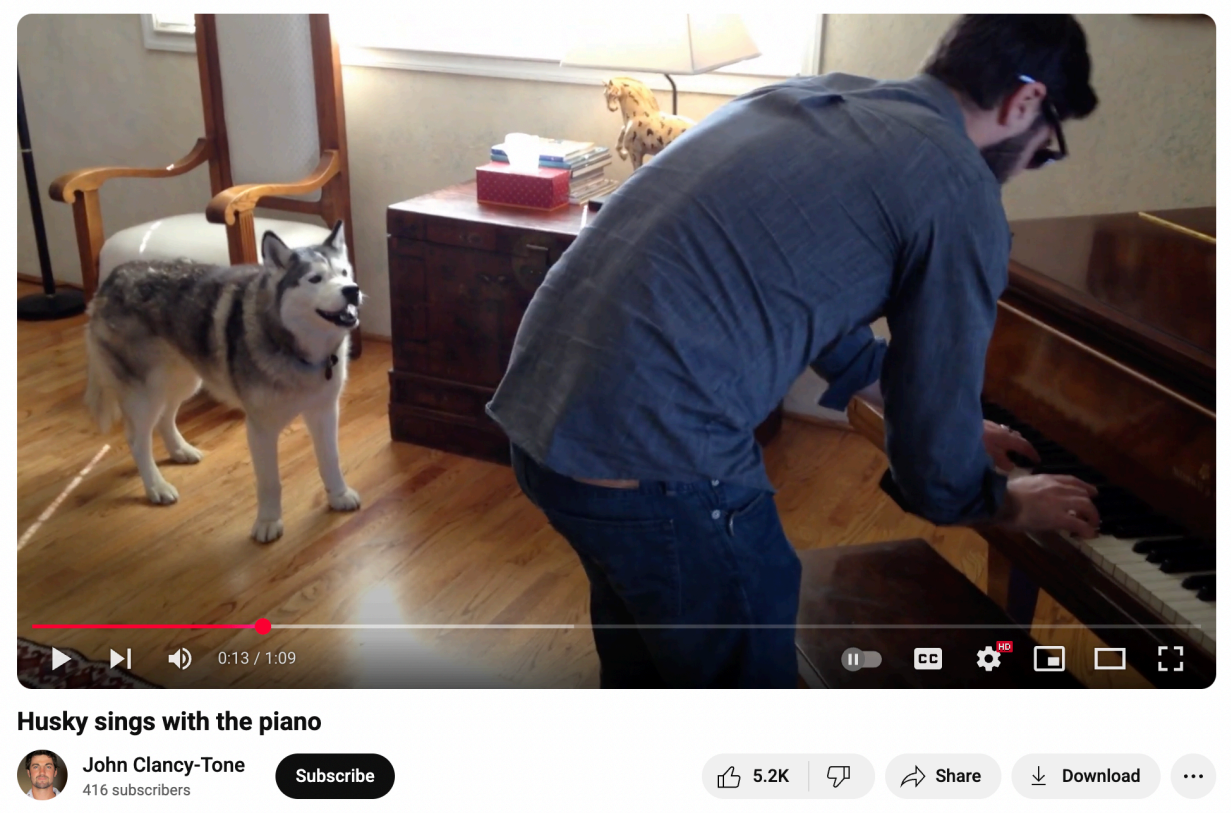


Figure 78. YouTuber John Clancy-Tone plays a piano rendition of *Heart and Soul* while an unidentified husky vocally responds with punctuated, expressive, melismatic howls (screenshot taken from John Clancy-Tone 2014: 0:13).

This reluctance to shift from composed music to more flexible, gestural interaction, as seen in the last two examples, may stem from a common misperception—particularly within Western classical music—that *any* form of improvisation demands the same specialist training and aesthetic standards associated with highly codified improvisational traditions such as jazz. Many musicians feel bound by notation-based systems that limit their ability to engage in spontaneous, genre-fluid interaction. Intriguingly, children may seem more attuned to a canine compromise in musical taste, showing fewer inhibitions about "wrong notes" and genre adherence. For instance, one child's honking saxophone phrases appear strikingly responsive to Mishka the husky's pitch-bending howls (Fig. 79) (Gardea23 2018). In another, a child with a harmonica appears more focused on listening and mimicking to his basset hound companion than on producing a polished musical product (Fig. 80) (Poke My Heart 2012).

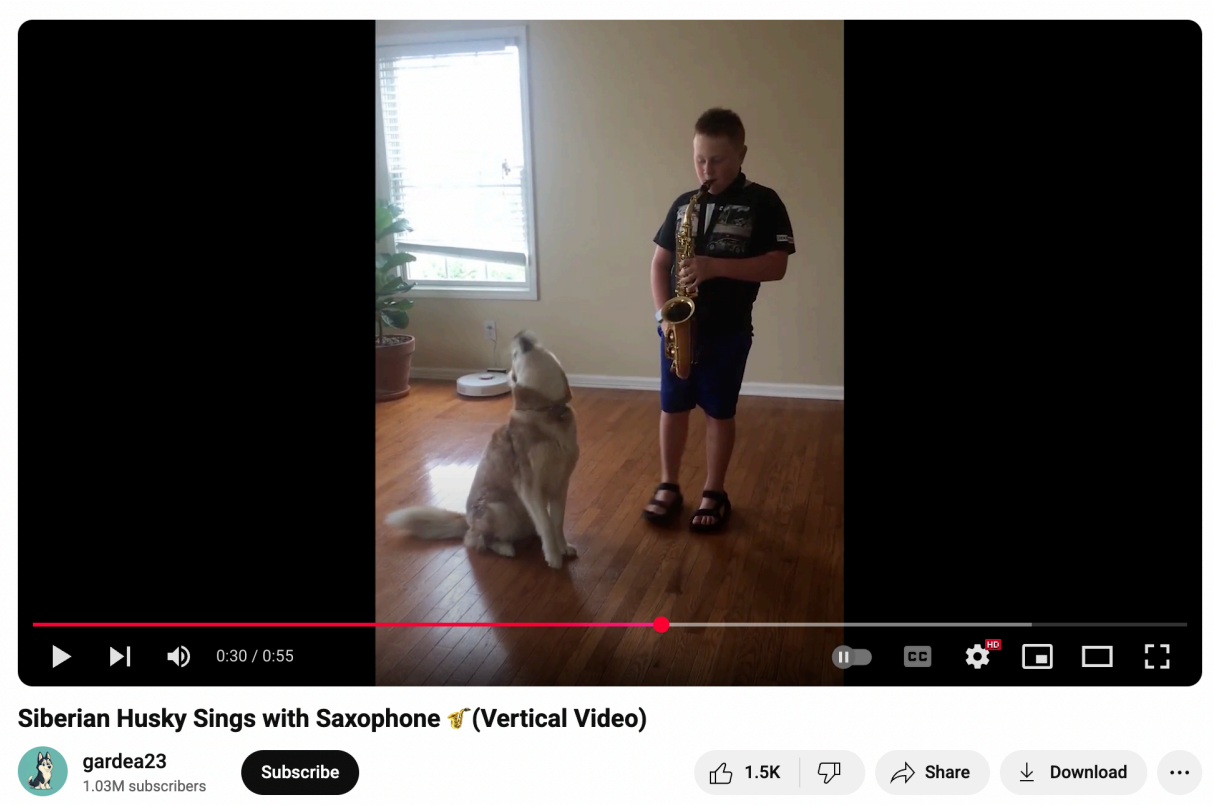


Figure 79. Mishka the husky baying at the honks of a child's alto saxophone playing (screenshot taken from Gardea23 2018: 0:30)

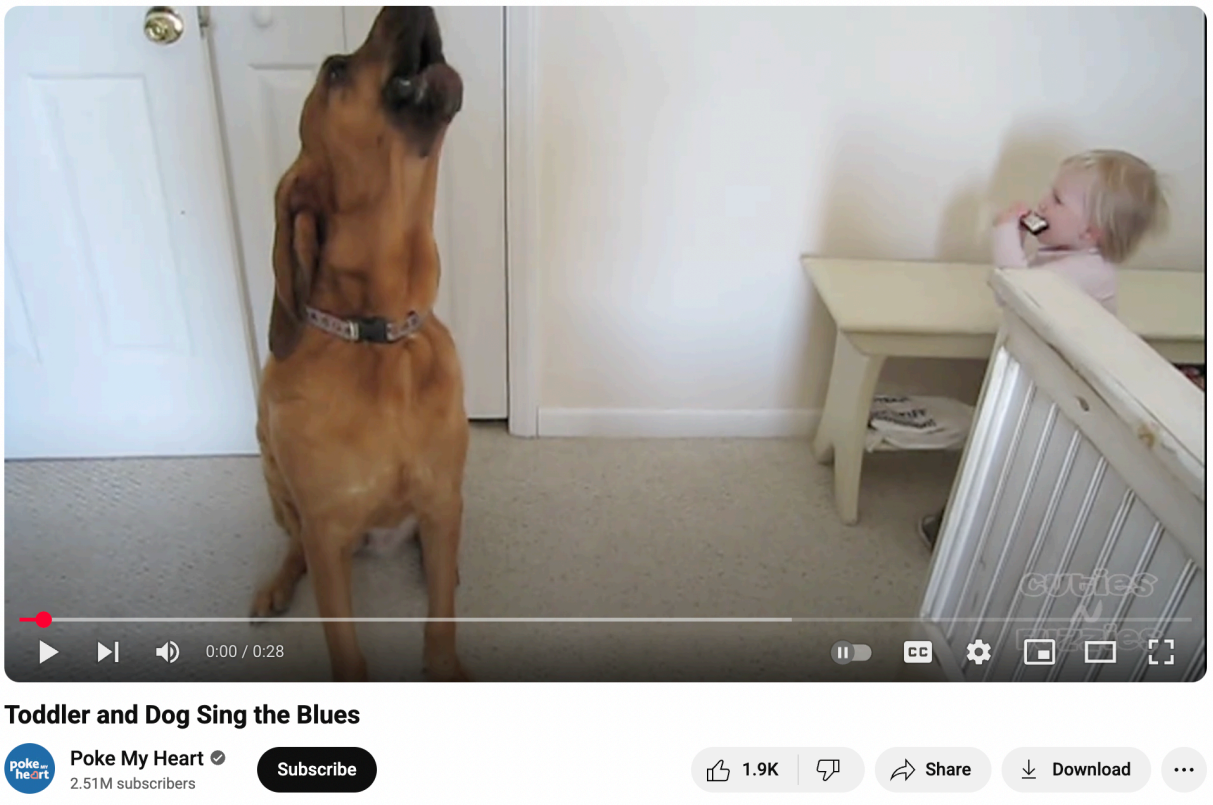


Figure 80. A toddler playing harmonica while their canine counterpart vocalises (screenshot taken from Poke My Heart 2012: 0:28).

Echoing the approaches taken by children, I suggest that embracing a more gestural and approximate way of playing could foster more responsive interspecies improvisation. After all, dogs do not nor share our culturally conditioned notions of harmony, melody, or musical form (Lahdelma and Eerola 2020). This approach could involve mutual stylistic compromise, which I attempted to model with Arca and Tilly, where human musicians adapt to the unique qualities of canine vocalisations while retaining their own musical voices. Just as in any cross-cultural collaboration, interspecies musicking benefits from flexibility, responsiveness, and shared agency, where both parties relinquish full control over the outcome.

5.3.5 Mass media proliferation

The *Got Talent* television franchise has become an unlikely but prominent stage for showcasing so-called singing dogs, with the phenomenon gaining such traction that compilation videos dedicated to these musical canines have proliferated (Talent Recap 2020). These televised appearances bring canine performers out of domestic obscurity and niche Internet spaces into the mainstream spotlight. While most dog-and-human acts do not progress far in the competition, many nonetheless gain significant followings on social media, fuelling the continued spread and popularity of canine musical content. In some respects, these performances push the boundaries of the musical avant-garde more boldly than many self-identified experimental artists. The sheer proliferation of these acts reveals a broad range of canine musical behaviours and signals a growing appetite for interspecies musical performance as a popular form of entertainment.

A particularly illustrative example comes from *Britain's Got Talent* Season 14, where contestant Aaron describes the "real bond" he developed with his dog Buddy, a sandy-coloured Weimaraner, through their shared musical practice (Britain's Got Talent 2020). According to Aaron, Buddy began vocalising along with his guitar playing at twelve weeks old, and they developed their duet-like routine in the lead-up to their audition. During their performance, Aaron strums a rhythmic pattern while Buddy responds with short, accentuated yowls, punctuated melismas that seem to increase in intensity alongside the guitarist's accented downstrokes. While it may be an overstatement to claim that Buddy consciously perceives musical pulse, his vocalisations closely mirror the gestural dynamics and phrasing of the guitar line, evoking a form of embodied imitation or affective synchrony.

Yet, even as we celebrate such interspecies collaboration, we must also confront the ethical implications of placing animals in high-pressure performance environments. While Buddy appears eager and engaged onstage, the bright lights, loud sounds, and unfamiliar crowds of a television studio may be distressing for a dog accustomed to domestic settings. We cannot know how his performance might differ in a more familiar, relaxed environment. Thus, any analysis of televised dog performances must also account for the potential stress and coercion involved in staging these spectacles. These ethical considerations heavily informed the design of *Dog Choir*, which analogously featured performances by dogs but was structured to ensure canine welfare and agency.

5.3.6 Category 3: ambient dog tracks

Amid increasingly busy professional lives, with pets often left alone at home from dawn till dusk, a growing trend has emerged: ambient music designed for pets. This content, platformed in long duration (10-15 hours) YouTube videos or Spotify playlists, is marketed as calming for dogs who are left alone for extended periods. Echoing findings that show that certain kinds of music uniquely appeal to cats (Snowdon, Teie, and Savage 2015), this content is intended as a form of solitary enrichment for dogs. Musically, these tracks resemble ambient, Brian Eno-esque instrumental pieces: slow, with minimal instrumentation, often featuring piano and string synthesisers, and occasionally incorporating sampled birdsong and environmental field recordings.

Although some users report the useful soothing effects of these tracks during thunderstorms, fireworks, and episodes of general anxiety, the primary use of this music is to provide environmental enrichment and relaxation for pets left at home alone. The purported benefit of these tracks lies in their structural sonic elements having a psychological effect on animals. The companies marketing them boast of specific high-frequency overtones and "sound sweep technology" that hold a dog's attention (Relax My Dog 2019), functioning much like anti-anxiety medication, which is often administered to pets with separation anxiety. This stands in contrast to this project's proposition of music as a shared, socially bonding activity between species.

In 2017, *Calming & Soothing Music for Dogs* appeared at number one on the *New Age Albums* chart, and these tracks have since gained millions of views and listens on streaming platforms; "Relax My Dog – Relaxing Music for Dogs" had over 51 million views on YouTube at the time of writing (July 2025) (Relax My Dog – Relaxing Music for Dogs 2018). The popularity, sheer volume, and commercial success of this dog music content demonstrate yet another way in which dogs are being implicated in and informing human musical practices.

While many dog owners use and report the positive effects of bespoke dog music tracks, one study found that there was "no additional benefit observed from any music purposely designed for dogs," while also acknowledging the limited research conducted in this area thus far (Lindig, McGreevy, and Crean 2020: 1). Although several researchers report positive and calming effects of music categorized as "classical" (Wells, Graham, and Hepper 2002; Kogan, Schoenfeld-Tacher, and Simon 2012) one must consider the highly variable timbral and structural qualities of classical music, a vast, centuries-spanning genre encompassing hundreds of ensemble combinations. In one study, "dogs were exposed to a randomly chosen mixture of tracks from the *The Very Best of the Classic Experience* (EMI Virgin Records) album" (Wells, Graham, and Hepper 2002, 387). However, the researchers failed to identify the specific tracks employed in their analysis. That album includes distinctly contrasting works, ranging from the loud, agitated high drama of Sergei Prokofiev's "Montagues and Capulets" from *Romeo and Juliet* (commonly known as "The Dance of the Knights") to the slow, tranquil languor of Edward Elgar's *Nimrod*. Within that same study, "heavy metal" was also used as a genre categorisation, yet one could argue that "Dance" has more in common structurally with Metallica (the designated heavy metal sample) than with *Nimrod*. To the musically literate, genre appears an uneven structural parameter for measurement when assessing how sonic elements affect animal behaviour, particularly within an otherwise rigorous and empirical scientific methodology. Therefore, this research, while demonstrating the notable effects of music on dogs, requires further refinement and exploration to fully understand how differing sonic qualities affect canine behaviour. This echoes similar calls by Kriengwatana et al. to employ greater musical specificity and rigour in scientifically investigating animal responses to recorded music (Kriengwatana et al. 2025).

Next, by drawing attention to the anecdotal experiences of those who use bespoke dog music tracks on streaming platforms, I examine the effectiveness of ambient dog music as solitary environmental enrichment.

5.3.7 Reported canine affect

In this section, I catalogue and reflect on the various observed responses of dogs to these ambient tracks by gathering the comments on one of the most popular YouTube examples of this content, the15-hour track "Relax My Dog – Relaxing Music for Dogs" (Relax My Dog – Relaxing Music for Dogs 2018). As well as elucidating the contexts in which people are utilising this content, many peoples' comments validate the intention of these tracks, with reports signifying positive canine affect.

In recounting these responses, peoples' posts are sentimental, subjective, and often quite emotional; for instance, one commenter reports the effect of the music on a missing dog found in New Zealand:

> Hello! I'm from NZ. A few hours ago we found a missing dog and she has been really anxious most of the time she's been here. I started playing this a few minutes ago and she immediately lay down and looked more calm. Thank you! We're working on finding the sweetie's owners as I'm writing this. I'm forever greatful for you. It helped a lot <3 (comment by @Purrito4Life on Relax My Dog - Relaxing Music for Dogs 2018)

Similarly, others anecdotally gratefully remark on the calming effects of this content in relation to normally distressing situations, like separation anxiety, fireworks, and storms:

Separation anxiety:

> If anyone is wondering if this works, it does. My dog was having a huge anxiety attack because my mom is out shopping and I played this and after a few seconds he stopped pacing and he's no longer whining or crying. His breathing has also calmed

down. <3 (comment by @SincerelyDelusional on Relax My Dog - Relaxing Music for Dogs 2018).

I just got a new puppy today, she was crying and shaking after leaving her sisters, brother and mom. Started playing this and she calmed down pretty quickly!! Thank you for this. Every please pray Coco gets over her separation anxiety (comment by @robloxiancj on Relax My Dog - Relaxing Music for Dogs 2018).

Fireworks:

Damn, this is actually calming my dog down during these fireworks. Thanks! And HAPPY NEW YEAR! (comment by @indy1972 on Relax My Dog - Relaxing Music for Dogs 2018).

This is helping my dog handle the fireworks outdoors. I'm so thankful he's getting a bit of calm through all of the 4th of July celebrations (comment by @MrStyle23 on Relax My Dog - Relaxing Music for Dogs 2018).

Storms:

My dog, Sky, has a lot of anxiety, so I put this on during a thunderstorm. She's shaking and every now and then she'll start panting, but I think it's helping. Thank you so much for this, I wish I had found it sooner. (comment by @VeryNerdyPerson on Relax My Dog - Relaxing Music for Dogs 2018)

My dog is terrified of storms. she is shaking and panting and i don't know how to help her, i am playing this for her and snuggling her right now . i love her so much and i have to see her like this. reading all of these heartwarming comments has got tears streaming down my face all you are such great people. i have to be up early tomorrow but it's midnight and i just want to be with my dog (comment by @eetapeet on Relax My Dog - Relaxing Music for Dogs 2018)

These comments appear to evidence clear canine behavioural affect (slower breathing, lying down, stopping vocalising, pacing, and panting), while other reports signify the additional impact of this content on human listeners. Multiple people comment on the soothing effect of this music, on both human carers and canine, when played for dying dogs:

> This will be the last thing my puppy richee will be hearing. I don't know how many remaining hours or days he has. His sick...and dying.....Ive been playing this music since 2days ago for his emotional support, but this makes me cry and my heart hurts. I've been lacking sleep, 12midnight to 6am I'm always touching him every hour just so he knows i am here. I Love You Richee. Thank you for giving us happiness even if its only been a months. you Live and give us things to remember forever. (comment by @angelmaria5383 on Relax My Dog - Relaxing Music for Dogs 2018).

Alongside this commenters account of Richee's responses, this music's potency from a human emotional and semiotic perspective also appears to be evident. Comments on these ambient dog music tracks reveal how listeners interpret and frame their effects across a spectrum of experiences. For many, the music is understood as therapeutically calming for dogs, particularly in contexts of storms, fireworks, or separation anxiety, and, as some accounts show, even during moments of end-of-life care. Yet alongside these deeply affective uses are more humorous or disruptive accounts, where dogs behave mischievously during playback or the listening experience is punctured by intrusive advertising.

One commenter reports on their dog's misbehaviour during the track:

> I fell asleep with this and when I woke up my dog was eating my dinner lol (comment by @lizard7348 on Relax My Dog - Relaxing Music for Dogs 2018)

Whilst the music itself is quiet, gentle, and mostly unobtrusive, if one does not pay for the premium YouTube subscription, one's experience of these tracks will be violently interrupted by algorithmically targeted ads that play every few minutes, as one user comically alludes to:

> Dog: Asleep

> Ad: THE LOUDEST POSSIBLE SOUND IS AVAILABLE, HERES A SNEAK PEEK. BLAST
> Dog: 0_0 (comment by @rishabhd5365 on Relax My Dog - Relaxing Music for Dogs 2018)

These jarring commercial intrusions remind us of the ever-present entanglements between music, commercialisation, and technology. The incongruous shift from tranquil piano birdsong ambience to a garish 15-second KFC ad pitched at twice the volume of the previous content seems a dystopic reminder of the insistent entanglement of both humans and non-humans within the profit-driven, socially mediated, technology-driven "hyperobject." Owing to the high volume of streams and the extended durations for which these tracks are played—often looped for eight hours or more each day—this content proves commercially profitable. While many musicians have been adversely affected by the shift from purchasing music to streaming, the publishers of such material benefit from the streaming model, in which royalties are calculated according to both the number of streams and the total listening time.

The phenomenon of ambient music for dogs offers a compelling insight into how music is used as a technologically mediated form of solitary enrichment, often serving a functional role akin to therapeutic intervention. While user comments reveal sincere emotional investment and point to the apparent soothing effects of this content, the sonic structures remain human-designed, commercially motivated, and likely unresponsive to individual canine preferences or expressions. This stands in stark contrast to the relational, improvisatory, and co-present musicking explored elsewhere in this project. Yet, the ambient dog music genre nonetheless affirms the entangled roles dogs now play in shaping both the function and reception of human musical practices, as well as the seemingly genuine positive effect that music has on some dogs. This trend also reflects a contemporary shift in the way dogs live with humans; historically, they accompanied us most places, worked alongside us, or roamed freely outdoors; nowadays dogs are confined in apartments and houses for long periods while humans work and play.

In the next section, the focus shifts from ambient, one-way sound environments to examine how postproduction tools and digital media are enabling new forms of canine-human co-composition. Through editing, layering, and sound manipulation, humans and dogs are being

situated as creative collaborators in novel ways, raising new questions about authorship, agency, and the aesthetics of more-than-human musical production in the digital age.

5.3.8 Category 4: postproduction and digitally aided canine co-composition

As I have suggested, technology plays a crucial role not only in the dissemination of dog-human musical content but also as a compositional tool, enabling creators to manipulate animal sounds and complicate the collaborative dynamic. Thousands of diverse instances of this phenomenon exist; examples include Dale Roosien's use of auto-tune on animal vocalisations (Dale Roosien 2019), Nigahiga's creation of a MIDI keyboard from his dogs' barks (Nigahiga 2019), and Hirokisan79's harmonically sensitive piano accompaniments to animal vocalisations (Hirokisan79 2021). These videos highlight how accessible technologies like smartphone apps and home recording software allow for creative, post-produced interspecies compositions that blur authorship and intention.

In "The Dog Piano!", for instance, YouTuber Nigahiga transforms his dogs' spontaneous howling, which initially interrupted his piano practice, into a humorous but deliberate act of cross-species co-composition (Fig. 81). By sampling and pitch-shifting barks into an arrangement of Mozart's *Ronda Alla Turca*, Nigahiga reframes canine interruption as musical material (Nigahiga 2019). While comedic in tone, the video exemplifies how animal disruption can spark creative responses, inviting humans to engage with more-than-human sonic worlds. In this sense, such practices echo Tsing's notion of "contaminated diversity," where unexpected multispecies entanglements arise through human disturbance and technological experimentation (Tsing 2015: 30).

Similarly, the popular TikTok trend of pairing vocalising animals with harmonic accompaniment, most effectively seen in Hirokisan79's videos of animal vocalisations harmonised with piano accompaniment (Figure 82), represents a sort of translational musicking, reframing animal sound through the idioms of Western tonality (Hirokisan79 2021). These practices—drawing on the "speech melody" compositional technique pioneered by Steve Reich and first employed in his work Different Trains (Reich, 1988/1990)—demonstrate how technology mediates and transforms interspecies musical relationships, rendering them more accessible, shareable, and emotionally resonant across digital platforms.

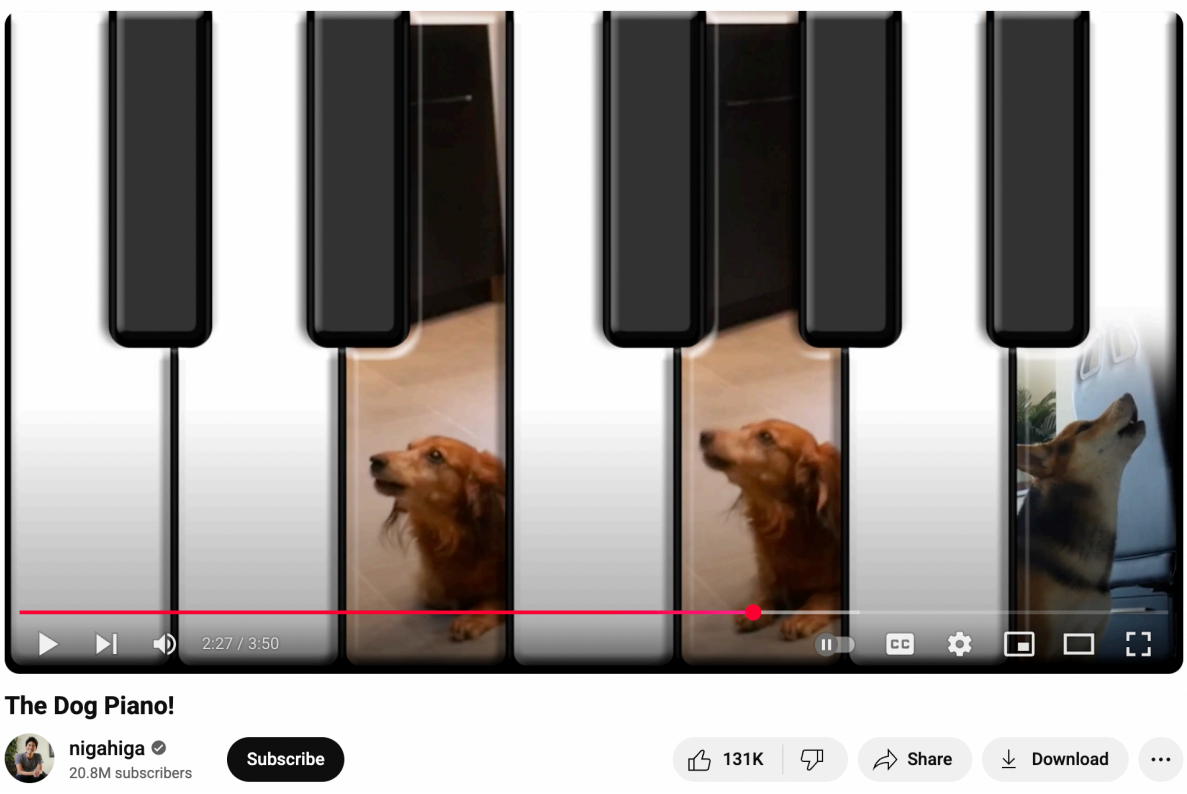


Figure 81. Nigahiga's "Dog Piano" constructed using repitched samples of other viral vocalising dogs then sequenced to play Mozart's *Rondo alla Turca* (screenshot taken from Nigahiga 2019: 2:27).

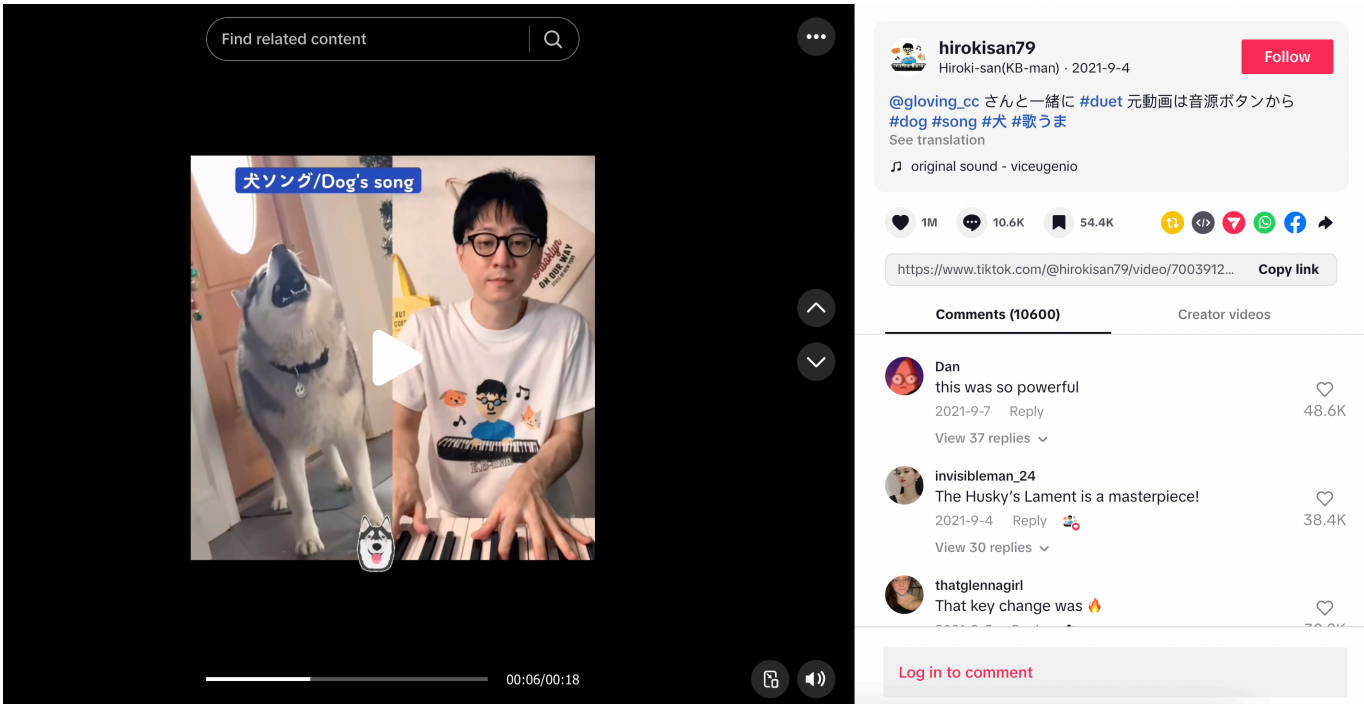


Figure 82. An example of Hirokisan79's practice in a work that incorporates recordings of a husky's intense howls and screams, pairing these vocalisations with tonal piano compositions to create a distinctive interspecies musical dialogue (screenshot taken from Hirokisan79 2021: 0:06).

Hirokisan79's practice represents a common trend (native to Tiktok) where the sound and/or visual content of a video are "remixed" and added to by other users utilising the "duet" function. What often emerges are chains of remixes, in which creators build upon earlier accompaniments to animal vocalisations, culminating in digitally enabled, cumulative ensemble arrangements of animal voices. Building on Hirokisan79's accompaniment of "Opera Dog," singer Cayleigh Capaldi adds her own vocal accompaniment to the duo (Cayleigh.capaldi 2021). In this instance, "Opera Dog's" initial vocalisation becomes a springboard for further instances of digitally enable human-human and canine-human collaborations (Fig. 83).

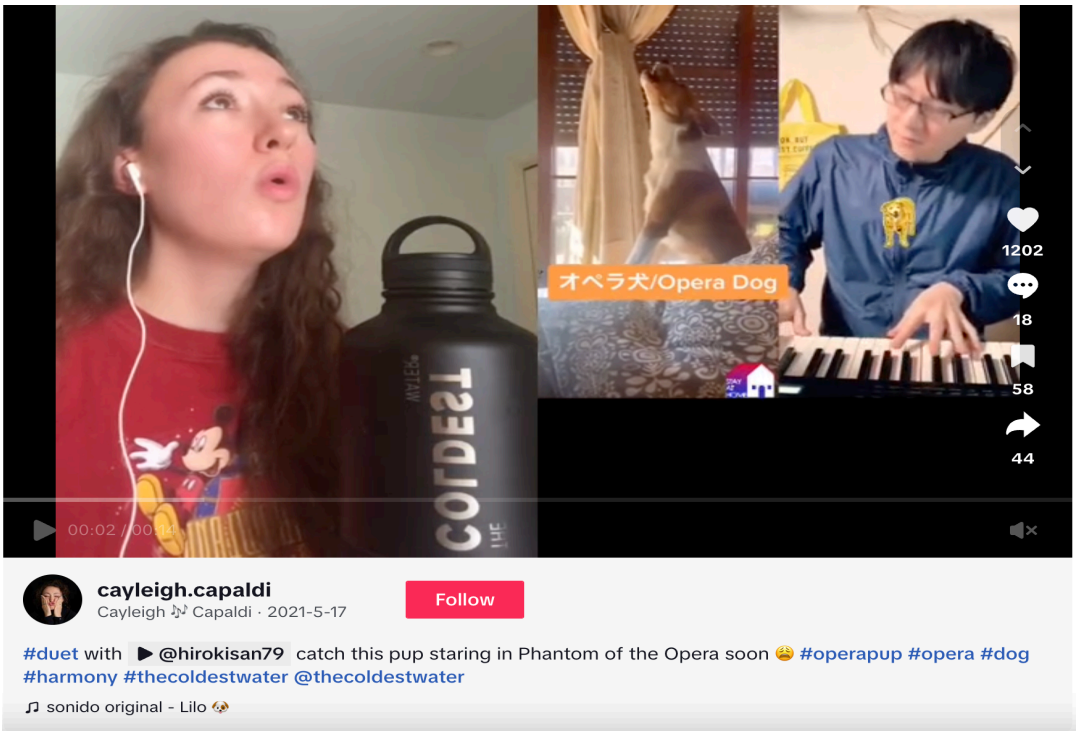


Figure 83. Cayleigh.capaldi's duet with Hirokisan79's piano accompaniment of "Opera Dog" (screenshot taken from Cayleigh.capaldi 2021: 0:02).

While not involving canines, YouTuber The Kiffness similarly began a chain of recompositions and accompaniments of the viral vocal cat dubbed the "Alugalug Cat" (Fig. 84) (The Kiffness 2021). The cat's gurgling syllabic phrases become a prompt for an "International Symphonic Mashup," where six musicians from across the globe join to create a co-composed ensemble accompaniment (ibid.).

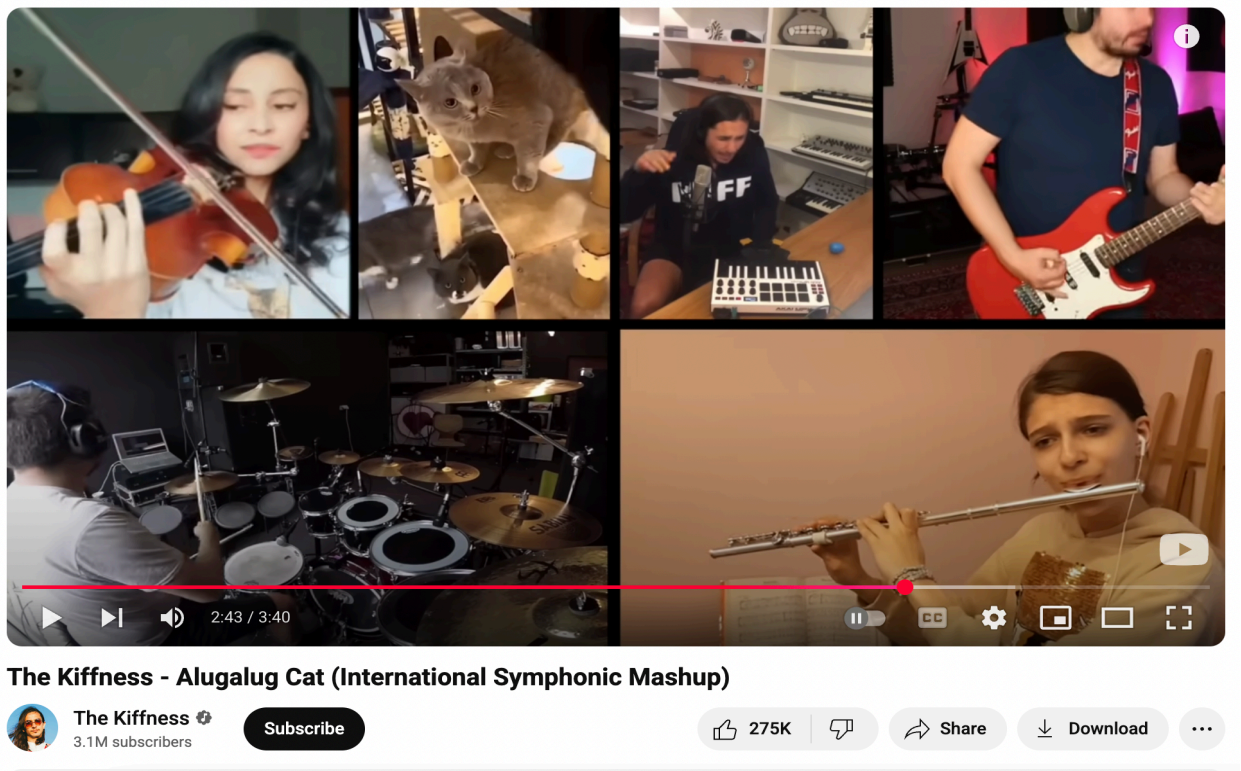


Figure 84. International collaborative accompaniment of the "Alugulug Cat" initiated by YouTuber The Kiffness (screenshot taken from The Kiffness 2021: 2:43).

These examples demonstrate how digital tools can reframe animal sound as musical material, amplifying its reach and accessibility, by employing explicitly tonal vernaculars applied to animal vocalisations. Yet the same processes that enable creativity also risk distorting or overwriting the dogs' or animals' voices, leading to deeper ethical questions about translation, authority, and respect that I now turn to in the following section.

5.3.9 Aesthetic colonisation or respectful engagement?

If we accept that animal sounds—particularly canine vocalisations—carry their own aesthetic, emotional, and communicative richness, then recomposing them within human musical frameworks demands a nuanced, respectful approach. Too often, the dog's contribution becomes backgrounded in favour of the human act of translation, with expressive canine sounds transformed into melodies that conform to Western tonal systems, eliciting familiar human emotional responses while potentially distorting or erasing the original intent or meaning as ascribed by the dog. This exploration of digitally aided canine-human co-composition reveals both the creative potential and the ethical tensions that arise when animal vocalisations are recontextualised through human technological intervention.

These practices risk reinforcing anthropocentric assumptions about what constitutes music and who holds musical authority. The addition of Western harmony—particularly when framed comedically or sentimentally—can impose a false semiotic layer on the dog's vocal gesture, reducing it to a raw material awaiting human refinement. In doing so, we risk engaging in a paternalistic act of aesthetic colonisation, where animal sound is deemed insufficiently musical until reworked by human hands. Yet, within these same tensions lies an opportunity: if artists are willing to embrace ambiguity, contradiction, and partial understanding, such compositions might instead reflect an ethos of respectful engagement, a speculative reaching-toward rather than a reductive re-framing: a territory I attempt to traverse in *Dog Choir* (discussed in Chapter 7).

This phenomenon also marks a surprising mainstream entanglement of more-than-human vocalities with human musical practice, one that reaches well beyond niche experimental circles into widely consumed digital content. The popularity of these videos, with millions of views and dedicated fanbases, underscores a growing public appetite for interspecies sound-making, even when it is mediated through humour or sentimentality. Importantly, these videos explicitly frame animal vocalisations as music by structurally exhibiting the recognizably and traditionally musical qualities of animal vocalisations, challenging long-standing human divisions between noise and music, nature, and culture. Whether through harmonic accompaniment or digital remixing, these works, however flawed, nonetheless invite broader audiences to consider animal sound not just as communicative signal, but as aesthetic expression worthy of attention, interpretation, and care. Beyond the scope of this project, a wider examination of such technologically aided interspecies practices could shed further light on how animal sound is being strangely entangled in 21st century digital culture and media.

What these digitally mediated works often lack is the intimacy and cohabitation, the flesh to fur relationality, that underpinned earlier examples of canine-human musicking. Without the embedded sociality that emerges from shared space and trust, these compositions can feel dislocated, even extractive. To move forward, I posit that creators might consider how to foreground the dog's voice not simply as sonic data but as a relational gesture, an invitation to "become with" (Haraway 2008, 4), rather than to translate over. In doing so, we can begin to

imagine a future for interspecies music that resists flattening and instead fosters layered, mutualistic encounters between species, sound, and technology.

5.4 Summary of Media Investigation: Theorizing Interspecies Music in Cultural Context

The media examined in this chapter reveals a widespread yet academically underexplored phenomenon: domesticated dogs have been observed participating and implicated in musical activities alongside humans for at least two centuries. These accounts provide historical precedents, models, and context for the pursuits I explored with dogs in Stage 1: Fieldwork, situating my practice within a longer lineage of canine-human musical entanglement.

Across both historical and contemporary media, canine-human musical practices bear traces of the anthropocentric biases that shape our relationships with the more-than-human; however, despite some documented instances of coercion and cruelty, many of the cited media examples show the joy, humour, and loving bonds consistently embedded in human-dog relationships throughout history. In the twenty-first century this phenomenon's visibility is amplified through viral online circulation; dedicated social media accounts and online archives reveal habitual and individualised canine musical practices, underscoring that such behaviours can, and should, be recognised as musically significant. Distinct genres of canine-human collaboration are readily identifiable—from dogs playing piano, to vocal call-and-response, to ambient tracks and technologically mediated co-composition—each representing a different modality of interspecies engagement.

Tsing's concept of "contaminated diversity" (Tsing 2015: 30) is readily apparent in the form and media context of these multispecies collaborations, reminding us that interspecies musicking is always situated within broader ecological, technological, and cultural forces. The presence of musical dogs across two centuries of media demonstrates that these practices are not marginal curiosities but recurring cultural expressions that complicate human notions of musical exclusivity. Although many accounts frame musical dogs through the lens of comedy or novelty, closer analysis reveals aptitudes and curiosities that challenge anthropocentric assumptions about the uniqueness of human musicality. These practices not only illuminate historical understandings of our relationship with dogs but also reflect

shifting ethical considerations around animal agency and value. Situating my own musicking with dogs alongside these broader examples highlights the diversity of creative and lateral ways humans and dogs have engaged musically across time.

Since this chapter sought not only to recount but also to problematise the portrayal of historical and contemporary accounts, I considered it essential to undertake in-depth interviews with contemporary practitioners who actively, and ethically, cultivate musical practices with their dogs.

Chapter 6: Individual Perspectives

As philosopher Heather Browning argues, anecdotal accounts are not merely casual stories but important forms of data when used critically, especially in research where lived, relational detail illuminates broader patterns (Browning 2017). In this chapter, I build upon the anecdotal evidence already presented—from archival media and personal fieldwork—not as an unfocused accumulation of examples, but as a deliberate extension of my methodology. By attending closely to individual experiences, I show how anecdote enhances, rather than dilutes, the rigour of this project.

Understanding dog-human music as a pervasive cultural phenomenon over the past few centuries, this chapter presents the in-depth contemporary perspectives of two people engaged in unique interspecies canine-human musical practices: I situate their practices as exemplars of, and in dialogue with, the wider canine-human music phenomenon. While the media survey offered valuable insight into the breadth of these practices, its reliance on mediated accounts—often sensationalised or framed for commercial and entertainment purposes—limits the depth of understanding it can provide about the lived dynamics of dog-human collaboration. Interviews therefore become a logical and more rigorous way to investigate these practices, enabling closer attention to the nuances of intention, perception, and relational context that media representations obscure. These perspectives were gathered through informal, semi-structured interviews, where I sought to understand each dog-human pair's nuanced relationship and unique history as the foundation for their individualistic musical practices. I also probed the practical and structural realities of each practice: how, where, and how often they make sound together, and what tools and approaches they use to collaborate ethically.

I interviewed Australian drummer, composer, and improviser Alon Ilsar, who uses custom-built digital technologies to sonify the physical play of his dog, Razzly. Their practice represents a canine-human musical relationship that uses lateral, radically accessible, and technologically aided methods of engagement. I also spoke with Canadian zoömusicologist Emily Doolittle, whose unique musical sessions with her whippet, Idris, enact an interspecies musical practice that respects canine agency. This chapter includes, when possible, the interviewees' own words. In conversations with both practitioners, their deep consideration

of the canine *Umwelt* will be apparent, with their efforts rooted in an ethos of respect and close attention to the unique histories and perceptive capacities of their dogs: this being important in differentiating their two approaches from more ethically dubious practices encountered in the media. Having observed how dogs' attempts to engage in human musical practices are often framed through the denigrating lens of anthropomorphic comedy and ridicule, Emily and Alon[3] exemplify practitioners of interspecies collaboration who critically examine the potentially musical qualities of their dogs' behaviours.

6.1 Alon Ilsar and Razzly: Technologically Facilitated Musical Play

Australian drummer, composer, and improviser Alon Ilsar utilises custom-built digital technologies to sonify the physical play of his dog, Razzly. Their practice embodies exemplifies the innovative intersection of music, digital technologies, and canine-human relationships, demonstrating a lateral and novel model of interspecies musical collaboration. Unlike my experiences with Mia, Tilly, and Arca, Alon and Razzly's practice is predominantly a non-vocal practice (on the canine and human part) but an instrumental and choreographic one, where Alon has constructed, then given control of a computer music instrument over to Raz. In our interview (conducted on 21 September 2023), Alon discusses his musical instrument (the AirSticks), Raz's history, his relationship with Raz, the origin of their practice together, and the way in which their practice has evolved. At the time of our interview (September 2023), I had not yet conceived of the *Dog Choir* performance outcome that Alon and Raz would feature in. In Chapter 7, I will elaborate on the performance that Alon and Raz presented as part of the *Dog Choir* project.

What distinguishes Alon and Razzly's practice from other digitally aided collaborations and co-compositions encountered online (like Ryan Higa's "The Dog Piano!" [Nigahiga 2019] or Hirokisan's piano harmonisations of viral vocalising dogs [HirokiSan79 2021]), is the non-exploitative live performance setting of the practice and Alon's broader goals of creating accessible tools for genuine musical and creative expression for people and beings with diverse capabilities.

[3] Despite both Emily and Alon being practicing researchers and artists, I have chosen to refer to Alon and Emily by their first names in my attempt to frame them as equal collaborators with their dogs: dogs are usually only given a first name.

I met Alon through other musician friends, and previous to our interview, we had only talked briefly a handful of times at jazz and experimental music performances. I became interested in their musical practice because Alon utilises custom-built digital technologies known as the AirSticks to sonify the physical play of his dog, Raz. My interview with Alon was conducted in September 2023, before I had conceived of the *Dog Choir* performance outcome that Alon and Raz would feature in (further discussed in Chapter 7). Before our interview, I had watched recordings of Alon and Raz performing and playing together but had never met Raz. My interview with Alon covered a range of topics related to their musicking, including Alon's musical instrument (the AirSticks), Raz's history, his relationship with Raz, the beginnings of their practice together, and the way in which their practice has evolved.

6.1.1 Razzly's history

During the extended COVID19 Melbourne lockdowns of 2020–2021, Alon adopted Razzly, a male "koolpoodle" (one-quarter Australian Kelpie, one-quarter koolie, and half poodle). At the time I met Raz, he was three years old, and exhibited a friendly, exuberant temperament. Raz was described by Alon as having an endless appetite for play, with a special affinity for balls. Alon explained that he demonstrated minimal interest in vocalising alongside music in the ways I had observed with other dogs; instead, his vocalisations are mostly limited to more functional vocal types, such as territorial barking and whines and yowls in response to pain or distress, and some growls during physical play. During the months after Raz was adopted, Alon was prototyping his AirSticks as ADMIs, designed for use by people with disabilities as alternative physical means of musical expression.

6.1.2 The AirSticks

Alon is the co-designer of the AirSticks, a computer music instrument made with a set of repurposed gaming remotes, as well as accompanying software to allow physical actions to control computer music parameters. The specialized software that Alon and his collaborator (programmer and composer Mark Havryliv) designed communicates orientation and position data from the AirSticks into the digital audio workstation Ableton Live, which then modulates musical parameters. Subsequently, the AirSticks allow Alon to map the motions of

his hands to any digital audio or visual parameter (volume, MIDI data, video, synthesiser, and patch controls in Ableton or Max MSP) in live contexts.

Originally designed for Alon to physicalise and improvise electronic music in a way that mirrored the action of drumming—drawing on his background as an improvising jazz drummer)—he later repurposed the AirSticks to fit inside Razzly's chew ball as a means of engaging musically with his dog. Simultaneously, Alon was exploring the use of the AirSticks as accessible digital musical instruments (ADMIs), for use by people with disabilities and as an alternative means of musical expression. Alon's framing of the AirSticks as ADMIs promote musical experimentation, play, and performance for beings with diverse physical capabilities.

6.1.3 Background to Alon and Razzly's practice and early performances

Alon explained that the long, often boredom-filled days at home with Razzly during lockdown prompted him to begin experimenting with attaching the AirSticks to Razzly. As he reflected: "Lockdown was definitely an element. I wore the AirSticks for a lot of my practice, and he was around. I would just play tug with him while wearing them" (Ilsar 2023). While observing and delighting in the rhythm and gesture of their play together, Alon began exploring how he could create a practice with Razzly, using the AirSticks to musically express their relationship and the movement language of play. Eventually, his thinking crystallised into a deceptively simple question: "How can you collaborate with a dog?" (Ilsar 2023). Alon was searching for a way to translate the joy and physicality he witnessed in Raz's play into a musical form that he could improvise with and communicate to audiences. His intent reflects an understanding of dogs as capable of complex emotion, play, and creativity (Bekoff 2000;2010)—behaviours that resist simplistic, Wallacian reductionism—the idea that all animal actions can be wholly explained as adaptations serving evolutionary fitness.

While in residence at Sensilab at Monash University (2021-2023) and exploring the use of his AirSticks as ADMIs, Alon began addressing this question by attaching the AirSticks to both Razzly (Airsticksguy 2022a) and himself while playing together (Airsticksguy 2022b), allowing their movements during play sessions to control musical parameters. These initial experiments are documented on Alon's Instagram. In subsequently considering Razzly's agency (or potential lack of agency) within this practice, Alon explained: "I tried it on his

collar. I tried it on his leg. But it just felt ... I don't know. It felt like I was lacking his permission for that or something as well. His consent, in a sense" (Ilsar 2023). Raz was unable to consent to having the device attached to his body, nor could he stop the sound unless he remained completely still. As such, Alon decided to embed the device inside a "special" chew ball (Airsticksguy 2022a) that would function like a musical instrument.

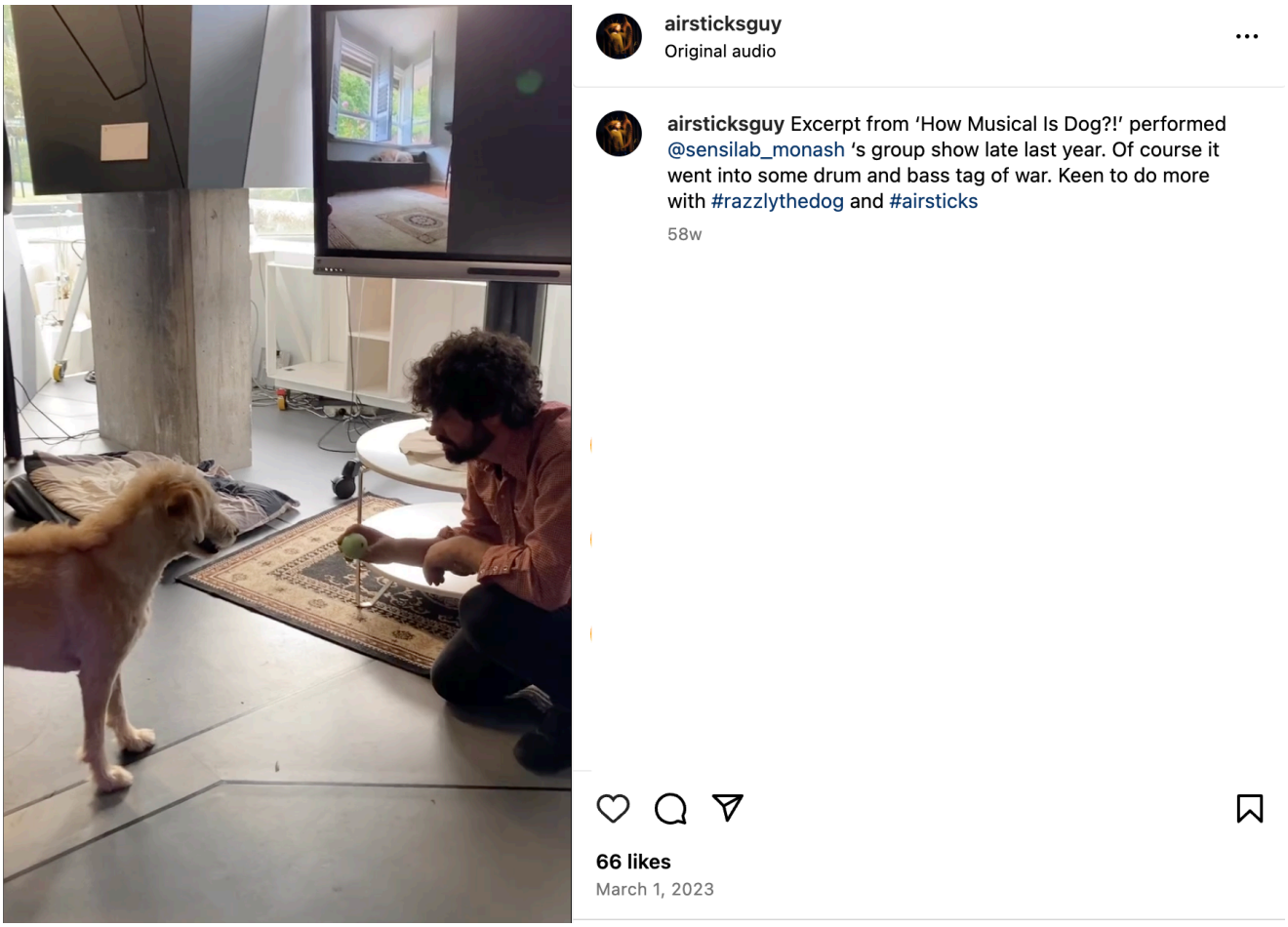


Figure 85. Alon and Razzly performing with the custom AirSticks dog ball at Sensilab Melbourne (screenshot taken from Airsticksguy 2023: 0:17) as part of his artwork "How Musical is Dog?!"

Following these initial experiments, in 2022 Alon was asked to exhibit an installation work titled "How Musical is Dog?!" (a reference to ethnomusicologist's John Blacking's book *How Musical is Man?* in which Blacking makes a case for musicality as a biologically universal trait of humans [Blacking 1973]) as part of a group show with SensiLab (Airsticksguy 2023) (Fig. 85).[4] Seeking to communicate the intimate lockdown foundations of his relationship with Razzly, Alon filmed a triptych of videos of himself and Raz engaging in shared activities:

[4] Link to the Instagram documentation of this work: https://www.instagram.com/airsticksguy/reel/CpOb8Iyvu7o/

playing with a ball, going for a walk, and shaving a mohawk down Raz's back. These videos functioned as a fixed installation in the gallery. Alongside this work, Alon and Raz performed a piece using three different AirSticks balls that controlled separate audio and video parameters. Alon threw the balls for Raz and then invited the audience to do the same. Each ball was programmed to control a different audio layer—one for bass, another for melody, and another for drums—allowing Alon to structure the texture of the work according to which ball he chose to throw for Raz. For this first iteration of their performance, Alon described the aesthetic outcome as "kind of a drum and bass thing by the end, because I felt like that was his chaotic energy" (Ilsar 2023). Since this initial showing, the practice has evolved in response to diverse performance contexts, with Alon and Raz being invited to perform at improvised music gigs, bars, and art galleries.

6.1.4 Agency and play

These later public performances have followed a similar structure, where Alon teases and throws a single AirSticks ball for Raz (often while simultaneously playing a drum set in response to Raz's movements), before inviting members of the audience to engage by throwing the ball themselves. During these performances, Raz has some agency in choosing when and with whom he wants to interact. Alon explained that, in some performances, Raz would stop returning the ball to Alon or the audience and instead sit still, chewing on it. He explains that while there are moments where Raz is free to roam and Alon responds to his movements, there are also times when Alon explicitly takes the lead in choreographing Raz's actions by teasing him with the ball and using basic commands such as "sit" and "lie down". These performances become a shifting power play that reflects the structure of their relationship. Alon describes a rehearsal process—a kind of "training"—that he leads in preparation for performances. Explaining his approach, he states: "I'll try this week to really work on my gestures in controlling him, as opposed to saying anything. Because I like the idea of holding the ball, getting him to sit, lie down perhaps, giving him the ball, getting him to drop it, kind of play that way at the start" (Ilsar 2023).

This interplay between structured musical intent and spontaneous canine play highlights the importance of play as a shared behaviour between species. Alon states: "To me, it's all about his play and the analogy between the way we play music and the way he just plays

physically. Where's that line? How can we come together at that?" By embedding music into their existing play rituals and acknowledging Raz's agency within the performance, this shifting dynamic often yields outcomes that defy human preconceptions of a "performance." For instance, there are moments of silence when Raz decides to sit still with the ball rather than engage with Alon or the audience. This commitment to process is central to Alon's approach: Raz is given opportunities to interact with the AirSticks ball and with people on his own terms. Alon's work challenges traditional perceptions of musical collaboration by framing such practices as a form of play where performance is secondary.

Alon's practice with Raz is not contingent on canine vocal exploration. He explained that while there were times he vocalises for and with Raz, this has not been part of the AirSticks practice so far: "I don't really sing with him. I sometimes kind of growl with him in the morning. He usually brings a rope over and kind of has this kind of sound that he uses for that, and I can play off him with that. I tried with a kazoo recently and it did really get him more excited" (Ilsar 2023). Alon views their musical practice more as a translation of their unique choreographic and gestural idioms of play. He described Raz's expressions as "erratic, fast, and dynamic," highlighting his interest in their rhythmic and gestural language. By including Raz in the performance, Alon initially sought to communicate to audiences the intimate relationship of play they had developed during lockdown, when Alon first adopted him. He emphasised the rhythms of "turn-taking" apparent in their play sessions. While Razzly has a keen ear, his limited vocal articulation means that his enthusiasm for their musical play sessions is expressed physically rather than vocally, reinforcing the idea that his engagement is rooted in process and experimentation rather than conventional musical aptitude. Although Alon acknowledges that Raz is partially aware of the impact his movements have on the sound, he believes Raz is ultimately focused on the ball and its movements: "I don't think he cares about the sound or relates to sounds so much" (Ilsar 2023). Foremost, it seems their practice is relational play, and the musical product is a synthesis and external communication of these behaviours and, by extension, their relationship.

Alon programs the AirSticks to trigger and alter a wide range of sounds, and throughout the development of this practice he experimented with diverse sonic materials, from melodic bell tones and synthesisers to cartoon sound effects and sound cues drawn from canine lives, such

as squeaky toys, panting, and growls. While the practice began privately, once Alon and Raz began performing publicly, the audio choices became an important way of semiotically framing the work for human audiences: as stated, Alon primarily presents their musical practice as an embodiment and enactment of play (specifically ball play). Accordingly, the sound effects he chooses often allude to this context of play and, more broadly, joy: panting evokes the physical exertion of play, growls recall the vocalisations dogs often make while playing, and cartoon sound effects invoke humour and the chaotic gestural language of animation, resonating with Raz's frenetic play energy. The incorporation of sounds familiar to dogs adds a playful and comedic element to the performance. These sounds help situate the practice within the familiar behavioural context of canine play and give the audience permission to participate as though they were joining a game, rather than watching a traditional performance. Additionally, Alon uses the structural elements of rhythm and the gestural language of canine play as prompts for the sounds he selects and for the methods of musical manipulation and translation that he programmes into Ableton (the musical product of their practice will be further discussed with regard to their performance at *Dog Choir* in Chapter 7).

The ball is an invitation to play: Alon is embedding music in their pre-existing practice of play. The AirSticks ball is not Raz's everyday ball, it's an asymmetrical shape and, when not in use, it resides on a high shelf in Alon's studio (unlike other balls that create trip hazards around the house). In framing this as "special" play with the "special" AirSticks ball, Raz and Alon create a new ritual and habit that each of them values and understands as a differentiated behaviour from their "normal" plays with the "normal" ball at the park or at home. When combined with the novel setting of a performance, where Raz is the only dog present, where he is the "star": with the unbroken attention of the audience, he has created a new shared play/music ritual (made explicitly musical in the way we perceive it at a gig and situated amongst other musical acts).

Altizer's piano as a tennis ball metaphor is again pertinent when discussing how Raz values the AirSticks ball (Altizer 2021). In this case, Raz's perception of the ball (the special lumpy one that lives on the shelf) has evolved. From Raz's point of view, he understands this ball as the ball associated with Alon playing drums, unusual sounds emanating from a mysterious source (speakers), and visiting big, strange rooms full of people who pay lots of attention to

him. Alon comments on Raz's extra reverence and increased desire for this ball when out of reach for him saying, "He would kind of climb up and go, that's the ball I want" (Ilsar 2023).

Through their collaborative play, Alon and Raz redefine the boundaries of musical engagement, centring movement, gesture, and spontaneity as core elements of their practice. By privileging Raz's agency, their performances resist traditional notions of musical authorship, instead embracing a dynamic interplay between structured intent and unpredictable response. This framework not only expands our understanding of interspecies artistic collaboration but also prompts broader questions about who—or what—can participate in musical expression.

As Alon continues to refine the sonic and gestural language of their performances, the accessibility of this practice for both Raz and human participants becomes increasingly significant. The AirSticks technology enables alternative pathways to musical engagement beyond conventional instrumental proficiency, opening up possibilities for individuals with different abilities to express themselves through movement and play. In this way, Alon and Raz's work serves as a compelling entry point into a larger conversation about accessibility in music and the diverse forms that musical expression can take.

6.1.5 Canine enactment of accessible digital musical instruments

Alon Ilsar's practice with his dog Razzly demonstrates the potential of adaptive digital musical instruments (ADMIs) to expand access to musical creativity. By situating canine play with the AirSticks alongside disability-led approaches to music technology, their collaboration reframes improvisation as an inclusive, relational, and multispecies practice. Alon explicitly sees his practice with Raz and the AirSticks as a demonstration of the accessibility of alternative technologically aided forms of musical expression. Alon's aims with Razzly are analogous to the way Christine Hunger saw the potential for the use of AAC buttons with dogs after first using the same tools for nonverbal children and people with disabilities (Hunger 2021). Hunger's work enables some beings lacking access to society's privileged mode of communication—verbal speech—to communicate through alternative means. Alon's work with Razzly reflects the sentiment that "expression" should not be

limited to functional communication but should include broader understandings and forms such as creative, artistic, and musical expression.

By including the audience in the performance—inviting them to throw the ball for Raz—and by giving creative control to Raz himself, Alon communicates the accessibility of his instrument while encouraging music as a space for non-experts to play and experiment: "The AirSticks can be customised to allow access to those with cognitive and physical limitations and/or no prior understanding of music. They promote social engagement, connection, and a sense of self and identity through creativity" (Krishna 2023). The AirSticks thus facilitate an alternative, non-expert means of experimental musical self-expression, and Alon sees his performances with Raz as evidence of their potential. Alon explains:

> So, for me it's almost a way of getting them engaging with the AirSticks through seeing that anyone can do it. Like that whole premise of what me and Kieran work on a lot, that you're all musicians, you all can make music. I think once you see a dog, hopefully you can go, "oh yeah, I can do that too, right, it's just some movement and play" (Ilsar 2023).

Just as adaptive digital musical instruments have been used in empowering people with disabilities to engage in creative improvisation by providing accessible and personalized tools for expression (Ilsar, Kenning, Trolland, and Frame 2022), Alon and Razzly's collaboration enabled by the AirSticks highlights the potential for interspecies agency and play in musical collaboration. In both cases, improvisation serves as a means of expanding participation beyond conventional frameworks, enabling individuals—whether human or canine—to engage in musical exploration on their own terms. By fostering a flexible, responsive environment where each participant's unique abilities and modes of engagement are valued, both contexts challenge traditional notions of musical collaboration. Alon's work with Raz and the AirSticks demonstrates the role of experimental and process led improvisation in creating inclusive, empowering, and deeply social musical experiences.

6.1.6 Summary of Alon and Razzly's technologically facilitated practice

Alon's practice embodies a lateral and technologically assisted approach to canine-human musical collaboration and consequently could be categorised within my fourth category of dog-human music as documented in media: postproduction and digitally aided canine co-composition. Unlike other similar practices within this genre, in framing their practice beyond the lens of comedy, Alon's engagement with novel technologies and bespoke canine instruments—designed with the species-specific physicality and object valuation of a dog in mind—demonstrates an awareness of the logistical and ethical realities of collaborating with a dog. He is hyper-conscious of creating a collaborative setting in which Razzly retains agency and feels comfortable being himself: a dog who wants to play, roam, and socialise. Together, Alon and Razzly demonstrate a practice that is habitual, individually distinct, mutualistic, and viable in a performance setting with audiences. Viewed through the lens of play as a vital expressive means for both humans and animals, their AirSticks practice becomes an important site of interspecies semiosis, playfully co-creating musical worlds that are inclusive, responsive, and deeply relational. The performance is as much about their relationship and the sonification of play as it is about communicating and enacting Alon's research into ADMIs for the audience. While other examples of technologically aided canine co-composition can be found on social media, most remain largely unexamined by mainstream scholarship. A more rigorous interrogation of one such practice—Alon and Razzly's AirSticks project—demonstrates how some practitioners are deeply considering musical collaboration with canine perception and respect in mind. Consequently, their practice stands as a unique, technologically aided model for canine-human musical collaboration, one that promotes an understanding of dogs as creative, agentive individuals eager to engage in musicking.

6.2 Idris and the Oboe: Emily Doolittle

Canadian zoömusicologist and composer Emily Doolittle's whippet, Idris, displays a keenness for vocalising alongside musicians and he has become a frequent collaborator with Emily and her musician friends. Her experiences, and the views she expresses, mirror my own encounters of musicality, initially with Mia, then later with Arca, Tilly, and the shelter dogs. As an expert in animal sound and music (specifically northern hemisphere songbirds) (Doolittle 2007; 2008; 2020; Doolittle and Brumm 2012; Doolittle, Gingras and Fitch 2014), Emily's observations and conjecture relating to the seemingly musical quality of Idris'

behaviours validate my claim that dogs should be considered as worthy subjects of zoömusicological study.

6.2.1 Background to Idris

Despite whippets' reputation as a quiet breed of dog (American Kennel Club 2025), after adopting Idris, Emily and her family soon became aware that he was a "howler." Idris was three years old at the time of this interview and Emily first noticed his vocal tendencies, not in a music-making context, but in response to the vocalisations of her young daughter. Emily explained:

> I have a very intense eight-year-old daughter who will have very long, very loud meltdowns where she'll be yelling really loudly for a very long time and… sometimes Idris will come and start howling while she's yelling. Then, no matter how angry she is and how stressful it's been, everybody bursts out laughing because you cannot not laugh when your dog starts howling (Doolittle 2023).

Just as I have noted the perceived farce and absurdity of canine companions vocalising alongside our serious attempts to make human music, Emily acknowledges the deescalating power of Idris' vocal attempts to participate in these emotionally heightened situations. Despite the cultural positioning of dog vocalisations in musical contexts as comedy, Emily does not dismiss Idris' vocalisations as a comedic trick; instead, she began to consider the musical qualities Idris' behaviours. During the Covid lockdown, contemporaneous to these child-tantrum-whippet-howl choruses, Emily began practicing oboe after a 20-year hiatus and noticed the same vocal response from Idris. Emily was pleased and intrigued by Idris' enthusiastic vocalising in response to her oboe playing.[5] She remarks:

> I've been sort of amazed at his sense of exchange. It really seems like he's listening to us playing and then fitting his howls in with that. And I have a lot of curiosity about how he sort of fits his pitches in (Doolittle 2023).

[5] Link to published video of Idris vocally participating in an oboe duet: https://www.youtube.com/watch?v=snVyZJkgQf0 (Emily Doolittle 2022)

6.2.2 Idris' vocal and aesthetic tendencies

Emily notes Idris' specific taste in sound, which broadly aligns with the sonic preferences I have observed in other dogs I have met and encountered online: many dogs exhibit vocal reactivity to high-frequency tones and wails, such as sirens, female voices, and wind instruments. She recounts his particular responsiveness to long tones on the oboe (an instrument sonically similar to both the clarinet and the melodica) and his increased engagement with oboe duets involving another player. As I found with Tilly (e.g., her increased vocal reactivity in response to dancing and vocalising as a group) and Arca (e.g., his enthusiastic participation in group *Happy Birthday* choruses), the involvement of more human participants seemed to more reliably elicit enthusiastic vocalising from Idris. Emily describes "a friend coming over to play duets" and explains that "it was especially when we would play duets that he would come and join in" (Doolittle 2023). She interprets this tendency to "join in"—both in musical sessions like the oboe duets and in the vocal tantrums of her 8-year-old child—as canine vocalisation representing a desire to be socially included. This understanding of Idris' vocal participation reflects other research interrogating and demonstrating the inherently social dimensions of canid chorus howling (Mazzini, Townsend, Virányi and Range 2013; Faragó, Townsend, and Range 2014; Déaux, Charrier and Clarke 2016; Kershenbaum et al. 2016).

While Idris is highly responsive to some sounds, he also demonstrates complete apathy toward others. Emily explained that when her husband played the baritone, Idris would simply leave the room. Idris was "just not into the low brass sound and there's other instruments that leave him totally indifferent, like he doesn't react to the piano or the banjo" (Doolittle 2023). Similarly, he is not reactive to sounds played through speakers. At one point, Emily experimented by playing him audio recordings of wolves howling, to which he was entirely indifferent: "He just, uh, ignores it" (Doolittle 2023). This suggests that the pitch, timbre, and the sound source/maker are elements Idris considers when choosing his responses to music.

Emily also observes that Idris responds positively to sounds similar in timbre to the oboe and to the screams of an 8-year-old, noting, "he likes the soprano as well. Or soprano voices." Prior to our interview, Emily shared videos of Idris vocalising alongside soprano Brooke

Dufton, who stayed with Emily and her family for a few days in 2023 (Fig. 86). The videos document Brooke singing in a classical vocal style, to which Idris responded with similarly pitched howls, yowls, and yelps. Emily noted Idris' heightened reactivity to one piece in particular: "…some pieces she was practicing, he didn't really care at all about, and the piece he was interested in is actually by R. Murray Schafer, which I think is pretty funny" (Doolittle 2023).

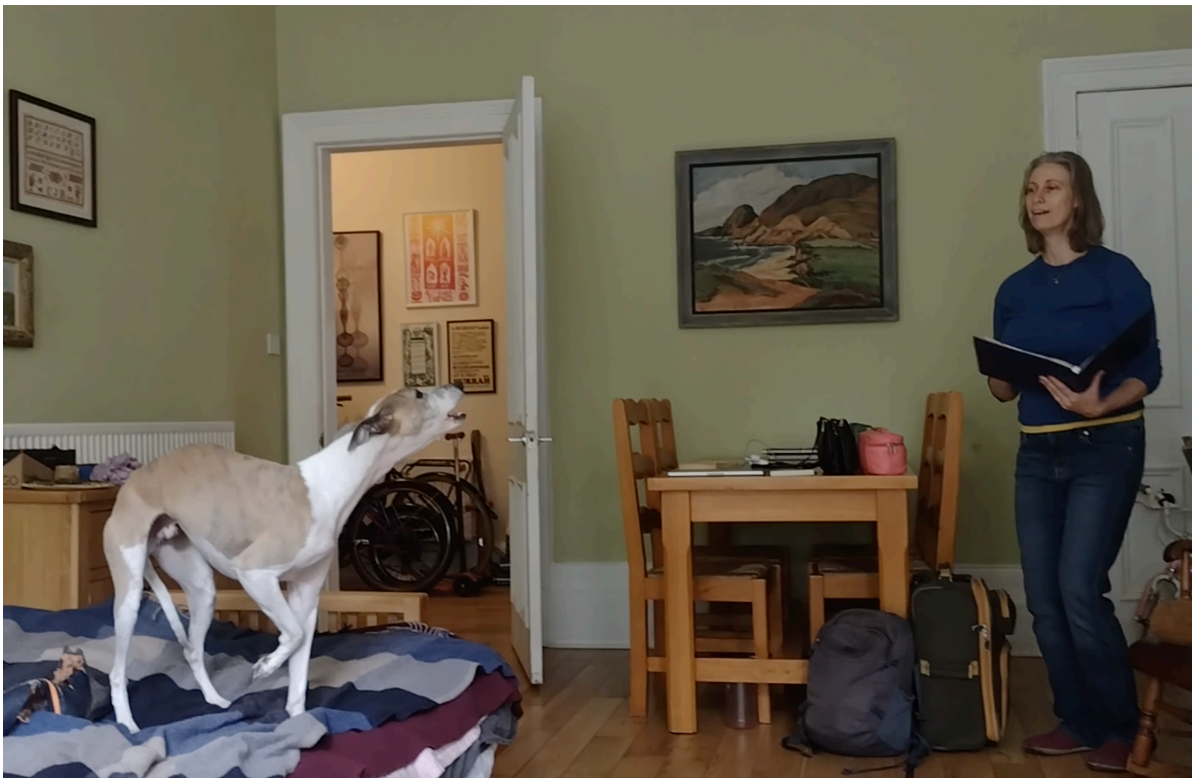


Figure 86. Idris and soprano Brooke Dufton engaged in a duet (screenshot of video used with the permission of Emily Doolittle 2023).

The piece in question was R. Murray Schafer's *Aubade for Two Voices,* which prompted a vocal response from Idris in every instance that Brooke practiced that piece.

> Brooke was here for maybe three or four days, and every time she would practice that piece, Idris would go to the room and howl with her, but not with other pieces. So, it was fairly consistent over a period of days (Doolittle 2023).

Compared with Emily's oboe playing, to which Idris would vocalise "maybe one out of three or four times" (Doolittle 2023), Idris' consistent response to this specific soprano work demonstrates his potential awareness of the static nature of this particular musical object and

his subsequent preference for vocalising alongside specific musical material. Emily observed Idris vocalising in a manner that roughly matched the punctuated staccato stabs of the opening of *Aubade*. In contrast to other recounted instances of Idris vocalising—and a published video of him howling with an oboe duet (Emily Doolittle 2022)—where he used longer, slow, portamento-style howls with gradual attack envelopes, Idris' vocalisations with Brooke were short, broken barks and yowls with steep melodic contours and fast attacks, closely matching the character and structure of the yipping gestures in the opening of the *Aubade*. In a gratifying coincidence, this work—intended to be performed outdoors at dawn—was written as part of a larger project titled *And Wolf Shall Inherit the Moon*, in which performers, during several performances, reported wild wolves vocally responding (Dufton 2018: 63).

Emily alludes to Idris' tendency towards rough gestural mimicry, which makes her question the rigid binary scientists have established around vocal learning, where a species is classified as either a vocal learner or not. She notes the same expressive patterns I first anecdotally observed with Mia, then later with Arca and Tilly, where Idris would match approximate gestural character of the singer, writing:

> He was hearing her and thinking, ok, she's singing the long kind of howl now, so I'll do the long kind of howl, and now she's singing the short kind, so I'll do the short kind. So, I don't know, what is imitation versus what is matching versus what is learning? I don't really know, but I think that it's, it's not as clear cut as some papers would have you believe (Doolittle 2023).

Although dogs are not traditionally classified as vocal learners— a trait definitively observed in humans, bats, cetaceans, elephants, and certain bird groups (Vernes et al. 2021: 2)—the rough gestural mimicry and matching displayed by diverse dogs seems to muddy a binary perception of vocal learning capabilities in animals. Emily echoes my view that further investigations into the vocal capacities of canid species, particularly domesticated dogs, could be valuable. Emily suggests a deeper ideological root to the rigid categorisation of vocal learning capabilities:

> I feel like it all comes out of sort of residual Cartesian thinking back to the time when people thought humans had souls and animals didn't. And then when science became non-religious, it sort of turned into, well, humans have language and animals don't, or humans have consciousness and animals don't. And then we're prepared to let a very few slide, we're ready to say, well, it's only humans and bats and whales that do this but no other animals. When in fact, I think that it makes more sense to think of, say vocal learning is a thing that can exist that lots of different animals have lots of different kinds of engagement with (Doolittle 2023).

Emily's observation points to the persistence of human exceptionalism in the sciences, where traits like language, consciousness, or vocal learning are reserved as markers of human difference. By framing vocal learning as a continuum of engagements across species rather than a rigid binary, she highlights both the limitations of Cartesian legacies and the value of attending to the diverse, if sometimes rough, ways dogs and other animals participate in vocal expression.

6.2.3 Consent and agency

For Emily, Idris' consent in their collaboration is a key factor, where she only engages if Idris reciprocates. As stated, Idris would not howl consistently in response to her oboe playing ("maybe one out of three or four times" [Doolittle 2023]). She elaborates:

> Like, sometimes he's in the mood and sometimes he's not in the mood. He's a pretty stubborn dog. He does what he wants and he doesn't do what he doesn't want. And I've sort of made myself my own rule that if I'm playing oboe and he goes somewhere else, I'll follow him once. But then if he's not into it, then I'll leave him alone because he's just not in the mood that day (Doolittle 2023).

Emily treats his involvement with the same respect she would any other collaborator, paying attention to bodily cues and choices that Idris makes. She respects Idris' agency within their practice, considering the absence of a response as a clear signal of his intentions. Emily's attentiveness to bodily comportment and Idris' agency mirror the assertions of Warkentin that interspecies relationships and collaboration "require the cultivation of a keen awareness of

embodiment, our own and the bodiments of other animals, to grasp continuities and negotiate key differences" (Warkentin 2010, 118).

Similar to my own experiences showing my recordings of vocalising dogs to other people and despite Idris' consistent tail wagging, Emily encountered the same assumption from people that Idris' vocalisations were a signifier of distress, saying, "when I posted one of those videos, a lot of people were like, I'm sorry to tell you Emily, but that dog is in pain. Like, no, he would go, if he was in pain" (Doolittle 2023). She consequently describes measures she takes to ensure Idris has ample opportunity to leave a situation if distressed, explaining, "I never close the door when I'm playing oboe with him. So, he always has the choice to come and go" (Doolittle 2023). In demonstrating a situation in which Idris exercises his ability to leave a situation if he doesn't like or is distressed by a sound, Emily describes "how he leaves the room when Neil plays baritone; clearly there's some sounds he doesn't enjoy and then he goes" (Doolittle 2023).

Similarly, in other non-musical contexts, Emily describes Idris as a wilfully independent dog who readily exercises his agency:

> If he wants to be in the room with us, he's in the room with us. If he wants to be out, he's out. If he wants to take all the pillows and stack them up so he's more comfy, he does that. He has agency (Doolittle 2023).

This pervasive assumption that canine vocalisations are a signifier of distress or pain can often be dispelled by examining the eliciting situation and the distinct non-vocal behaviours of individual dogs, as uniquely expressed by their primary human carers. By viewing a dog's habit of vocalising in response to musical stimuli in a wider behavioural context, instead of presumptuously assuming distress in a howl, we can ascertain the level of complicity that a dog has in these musical practices. Key to this process is hearing and heeding the perspective of the dog's most intimate human companion, who knows that individual's unique behavioural signifiers of emotional states: in the same vein as Nussbaum suggests we could advocate for animals for in the legal system (Nussbaum 2022).

In the spirit of utilising the dog's primary carer as the best advocate for that dog's wellbeing, I asked Emily if she believes Idris takes pleasure from singing with Emily and her musician friends. She reiterates his propensity for doing whatever he wants and not doing things that he doesn't want to do:

> I do think the dog enjoys it just because he doesn't really do things he doesn't want to do. He's a whippet. So, if he wants to hop on the table and take food, he hops on the table and takes food even though he knows he's not supposed to (Doolittle 2023).

To strengthen Idris' seeming enthusiasm for vocalising in these musical contexts, in the videos provided by Emily, both with Brooke and Emily playing oboe, as stated, Idris can be observed wagging his tail throughout the sessions.

6.2.4 Function and socially situated practice

These explicitly interactive and relational musical experiences with Idris have prompted Emily to consider animal music through a focus on the social function of music practices as opposed to purely structural analyses of sound. She explains:

> It made me realize that how much my focus on birds has led to a focus on one aspect of music, which is what it sounds like. But that's really not the only or maybe not even the most important aspect of music. So just thinking about the dog, just recognizing that, OK, another huge part of music is how you interact with other music makers around you. The way he seems to listen and join in after he's heard what we're doing and stop after we stop, it really feels like an interactive experience (Doolittle 2023).

It seems, Emily, in her observation of the relational element of Idris' singing has come to the same argument that I put forward, music cannot be solely defined by its structural qualities, rather sounds situated within certain culturally and socially constructed settings become musical. In speculating on Idris' perception of their musical sessions, Emily points to the diverse reasons for humans' engagement with music.

> I think there's so many different reasons people engage in music too and you can imagine that a dog might engage in a music making practice, not because they really cared how it sounded or even because they cared about that sonic interaction, but just because they see it makes their person happy, which is fine. I mean, there's people who engaged in music for that reason too, like, they don't really care that much but they know it makes their grandmother happy or whatever (Doolittle 2023).

Emily's view highlights the deeply social nature of music, suggesting that its value extends beyond mere sonic aesthetics to encompass relational and emotional bonds. By paralleling human and canine motivations for musical participation, Emily challenges rigid anthropocentric notions of musical intent, instead framing it as an inherently communal act. In this light, interspecies musicking emerges not just as a curiosity but as a reflection of broader social dynamics, where connection and shared experience often outweigh technical or artistic considerations.

6.2.5 Summary of Idris and Emily's interspecies musical model

Idris' vocal interactions with Emily and her musician friends provide compelling evidence that dogs are socially and aesthetically motivated to engage meaningfully with musical experiences. Rather than dismissing these behaviours as mere novelty or coincidence, Emily's observations suggest a deeper, socially motivated musicality in dogs. Idris' selectivity in responding to specific instruments, tones, and musical structures aligns with broader patterns of rough gestural imitation that I observed in other dogs I've encountered, reinforcing the need to reconsider the rigid classifications of vocal learning in animals (that Emily directly connects with canines).

Their practice together embodies an ethical, attuned, and considered mode of collaboration that we are unable to probe in analogous examples from the archival media. Emily's attentiveness to Idris' agency highlights an essential aspect of interspecies collaboration: consent and mutual participation. Her willingness to respect his choices, alongside his clear enjoyment of certain musical experiences, challenges common anthropomorphic assumptions that canine vocalisations in musical contexts must signify distress. Instead, Idris'

enthusiasm—evidenced by his responsiveness, mimicry, and even tail-wagging—supports the argument that dogs can actively participate in musical expression.

6.3 Stage 2: Media Analysis and Interviews Conclusion

The second methodological stage of this project (presented in both Chapter 5 and 6) demonstrates the rich and varied landscape of co-created human-dog music, evident in multiple examples from historical and contemporary media as well as the work of current practitioners engaged in dog-human interspecies musical collaborations. The media I examined from across two centuries reveals a consistent framing of musical dogs through the registers of novelty, comedy, and spectacle, which I argue has led to a dismissal of the distinctly musical nature of the phenomenon. My investigation demonstrated that dogs and humans engage in diverse modes of musical collaboration with varying degrees of ethical consent. Likewise, dogs have been implicated, and sometimes agentive, in the utilisation of musical technologies such as the piano, digital instruments and editing tools, and online publishing technology. Within the examples I examined, dogs seem to demonstrate diverse musical capacities that echo findings in my fieldwork; namely, some dogs seem to exhibit rudimentary vocal imitation, pitch replication, and independent musical agency (such as the piano-playing dogs): canine vocal abilities and behaviours that remain understudied and overlooked.

Within the media investigation, I found that, crucially, the tools of publication—whether archival newspapers or digital platforms—actively shape the way these musical collaborations are propagated, interpreted, and evolved. Digital media serves as a conduit for the rapid dissemination of interspecies music, enabling its virality while simultaneously embedding it within a globalized, corporate-driven framework. This economic and political backdrop not only facilitates the spread of these musical endeavours but also raises questions about the representation and agency of the more-than-human within such systems.

The examples of dog-human musical collaboration described in Chapter 6, through the work of Alon and Emily, demonstrate that the superficial comedic spectacle of dogs making music with their human companions offers a relatively limited perspective on canine musical capability and interests. By moving beyond this perspective, we uncover a deeper, more

complex reality—one that highlights the expressive capacities of both species. Across many instances, dogs seem to demonstrate a musical curiosity that challenges our understandings of who can be considered "musical". The enthusiasm with which audiences engage with these performances (demonstrated in the virality of certain examples) further affirms their immense appeal to audiences and the potential of artistic and affective potency.

Yet, ethical considerations remain central. The tendency to filter canine behaviours and vocalisations through human emotional and semiotic frameworks can lead to misconceptions about their experiences, particularly assumptions about distress or enjoyment. Approaches such as those taken by Emily and Alon, who prioritize attentiveness, agency, mutual responsiveness, and play-based musical exchange, offer a more nuanced and ethical model of interspecies collaboration. Alon and Emily enact ethical and considered approaches within their respective practices, and both practices evidence diverse ways of musically collaborating that take into account animal individuality. Their practices echoes my own findings with Arca and Tilly, reinforcing the idea that genuine musical co-creation is possible when both human and canine participants engage as active, listening partners.

The close collaborations of my fieldwork, the cultural framings uncovered in archival media, and the ethical and creative strategies gleaned from practitioner interviews all informed the design of *Dog Choir*, the public participatory performance workshop, which I discuss in the next chapter. *Dog Choir* embodies the iterative methodology that underpins the project: each stage feeding into the next, shaping how I understand and stage interspecies musicking. As such, it functions as both a culmination of earlier investigations and a testing ground for exploring how canine-human musical relationships might unfold in collective, experimental, and performative contexts.

Chapter 7: *Dog Choir*

Dog Choir is the socially engaged performance workshop I devised as the final stage of fieldwork. Synthesising insights from earlier research, the event offered a participatory platform for exploring and showcasing human-canine musical interaction in a setting and in a format accessible to both dogs and people beyond the academy. The chapter details the structure, reception, and provocations raised by the workshop, reflecting on its success as both an artistic and research methodology. A short, edited video showing highlights from the various sections of *Dog Choir* can be accessed here.[6] Watching this video ahead of reading this chapter will aid the reader in understanding the particular details, structure, and components within *Dog Choir* that will be discussed.

7.1 Precedent and Justification for a Public Compositional Outcome

Throughout my fieldwork, I encountered and engaged in canine-human musical practices within private settings. Given the importance of public-facing outcomes for integrating and communicating academic and artistic research (Klein 2017; Tomlinson 2023), constructing a performance work emerged as a logical and necessary extension of the project. The result was *Dog Choir*, a public performance event designed to present and enact my research in an accessible, engaging format. Given many peoples' only exposure to human-canine musical practices comes through online videos that cast such practices as comedic, novel, and thus unworthy of serious intellectual consideration, *Dog Choir* would instead offer a site of socially contextualised interspecies gathering. Here, participants, both human and canine, would be encouraged to use music and sound as a means of meaningful and playful interaction.

In addition to synthesising my fieldwork experiences and showcasing ethical models of live canine-human musical interaction, *Dog Choir* enabled triangulation of prior analyses across three core human–dog pairs, generating new insights in a public setting. In essence, *Dog Choir* operated as a performative microcosm of my broader research: an alternative, non-written mode of communication in which the core ideas of my thesis were enacted and

[6] Video 1 *Dog Choir* edited highlights 21 July 2024 videography by Steve Wilson-Alexander https://www.dropbox.com/scl/fi/i6f6p9rgbybafrbj15k2x/Video-1-Dog-Choir-edited-highlights-21-July-2024-videography-by-Steve-Wilson-Alexander.mp4?rlkey=tz2vk0iku8tkw6wor7bzd1q0f&dl=0

experienced in real time. By positioning dogs not merely as subjects of study but as active participants, the performance culminated in a large-scale interspecies chorus howl. As an artistic outcome, the work also established a model for presenting and advocating for my research beyond the term of my PhD and in contexts outside academia.

As already noted, a key inspiration for *Dog Choir* was Laurie Anderson's *Concert for Dogs* (Anderson 2016) documented by Bill Morrison on YouTube (Bill Morrison 2010). Anderson's performance featured electroacoustic compositions tailored to canine auditory sensitivities, incorporating high-frequency sonic material and live amplified instruments (keyboard, guitar, violin, saxophone). Her work positioned dogs as the primary audience, crafting a sensorially specific musical experience. Building on this premise, I sought to develop a concert that did not merely cater to canine listeners but foregrounded their agency as musical participants within a social setting. Anderson's invitation for dogs to vocalise in the latter part of her concert became a structural prompt for my own work, where the interplay and encouragement of human and canine vocal and musical participation was placed at the centre. Emphasising the dogs' agency and participation in *Dog Choir* sets my project apart from Anderson's, not just as a concert *for* dogs, but as a concert *by and for* dogs.

Dog Choir was not conceived as a fixed performance but instead emerged through iterative experimentation, informed by my fieldwork in Stage 1, the media survey and interviews conducted in Stage 2, and prior iterations of my own *Concert for Dogs* I had conducted outside this project. The final *Dog Choir* event (21 July 2024) was shaped by three preliminary trials: at the Canberra International Music Festival (2022), Bondi Festival in Sydney (2023), and Art Farm Birchs Bay in Tasmania (March 2024). Although I conducted these early performances separate to the research undertaken for this project, these events provided invaluable insights into the dynamics of interspecies musical collaboration in diverse public settings and helped refine the structure of the final event, which became the culminating component of this project.

7.2 Early Iterations of *Dog Choir* (Initially *Concert for Dogs*)

After learning of my research interests, the programmer of the Canberra International Music Festival (CIMF) invited me to run a *Concert for Dogs* in the 2022 festival (intentionally

employing the same title as Anderson's project to allude to her original premise). Originally planned as part of a monthly dog meetup, the event was cancelled due to heavy rain. It was rescheduled for the following day (April 30 2022) and relocated to a farmers' market, transforming the event into a more informal, roving performance for passers-by with their dogs (see Figs. 87 and 88).



Figure 87. Interacting with a labrador retriever at the CIMF iteration of the Concert for Dogs on April 30 2022 (photograph by Peter Hislop).



Figure 88. Interacting with an enthusiastically vocal kelpie while an inquisitive guide dog in training attempts to pull their guardian closer to my clarinet at the CIMF *Concert for Dogs* on April 30 2022 (photograph by Peter Hislop).

This iteration was amorphous and interactive, comprising many brief encounters with passing dogs. Responses from dogs were mixed: some showed hesitant curiosity, while others appeared frightened, reflecting the same diversity of initial responses I observed in shelter dogs. Two dogs were particularly vocal (one pictured in Fig. 89), echoing the enthusiastic vocal responses I received from Tilly, Arca, and Mia. Their human carers were similarly engaged, encouraging participation despite some dogs' misgivings about the clarinet. This early version revealed both the promise and the challenges of interspecies performance, underscoring the need to adapt the format in future iterations to adopt more structured, supportive, and immersive conditions that could foster sustained canine participation while preserving their agency.

In 2023, Bondi Festival invited me to present another *Concert for Dogs*, this time as part of an amateur dog parade in Sydney's Eastern suburbs. Building on insights from the first Canberra iteration, I strove to experiment with a technologically aided interspecies chorus howl. The event, which took place on July 8 2023, took the form of a short, 20-minute segment within a larger dog-focused program. Following a demonstration of an enthusiastic canine response to music with Tilly (Fig. 89), I structured the performance as a guided participatory workshop: introducing the premise of my research, distributing small wind instruments (party blowers and slide whistles), and inviting participants to musically engage with their dogs while I "conducted" them through an electroacoustic piece (this process will be further detailed in Section 7.3.6).



Figure 89. *The Concert for Dogs* at Bondi Festival on July 8 2023 capturing the moment I brought Tilly up for a short demonstration before the participatory part of the event (photograph by Lucy Parakhina).

Building on the Bondi Festival iteration, where I first experimented with the premise of an interactive technologically aided interspecies chorus howl, I was next invited to perform the work—still titled *Concert for Dogs*—at Art Farm, a regional arts centre in Birchs Bay, Tasmania (Fig. 90 shows the event poster). This event (24 March 2024), attended largely by older rural residents and their dogs (Fig. 91 shows the outdoor setting and some of the attendees), further cemented my inclusion of both digital audio components and small acoustic instruments distributed to audience members. The open-mindedness and enthusiasm of participants, many of whom rarely encountered experimental interactive work of this kind, underscored the project's accessibility and its capacity to engage people and dogs across diverse contexts. In this less urban setting, the Art Farm performance demonstrated the project's appeal to a wider demographic than city arts festival audiences; people everywhere seemed eager to witness and encourage their dogs' musical engagement. After the Art Farm performance, I decided to rename the project *Dog Choir*—a title that distinguished it from Anderson's *Concert for Dogs* while more accurately reflecting its participatory, workshop-like structure, in which audience and canine involvement was central to the design.

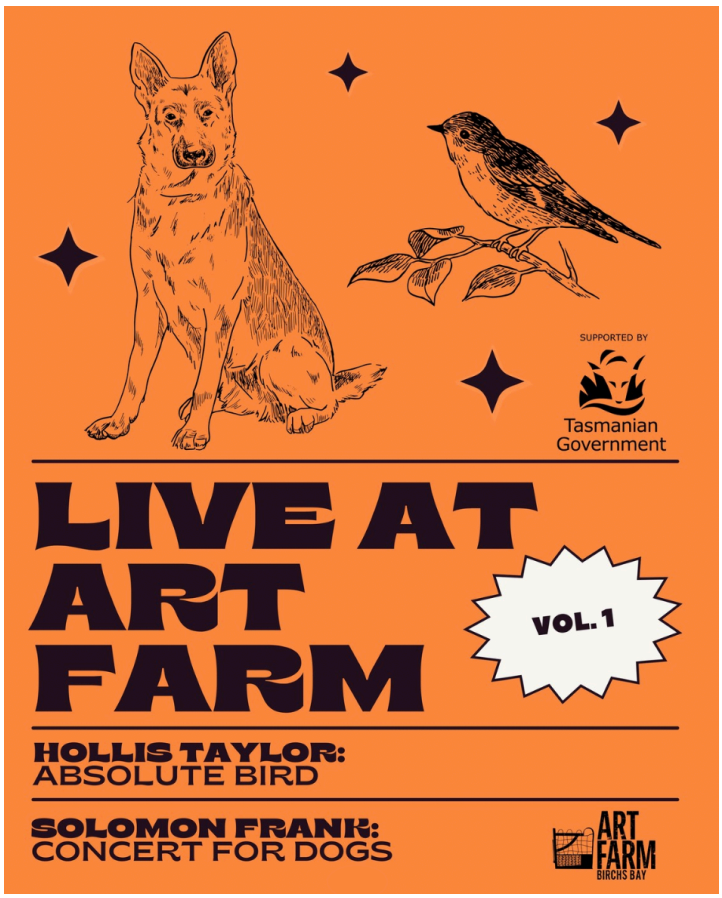


Figure 90. Promotional poster used in publicising the Tasmanian iteration of *Concert for Dogs* in March 2024 (poster used with permission from Art Farm 2023).



Figure 91. Attendees seated in the outdoor setting of *Concert for Dogs* at Art Farm March 8 2024 (author photograph used with permission from Art Farm 2023).

When initially planning this thesis, I did not anticipate including a public performance as a component of my research. However, presenting these canine-centric concerts to diverse audiences revealed the value of synthesizing and communicating this research outside of a written format. Observing how these performances were received in practice offered real-time insight into how the phenomenon unfolds and is perceived. This led me to formulate an expanded *Dog Choir*, inviting dog-human duos I had met during my research to perform for an audience of dogs and their people, while retaining the participatory guided improvisation element I had devised through the previous iterations. Although I do not include these three events as part of the data I formally collected and examined, they served as crucial testing grounds, shaping the final event in July 2024, which I discuss in the following sections.

7.3 Structure of *Dog Choir* on 21 July 2024

7.3.1 Setting and logistics

Dog Choir took place on 21 July 2024 at 107 Projects, Redfern (Sydney). The venue included a tiled indoor area that opened onto a rooftop garden, giving dogs and people space to step

outside for sonic or social relief. The event was professionally filmed by videographer Steve Wilson-Alexander. Verity, Chloe, and Alon agreed to present segments with their respective dogs, while I facilitated an interactive improvisation activity similar to the *Concert for Dogs* performances I had previously presented in Canberra, Bondi, and Tasmania.

Speakers for the microphones and electroacoustic sounds were kept at medium-low volume, no louder than typical urban environments. As facilitator and MC, I attempted to create a relaxed atmosphere—unlike a formal concert—to accommodate unpredictable canine responses such as distress, aggression, or disinterest. In reminder emails, attendees were asked to monitor their dogs and take responsibility for their individual needs.

To reiterate the structural welfare measures and logistics of *Dog Choir* outlined in Chapter 3: Methodology, the participants comprised:

- Performers: Three dog-human duos—Verity and Arca, Chloe and Tilly (plus me joining in), and Alon and Razzly.
- Audience: 40 people and 13 dogs, in addition to the three invited featured dogs.

Promotion and registration were conducted via:

- A poster circulated through Instagram, Facebook, and personal networks;
- A Humanitix online registration page, which collected attendee details and information on any special needs of dogs;
- Direct outreach to friends and colleagues with dogs.

Preparation and safety measures included:

- Pre-event checks ensuring dogs were well-socialised, non-aggressive, and unlikely to be distressed by sound;
- Reminder emails prepared attendees for the chaotic, experimental nature of the event, including potentially loud sounds, the presence of other dogs, and large crowds;
- Clear instructions for attendees to monitor and take responsibility for their dogs.

The sequence of activities and approximate durations of *Dog Choir* are:

- An informal pre-concert social gathering (15 minutes);
- An opening address (5 minutes);
- Performances by the three dog-human pairs (5-10 minutes each including pre-performance informal chat);
- A participatory electroacoustic improvisation work (dubbed "Interspecies Chorus Howl"), inspired by earlier *Concert for Dogs* events, where attendees and their dogs were encouraged to make sound together (15 minutes).

To illustrate this structure and explicitly demonstrate these components, I include a short, edited video of the event (Video 1. *Dog Choir* edited highlights 21 July 2024 videography by Steve Wilson-Alexander).[7]

7.3.2 Informal social gathering pre-concert

The event opened with an informal gathering of people and dogs on the rooftop terrace of 107 Projects in the inner-city Sydney suburb of Redfern. I scheduled the start for dusk (4:00pm in late Australian winter), aligning with canids' crepuscular tendencies, when they are most active and alert. To accommodate the logistical challenges of transporting dogs through an urban environment, the start time was kept flexible, allowing for staggered arrivals. This gave the dogs the opportunity to familiarize themselves with and adjust to the space, while allowing attendees—both canine and human—to get acquainted with one another ahead of the formal "concert." People were encouraged to let their dogs guide them around the venue so they could become comfortable in the space (this process is pictured in Figures 92–94).

[7] Link to all audio tracks and this video can be found in front matter section titled "List of Referenced Audio Tracks and Video" on page xxv



Figure 92. Two dogs becoming acquainted during the informal social gathering preceding the formal components of *Dog Choir* (photograph by Steve Wilson-Alexander).



Figure 93. Razzly meeting one of the other dogs attending *Dog Choir* before Alon and Razzly's performance (photograph by Steve Wilson-Alexander).



Figure 94. People and dogs gathered on the outdoor terrace at 107 Projects Redfern preceding the formal components of *Dog Choir* (photograph by Steve Wilson-Alexander).

I conceived the event as a musical dog meetup—a pre-planned gathering, typically held in outdoor spaces such as parks, where dogs and humans can socialise (as was the original intended setting for the first iteration of the project in Canberra 2022). This casual opening phase of *Dog Choir* also allowed me, as facilitator, to meet and interact with the attending dogs and their carers, establishing a relaxed, participatory tone through a loose social introduction.

7.3.3 Opening address

Following the relaxed arrival of attendees, I guided everyone into the indoor space—still open onto the outdoor terrace—where they were seated with their dogs. In my opening address, I outlined the premise of my research and the structure of the event.

I introduced my research with the following explanation:

> My PhD research investigates canine musical curiosity—not necessarily aptitude, but curiosity. I play music with dogs because, in some cases, there is a canine willingness to musically collaborate. Today, I've gathered you—people and dogs—together to share some of the ideas I've been exploring. You'll see some dogs and people I've

worked with who, in my observation, have developed distinct co-created musical practices.

Early in my introduction, I was interrupted by a bark from one of the canine attendees. In response, I explained that canine vocal interruptions were "totally welcome." I emphasized that there was no right or wrong way for dogs (or people) to respond. I encouraged people not to think, "Your dog is being naughty by vocalising," and reassured them that "participation is encouraged." I also made it clear that, due to the "sensorially rich and intense" nature of the event, attendees were welcome to step out whenever necessary. Additionally, I stressed the experimental nature of the project: I was trying out an idea without a guaranteed outcome—some dogs (and people) might not respond positively, while others might enthusiastically engage. I explained that listening is an active form of musical participation, noting that a dog's engagement might not be expressed through vocalisation but through behavioural cues such as perked ears, tail wagging, gazing up at their person, or changes in posture. This introduction underscored my prioritisation of process over product, encouraging participants to individually attend to the needs of their dogs while inviting them to consider sound as a sandbox for interspecies play and to reflect on the simultaneous, sensory and social dimensions of shared musical experience.

7.3.4 Canine-human performance 1: Chloe, Tilly, and Me (documented from 0:15-0:39 in Video 1)

Including other dog-human duos allowed me to observe the practices I had studied throughout my fieldwork in new contexts, revealing how the distinctive elements of each manifested beyond private settings. As will be discussed, each performance by the human-dog ensembles retained characteristic components of their respective practices. This formal and behavioural consistency across contexts supports the notion of a "practice"—a repeatable, describable set of behaviours mutually developed over time—as is also evident in online accounts dedicated to individual dogs, such as Buddy Mercury (Buddy Mercury 2025).

I aimed to show that these practices were habitual and the product of long-term, intertwined social and musical processes. Before each performance, I held an informal conversation with each human participant, inviting them to share their dog's history and relationship with sound

and/or music. In line with the broader aims of my thesis, I sought to convey the individuality and behavioural nuances of each dog's entangled relationship with music and their human companion as well as the distinctive, habitual, deliberate, and mutualistic nature of each human-dog duo's practice. It was key that this information came directly from each dog's closest human companion—their most reliable advocate—following a model similar to the legal system, where carers advocate for disabled individuals who may be unable to express themselves verbally (as Nussbaum [2023] advocates for animals within the legal system).

Chloe, Tilly, and I were the first canine-human ensemble to perform. In my opening conversation with Chloe, she described to the audience Tilly's tendency as a "talker" and Chloe's interpretation of Tilly's short yowls and "woowoos" as an attempt to mimic conversation and express a desire to be included. For the performance, Chloe played the melodica while I played the clarinet. After an initial burst of her characteristic "woowoo" gestures (Fig. 95) lasting about a minute, Tilly became hesitant to vocalise as she had in our private sessions. Regardless of her vocal participation, Chloe and I continued to improvise in a gestural call-and-response pattern, exchanging singular staccato notes, long vibrato tones, and trills.



Figure 95. Tilly, Chloe, and I performing together as the first item in *Dog Choir* (photograph by Steve Wilson-Alexander).

As I had emphasized at the outset of *Dog Choir*, there was no correct or expected way for canine participants to behave. After Tilly's initial vocal contribution, she lay down at our feet with her head on the ground. Despite our attempts to prompt further participation through exaggerated bodily gestures and eye contact—techniques that had proved effective during my fieldwork—after about a minute, Chloe and I took her silence as a sign that she was uninterested in vocalising at that moment.

Our clarinet-melodica duo came to an agreed-upon cadence, and the audience applauded. Chloe and I gave Tilly a congratulatory pat. As the applause faded and Chloe moved offstage, Tilly stood up and gave us a resounding "hoowoowoo" while wagging her tail. Tilly and Chloe's performance encapsulated both the unpredictable beauty and inherent challenges of interspecies musical collaboration. While Tilly initially contributed her signature "woowoos," her subsequent silence during the performance highlighted the importance of honouring a dog's participatory agency. Despite our attempts to re-engage her through musical and gestural cues, Tilly ultimately chose to observe rather than vocalise[8]—an outcome that, while perhaps unexpected, aligned with the project's ethos of non-coercive, open-ended engagement. Yet, in a moment of almost comedic timing, Tilly's post-performance howl seemed to reaffirm her awareness of the event, playfully subverting expectations. This instance served as a reminder that while musical collaboration with dogs cannot be forced, their participation—when it does emerge—carries its own unique and meaningful timing.

7.3.5 Canine-human performance 2: Arca and Verity (documented from 0:39-1:56 in Video 1)

In my pre-performance conversation with Verity, she recounted the story of discovering Arca's enthusiasm for vocalising in response to her downstairs neighbour's harmonica playing with his Rhodesian ridgeback (as detailed in Chapter 4). She described his lively response to bagpipes (both live and pre-recorded) and to human howls, which she expressed as "really cathartic." To highlight the extra-musical elements of their practice, I invited Verity to discuss the ways she physically directs Arca (as codified in Chapter 4). Verity explained the physical mannerisms she has observed in Arca and how she mirrors them to

[8] One arts worker friend humorously suggested that perhaps Tilly didn't vocalise because she wasn't being paid the correct Live Performance Award rate.

guide his singing, such as her head-thrown-back gesture, which prompts him to vocalise with greater intensity. I considered it important that audiences understood both the history of Arca's vocal habits and the ways Verity has consciously considered and refined their practice together. Arca and Verity performed a version of *Amazing Grace* on bagpipes, a work I had seen Arca perform several times by this point.

Before the recording began, Arca sat at Verity's feet, seemingly relaxed and looking around at the audience. The moment the recording started, his demeanour changed instantly marking his recognition of the particular track (Bagpipe Master 2016): his tail began wagging, he centred his gaze on Verity, tilted his head, started vocalising, and stood up. Once standing, Arca's howls intensified; he arced his head back and lifted his front feet in a manner co-occurring with certain louder howling gestures (as detailed in Chapter 4). Verity used her unique hand signals and her own voice to guide Arca through the recording (Fig. 96). Whenever Arca vocalised, his gaze was locked onto Verity, and during the periods when he did not vocalise, he looked around the room. This corresponds with Verity's description of his tendency to "check in" to ensure everyone is participating—looking at or walking up to each person in a room to involve them and seek acknowledgment. At the risk of anthropomorphising, Arca's gaze towards audience members appeared expectant; he directed it toward different people while his tail wagged insistently.



Figure 96. Verity and Arca performing their rendition of *Amazing Grace* bagpipes (Bagpipe Master 2016) together as the second item in *Dog Choir* (photograph by Steve Wilson-Alexander).

At about the three-minute mark, Verity, sensing Arca losing interest, signalled the end of the performance by clapping, prompting the audience to applaud in response. During this applause, Arca displayed his play bow. As discussed earlier, ethologists have rarely observed this behaviour outside the context of play (Bekoff 2014). Even in the unfamiliar environment of *Dog Choir*, Arca appeared to perceive his vocalising with Verity through the lens of play.

Verity and Arca's performance further illustrated the nuanced dynamics of interspecies musical engagement, where a dog's agency and comfort dictate the flow of collaboration. While Arca displayed less vocal reactivity than in our private sessions, he clearly remembered the *Amazing Grace* recording, as shown by his immediate change in behaviour when it commenced. His vocal responses aligned with the types of vocal gestures observed during my fieldwork with him, and the performance retained characteristic structural elements of their practice (vocal gestures, hand signals, play bow). Despite Verity's physical prompts, the performance was ultimately led by Arca, with Verity staying attuned to his vocal responses and honouring his non-vocal cue to conclude. Much like Tilly's unexpected post-performance howl, Arca's sporadic vocalisations underscored the central argument that canine musical expression cannot be predetermined or coerced, but instead emerges contingently within the relational dynamics and varied contexts of interspecies collaboration.

7.3.6 Canine-human performance 3: Alon and Razzly (documented from 1:57-3:30 in Video 1)

Tethered to Razzly at the waist, Alon introduced their performance by contextualizing his background as an instrument designer and explaining how his interest in Raz's musical capacities emerged during the COVID-19 lockdowns. He framed their practice not as a traditional performance but as an extension of Raz's natural modes of play, emphasizing that the work was about "celebrating the way he dances and moves more than his musical ability" and sonifying his "obsession with the rope and the ball." Alon further remarked, "I do not see the work as a performance, but an excuse to play with my dog in front of other people," positioning the piece within a framework of interspecies improvisation and play rather than conventional musical presentation.

In demonstrating the function of the AirSticks ball, Alon highlighted both the fragility of the instrument and the process through which Raz had learned to gently interact with it. The performance commenced with Alon untethering Raz and initiating a teasing form of play—

moving the ball in circular gestures around his head, momentarily allowing Raz to grasp it before swiftly retracting it (Fig. 97). This physical interplay generated an electroacoustic soundscape dominated by plucked, electric guitar-like tones, whose pitch, density, and volume were dynamically modulated through Alon's gestural control. The spatial manipulation of the ball dictated the sonic output: vertical motion influenced parameters of a generative sequencer/sampler, effectively entwining movement and sound as co-responsive elements.

Following an initial phase of playful provocation, Alon ceded control of the ball, allowing Raz to carry it freely throughout the performance space. Raz's first instinct was to approach Alon's partner and their newborn child—positioned at the back of the room—suggesting a social logic that transcended mere object play. At this juncture, the sonic texture shifted, introducing layers of triangle samples interwoven with prerecorded dog howls and barks. The inclusion of these canine vocalisations demonstrated a deliberate engagement with Raz's perceptual world, embedding auditory stimuli that might hold significance within a canine cognitive and affective framework. However, when Raz received no engagement from Alon's partner, he returned to Alon, at which point their play evolved into a structured game of fetch (Fig. 98). This transition was marked by another sonic shift: the introduction of percussive drum kit samples, reinforcing the rhythmic propulsion of the emergent exchange.



Figure 97. Alon "teasing" Razzly with the AirSticks ball at the start of their item at *Dog Choir* (photograph by Steve Wilson-Alexander).



Figure 98. Alon and Razzly playing a version of fetch with the AirSticks ball during the middle section of their item at *Dog Choir* (photograph by Steve Wilson-Alexander).

As the fetch game progressed, Alon extended the interactive potential of the work by passing the ball to an audience member seated in the front row. Raz, having previously encountered this individual, responded by returning the ball to them rather than to Alon. This act initiated an expansion of the performance's participatory field, with additional audience members becoming involved in the game. With this widening of participation, the sonic palette shifted again, incorporating cartoon-like sound effects that infused the moment with a playful, almost slapstick aesthetic. The act of sharing the ball among human participants further blurred the boundary between performance and spontaneous social play, reinforcing the open-ended, co-creative ethos of their practice.

Overall, the electroacoustic architecture of the performance moved fluidly through a series of distinct sonic environments: beginning with plucked electric guitar timbres, progressing through percussive triangle tones and canine vocalisations, then into drum-kit textures, cartoonish sonorities, and melodic pentatonic bell tones. This progression mirrored the evolving nature of the human-canine interaction while reflecting a compositional logic attentive to both human musical sensibilities and canine perceptual faculties. Samples with clear attack transients (e.g., plucked strings and percussive strikes) likely heightened the intensity during moments where Razzly ball-play increased, producing denser textures. Meanwhile, the inclusion of dog-specific vocalisations and familiar environmental sounds

positioned the work within an interspecies perceptual space, with sonic material curated to engage both human and non-human audiences.

As the game of fetch reached its conclusion, Alon gradually slowed the pace and intensity of the exchange, ultimately allowing the ball to come to rest. This deceleration corresponded with a tapering of sonic activity, and the performance thus concluded not with a predetermined compositional endpoint but with an organic dissolution of movement and play—a final affirmation of the piece's commitment to spontaneity, embodied interaction, and interspecies agency.

Alon and Raz's performance at *Dog Choir* exemplified the fluid interplay between structured musical experimentation and spontaneous interspecies play. By foregrounding Raz's natural instincts and movements as a core element of the sound production, Alon blurs the boundaries between performance, improvisation, and play. The evolving sonic textures—ranging from intricate guitar-like plucks to percussive drum kit samples and whimsical cartoon effects—demonstrated the dynamic radically accessible capabilities of the AirSticks while reinforcing the personal and relational dimensions of the work.

What began as an intimate exchange between Alon and Raz expanded into a communal experience as audience members were gradually drawn into the unfolding game of fetch. This shift transformed the audience from passive spectators to active participants, emphasizing the accessibility and unpredictability of the work, and foreshadowing the explicitly participatory role of the next section of *Dog Choir*. The moment when Raz instinctively carried the ball to Alon's partner and newborn underscored the emotional depth of the performance, revealing the social and relational dimensions embedded within the sonic framework.

By the time Alon brought the performance to a close—allowing the ball, and consequently the sound, to come to rest—the room had been transformed into a space of shared attention, curiosity, and play. The success of the segment lay in its capacity to foster genuine interaction, not only between human and canine performers but also between performers and audience, as well as modelling the use of the AirSticks as ADMIs.

7.3.7 "Interspecies Chorus Howl": a guided electroacoustic improvisation work
(documented from 3:30-6:34 in Video 1)

After Razzly and Alon left the stage, I introduced the final item of *Dog Choir*—the participatory "Interspecies Chorus Howl"—by reading the following statement:

> Once upon a time, people would say children should be seen and not heard. In the past, subjugated peoples—children, women, people who were not white—were encouraged and often forced to be quiet and not use their voices. Domesticated dogs, having been integrated into modern life, where noise is taboo, have been told not to speak. So much so, devocalisation or debarking procedures are often pursued, where animals have tissue from their vocal cords surgically removed to quieten or altogether remove their ability to vocalise.
>
> In the wild, wolves, dingos, and wild dogs howl. Animal behaviourists do not have a definitive reason why they do it, but they have suggested it serves a social function: it aids in pack bonding and establishes and communicates hierarchies within the pack. Dingos have been shown to have individually distinct howls that communicate to other dingos who they are and where they stand in the pack. These chorus howls are improvisational, collaborative, and—dare I say—beautiful.
>
> Despite most canine vocalisations not adhering to traditionally Eurocentrically imposed markers of musicality, like the presence of regular pulse or melody, the dog-human musical collaborations I've encountered appear to adhere to a more fundamental marker of musical practice in their social, interpersonal contexts. People and dogs are enthusiastically making sound together. Today, I want to try to facilitate an interspecies chorus howl! Human and canine, I want you to sing into the ether. Express the universal pleasure and pain of existence.
>
> I want to encourage our dogs to use their voices. In our modern world, you are your dogs' pack, and maybe you can bond with them through sound and music.

I conceived this statement as both a project manifesto and a call to action: to take seriously the auditory and vocal capacities of dogs, and to recognise these companions as active listeners and creative agents. By articulating the conceptual underpinning of the project in accessible language, I hoped participants would approach the ensuing participatory piece with openness and curiosity. Following this introduction, I outlined the structure of the guided improvisation, in which human participants were given instruments, and I would "conduct" them through an interspecies rendering of a chorus howl. Drawing on my years of experience conducting primary school bands, I approached this moment much like a band rehearsal, guiding people and their dogs through a group improvisation with simple instructions, a sense of humour, and a relaxed demeanour. Instruments distributed to audience members included slide whistles, plastic harmonicas, party blowers, wooden train whistles, a miniature toy piano, a whirly tube, and brass goblets. I then taught the audience a set of basic conducting gestures: begin, cut off, get louder, get softer, and faster or denser texture.

After attendees had chosen their instruments, I instructed them to let their dogs smell and investigate the object they had chosen. Informed by my prior one-on-one experiences with dogs—where they were often startled by the unfamiliarity of the clarinet—this action went some way toward demonstrating that the object was non-threatening. Similarly, I explained that synchronising physical gestures with sound-making would help show dogs the connection between object and sound. For example, I instructed participants to lift their shoulders and exaggerate the motion of inhaling and exhaling to explicitly model when sounds were beginning and ending (see Fig. 99, which shows a participant following these instructions with Italian greyhound Dexter).



Figure 99. A human participant exaggeratedly physicalising the party blower sound to demonstrate to the Italian greyhound, Dexter, the connection between the object and the sound, and then allowing Dexter to smell the object to reassure him that it posed no threat (screenshot from video by Steve Wilson-Alexander).

I reminded everyone that each dog is a unique individual who would each respond differently to sonic stimuli. I encouraged participants to be responsive to their dogs: if a dog showed signs of fear or distress, they should back off and allow the dog to approach on their own terms. I suggested that participants physically and verbally reassure their dogs, pay attention to their needs, and allow the dogs to retain agency throughout the dialogue. This approach reflected my broader commitment to non-coercive collaboration, ensuring that dogs' participation remained voluntary and grounded in their own comfort. I explained that the goal of the work was as much social as it was musical, where sound could serve as a shared space for mutual sensory play and creative expression.

In previous versions of the work, I had used a MIDI keyboard programmed with "doggy" sound effects, which I triggered live. These included a mix of pre-recorded dog and canid vocalisations, other animal sounds (cat meows, duck quacks), and inanimate sound effects (emergency sirens, doorbells, squeaky toys, wind chimes). For this iteration, however, I composed a fixed electroacoustic backing track to accompany and prompt responses from the participants. Using a precomposed track not only allowed me to focus on my role as conductor—leading participants through the piece with hand gestures, verbal instructions, and clarinet playing—but also gave me the ability to design logical dramaturgy including sonic environments that balanced canine perceptual sensitivities with audience accessibility.

I structured the work into a series of themed soundscapes, each aligned with the prompts provided to the audience. This framework is represented in the visual score I created (Fig. 100). In a way reminiscent of Alon's piece with Razzly, the audio track progressed through clusters of thematically linked sonic material, balancing predictability with moments of surprise. This shift not only redefined my role but also shaped the participants' experience, creating a more cohesive framework that many later described as playful, immersive, and surprisingly moving. Building directly on my earlier experiments in Canberra and Bondi, where I first trialled the use of interactive instruments and participant prompts, this iteration refined those approaches, making *Dog Choir* more structured and immersive while preserving its improvisatory ethos.

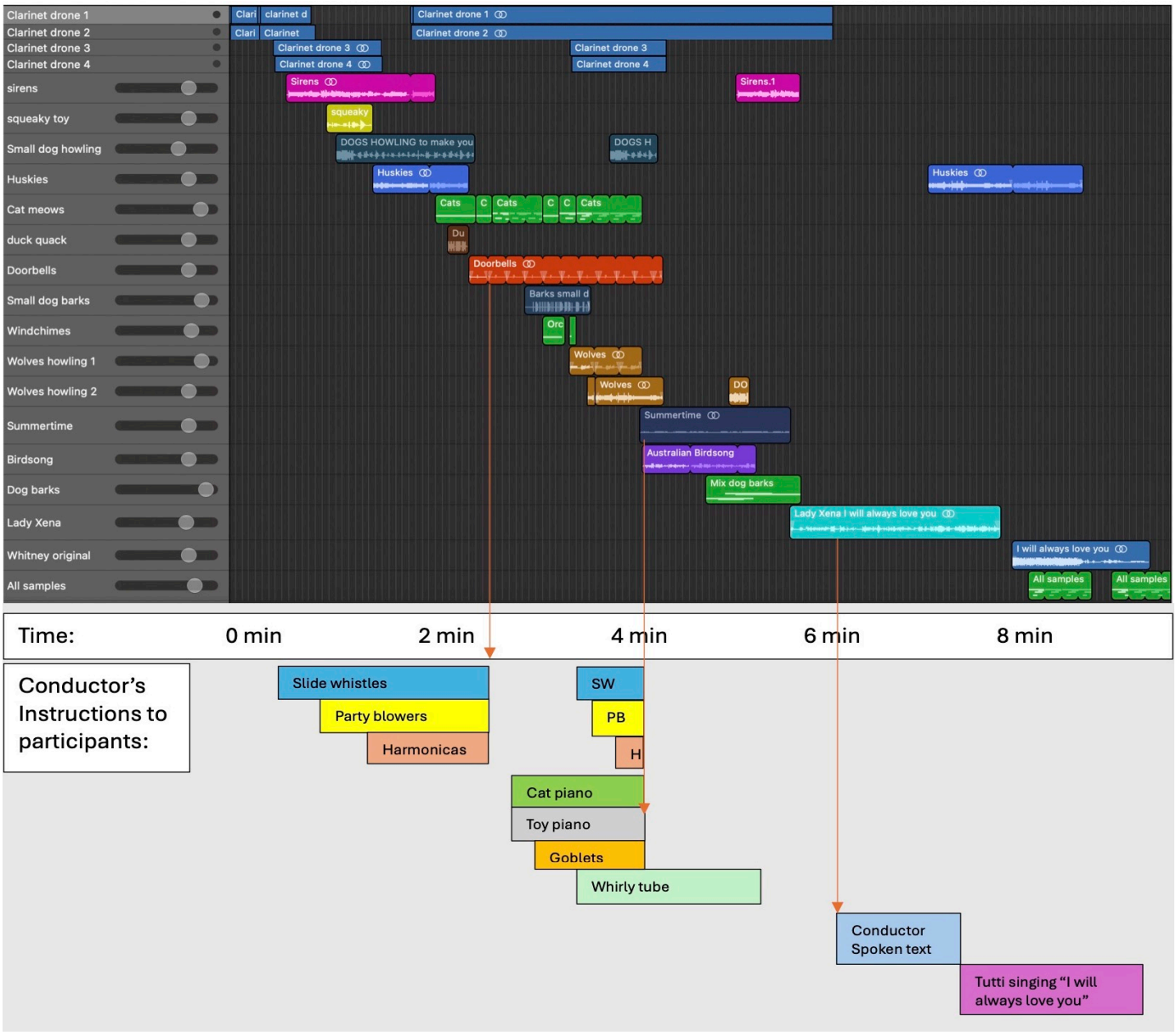


Figure 100. Visual score showing the structure of the "Interspecies Chorus Howl" section of *Dog Choir*, including labelled audio samples, alongside musical and instrumental instructions given by me as conductor.

The sounds were selected both to elicit responses from dogs—each having been observed to provoke canine reactions—and to act as human semiotic markers of dog-centred soundscapes. My aim was for human participants to step inside a dog's auditory worldview. Juxtaposing ambulance sirens with wolf chorus howls, for instance, makes their structural similarities apparent. I was also mindful that many people would have encountered viral videos of dogs vocalising alongside human stimuli, and by including sounds from these well-known clips I intended to reference them directly. A widely shared video of a golden retriever nudging wind chimes with her muzzle while howling (Caters Clips 2020) and a TikTok of a border collie transfixed by wind chimes (Lifewithkoira 2020) prompted me to include a wind-chimes sample. Likewise, the prevalence of popular clips showing dogs howling to emergency sirens (Newsflare 2024; GSKVideos 2014; Lewisloulouchannel 2011; Viralhog 2021) informed my choice to incorporate siren samples.

To conclude the guided improvisation, I incorporated an audio excerpt from *Belgium's Got Talent* (VTM 2015), in which Lady Xena—a white dog resembling a great Dane—produces consistently pitched, high-frequency tones in response to Whitney Houston's *I Will Always Love You* (Houston 1992) (Fig. 101). Unlike the typically noisy, spectrally diffuse howls of many dogs, Lady Xena's vocalisations are monophonic and harmonically resonant, closely mirroring Houston's melismatic singing (akin to Arca's mostly tonal vocal vernacular). Her vocal range aligns strikingly with Houston's, and during sustained high notes their tones became nearly indistinguishable. Remarkably, Lady Xena often matched Houston's long notes with impressive stability, at times holding a singular pitch to match Houston's held notes (spectrograph seen in Fig. 102). By placing Lady Xena's audio alongside other sonic allusions to famous "musical dog" examples, I sought to highlight both the ubiquity of dog-human musical encounters in social and mass media and their influence on how audiences perceive canine vocal expression. These viral examples demonstrate how popular culture amplifies the visibility of canine-human musicking while often framing it through humour, sentimentality, or anthropocentrism. This, in turn, underscores the need for qualitative practice-based and ethnographic approaches—such as interviews and fieldwork—that move beyond surface spectacle to account for the complexity of dogs' roles as collaborators and agents in musical exchange.



Figure 101. Lady Xena on *Belgium's Got Talent* (screenshot taken from VTM 2015: 0:11).

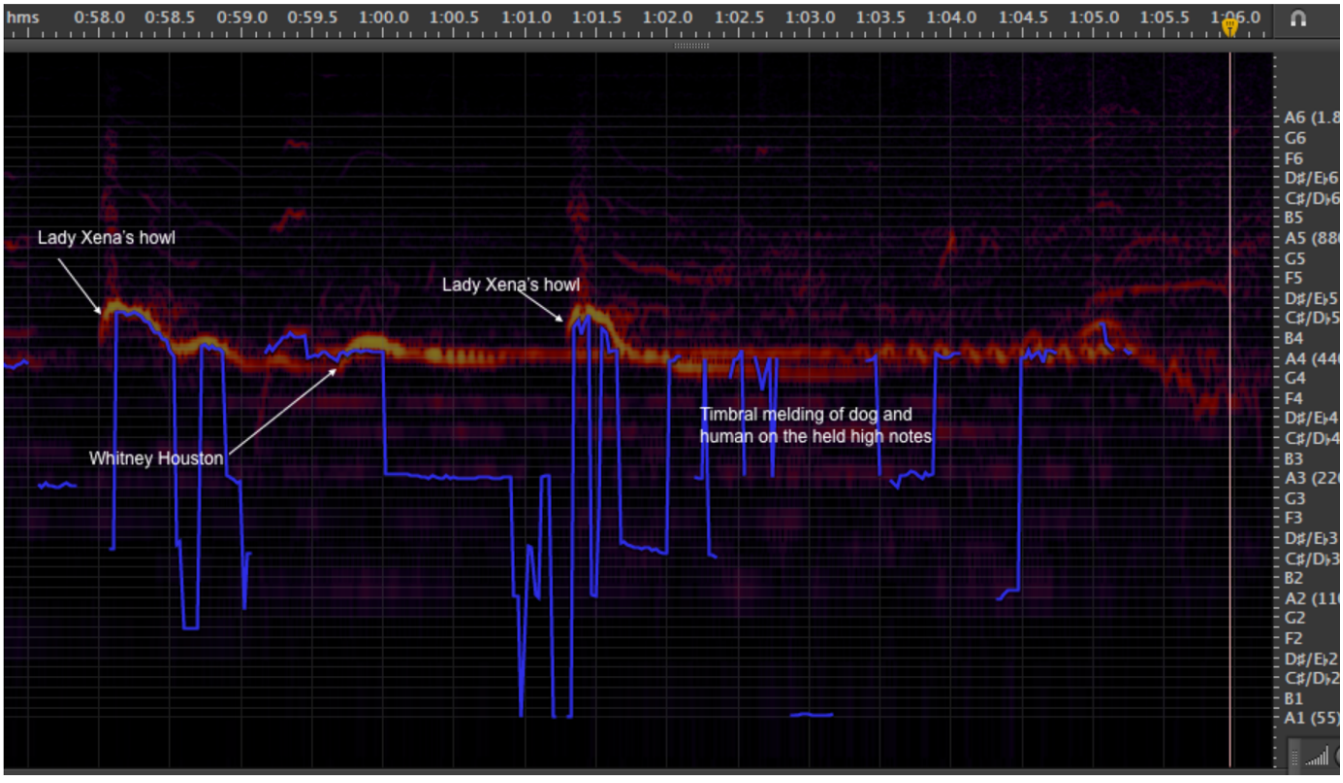


Figure 102. Spectrogram showing Lady Xena and Whitney Houston's vocal tones as spectrally resemblant. Audio from Lady Xena's audition on *Belgium's Got Talent* (VTM 2015; 0:58-1:06).

As this recording of Lady Xena began (about six minutes into the work), I explained the provenance of the audio sample and elaborated on the project's overarching intent:

> What you're hearing is Xena singing with Whitney Houston on Belgium's Got Talent. A dog singing is funny. I'm not going to deny that. There is an inherent absurdity in living with a dog. Laughter pervades our cohabitation. While there are attempts to make serious the bond between human and dog where they become participants and workers in the capitalist framework, from my experience, dogs bind us to the absurd and ground us within the ridiculous farce of modern living: a dog barking at a vacuum cleaner, a dog defecating on the lawn of multi-million-dollar harbourside mansion or perhaps a dog expressively vocalising alongside a recording of Whitney Houston. This endeavour, to seek out and create musical practices with dogs, carries with it this exact absurdity that is embedded in our entangled history with dogs.
>
> What I'm encouraging through this project is to think a little more deeply about what a dog is trying to express when they participate in music. Dogs are creative, playful, sensitive and astute listeners. I am not suggesting that all dogs are inherently musical, rather all dogs are curious, creative and social which appear to be prerequisites for any musical pursuits regardless of species. I truly believe that music can be a meaningful and ripe sandbox for interspecies play. Just as we walk with, sleep with and play with our dogs, maybe we could sing with our dogs.

Reading this statement aloud functioned as a performative gesture in its own right, guiding the audience to interpret Lady Xena's duet with Whitney Houston not just as a novelty but as an entry point into thinking about absurdity, intimacy, and interspecies expression. In this way, the text blurred the line between framing commentary and musical event, situating speech as an extension of the performance's sonic, aesthetic, and conceptual fabric.

Following this text, I began singing along (in my most warbling, howl-like tone) with Whitney and Lady Xena, while encouraging the audience to join in. Through my inclusion of Dolly Parton's song (re-recorded by Whitney Houston), I aimed to draw attention to the song's melancholy message as it relates to our relationships with dogs. Dolly Parton wrote *I Will Always Love You* in 1973 (Parton 1974) as a farewell to her longtime musical and business partner, Porter Wagoner, when she left his television show to pursue a solo career.

The song, a heartfelt tribute to their partnership, became a country hit in 1974 and later gained worldwide fame through Houston's 1992 rendition for *The Bodyguard* soundtrack—the version used with Lady Xena on *Belgium's Got Talent*. Given the short time we share with our canine companions relative to our own lifespans, *I will always love you* seemed a fitting sentiment, one that resonates deeply with those of us who have lived with or loved a dog. This phrase, which I prompted participants to sing in a tumultuous chorus, encapsulated the project's deliberate emphasis on interpersonal (and inter-animal) relationships as a core component of musicality. Furthermore, the song's wide familiarity enabled most of the audience to sing along, while its soaring, melismatic chorus and "aye-ye-aye" refrains lent themselves naturally to howling, as vividly demonstrated in Lady Xena's recording. In this moment of technologically aided interspecies chorus howling, the vocalisations and sonic interventions of dogs and people merged. This human-canine-digital mélange occurred at the nexus of mass media, technology, and the co-evolution of humans and dogs.

By framing the performance with a manifesto underscoring the historical silencing of both marginalized human voices and non-human ones, the work elevated canine vocal expression beyond mere novelty, while still allowing the audience to recognize and register the absurdity and joy inherent in the action of singing Whitney Houston with their dog. Instead, it positioned dogs' howls, barks, and reactions as meaningful acts of participation—both musically and socially.

The guided improvisation, facilitated by audience members wielding an eclectic array of instruments and proclivities, created a dynamic and responsive soundscape where human and canine voices intertwined. Careful attention to each dog's agency and comfort transformed the event from a simple exercise in participation into a deeply relational experience. The integration of viral media examples, such as Lady Xena's duet with Whitney Houston, highlighted the rich history of dog-human musical entanglements, situating the performance within a broader cultural framework.

As the final chorus of human and canine voices swelled alongside Whitney Houston's soaring vocals (Fig. 103), *Dog Choir* reached its emotional and conceptual climax. The absurdity, playfulness, and poignancy of the human-dog bond became sonically palpable,

reinforcing the project's assertion that musicality is not defined by human-centric constructs but by a fundamental drive to connect through sound.



Figure 103. The attendees of *Dog Choir* engaged in a passionate interspecies chorus of Whitney Houston's cover of *I Will Always Love You* (Houston 1992) (photograph by Steve Wilson-Alexander).

At the conclusion of the "Interspecies Chorus Howl," attendees lingered to socialise, and—just as the audience had arrived informally and in a staggered fashion—the event gradually drew to a close.

7.4 Audience Reception to *Dog Choir*

7.4.1 Canine responses: varying forms of participation

As with the shelter dogs I encountered in the first stage of my fieldwork (Chapter 4.4), responses from dogs in attendance at *Dog Choir* were highly variable. While a minority of dogs showed signs of distress at certain moments during the event, feedback from participants indicated that, overall, the event was engaging both socially and sensorially. Likewise, video documentation captured canine behaviours that demonstrated active participation, expressed through attentive listening and vocalisation. These responses highlight *Dog Choir's* focus on the entangled relationship between interspecies social spaces

and auditory/musical stimulation. Feedback was collected in a voluntary post-event online survey where responses were anonymised.

In the feedback received following the event, one participant described how their dog:

> …was extremely alert and his ears were moving a lot he was interested in the performances when he could see them. In general, he didn't know where the music was coming from. Very little vocalisation but that is not unusual. I don't think he was in distress, but interested in what was going on as this was a new experience.

Another participant described a similar response from their dog, with no signs of vocal engagement: "My dog didn't vocalise, but I could tell from her expressions and behaviour that she was very interested and curious about what was going on, especially when we played the harmonica to her." Attendees reporting on the emotional state of their dogs during the event used descriptors such as "alert," "excited," "playful," "stimulated," and "curious," while more negative terms—often appearing in the same sentence as the positive ones—included "confused" and "concerned." Likewise, canine behaviours observable in the video documentation were equally mixed. Attendees reported behaviours such as "ears perked up," "head tilted to the side," and "wagging tail," as well as "pacing," "trembling," and "ears back" (some of these alert, curious behaviours are visible in Sadie [Fig. 104] and Dexter [Fig. 105]). Other reported more neutral behaviours, including "lying down" and "sleeping."



Figure 104. Sadie, a curious but mostly non-vocal dachshund attendee, perking her ears up in response to activities at *Dog Choir* (photograph by Steve Wilson-Alexander).



Figure 105. Dexter looking attentively towards Raz playing with his AirSticks ball at *Dog Choir* (photograph by Steve Wilson-Alexander).

Many of the dogs in attendance seemed less responsive to the auditory stimuli presented and more excited by the social element of the event. One participant described their dog's emotional state as "…excited…because it was a large group of new dogs." As this thesis continually asserts, a person or dog's positive response to the purely social component of an event involving music does not exclude them as participants in the wider process of musicking; music also functions in social contexts.

Mango, a jack russell terrier puppy who attended *Dog Choir* (Fig. 106), was perhaps the most persistently vocal throughout the event, interjecting the proceedings with high-frequency yaps and barks. Having spent time with Mango in the weeks leading up to *Dog Choir* (she was adopted by a close friend, and I had looked after her for a few days), I recognized these yaps as characteristic of anxious, attention-seeking behaviour—often observed when I was not directly engaging with her and instead was busy with other tasks such as working or sleeping. As is typical of many puppies, Mango was visibly restless and unwilling to sit still. Given that Mango's humans were paying less individual attention to her and more to the proceedings of the event, these yaps can be understood less as a response to the sonic stimuli of *Dog Choir* and more as a continuation of the same attention-seeking behaviour. At certain points during the event, Ella—her human companion—picked up on Mango's restlessness and guided her to the terrace, a quiet area reserved for moments like these. This

accommodation underscored the project's ethos of non-coercive participation, affirming that interspecies collaboration must allow dogs, like humans, to step away when needed.



Figure 106. Mango appearing restless at the feet of attendants at *Dog Choir* (photograph by Steve Wilson-Alexander).

Other dogs seemed totally apathetic to the auditory stimuli of the concert and were content in the arms of their people. Monty, an elderly Papillon, was observed sleeping in the lap of his person, occasionally lifting his head to investigate the proceedings (Fig. 107). When dogs displayed signs of distress, people could be observed soothing their dogs through physical touch and verbal reassurance (Sadie in Figure 108 is being physically soothed by her carer). As I emphasised in the opening address and the instructions for the guided improvisation, throughout *Dog Choir* human carers played a crucial role in regulating canine behaviour, paying attention and catering to the individual responses of their dogs.



Figure 107. Sleepy Monty raising his head while resting on his person's lap at *Dog Choir* (photograph by Steve Wilson-Alexander).



Figure 108. Sadie appearing overwhelmed and anxious during one of the more chaotic parts of the "Interspecies Chorus Howl" while being physically soothed by her human (photograph by Steve Wilson-Alexander).

Many of the "excited" responses from dogs could be interpreted as reactions to the exuberant emotions of the human participants. Various scholars and animal behaviourists have noted dogs' capacities and tendencies to both sense and "catch" the emotions of their human companions (Albuquerque and Resende 2023; Colino 2021). Despite some reported negative responses at some points during the event, consistent observations of dogs mirroring the audience's delight, laughter, and excitement indicate that the event had a positive, enriching effect on them, despite that effect not necessarily arising from the auditory stimulus itself.

In sum, the responses of dogs at *Dog Choir* highlight the complex and inherently entangled nature of interspecies social and musical experiences. While some dogs appeared highly engaged with the musical elements—either through active listening or vocal participation—others were more invested in the social aspect of the event, responding to the presence and emotions of their human companions and fellow dogs. Just as in my observations of shelter dogs, Arca, and Tilly in earlier fieldwork, canine reactions were highly individualized, shaped by prior experiences, temperament, and environmental factors.

Importantly, the role of human companions in interpreting, soothing, and responding to their dogs' sometimes more negative reactions underscores the co-regulated nature of these experiences. Whether through curiosity, excitement, confusion, or even apathy, the varied canine responses reflect a broader reality: music and sound exist within dynamic social contexts, and participation in musicking extends beyond direct vocalisation or attentive listening.

7.4.2 Human responses: strange, affective politics of laughter and perceptions of "cuteness"

As intended, people responded to *Dog Choir* with consistent and often uninhibited laughter. My ethos as an artist is to take silly things seriously: to embrace the absurd and the playful as legitimate—even profound—sites of inquiry. By foregrounding humour and granting audiences permission to enjoy the culturally familiar trope of the "singing dog," I sought to create an accessible space for those uninitiated in academic discourse to encounter the deeper questions my research poses. Despite its grounding in zoömusicological and interspecies ethical scholarship, *Dog Choir* was never designed exclusively for the academy. It was staged

as a porous, formally experimental event, inviting dogs, their carers, dog lovers, and art audiences alike to witness musical collaboration between species.

And yet, laughter is never neutral. While it can be an expression of joy, surprise, and connection, it is also historically entangled with ridicule and power. The cultural legacy of laughing at animals (and at those seen as "other") is burdened by histories of exclusion and mockery—from twentieth-century minstrel caricatures such as Jonathan Rice's "Jim Crow" to today's viral pet videos that commodify non-human expressivity for cheap amusement.

Within this lineage, the trope of the "cute" animal often becomes a site where affective responses are laced with asymmetries of power. Sianne Ngai's theorisation of cute as an aesthetic category is especially useful in unpacking these dynamics. She argues that "there is no judgment or experience of an object as cute that does not call up one's sense of power over it as something less powerful" (Ngai 2012: 11). In the context of *Dog Choir*, moments of audience laughter and delight were often entangled with the perception of dogs as charmingly untrained, naïve, or amusingly anthropomorphic. Cuteness here becomes a double-edged aesthetic—on the one hand enabling affective connection and disarming receptivity, while on the other reaffirming hierarchies between observer and observed, speaker and spoken-for. Importantly, as Ngai observes, *cute* has often been pushed to the margins of aesthetic theory, dismissed as trivial or unserious; in *Dog Choir*, however, cuteness becomes a generative tool, reclaiming the silly as a site of depth, wonder, and critical inquiry.

This tension resonates with Justyna Włodarczyk's recent work on "critical cuteness" in the context of representations of interspecies friendships, in which she argues that representations of interspecies intimacy can either reinforce sentimentalised hierarchies or, alternatively, destabilise them by foregrounding reciprocity, vulnerability, and shared agency (Włodarczyk 2024). Moving beyond what she terms "animal odd couples," Włodarczyk utilises Haraway's notion of "oddkin" (Haraway 2016) to describe affective bonds that resist novelty framing and instead insist on sustained, relational co-presence across species boundaries.

In *Dog Choir*, my aim was to resist the events being flattened into just a cute spectacle. While I did not shy away from its inherent strangeness—the sight and sound of dogs and humans performing music together is indeed unusual—I also sought to create a space where

audiences could sit simultaneously with laughter, wonder, curiosity, and ethical dissonance. This returns us to Nussbaum's notion that "we have an obligation to develop our capacities for wonder and awe at the lives of animals" (Nussbaum 2022, 63), which underpinned the event. Wonder is not merely an aesthetic response but, in Nussbaum's formulation, a foundation for ethical engagement. By inviting audiences to witness dogs not as mute companions or comic relief, but as improvisers and participants in sonic dialogue, *Dog Choir* repositions the "cute animal" as a collaborator rather than a prop.

People often laugh at what is strange, and in *Dog Choir*, I did not deny that strangeness. Instead, the project leaned into it, allowing absurdity to open up questions of multispecies play, aesthetic expectation, and shared joy and presence. Interestingly, responses from those without dogs in attendance frequently revealed a deeper layer of contemplation: while laughter marked the surface of their experience, many described a lingering sense of awe or surprise at the animals' apparent intentionality and responsiveness. In the post-concert survey, one attendee reported their wish to explore musical interventions with their dogs at home, writing: "I thought it was unique, fun, engaging and wonderful to see how people are involving their dogs in their music making. It makes me want to try to do the same." Others reported the potential value of exploring music with their dogs in less sensorially rich environments, with one audience member noting, "If you do private sessions, I think my dog would definitely be more attentive." Another attendee commented on the value of being "in a formal space where the dog had no rules," reflecting my aim of opening up spaces for dogs to display their agency in creative ways that include listening, vocalising, and socialising. For these audience members, the event catalysed an encounter with non-human subjectivity that was delightful, unsettling, and generative, prompting further musical experimentation.

I attempted to frame the encounters at *Dog Choir* through the lens of play, and peoples' responses seem to evidence the success of this framing. In encouraging audiences to view canine-human music beyond trivialism; my aim was to situate the phenomenon as a form of play that is deeply interactional and social, both within and across species. Bateson highlights the connection between playfulness and creativity, noting how environments that foster play support novel, exploratory behaviour (Bateson 2015). In this light, *Dog Choir's* humour and absurdity align with a broader biosemiotic tradition that situates play as a vital mode of

communication and exploration (Sebeok 1981; Wheeler 2014), positioning it not as frivolous but as a powerful medium for relational creativity between humans and dogs.

In this way, humour, joy, and play operate as stealthy vectors for radical politics. *Dog Choir* smuggles complex questions about power, agency, and animal musicality into public performance, not through didactic argument but by cultivating an atmosphere in which levity and seriousness coexist. Through the aesthetics of the cute, the strange, and the joyful, the event offers a provocation: what might change if we began to take canine (and animal) musicality and creativity seriously?

7.5 *Dog Choir* Successes and Areas for Improvement

Dog Choir emerged from an evolving process of creative experimentation, shaped by private musical encounters with individual dogs such as Mia, Tilly, Arca, and the shelter dogs, as well as public-facing iterations of earlier events under the title *Concert for Dogs*. Rather than a fixed, repeatable performance, *Dog Choir* constitutes an unfolding practice, responsive to its participants, environments, and evolving interspecies dynamics. As such, the event was as much about testing the boundaries of human-dog musical collaboration as it was about presenting a polished outcome. Its generative messiness, embracing of joy, humour and profundity, and openness to difference are among its most significant successes.

The successes of the event included:

- Positive human-dog energy exchange: many dogs mirrored the joy, laughter, and excitement of the audience, suggesting the event fostered an enriching atmosphere beyond the music itself;
- Variety of engagement styles: some dogs actively listened or "sang along," while others enjoyed the social aspect—highlighting the event's ability to cater to different canine personalities;
- Supportive environment: the provision of a terrace for breaks allowed dogs like Mango to decompress, reducing stress and preventing overstimulation;
- Community bonding: strengthened connections between dog owners, their pets, and other attendees, creating a sense of shared experience;
- Novelty and enrichment: the unusual format offered mental stimulation for dogs and humans alike, breaking routine, encouraging curiosity, and cultivating wonder.

One of the project's core achievements was its ability to hold space for multiple forms of canine-human musical collaboration. The three dog-human duos involved each demonstrated distinct modes of engagement, underscoring the ethos that there is no singular or correct way to music with a dog. Each performance carried the imprint of its relational history while also showcasing a diversity of approaches to interspecies musicking, reflecting prominent trends found in existing media that document canine-human musical collaborations; these include technologically aided co-composition (Razzly and Alon's performance) and dogs vocalising with human stimuli in explicitly dialogic, responsive, and potentially mimetic ways (Tilly and Chloe, and Verity and Arca). In presenting these divergent approaches side-by-side, *Dog Choir* resisted prescriptive definitions of interspecies music-making and reflected broader patterns of pluralism evident in media representations of musical dogs.

The event also made deliberate reference to this wider media ecology, integrating clips of famous singing dogs within the guided improvisation section and framing the project as part of an ongoing cultural lineage. In so doing, I aimed to position *Dog Choir* not as an outlier but as an extension of a longstanding, if often unserious, cultural fascination with musical animals. However, *Dog Choir* recasts this fascination with intention and care, embedding it within a practice that foregrounds canine agency, playfulness, and unpredictability.

This unpredictability, in fact, is one of the event's strengths. Tilly's unwillingness to vocalise in performance—despite her responsiveness in private sessions—served as a reminder that dogs are not performers in the traditional human sense. They do not reproduce actions on command, nor should they be expected to. *Dog Choir* made room for this resistance, allowing the audience to witness the refusal as part of the work. Rather than interpreting such moments as failure, I frame them as acts of agency, an enactment of dogs' right not to perform and a disruption of anthropocentric assumptions about control and obedience.

The spatial design of the event contributed to this ethos of choice and care. By establishing a porous performance environment, dogs and humans had access to designated retreat areas when overstimulated. This adaptability is a key component of the project's ethical commitment to multispecies comfort and autonomy. That said, the sensory richness of the event, its amplified sound, crowd dynamics, and heightened energy proved challenging for some canine participants, particularly those with anxiety issues. Future iterations of *Dog*

Choir would benefit from further attention to spatial design, incorporating outdoor areas, quiet zones, and fluid boundaries between performance and audience spaces. Allowing dogs to move freely between these zones would better accommodate their needs and foster their sense of agency within the event.

Another key success of *Dog Choir* was its ability to evoke joy. The event was marked by moments of laughter, wonder, and affective connection, not just between humans and dogs but among audience members as well. This joy was not incidental but central to the project's politics. Like Alon's work with Razzly, my intention was to model music as a low-barrier form of play and interspecies sonic exploration, a non-expert, inclusive medium where the emphasis lies not on some sort of culturally defined skill or virtuosity, but on relationality and openness. By framing musical collaboration as something that can emerge through curiosity, responsiveness, and co-presence, *Dog Choir* enacted a quietly radical reimagining of who gets to participate in music-making, and on what terms.

In future, to further promote canine welfare, I suggest some areas for improvement:

- Managing canine anxiety: some dogs displayed signs of restlessness or attention-seeking behaviour; more structured quiet zones or staggered participation could help;
- Clearer cues for breaks: while the terrace was available, more visible prompts or scheduled intermissions could encourage owners to use it proactively;
- Inclusivity for different temperaments: activities or spaces tailored for shy, senior, or noise-sensitive dogs could make the event more accessible;
- Post-event decompression exercise: offering an additional exercise at the end that guides people in helping dogs wind down after the sensory intensity of the "Interspecies Chorus Howl" could extend the positive impact and reduce lingering stress.

Importantly, *Dog Choir* was not merely a site of artistic presentation but a valid and generative site of research in its own right. As a live, participatory experiment, the event provided rich data about the dynamics of human-dog musical interaction not accessible through private sessions alone. The event format—fluid, responsive, and audience-inclusive—upheld principles of iterative design, enabling feedback loops between rehearsal, performance, observation, and reflection. Rather than approaching research as something that

happens prior to or outside of performance, *Dog Choir* affirmed that the performance event itself is a methodological tool: a testing ground for relational affordances, spatial configurations, and affective atmospheres. This approach aligns with practice-led research frameworks that prioritise emergent knowledge through doing, and positions interspecies musical collaboration as a continually unfolding, revisable process.

In this sense, *Dog Choir* functioned as a kind of multispecies social experiment: a test of how joy, strangeness, humour, and care might converge to reconfigure animal aesthetic and ethical expectations. Its messiness was not a flaw but a feature—an embodiment of the unpredictable, improvisatory nature of interspecies relationship-building. As the project continues to evolve, its ongoing challenge will be to deepen this responsiveness, refining its accessibility and ethical design without sacrificing the playfulness and relational wildness that gave it life.

Chapter 8: Conclusion

The final chapter of this thesis addresses the broader disciplinary implications of this study, consolidating its principal stages and findings while delineating potential trajectories for future research. By foregrounding canine agency and creativity, the project has troubled entrenched anthropocentric paradigms concerning musical participation and has reconceptualised musicking as a pluralistic, multispecies practice. Within this framework, I have situated dogs as creative and musical agents in zoömusicological discourse, thereby advancing an expanded and more inclusive definition of musicality. The analysis further underscores the significance of interspecies musical collaboration, not only as a site of aesthetic innovation but also as a practice with profound implications for enrichment, welfare, and ethical engagement with the more-than-human world.

8.1 Methodological Summary

This thesis deliberately weaves approaches from ethnomusicology, zoömusicology, and the environmental humanities, and, given that this design is atypical and constitutive of the results, restating how the methods produced the findings clarifies the warrant for my claims and demonstrates why the approach matters. This thesis situates my work among, and builds upon, other novel approaches utilised across zoömusicology and the humanities, proposing the iterative methodology I developed as itself a finding—a potentially transferable framework for future research in canine–human musicking.

Stage 1: Fieldwork with Individual Dogs

The project began with practice-led fieldwork, engaging directly with individual dogs in both domestic and shelter contexts. Through clarinet improvisation, vocal play, and observation, I built relationships with dogs and their people and explored how each responded musically and socially to sound. These sessions highlighted the importance of trust, intimacy, and respect in creating conditions where canine agency could emerge while also underscoring the variability and unpredictability of dog responses. This stage grounded the project in lived, relational encounters and foregrounded the methodological and ethical foundations of interspecies musicking.

Stage 2: Media and Interviews

Building on this foundation, I turned to archival and contemporary media, examining how canine-human musical practices have been represented across print, broadcast, and digital platforms over the past two centuries. In my survey and throughout this thesis, I examined 27 archival print media sources and 52 online media sources to substantiate both the persistence and distortion of such practices—often sensationalised, anthropomorphised, or framed comically—while also demonstrating their widespread cultural resonance. Within the social media examples, I identified categories of practices within the broader phenomenon: namely, piano-playing dogs, dogs vocalising with humans, ambient dog tracks, and digitally aided canine co-composition. Complementing this, I conducted interviews with two practitioners (Emily Doolittle and Alon Ilsar), whose thoughtful and reflexive engagements with their dogs provided rigorous, contemporary models of respectful, co-creative practice, complementing the approaches I developed in Stage 1. This stage highlighted the widespread cultural fascination with, creative potential, and the ethical tensions of canine-human musical collaboration.

Stage 3: *Dog Choir* as Public Practice

The final stage translated my research into a public-facing performance work, *Dog Choir*, which functioned as both an artistic outcome and a research method. Developed iteratively through trial presentations in Canberra, Bondi, and Tasmania, and culminating in a full event in Sydney in 2024, *Dog Choir* brought together dogs, their human companions, and wider audiences in a participatory exploration of interspecies sound-making. Here, the ideas tested in Stages 1 and 2 were embodied in a socially and musically co-created space, foregrounding canine agency while opening experimental and accessible avenues for public engagement.

Together, these three stages form a coherent methodology: moving from intimate encounters through to critical analysis of cultural representations and practitioner insights and on to public experimentation. This trajectory demonstrates how dog-human interspecies music is best studied not as a static cultural object but as a fluid practice, where relationships between beings are vital in understanding how each individual practice operates.

Throughout these research stages, I have argued that:

- Over the past two centuries, instances of dogs vocalising with humans have been discursively constructed and predominantly interpreted through anthropocentric frameworks that position such behaviours as novelties, as projections of human traits (anthropomorphic attributions), or as objects of comedic spectacle.

- These practices have gained increasing visibility in the twenty-first century through the mediating forces of digital media, technological innovation, and globalisation, insofar as their meanings are constituted by cultural narratives as much as by direct observation.

- In my own encounters with dogs, interspecies musical practices have taken time, intimacy, and trust to develop.

- These practices are socially situated and contingent on the relational dynamics between dogs and humans.

- Practitioners of canine–musical collaboration utilise diverse methods of musical engagement (sometimes including digital technologies) that account for the individual circumstances, histories, and tastes of both canine and human participants.

- Within these practices, some dogs appear to exhibit behaviours that challenge established understandings of canine vocal and perceptive capacities, such as pitch recognition and replication, as well as rudimentary vocal imitation.

- Some practices may be understood as forms of interspecies play, as evidenced by dogs' enthusiastic participation in musical activities, instances of autonomous piano playing, and Arca's play bows (as documented in this project).

- The collaborative and social dimensions of these vocal practices—operating outside Eurocentrically imposed musical forms and structures—position this

phenomenon as distinctly musical and as meriting scholarly attention beyond its superficial comedic framing.

8.2 Dogs as Creative Agents

As the written component of this thesis draws to a close, I return to the essence of music not as a fixed object or commodified product but as an experiential process: the immediacy of listening, sounding, and responding. Bracketing analytic frameworks and disciplinary conventions, I reflect on the affective intensity of co-creating sound with dogs—a practice experienced as instinctual, embodied, and mutually energising. These modes of sound-making activated in me deeply relational and social capacities for empathy, joy, and play, the very foundations of our species' shared evolutionary bond. It is within this tactile and relational space that music, as a collaborative act between dogs and humans, emerges with particular vividness and significance.

Following these experiences, this project has been less concerned with policing culturally flexible definitions or comparisons of what constitutes "music" and more invested in the individual as the unit of measure—or, in this case, two individuals, a dog and a human—and how sound acts as an agent in each unique relationship. In this sense, the project resonates strongly with Christopher Small's theorisation of musicking as an inherently social and relational act, where listening and participation, however they manifest, are central to the meaning of music (Small 1998). In this way, the thesis has mobilised anecdote as a methodological lens through which to interrogate individual relationships and their emergent music-like practices.

My research does not suggest that all dogs are inherently musical. Rather, I propose that all dogs possess curiosity, creativity, and sociability—qualities that appear to be prerequisites for any musical pursuit, regardless of species. By demonstrating the diverse ways in which dogs become entangled and agentive within musical practices—emerging from shared sociality in everyday life rather than from imposed, culturally contingent structures—this thesis advances a challenge to anthropocentric assumptions about who or what counts as a creative subject.

8.3 Pluralistic Interspecies Practice

Thus, this project does not propose a single model of interspecies musical practice. Instead, reflecting broader disciplinary moves in Critical Animal Studies, it advocates for embracing diverse modes of engagement that respond to the specific histories, contexts, and social dynamics of individual dogs and people. The analysis has demonstrated this diversity across case studies, shelter-based encounters, and media examples, each of which illustrates that the musical artefact cannot be disentangled from the relational field from which it emerges.

My case studies with Tilly and Arca exemplified this pluralism. Tilly's collaborations often took the form of dialogic vocal exchanges, where her "woowoos" evolved into diversified call-and-response structures and strategic silences that asserted her agency to participate selectively. For Chloe, these were intimate conversations, a way of honouring Tilly's voice as a relational offering. By contrast, Arca's practice with Verity was rooted in chorus-howling rituals frequently catalysed by external stimuli such as bagpipe recordings or group howl sessions. Verity perceived Arca's howls as both cathartic and aesthetic gestures, shaped through her embodied cues and mutual responsiveness. Arca's repeated play-bow behaviour further anchored his vocalisations in ludic expression, linking performance to shared play. Taken together, these cases illuminate the diversity of canine musical participation: at times conversational, at times relying on listening, at times playful, and at times aesthetic. Equally significant are the human perceptions that co-constitute these practices, attributing to dog's sounds qualities that are conversational, cathartic, or performative. This plurality underscores the need to approach interspecies musicking as a spectrum of possibilities, each grounded in particular relationships and interpretative frameworks.

The shelter encounters added another layer of pluralism. Unlike home-based case studies, in which long-term bonds fostered intimacy and trust, the shelter context was marked by transience, noise, and logistical constraints that rendered sustained engagement considerably more difficult. Some dogs responded aversively to clarinet interventions, whereas others exhibited subtle indicators of attentiveness—ears pricked, heads tilted, and gazes fixed upon the source of sound. Many remained silent yet visibly engaged, their bodily comportment shifting in response to musical changes. Such behaviours, while not overtly "musical" in a conventional sense, suggested a form of active listening resonant with Warkentin's ethos of

interspecies etiquette (2010) and Shapiro's concept of kinesthetic empathy (2008). By attuning to these signals, I enacted a form of active listening that shaped the music responsively rather than imposing it unilaterally. In alignment with Small's argument that listening is itself a form of musicking (1998: 9), some of the shelter dogs' embodied responses affirmed their role as co-participants in musical-social rituals.

The archival media investigation further extended this pluralism, demonstrating how technology and mass culture diversify and complicate interspecies practice. Viral YouTube clips, TikTok duets, and television talent shows reframe canine vocalisations through digital remixing, harmonic accompaniment, and sentimental or comedic framing. Here, technology operates both as compositional tool and distribution mechanism: auto-tune, sampling, and editing render dogs' voices recognisably "musical," while algorithms circulate these collaborations globally. At once, these practices democratise access to interspecies musicking and raise ethical concerns, as canine agency risks being flattened into spectacle. The historical and contemporary visibility of these examples—whether quirky print reports of "singing dogs" or viral social-media trends—attests to their cultural endurance. Archival print media provides evidence that these practices are not recent innovations but part of a longer cultural lineage, demonstrating how canine musicality has long been framed through registers of comedy, novelty, spectacle, and anthropomorphism—even as digital technologies have more recently reconfigured their reach and aesthetics. When read alongside intimate case studies and shelter encounters, these underscore the heterogeneity of dog-human musicking: from co-present, embodied play to mass-circulated digital remix, each form discloses distinct affordances and tensions in the ways interspecies practice is imagined, enacted, and consumed.

Despite this breadth of examples, one of the most persistent threads across both archival print and contemporary digital media is the framing of canine–human music through the lens of comedy and novelty. From nineteenth-century newspaper reportage of "singing dogs" to twenty-first-century viral clips, the cultural reception of these practices has often prioritised amusement and spectacle over deeper recognition of their relational, musical, aesthetic, and ethical dimensions. The challenge, then, is to consider how laughter, absurdity, and joy might remain integral to these practices while being reconfigured not as dismissals but as generative entry points for interspecies musical practice.

8.4 Taking the Silly Seriously

There is an inherent absurdity in living alongside dogs, and laughter permeates this cohabitation. While certain human endeavours—such as formal dog training regimes—seek to impose seriousness and discipline upon the human-canine bond, my experience suggests that dogs bind us to the absurd. They ground us within the farcical dimensions of modern living: a dog barking furiously at a vacuum cleaner, defecating on the lawn of a multimillion-dollar harbourside mansion, or perhaps vocalising expressively alongside a recording of Whitney Houston (VTM 2015). This endeavour to seek out and cultivate musical practices with dogs carries within it this very absurdity, one deeply embedded in our entangled history with canids across the world. It is an embrace, rather than a resistance, of the comic, messy, relational potential of our shared lives.

Given that canine vocal behaviours have frequently been framed through registers of novelty, anthropomorphic humour, or exotic spectacle, it can usefully be approached through Sianne Ngai's theorisation of "cute" as an aesthetic category (Ngai 2012) offers a productive framework for reconsidering dog–human musical practice. Like some animal play behaviours (Bekoff 2010), cuteness has long been trivialised—pushed aside as superficial or sentimental—and consequently excluded from serious aesthetic debate. This dismissal mirrors the ways canine musical behaviours have historically been cast as comedic novelties rather than legitimate creative acts. Yet, as Ngai argues, cuteness is never neutral—it is bound up with vulnerability, power, and desire. I reviewed how these similar dynamics are evident in the cultural reception of piano-playing dogs or viral canine howls, where anthropocentric and anthropomorphic framings reduce canine expression to entertainment, reinforcing human authority over what counts as music. My work has sought to resist this flattening by reframing the "cute" not as trivial but as a space of aesthetic, relational, and intentional expression. In foregrounding dogs' contributions as creative, agentive, and collaborative, I have repositioned cuteness as a generative mode of aesthetic engagement rather than a dismissal of seriousness. This move not only challenges entrenched assumptions of human exceptionalism but also expands the aesthetic vocabularies available to musicology, allowing interspecies sound-making to be understood as more than noise, novelty, or anthropomorphic projection. Ultimately, by embracing the oscillation Ngai identifies between reverence and irreverence, my research has demonstrated that canine–human musical collaboration can be both mutually enthusiastic, playful, and profound. In this sense, "cute"

can be read alongside Anna Tsing's notion of "contaminated diversity" (2015), as a register through which novel and sometimes uneasy interspecies relationships are forged and where relational messiness and aesthetic ambiguity open possibilities for new forms of multispecies collaboration.

Dog Choir was, at its heart, an attempt to take the silly seriously: to let laughter, absurdity, and joy remain present in interspecies musical practice while simultaneously inviting audiences to look beyond novelty and anthropomorphism. By embracing humour without collapsing into ridicule, the event created space for dogs to be recognised as collaborators rather than curiosities. In so doing, it resisted the historical flattening of canine expression into mere spectacle and repositioned sound-making with dogs as a form of shared, relational, and playful artistry. This reframing challenges audiences to recognise the power of play, wonder, and even cuteness as aesthetic and ethical registers, where levity coexists with depth and where multispecies music-making can be both comic and critically significant.

Importantly, the questions raised by *Dog Choir* do not exist in isolation. They reverberate across the pluralistic interspecies practices explored throughout this thesis, where dogs and humans meet one another in diverse modes of sound-making, listening, and play. The work demonstrates that canine-human music cannot be reduced to a single model or outcome but instead emerges through multiple, sometimes contradictory, practices shaped by histories, technologies, and relationships. *Dog Choir* thus serves as one articulation within a wider ecology of practices—an example of how humour, joy, and strangeness can sit alongside intimacy, ethics, and attentiveness in co-creating music across species.

8.5 Challenging Musical Definitions and Overlooked Aptitudes

Much of my work has challenged perceived musical definitions and the attitudes that support them that have previously excluded dogs from musical discourse. In probing beyond the comedic framing of the phenomenon, I found that some dogs, both in my fieldwork and in media examples, displayed some behaviours that challenge conventional understandings of canine sonic and auditory capacities. Instances of pitch matching, rudimentary vocal imitation, and turn-taking point toward an emergent canine musical vocabulary that bears some similarities to forms of human musicking. These behaviours often unfolded in playful

contexts, underscoring music's affinity with improvisation and relationality. Arca's continual display of the play bow, Tilly's dialogic vocal gestures, and the autonomous piano-playing of dogs online all speak to a form of enthusiastic and agentive creativity that exceeds simple conditioned stimulus-response patterns. Many examples resist Eurocentric formalism in their structural looseness, multimodal enactment, and reliance on mutual responsiveness, marking them as musical phenomena grounded not in fixed forms but in shared presence and emergent action. Music, here, becomes a mode of relation.

While relationality is key in framing my thesis, I echo Emily Doolittle's questioning (in Section 6.2) of the rigid binary framework that categorises animals as either vocal learners or not; many examples cited throughout this thesis suggest a muddying of this binary, where dogs perform a rudimentary form of vocal mimicry and responsiveness. I observed such behaviours during my sessions with Arca and Tilly, while Emily reported similar instances in her work with Idris. Online, further evidence abounds of dogs vocally replicating musical and verbal structures. Much like some other discussed viral examples online, Arca demonstrated a sensitivity to pitch, with multiple instances suggesting his attempts to match modelled tones. While this thesis has not employed a scientifically rigorous methodology to measure these abilities, the recurring presence of gestural mimicry and pitch sensitivity across diverse contexts points to the need for further research into canid vocal capacities, particularly within the human-influenced environments of twenty-first-century domestication. Taken together, these instances of mimicry and pitch sensitivity not only complicate conventional categories of learning but also invite us to situate such abilities within a longer evolutionary narrative that foregrounds the centrality of sound and vocalisation to human-canine coevolution.

As discussed in the literature review, some theories of human-canine coevolution highlight how sound and vocalisation have long been central to the interspecies bond. Paxton (2021) argues that as early humans developed more complex enunciative capacity, their olfactory acuity diminished, and a complementary relationship with canines emerged: dogs contributed their superior sense of smell while humans honed vocal communication. This interdependence, he suggests, laid the groundwork for dogs and humans to coevolve anatomies and communicative repertoires in ways that mutually reinforced survival. Howe's (2023) archaeological and ethnographic research similarly indicates that dogs were selectively bred to bark—a sonic trait functioning as early biotechnology for human security.

These insights complicate the assumption that domesticated dog vocalisations are merely evolutionary leftovers from their wild ancestors, instead revealing a shared history in which canine voices were cultivated and prized. Ironically, while barking was once an actively selected survival trait, today it is often disciplined or suppressed in domestic life. If Paxton's theory is read alongside accounts of an ancestral "musilanguage" that suggests a common ancestor for music and language (Brown 2000; Mithen 2005; Bannan 2012), the implication is that canine domestication unfolded in tandem with the human divergence of music and speech, leaving traces of these entangled histories in contemporary canine-human sound-making. From this perspective, dog–human musicking is not an anomaly or novelty but a continuation of deep-time coevolutionary entanglements—an echo of a shared sonic past that persists in practices like dialogic musical and vocal exchange as we encounter in this thesis.

Seen in this light, chorus howling—a multimodal behaviour observed across wild and domesticated canids (Déaux and Clarke 2013; Déaux, Charrier, and Clarke 2016; Kershenbaum et al. 2016)—can be understood as both a precursor and a parallel to these contemporary practices. The same overlooked aptitudes for pitch sensitivity, vocal imitation, and improvisatory play that I observed in my case studies and in media examples resonate with the structural and social functions of chorus howling. Just as dogs and humans once co-shaped each other's communicative repertoires through deep evolutionary processes, today their collaborative vocalisations extend this lineage in new cultural forms that respond to the unique context of twenty-first-century life. When dogs vocalise alongside or in response to human music, these events may be read as interspecies renderings of chorus howling, situating the dog and human as members of the same vocal pack. The social power of human ensemble music has been well documented (DeNora 2000; Born 2010; Aigen 2013), and *Dog Choir*, along with the other examples presented in this thesis, reaffirms music's capacity to generate bonds, negotiate difference, and reconfigure the human-animal divide.

These insights contribute to the broader aims of zoömusicology, which seeks to account for the aesthetic, communicative, and relational qualities of non-human sound-making while challenging the human boundaries of musical definitions. Zoömusicology has historically focused on recognizably "musical" examples such as birdsong and whale song while overlooking more familiar species like dogs. Additionally, previous zoömusicological research has foregrounded structural measures of musical capacity by focussing primarily on

musical products. By centring canine-human musicking within distinctly social and extra-musical contexts, this thesis expands the field's scope, demonstrating that dogs are capable of meaningful, creative, and enthusiastic musicking, even if the fruits of that musical practice do not adhere to assumed structural definitions of music. In so doing, it has challenged anthropocentric assumptions about musicality and underscored the importance of recognising the pluralistic, multispecies contexts in which music emerges.

8.6 Ethics of Interspecies Musical Play

I want to return here to the theme of music and vocalising as forms of play (for both humans and dogs), understood as enriching practices through which a capability is both exercised and revealed. My fieldwork with dogs—both through direct musical play and through interviews with human companions—has demonstrated that interspecies musicking is often experienced as playful, stimulating, and even joyful. Caillois' (1958/2001) framing of play as a core dimension of social life that enables creativity and mutual adaptation, and Bateson's (2015) insistence on play's role in fostering the innovation and flexible thinking essential for survival reinforce the importance of play in domesticated canine life. As noted previously, Bekoff asserts that "We train too much and play too little…." (Bekoff 2010: 331) with our dogs. Therefore, my examination of the varied play behaviours evident in existing canine-human musical practice suggests that collaborative sound-making can represent a form of meaningful and enriching play for both dogs and their people as a shared activity.

With Nussbaum's Capabilities Approach in mind, I further argue that interactional musical activities (alongside a healthy, social life) can support a dog's central capabilities—particularly for "senses, imagination and thought," "relations with other species," and "play" (Nussbaum 2022: 88-89)—with the goal of providing beings the opportunity to flourish in ways suited to their nature. In centring ethical engagement at the core of this project, I sought to structure my sessions around canine choice. Dogs were free to disengage, express disinterest, or signal discomfort, and I interpreted behaviours such as walking away, ceasing vocalisations, or displaying stress signals as indicators that the activity should pause. This ethical framing—foregrounding canine agency—ensured that musical participation was an opportunity, not an obligation, and reflected respect for their autonomy. In this light, sonic

play and interspecies attunement can be seen as supporting a dog's striving for a flourishing life.

The chorus howls I have observed and participated in appear improvisational, collaborative, and aesthetically rich. If vocalising is a part of a dog's striving for social connection, communication, and pleasure, then stifling this capacity restricts their ability to exercise the capabilities of play and affiliation. By framing canine vocalisations as expressive and creative rather than disruptive or indicative of distress, participatory musical practices that invite canine vocalisation open spaces for dogs to be uniquely respected and engaged with on less anthropocentric terms. Such can therefore be understood as enhancing key capabilities: they affirm the importance of social bonds, foster imaginative exploration, and provide opportunities for joy for both humans and dogs.

Examples from this project highlight the diversity of these playful practices. Arca's play bow exemplifies Bekoff's insight that play signals communicate intent and sustain cooperative interaction (Bekoff 2004), marking his vocalisations as invitations to shared engagement. Alon and Razzly's technologically mediated AirSticks practice demonstrates how play can be extended through instruments while retaining improvisatory, turn-taking dynamics. Even the viral phenomenon of piano-playing dogs can be read through Thomas Sebeok's framing of play as a generative mode of semiosis (Sebeok 1981): playful pawing becomes reframed as music, producing new layers of relational meaning. Taken together, these cases show that interspecies play is not trivial but foundational, creating communicative, creative, and ethical encounters that support the flourishing of both species.

Play thus provides a productive framework for understanding some forms of interspecies musicking as an ethically grounded practice. Rather than reducing music to a tool for behavioural conditioning or calming enrichment, framing it as play recognises its emotional, cognitive, and social dimensions. While other aspects of musical participation that I encountered in this study might not be explicitly relevant to play—active listening and other forms of vocal exchange and improvisation—these forms of musicking nonetheless become modes of participation that allow dogs to exercise their agency and achieve their expressive goals. Supporting these practices requires moving beyond human-centred definitions of music and towards an expanded conception of musicking as relational, open-ended, and

species-specific. In this sense, interspecies musical play aligns directly with Nussbaum's call to secure opportunities for animals to live flourishing lives—not by coercion but by cultivating spaces of mutual joy, attention, and creativity.

This project has demonstrated that dogs are not passive recipients of sound but can be enthusiastic participants in musical collaboration within a more expansive understanding of musicking. I have argued that these practices are co-constructed through mutually responsive gestures, sounds, and movements that evolve over time, much like a collaborative human musical practice. Crucially, this calls for a redefinition of music not as a fixed form but as dynamic interaction that includes diverse means of engagement and participation. Historical and contemporary responses to musical dogs have been shaped by anthropocentric biases and restrictive definitions of music; in pushing back against such norms, this thesis aligns with a broader move in zoösemiotics and posthumanist aesthetics (Sebeok 1981; Allen and Bekoff 1994; Martinelli 2004; Wheeler 2014) that recognises animals as expressive, creative beings.

Nussbaum argues that humans have an obligation to "develop our capacities for wonder and awe at the lives of animals" (Nussbaum 2023: 63), so as to create a society where animals can flourish alongside humans. Musical play, when framed as interactional enrichment, offers a means for cultivating interspecies relationships grounded in this sense of awe, as well as mutual attention, pleasure, and creative exploration. As this field continues to develop, researchers, artists, and caregivers alike must remain attentive to the complex desires, expressions, and agencies of non-human participants. As I argue in the final section, extending this ethos of attentiveness beyond the human—situating dogs not only as collaborators in music-making but as enactments of ecological awareness—invites a reimagining of our sonic and environmental relationships more broadly.

8.7 Future Research Directions

This thesis has established that canine-human musicking is plural, relational, and musically significant, yet it also opens as many questions as it resolves. Future research will need to explore these practices across multiple scales and methodologies, combining ethnographic, scientific, and creative approaches. In foregrounding the ethical dimension of interspecies practice and echoing parallel developments in ethnomusicology and the broader humanities,

future research should approach dogs not as mere subjects but as collaborators within shared contexts of research and knowledge production.

1. Interactional enrichment potential

As I have noted, much of the existing research into animals' responses to music risks oversimplification. As discussed earlier, Kriengwatana et al. (2025) observe that many animal musical enrichment studies overlook essential extrinsic factors—such as the unique properties of individual listeners, the specific playback context, and the characteristics of the sound producers—and often lack rigorous musical discussion. These omissions introduce biases and misunderstandings, further compounded by improper music-source referencing, unchecked assumptions about species preferences, and superficial interpretations of animal musicality. They argue for careful, context-sensitive selection of musical stimuli and a rigorous consideration of the relational dynamics shaping animal-music interactions. My own findings echo these concerns. My exploration of ambient dog tracks revealed both their widespread popularity, and the diverse affective responses reported by guardians, from alleviating separation anxiety and calming during storms to unexpected moments of humour and disruption. Such examples highlight the importance of situating musical enrichment within the lived, relational, and technological contexts in which humans and dogs actually encounter sound.

Additionally, most studies of music and dogs have focused on recorded playback aimed at calming behaviour, but my findings suggest that interactive, co-created musical play may offer enhanced and diverse forms of enrichment. Future research could investigate how improvisatory, responsive practices contribute to canine welfare, exploring music not merely as background stimulus but as a dynamic, relational activity. Longitudinal studies, in particular, could track whether ongoing musical engagements support dogs' capabilities for play, affiliation, and sensory imagination, as articulated in Nussbaum's Capabilities Approach.

2. Ethnographic Studies of media and viral examples

The survey of media examples in this thesis revealed how digital platforms amplify and

reshape interspecies musicking, while often flattening canine agency into novelty. Further ethnographic work could study these practices in situ: interviewing creators of viral videos, tracing how dogs' contributions are framed and understood by audiences, and mapping the circulation of these clips across digital cultures. Such research could help disentangle the ethical and aesthetic complexities of technologically mediated interspecies collaboration and shed light on how humour, sentimentality, and spectacle intersect with genuine creative agency.

3. Scientific research into canine vocal aptitudes

While my observations identified pitch sensitivity, rudimentary mimicry, and dialogic responsiveness in dogs, these claims require more systematic study. Interdisciplinary research bringing together zoömusicologists, ethologists, and cognitive scientists could rigorously test domesticated dogs' vocal and auditory capacities within domesticated contexts. Particular attention should be given to the muddying of categories such as vocal learners versus those who lack the capacity for vocal learning, and to the ways domestication has shaped dogs' communicative repertoires. These studies could help move beyond anecdote toward a more robust account of canine musicality in the context of messy twenty-first century dog-human shared lives.

4. Technology and new tools for collaboration

Technological tools—whether interactive instruments, auditory interfaces, or digital sharing platforms—are already shaping interspecies practices, and their influence is likely to grow. As has been demonstrated with Hunger's (2021) technologically aided communication methods with animals and Alon's practice with Razzly, technology is increasingly playing a role in shaping the lives of animals in the twenty-first century. This includes not just the "gadgets" that enable musical and creative expression but also the role of social media and globalised platforms in dispersing and propagating these practices, subsequently shaping people's explicitly musical perception of the phenomenon. As interactive technologies evolve, new tools could be developed to support dialogic engagement rather than dominance or spectacle. Building on examples like Hunger's (2021) work with animal communication devices, future research could explore how interactive instruments, auditory interfaces, or AI-

mediated platforms might facilitate new forms of multispecies co-composition. At the same time, critical work is needed to interrogate the risks of commodification, ensuring that technological mediation amplifies rather than flattens canine voices. These endeavours (already underway) go towards fulfilling a popular cultural imagining of a future hyper-evolved dog who utilises technology to reclaim an intellectual status that humans have historically denied to animals (evident in the previously discussed examples of Disney Pixar's *Up* and the *Rick and Morty* episode "Lawnmower Dog").

5. Cross-disciplinary integration

Finally, there is a need for greater integration between zoömusicology, ethnomusicology, the environmental humanities, and animal behaviour sciences. While some of this work is already taking place (Doolittle, Gingras, Endres, and Fitch 2014; Rendell, Doolittle, Garland, and South 2021; Xing, Sainburg, Taylor, and Gentner 2022), interdisciplinary projects could more effectively situate canine-human musicking within ecological and ethical frameworks, connecting everyday practices with urgent questions about human exceptionalism, multispecies coexistence, and environmental collapse. As we accept that animals are cultural beings (De Waal 2001), we need to dispel the notion that all research related to animal behaviour should be carried out by science practitioners. In this way, interspecies music might be positioned not only as enrichment or entertainment but as a vital site for reimagining relational futures in a multispecies world.

8.8 Dogs as Enactments of Ecological Attentiveness

> How might an ethics and politics committed to the flourishing of significant otherness be learned from taking dog-human relationships seriously … (Haraway 2003, 3).

Haraway insists that we must understand ourselves not in isolation but through our interdependencies with other species. This project has taken up that call, positioning music as an ethical and political sandbox in which to interrogate and reimagine humanity's relationships with dogs, while also challenging the long-standing exclusion of animals from musical discourse. In moments of interspecies co-creation, such as a dog howling with a clarinet, what emerges is the visible and audible trace of a long, interwoven history mediated

by an interbeing connection of intimacy, trust, and love. By framing these exchanges musically, I have argued for an approach that honours dogs as creative agents and recognises the affective power of multispecies play.

Our relationships with dogs already shape and infiltrate human creativity in ways often overlooked. Far from being static companions, dogs are active participants in twenty-first-century life, threading themselves through music, technology, media, and domesticity. Some may dismiss the connection between dogs and music as tenuous or as mere novelty. Yet, as this thesis has demonstrated, humans and dogs are already (and have been historically) co-creating musical practices that now circulate widely through social media and digital culture. Attending to these encounters seriously—as more than "cute" curiosities—demands an expanded musicology, one that recognises interspecies collaboration as a valid, socially and aesthetically significant form of musicking. As Silvers reminds us:

> …because music's effect on the non-human in turn affects musical meaning and relationships between music and society—there is a reciprocal and complex relationship between music (as a human behaviour, signifier, and sound) and the (non-human) world with which it interfaces. A multispecies ethnomusicology provides a more-than-human comprehension of music's place in the contemporary world (Silvers 2020, 205).

In a world plummeting toward ecological collapse, such reimaginings are not trivial. They are urgently needed. Plumwood (2009) insists that survival depends on rejecting human exceptionalism and embracing our place within, not above, nature. Musical practices with dogs provide a glimpse of how such reorientation might take form: they cultivate attentiveness, mutuality, and joy across species boundaries. By observing the expressive diversity of canine-human musical aptitudes—improvisation, harmonic sensitivity, gestural mimicry, and musical curiosity—we not only delight in creative possibilities but also destabilise entrenched hierarchies of artistic ability. Recognising animal musicality unsettles humanity's self-image as occupying the apex of creativity, opening space for more ethical and ecologically attuned modes of being. Even when these practices do not lead directly to environmental restoration, they invite us to reimagine our place within evolutionary and creative continua, unsettling long-held anthropocentric biases. Importantly, in echoing

Tsing's conceptions of twenty-first century interspecies living, these messy, mediated collaborations can be read as forms of "contaminated diversity," where unlikely interspecies entanglements emerge in the fractured landscapes of globalisation, technology, and everyday cohabitation.

Throughout this project, I have approached canine–human music with a trained musical ear and the tools of ethnomusicological and zoömusicological inquiry. By focusing on practices that have historically been overlooked—particularly domestic, everyday encounters, as well as their circulation through digital platforms—I have sought to substantiate the inclusion of animal musics in broader musicological discourse. These practices challenge and enrich human idioms, while also creating new musical and social bonds with animal companions. Significantly, they expose the implicit anthropocentric biases that frame animal musical contributions as comic spectacle or subordinate them to human intention. By critiquing these precedents, this thesis advocates for more mutualistic models of collaboration—flattening hierarchies and fostering shared creative expression. *Dog Choir* epitomises this vision. As an experimental performance, it enacts the core aims of this project: fostering interspecies collaboration through shared sonic experiences that are playful, humorous, relational, and deeply affective. Audiences laughed, wondered, and reflected, experiencing both joy and ethical dissonance. This blending of the silly and the serious staged an interspecies chorus that was as ridiculous as it was profound, resisting anthropocentric framings while opening space for relational creativity.

Ultimately, this thesis suggests that music is not only an art of sound but an ethics of relation. Canine-human musicking is a vivid enactment of ecological attentiveness: a practice of listening across species, of cultivating reciprocity, and of fostering wonder in a time of planetary unravelling. By taking dogs and their voices seriously as collaborators, we may begin to reimagine music—and ourselves—as entangled within multispecies worlds. Beyond academic discourse and any theoretical posturing that this thesis engages in, just as I grew up being delighted by the vocal responses of Milly (Fig. 109) then Mia to my clarinet playing, I have gained so much joy from spending time with dogs and from exploring strange, ridiculous, and profound musical moments. This thesis has advanced the claim that musical research must be situated in the real world of sensory richness, in relationships, and in shared experiences. It insists on music as an embodied practice of companionship, play, and ecological imagination, capable of nurturing more inclusive and flourishing futures.



Figure 109. Me (aged 14) playing clarinet while Milly sits on the couch in the background.

Epilogue: An Update on the Dogs in this Project

After the fieldwork concluded, I continued—without agenda or documentation—to share musical and social time with Tilly and Chloe, Arca and Verity, and Mia, most often in the ordinary intimacy of dog-sitting. These encounters were no longer framed as research, yet they remained shaped by listening: by habits of attentiveness cultivated through the work of this thesis.

Three months after I submitted this thesis, Tilly died. In December 2025, Chloe and I gathered with a small group of friends in her home and made music in Tilly's memory.

At the time of writing, Arca continues his musical life with Verity, a fact confirmed through regular video messages that arrive as quiet reminders that this work persists beyond its pages. I plan to include Arca as a collaborator in an upcoming performance project at the Sydney Opera House. Mia, now very old, still interrupts my clarinet practice—entering the room, insistently vocalising and sitting close, reshaping the music through her presence.

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Appendix A
Interview Transcripts

Alon Ilsar Interview Transcript
Conducted outdoors at a café in Glebe Sydney on 21 September 2023

Solomon: I'm really excited for your gig next week.

Alon: Yeah, so am I. I'm like, yeah, what am I going to do?

S: It's at a comedy venue, sort of.

A: Well, it's actually kind of a blues-jazz venue.

S: Right.

A: But there's a guy called Phil Spencer, who actually runs a kids' program at the Opera House. He used to be the artistic director of Griffin Theatre, so he was involved in theatre. But he'd just come out of having two young kids and he just wanted to put on a monthly event where he could do some of his storytelling slash comedy, I guess. And he's invited other people and he wanted some music relief in between it. So I said, what if I do something with Razz? And he's like, "Oh, OK, whatever."

S: How good. It's exciting.

A: Yeah, so it's a different context to what I've done before, but I guess that's the beauty of all this.

S: Yeah. I mean, what are you going to do with it? Because I know you use, like—there's like a toy with electronics in it. Is that right?

A: Yeah, exactly. So the first time I did a piece with him was at Sensilab in November last year. It was part of a group show. And I guess for that, I was just trying to figure out: how

can you collaborate with a dog? And I think this is where it comes down to your alley a lot more.

S: Yeah.

A: What would Razz want to do in that environment? And I—so, for that piece I kind of filmed him doing all these different things and made a triptych of videos that went for about 45 minutes, that was on loop in the gallery. Behind, like, a couch and a coffee table—kind of this lockdown kind of moment, I guess. And on the coffee table there was a jar of his hair, and one of the videos was me shaving him and getting him to…

S: Lockdown haircuts.

A: Yeah, lockdown haircuts and giving him a mohawk all the way down his back, and kind of preparing him for the gig. And for me it was, like, these videos of him preparing for this performance, even though they were just him playing, walking. There was one video that was actually kind of cool, which was… I was just playing with him in the corridor of my house in the pitch black with the glow ball. He was just incredible at finding it. He was just bouncing around this corridor.

S: It must have looked beautiful.

A: Yeah, and it was just this ball disappeared because of his mouth as well. Drop out, come out, you know. So I kind of approached it like that, even though I'm not a filmmaker playing in stretch.

S: So that was a visual art setting? That was a visual art setting?

A: That was a visual art setting. And then the activation part of it, the performance with him—I had three different balls. And the first one manipulated the audio from the video and slowly faded into kind of a marimba sound, I guess.

S: Cool. So what's inside the ball?

A: So inside the ball is what we call the air stick. So I don't know if you're across the...

S: Yeah, I've seen you do it.

A: Right. So there are a few versions of it. The first version I had was a virtual reality gaming controller. And then in more recent years, we turned it into this tiny device that seems to fit comfortably in one of those glow balls. It kind of pushes it out so the ball becomes not quite round as well, so it kind of moves a little more than a ball. Somehow he hasn't destroyed it. I don't know how.

S: Miraculous.

A: But it's just sitting in a space there. But I had three of them, and basically each one had a different sound of a track that was being manipulated—like the bass, the drums, and the melody. And it was kind of a drum-and-bass thing by the end, because I felt like that was his chaotic energy.

<coffee arrives>

A: And then I guess I had him sitting down with me, kind of giving him the ball but then taking it off him, like quite close. And then I finally just gave it to him and let him have it, and his instinct is to just give it to people in the audience straight off. And if they're not playing with it, he'll just paw it. And I just think he appreciates that level of it. I don't think he cares about the sound or relates to sounds so much.

S: Does he know that the sound is being controlled by his actions?

A: I don't know. But I think he does gravitate towards that ball more. Like, I think that ball is kind of special.

S: Right. As opposed to the two other ones.

A: As opposed to the ones that don't have sensors in them.

S: Oh, I see. I see. I see.

A: I think, like... because there was a long time around that time where he would see it up on the desk, and I wouldn't want to use it too much in case it would break.

S: Yeah.

A: And he would, like... he's staring at it. He would kind of climb up and go, that's the ball I want.

S: The forbidden fruit.

A: Yeah. I think there was something about the context, because I played at a party with him as well. And I think there was something about him being the centre of attention that he could get. Yeah. I don't know if the sound made a difference, but the sound at least brought attention to it.

S: Yeah. Right.

A: So, and really all I'm trying to do with the sound is articulate a way that sonifies his play—the intensity of his play. So yeah, that was the first one. The second one was in the context of the Make It Up Club. So I knew that the context there would be a lot more open to the sound. So I brought a squeaky toy and a ball, and I played with the squeaky toy with him, sampled it live, and then brought out the air stick ball that had squeaks sampled into it and gave it to him. And he went out into the audience. And then I played drums on top of that while the ball's sound would change to whatever I was playing. So I kept looping, using granular synthesis just to keep activating the ball in a different way.

S: Cool.

A: That was fun for that context.

S: Do you think he was a bit aware of the way that the squeak, like, kind of moves from the squeaky toy to the non-squeaky toy? Like, what do you think is going through his head at that point?

A: I really don't know. I think he just preferred the other ball again.

S: Okay, yeah, yeah, the forbidden fruit.

A: Yeah, I don't know if... yeah, but it is a good point because the squeaky ball obviously makes a sound, I squeak it, he acknowledges it straight away. And we have done a few little bits of training, I guess, if you want to call it that, or even just play, where I'm like, "Does he understand the concept of one squeak versus two squeaks?" Like, is that even something I can, you know, ask him to do? And I kept giving it to him, and he would squeak it once and drop it. And I would say, "Yes, that's one. Now do it again. Yes, that's one." And then eventually try to get him to do two, and I don't think he quite got there. But he would stop doing one very quickly because he was like, oh, OK, that's not what it is. But…

S: One versus two or zero or many.

A: Yeah, yeah.

S: It's only one or many.

A: Yeah, maybe. For this one, I don't know yet. I'm kind of sitting on the idea that maybe, as a bit of a larger narrative, the ball I'm using is my instrument. It's not his. And I've had to bring him to the gig because I couldn't find anyone to take care of him all day and I was out all day. So he's at the gig and I'm just minding him. And I'm performing with this ball.

S: Right. But you've also got this sort of parameter you can't control, which is his actions. Is that right?

A: Mm. But eventually I invite him to... like, he's gonna be excited to do it.

S: Yeah.

A: He's gonna interrupt my performance and take over.

S: He wants to play. It seems all about play.

A: Yeah. So at that point, I think I'll change the sound though. And then I think I might set it up in a way where—see how I, if I wanna go down this path—but the technology actually senses through your sweat some brain activity and what you might be thinking.

S: I didn't know that was possible.

A: Exactly. But who knows? Is it? <laughing> Maybe I'll set up that kind of impossibility of the instrument to create a bit more so that when he does get it, the samples that I use—whether it's him, sounds of him, or things that he might be thinking in a dog voice, or certain, I don't know... I think for this one I want to use really, like, cartoon sounds.

S: Oh, awesome. That would be great in that comedy sort of variety show context.

A: Yeah. So basically the pen, you can put it in time, and it's just using up all these, like, Warner Brothers sounds. And then the opposite as well—like, I'm trying to figure out what would happen when it's still. So I can set it up so that as soon as it stops, it slowly fades in with something, some random track. That's what I'm playing with.

S: It's awesome.
A: But yeah, you're right. To me, it's all about his play and how the analogy between the way we play music and the way he just plays physically. Where's that line? How we can come together at that?

S: Yeah, I think about it exactly the same way as we play with our dogs in the park and we take them for walks and they sleep in our beds and all these things. And it's just another thing we can do with them. We can sing with them, we can make music with them. It's like another playground for them and for us.

A: But yeah, this is for me interesting because I don't really sing with him. I sometimes kind of growl with him in the morning. He usually has this kind of... He usually brings a rope over and kind of has this kind of sound that he uses for that and I can play off him with that. I tried with Kazoo recently and it did really get him more excited.

S: Does he vocalize alongside or does he just sort of...

A: He vocalizes... Yeah, he's loud, you know, and he can control his dynamics. But I wouldn't say that he's necessarily howling or hitting pitches or anything. But I'm a drummer, so maybe I haven't really approached it that way.

S: Every dog seems really different with how they howl, especially in that context of vocalizing outside of, like, threat, you know, because the main place where they vocalize is they're barking at like an intruder or something like that.

A: But he barks from excitement. He chases... he gets growly pretty quickly to kind of just assert his... like he wouldn't get aggressive but he asserts his boundaries really clearly. He tells my partner off quite a bit if she tries to hug him too much. But he always comes back. Like it's just... it's not like go away, it's more like give me a second. But you know, when he does play with his best puppy friends from the old days, he definitely vocalizes like... “awrarawaw”, those kinds of sounds. But I wonder if it's more his ears than his vocals. Because he's obviously got better ears than vocal passage. He can hear better than he can articulate. And he definitely turns his head, tries to understand when you're talking certain tones and singing certain things.

S: Has he ever vocalised in the context of your collaboration? Like your drumming and the electronics that you use? Or is he always just so fixated on the ball that there’s nothing else that matters.

A: He might have barked a couple of times at people to engage to throw the ball the you know.

S: Yeah.

A: But, yeah, no, he's actually quite quiet.

S: Yeah. Sounds like he's quite focused at that time.

A: Oh, he's definitely super focused.

S: It's a game.

A: Yeah, super focused and super obedient in a sense. And I've, you know, maybe I'll try this week to really work on my gestures in controlling him, as opposed to saying anything. Because I like the idea of holding the ball, getting him to sit, lie down perhaps, giving him the ball, getting him to drop it, kind of play that way at the start. Before I say it, because I don't like saying anything. For me, saying any commands kind of ruins the sound, in a sense.

S: Yeah. Great. And the thing that does to mine straight away is like, I don't know, dogs seem to be really reactive to other dogs vocalising, but have you ever tried putting like howls in the sample?

A: I tried to do a few things, but I didn't go too hard on it. I tried panting.

S: Oh yeah.

A: Because I wanted a rhythm of some sort. But again, I don't think… I think if the sound was in the ball, that he might connect to it. But because it sounds coming out of speakers, it's just too far over stretching to…

S: yeah, the logic doesn't match up.

A: No Like the only time he parks in our apartment, like more than once or twice, is if someone rings a doorbell. And it's a doorbell from downstairs, it comes in through the, you know, it rings. He doesn't do that when our phone rings or anything like that. But that's the

only time he's just like, “what is this sound?” But I think he also associates it with someone coming in. So, he knows that someone's about to come in. But yeah, in terms of... I'd love to put the sound in the toy, because I think it would change it...

S: Like a little Bluetooth speaker or something?

A: Yeah.

S: Well, that's why they love that squeak sound, because it sounds like a little animal, you know, like a little gerbil they're biting into.

A: But he's never actually loved the squeak sound.

S: Oh really?

A: Yeah. And he's usually very gentle with balls, which is great. It means that he hasn't chewed his ball at all. He just kind of holds it, drops it. He's quite gentle with it.

S: Does he covet it?

A: In what way?

S: Like, does he protect it and keep it to himself?

A: Oh, no, no.

S: He's not like, possessive of it?

A: No, no. He's never really been... Like, if another dog gets his ball, he gives up straight away. He'll get possessive the moment before they maybe get it, but as soon as they've won it, he's like, okay, he's not going to get it. But yeah, with this ball, yeah, I haven't noticed that. And again, he's never been in... I haven't trusted another dog enough with the ball. I don't know how they chew, I don't know how...

S: So it's very individual to the both of you. How did you... like why did you start doing this? I know you talked about it a bit earlier, but what was the idea that set you on this path?

A: Um... there was a lot of them I think. One, on an academic front, was that we're part of a department at Monash called Human-Computer Interaction. So there was definitely a pushback against that, for me, straight away. It's like, why are we calling ourselves Human-Computer Interaction, when it's clearly like really interesting things that we can do with dogs and computers, if you want to call it that. So that was one element.

Lockdown was definitely an element. The first things I did with it was, because I wear the air sticks for a lot of my practice, and he was around, I would just play tug with him while wearing them.

S: Oh yeah.

A: And that was probably the first... I never thought to put them in a ball. I actually thought they'd get destroyed pretty quickly. But they just haven't for a year. I'm confident enough to start putting it in different objects. I tried it on his collar. I tried it on his leg. But it just felt... I don't know. It felt like I was lacking his permission for that or something as well. His consent, in a sense.

S: The balls are really a nice invitation, isn't it? It's like, here's this thing if you want it. As opposed to, you're involved in this and you've got no choice.
A: Yeah, and it's an instrument in that sense as well. It's a more conventional instrument in a sense, it's a continuation. And it's a thing that he just loves playing with. The same way that you love playing the clarinet and I like playing the drums. He's obsessed with it. It's pretty hard to get him to do other things. But he also... he knows when it's enough.

S: I mean, it reminds me of the sort of YouTube sub-genre of dogs playing piano.

A: Yeah.

S: Because there's a lot of dogs who love playing piano.

A: There was a video I saw recently that was framed as... it's a beagle.

S: Yeah, is that Buddy Mercury?

A: Yeah, is that right?

S: I've written about Buddy Mercury.

A: Yeah, yeah, yeah, that's right.

A: I think it was the same one that you quoted. Yes. But it was a new video, I think, of him at home alone, supposedly. And I was like, is this set up? I wonder if it is or isn't. I've never taken any video of him at home, so I have no concept of what...

S: Yeah, you never know what they get up to when they're on their own, do you?

A: Yeah.

S: Yeah, that dog has like 200 videos or something online of him playing piano. And there's all sorts of...

A: They've probably monetised it in a way?

S: Yeah, they've monetised it, yeah, yeah, for sure. They have merch you can buy. He's done, like, interviews and does Cameos.

A: Who's done interviews? The dog?

S: Well, the owners with the dog, like on TV and that kind of thing. Crazy 21st-century world we live in.

A: Yeah.

S: And do you think, I mean, you talk about him enjoying it. Do you think he enjoys it more than just playing with his ball normally? Is there, like, a level of interaction that he gets from it that is unique to that context? That he enjoys more?

A: I think the performance. I think, like, because when I do take him to a dog park and play fetch with him, he's pretty keen to drop a ball to other people. Like, he's pretty keen to make that connection with other people. And he's so quick to know how to play with them as well. Like, if it's a kid, he's really gentle and drop a ball to them and bite them. So I think the context of a small room indoors where there are no other dogs, where everyone's watching him, and he's got all this attention. I think…

S: He's the star.

A: Yeah, yeah. I think he loves that.

A: Right.

S: So it's obviously very relational, and it's not something that happens—he doesn't do it on his own. He'd never just do it at home on his own, do you think?

A: I've never set him up with it. Yeah. Maybe I should. Like, again, I was always, like, fearing that the stick would break if it was kind of unsupervised. But yeah, I guess I could turn on the air sticks and just leave them and see what happens. Even when I'm just around in the other room or something.

S: And has it changed over time, like his way of playing with it? Like, you sort of described the progression in your practice throughout... the how many gigs you've done. Is there a way that he's changed over that time, or do you think he just does the same kind of thing each time?

A: It's only been, like, a party and two gigs. But the Make It Up Club, what was interesting for me is that after I played with it, I was on the drums, playing with one hand on the drums, kind of holding the squeeze toy, letting him, making sure he didn't take it, like kind of playing tug with it. But as soon as I got out the other one and let go of it, he just went, I know what you want me to do. And he went straight to the audience with it and dropped it. And the audience was, because it was Make It Up Club, were on the floor, they're kind of in this semi-circle, and it just made perfect sense for him. So I think he's kind of understanding...

S: He's learning the context, learning the habit of this place.

A: Yeah.

S: Yeah. That's great.

A: It's going to be interesting in the next gig with more people he knows. Particularly my partner will be there, like someone really close to him. My parents might be there, you know, he stayed there for many months over his life. So that will be interesting, how he will gravitate towards other people. In the last gig it was really nice, actually, because the person he probably knew best was Robbie Avenaim, the percussionist. He's got a dog, and we go walking a lot together and we talk about it a lot. And he was the last person to kind of throw it to him. And just as he caught it, I just switched it off. And it was a nice ending as well. So the ending is an interesting thing, like compositionally, how you end something like that, because usually at a dog park the ending is, OK, we're going, you know, like...

S: Sometimes they get bored as well.

A: Yeah, yeah.

S: Do you think he gets bored in that setting easily?

A: There were a few times in the show where he just went and chewed it off in the corner, away from people, but it's still moving around a lot, he's still playing with it.

S: It's a nice ebb and flow, isn't it?

A: Yeah. To me, I actually think it's more about the audience, because I don't tell them anything. A few people came up to me after they made that plug and kind of apologized for picking the ball up. They weren't sure if that's what was... and I'm like, “no, no, that was the whole point.” But also, maybe people aren't comfortable holding a salivary ball. It's relatively saliva-less. That's why the electricity...

S: Dog saliva is like a... what do you call it?

A: Antiseptic.

S: Yeah, yeah. That's why they can chew all sorts of disgusting things and be fine.

A: But to me what's interesting is that relationship between them, the audience and him, in a sense that all of a sudden they pick up this toy that makes sound as well. So for me it's almost a way of getting them engaging with the AirSticks through seeing that anyone can do it. Like that whole premise of what me and Kieran work on a lot: that you're all musicians, you all can make music. I think once you see a dog, hopefully you can go, “oh yeah, I can do that too, right, it's just some movement and play.” So, there's something in that that I'm interested to explore further.

S: Yeah, we've got a lot to learn from dogs, I think.

A: Yeah, I think one way to do it technically is to change a sound every time a human picks it up, engage with it differently to the dog, and I don't know if I'll quite get that together for this next gig.

S: What software do you use?

A: So we've got our own custom software that works with the AirSticks that then spits out OSC and MIDI. And then the MIDI I'm using at the moment is just all in Ableton, which is good because it allows me to go to different cues if I want, but also just create a timeline or

have backing tracks as well that things can slot in with. So yeah, it's pretty powerful that way. So I can say, okay, this is a 10-minute piece. The first minute, the sound will be like this, and then slowly over the next minute, another sound will fade in, that sound will fade out. So it's that compositional side of it.

S: Yeah, there's a level of, like, structuring that happens beforehand.

A: Yeah.

A: If I feel like it, or I can use buttons to get to other places, but where those buttons are, I kind of want to hide them and not really...

S: And I suppose you're reacting to him as well, you're reacting to what's happening in his play, and then you can then respond with whatever sounds you think are appropriate.

A: Yeah.

S: So it's a collaboration in that way.

A: Yeah.

A: So for this next one I might wear AirSticks as well.

S: Oh yeah.

A: And there's some stuff we've been doing with that in terms of the power being transferred, like if I'm using a ball that I'm articulating—this is the sound—and then I drop it and let it go, and then the sound keeps going and I hide the sensors, and that could be really interesting. So that might be a beat like that, where I let it go and I'm like, I've still got the sound, and then he can take over the other sound.

Emily Doolittle Interview Transcript
Conducted over video call on 22 November 2023

Solomon: Yeah. Anyway, thanks for agreeing to chat today. Um, I was really excited to hear—

Emily: Before we start chatting, I should warn you that we're having our kitchen redone. So, first of all, there may be some interruptions with people delivering refrigerators and things, but also it's possible that the electricity might suddenly go out. So if I suddenly disappear, I'll be back. But it's just because the electricity suddenly went out.

S: Ok. No stress at all. I mean, it's a very casual chat we can have today. I'm interested to hear what, um, what's happening with you and your dog and your experience with your dog. Because my PhD is kind of about exactly what you're doing.

E: Well, so tell me about your... I mean, I have my own questions for you as well. Like, because I'm going to be writing something about dogs and I also, together with a colleague, we eventually want to apply to get funding for a PhD student to research dogs. So it would be great to find out more about what you're doing and how you framed your research and so on.

S: Yeah. Yeah, definitely. Um, but just before I go on, is it alright if I record this chat?

E: Of course. Yeah.

S: I'll just record it on my phone, maybe I'll also record it on here, record on this computer. And I think to include any quotes from you, I'll have to send you through, like, a form. And I'll just do it after if that's all right. I know it's—

E: Yeah.

S: It's just to consent to, um, being included in the research.

E: Yeah.

S: Um, well, yeah, my research is about dogs and music. I mean, I think you marked my master's thesis, didn't you?

E: Yeah.

S: So it kind of springboarded off that and really thinking about interspecies entanglement and collaboration and music as a means to interspecies play. So I've been working with a number of dogs and developing my own practices with each dog that are individualized and, I guess, uniquely identifiable as a practice, as a repeated set of behaviours. I'm not so picky about calling it music. I don't think... I think it's like a shared sonic play, a form of sonic play and vocal culture. Because it is very difficult to say, well, you know, all these sorts of arguments about music and language and all those kinds of slippery definitions and things.

So yeah, I'm kind of working in three parts. I'm doing this sort of fieldwork which has been with individual dogs, and I've also been working in a dog shelter and playing music with dogs in that setting. And I play the clarinet, so I play clarinet with the dogs, but lately I've also been singing with them as well. And they've been singing as well, I think.

And then I do these interviews as well, which are really about including the perspectives of other people about their individual relationships with their dogs, because everyone seems to have quite a unique take on it, which I've found in people who are exploring this and a lot of people who aren't musicians as well. And then I'm kind of doing this, I guess, artistic output, which is this Concert for Dogs, kind of in the spirit of Laurie Anderson.

E: Like, people are supposed to bring their dogs?

S: Yeah. Yeah, exactly.

E: I wish I could bring my dog.

S: I mean, your dog looks like a perfect candidate for the Concert for Dogs. But it's framed more—I think Concert for Dogs is still a bit of a working title—because it's more of a

workshop than anything. It's participatory. I kind of guide the participants through a guided improvisation with their dogs. And it's a sort of prompt to get them to think about sound and singing and music as an avenue for play and an avenue for communication beyond language with their animal. So that's kind of the thesis at this point.

E: Yeah, that's great.

S: I'd be interested to hear about your relationship with your dog. Your dog is called—I looked it up just before—Idris. Is that right?

E: Iris, Idris Doughnut. Idris Doughnut.

S: Beautiful. And how did you discover his vocal tendencies?

E: Yeah. Um, I'll tell you one sort of funny time. He often vocalizes, which is not sort of a music-making context, but I have a very intense eight-year-old daughter who will have very long, very loud meltdowns where she'll be yelling, like, really loudly for a very long time. And sometimes, you know, it's very intense and very serious. And then sometimes Idris will come and start howling while she's yelling, and then, no matter how angry she is and how stressful it's been, everybody bursts out laughing because you cannot not laugh when your dog starts howling when a child is yelling.

I think that's actually the first time I remember noticing him howling. Like, if there's something intense going on, he'll sometimes come and howl and that actually breaks the tension a little bit. I mean, he's probably not... I don't think he's thinking about that, but at least he's joining in, in this moment of emotional intensity, and then it actually shifts the situation for everybody.

But in terms of calling it musical, I should say we picked a Whippet partly because they're not particularly loud dogs. Like, we live in a tenement in Glasgow. So there's like eight apartments in the same building. So we wanted a dog that wouldn't be too vocal. So I was not expecting he'd be a howler at all.

But a few years ago I started playing oboe again after not having played for about 20 years. And I think it was especially—I had a friend coming over to play duets—and it was especially when we would play duets that he would come and join in as well. And I should say that he doesn't do it every time. Like, sometimes he's in the mood and sometimes he's not in the mood. And he's a pretty stubborn dog. He does what he wants, and he doesn't do what he doesn't want.

And I've sort of made myself my own rule that if I'm playing oboe and he goes somewhere else, I'll follow him once. But then if he's not into it, then I'll leave him alone because he's just not in the mood that day.

But yeah, so it sometimes happens when I'm just practicing on my own, especially if I'm playing long tones or something, he'll often join in—again, not every time, but sometimes—and even more when I was playing with my friend, when we were playing duets. And I think you've seen the video of us playing and him joining in. And I've been sort of amazed at his sense of exchange. It really seems like he's listening to us playing and then fitting his howls in with that.

And I have a lot of curiosity about how he sort of fits his pitches in, because I do think there's a specific way he fits the pitches in, but it's a little bit hard to study him because he doesn't do it every day or every time I play at all. It's maybe one out of three or four times that he'll be in the mood to howl.

And he doesn't do it with every instrument. Like, my husband plays baritone—you know, it's like a small tuba—and Idris really doesn't like that. So when my husband plays that, Idris will go to the other room. He's just not into the low brass sound. And there are other instruments that leave him totally indifferent, like he doesn't react to the piano or the banjo or anything.

So, it seems to be very specific to the sound. And I think—did I send you the clips of him singing with my friend?

S: With the opera singer? Yeah.

E: Yeah. Like, yeah, he likes the soprano as well, or soprano voices. But it was interesting because again, some pieces she was practicing, he didn't really care at all about. And the piece he was interested in is actually by Murray Schafer, which I think is pretty funny.

S: Yeah.

E: I mean, I'm sure if Murray were alive he would find it hilarious that the dog was into his piece. And multiple times over, you know, Brooke was here for maybe three or four days, and every time she would practice that piece, Idris would go to the room and howl with her, but not with other pieces. So it was fairly consistent over a period of days.

But the other thing that I found quite interesting about that is he sure seems to be matching what he howls to what she's singing. I feel like—

S: Yeah.
E: And, and I mean, it was, you know, every time she was singing he did that. I mean, I just got it on film a couple of times, but it wasn't like—sometimes he would sing the short yips with her singing long pitches and vice versa. It was always like he was matching his howls to the kind of things she was singing. Um, which, I don't know, put up all kinds of questions in my mind about: why do we say that some animals are vocal learners and some aren't? And how do we draw the line? Because, you know, I, I mean, I think you probably can strictly divide between imitation and vocal learning, and you probably also can strictly divide between imitation and, say, you know, maybe he just was hearing her and thinking, "OK, she's singing the long kind of howl now, so I'll do the long kind of howl. And now she's singing the short kind, so I'll do the short kind." So, I don't know, you know, what is imitation versus what is matching versus what is learning? I don't really know, but I think that it's not as clear-cut as some papers would have you believe, I think.

S: Yeah, that's kind of what I've been puzzling over for years now because I've had a similar experience with my dog Mia. Um, where actually my honours thesis was about gestural mimicry and very basic kinds of things. Like if I play a high sound, she would do a higher howl, and if I did a low sound or a low short sound, she would bark.

So, like very basic kinds of gestures. But there's a level of thought and imitation, and it just muddies that binary that we have about, like, “this animal is a vocal learner and this animal isn't a vocal learner.” It's like, as you said, there's no clear line.

E: Well, my personal theory is that there is, you know, our tendency to want to say, well, these animals do this and those animals don't. I feel like it all comes out of sort of residual Cartesian thinking back to the time when people thought humans had souls and animals didn't. And then, when science became non-religious, it sort of turned into, well, these, you know, humans have language and animals don't, or humans have consciousness and animals don't. And then we're prepared to let a very few—you know, I think we're ready to say, well, it's only humans and bats and whales that do this but no other animals. When in fact, I think that it makes more sense to think of, say, vocal learning as a thing that can exist that lots of different animals have lots of different kinds of engagement with. And the scale—“this one does and this one doesn't”—is always going to be a problem.
And I think it comes back to religious thinking, honestly. I feel like, often—my personal way, the way I see it—the scientists who are most strict about, “oh, well, humans can do this, but this is an animal, so we can't do that; you have to assume it doesn't do that unless you can prove it can,” I feel like they're actually, like, they think they're being the most scientific, but they're actually being the most religious. You know, they still believe that humans have souls and animals don't, even if they're defining that differently.

S: And I think also there's, there's a sort of, um, you know, very common thing in science: that animals are trying—you know, that they're trying to study them in their natural habitat. Whereas dogs—like that, we're seeing all these amazing abilities in dogs, like the ones that can use those AAC, like, you know, those language boards. That's not a behavior that is naturally observable. So there's all these kinds of abilities that are only available if there's human intervention and human disturbance.

E: But I mean, dogs only exist because of humans. And, yeah, I'm curious about—I would be so curious to know, like, how would humans be different if we didn't have dogs?
Like, I'm sure a lot of human culture would have developed differently without dogs.

Um, yeah, there was a really—I thought very stupid—article in The Guardian a couple of months ago. There have been a couple of articles by this guy sort of arguing that people shouldn't have pets. And, you know, first of all he's talking about how some parrot he met was neglected, and you're like, "OK, well, of course, people shouldn't take a parrot from the wild and neglect it." But then he went on from there to, like, "and dogs deserve to be living out their days in the wild," and you're like, "have you ever met a dog? You know, there is no such thing as a dog in the wild. It's not a dog without a person, and vice versa."

S: I've been reading this book at the moment—this animal justice book—which talks briefly about abolitionists. Have you heard of that? Is it, is that what—

E: You mean, is it the people who think nobody should have any interactions with animals?

S: Basically, yeah. Like, they just want to abandon that practice and abandon all kinds of domesticated practices. Um, Gary Francione was the guy, I just looked it up, but I don't know.

E: Yeah. I think it's just strange because, I mean, I have the same problem with people who come to veganism from a certain perspective, but I'm not a vegan myself. But sometimes people—I feel like sometimes people will come to these abolitionist perspectives out of a distaste for animals. They're like, "we're not animals, we don't do that. Animals eat animals because they're animals, but we're not animals." Whereas I feel like I very much am an animal, and although I'm not a vegan, I could imagine saying, "I'm an animal and I don't want to hurt another animal." So, you know, I could understand that rationale for being a vegan or being an abolitionist. But I have a really hard time—there's something very, actually anti-animal about wanting to avoid animals because you think you're above interacting with animals or something.

S: Yeah. You know, it's all pretty, um, it's sort of loops of thinking, isn't it? Um, yeah, I mean, I'm really interested about Idris. Do you think, like, 'cause I suppose the thing that people often say—the first thing they say when they see videos of me doing what I do with dogs—they say, "is the dog in pain?"

E: I was gonna ask you how you react to that because, like, the dog can come and go. He doesn't stick around if he doesn't like something.

S: Well, I mean, I'm gonna kind of counter that question with: do you think the dog enjoys it?

E: Right. Oh, I do think the dog enjoys it just because, like, he doesn't really do things he doesn't want to do. He's a Whippet. So, like, if he wants to hop on the table and take food, he hops on the table and takes food even though he knows he's not supposed to. If he wants to be in the room with us, he's in the room with us. If he wants to be out, he's out.
If he wants to take all the pillows and stack them up so he's more comfy, he does that. He has agency. You know, obviously, I never close the door when I'm playing oboe with him. So he always has the choice to come and go. Even in the clip you've seen where he's lying in his crate—the door is open so he can come and go. And, you know, just seeing how he leaves the room when Neil plays baritone—clearly there are some sounds he doesn't enjoy, and then he goes. He's a pretty resourceful dog.

So, I do think he enjoys it. I don't think he—I mean, he always looks—I mean, who knows? I can't—you can't read, or I can't fully read, the dog's facial expression. But sometimes I feel like he doesn't know quite what to make of it. He's like, "what are these people doing?" But I don't think it's in a way that's threatening or that he's in pain or something. I think he's like, "why did these people suddenly start howling?" Sometimes we have to stand in the hallway and howl with him, and sometimes he joins in. Sometimes he just looks at us like we're a bit crazy.

S: Interesting. Yeah, because I've had experiences where the dogs—you know, it's difficult to tell whether they enjoy it. I mean, they're definitely engaging and enthusiastic about joining in. But there are dogs that I've worked with who wag their tails, and then it's almost like they're performing. And after it's finished, they sort of come up to you like, "oh, look what I just did, you know, I had this amazing singing with you."

E: Yeah, I mean, I think there are so many different reasons people engage in music too. And you can imagine that a dog might engage in a music-making practice not because they really cared how it sounded, or even because they cared about that sonic interaction, but just

because they can see it makes their person happy—which is fine. I mean, there are people who engage in music for that reason too. Like, they don't really care that much, but they know it makes their grandmother happy or whatever. So…

S: Yeah.

E: I think a multiplicity of reasons for engagement means that it's not not a real thing that's happening.

S: No, no. I think, I mean, I think I preface the whole thesis with the idea that music is an interpersonal thing. And in this research, I'm really putting that at the forefront: it's this shared interaction, and the musical product is actually not that important. It's more about the social interaction and that aspect of it. So it sounds like you've come to the same way of thinking, which is great.

E: Yeah, I mean, that's one of the reasons I've been interested in thinking about dogs is that, you know, so much of my research has been about birdsong, and I've also used some whale song and seal howls in my music, but it's mostly birdsong, which of course sounds so much like music. But in making music or making music-like sounds with my dog, I've realized how much music is also about social interaction. I mean, of course, I knew that, but it wasn't really until COVID and not having any musical interaction with people. And in fact, you know, playing with the dog sort of became like my lockdown practice, like, I get to make music with my dog—that's who's around—and we're going to make some sounds together. And it made me realize how much my focus on birds has led to a focus on one kind of one aspect of music, which is what it sounds like. But that's really not the only, or maybe not even the most important, aspect of music. So just thinking about the dog, you know, just recognizing that, OK, another huge part of music is how you interact with other music makers around you, and the way he seems to listen and join in after he's heard what we're doing, and stop after we stop—like, it really feels like an interactive experience. He's in the mood for that.

S: I mean, it's interesting, you said that he was most reactive when you were playing with somebody else. It was like he was seeing something social happening. He's like, “Hey, I wanna be a part of that,” which is something I've observed in the dogs that I've worked with.

Because when I first started with these dogs, I was with their people, and I couldn't get any kind of reaction out of them. But the owners—as soon as I started making music with the owners, then the dogs were like, "Oh, hang on, I want to be a part of this." So, um, and that makes sense in terms of, like, I guess wolves in the wild, like this chorus howl, which is all about—you know, I mean, well, they don't really know exactly why they do it, but there's something about hierarchies and sort of setting the social places within the group, and bonding and all these kinds of things. So, I mean, I refer to a lot of what I do as interspecies chorus howl.

E: Yeah.

S: Yeah, I mean, I'm interested—you said it's become a bit of a practice. Has the practice changed over time?

E: It's very intermittent. Like, right now I can't play oboe because I have an asthma flare-up. So I haven't been able to play for a couple of months. So it's sort of a practice that we go away from and come back to. Yeah, I would say at the beginning he used to mostly just do howls, and now sometimes he'll intersperse it with barks. I sort of wish he'd go back to just the howls because it's easier to know how to interact with the howl, but it'll sort of go in and out. So I don't know what has changed for him in terms of how he's hearing it and how he thinks he fits in. Yeah, so I think the kinds of sounds he uses have changed a little bit. It's, in a sense, become more varied. You know, to my own ears, the howls are a nicer sound.

S: I mean, I feel the same way, which is just a purely aesthetic thing, but sometimes some dogs only bark.

E: Yeah.

S: Does he, does he move—like, does he physicalize at all? Like, does he arc his head back, or does he move around the room, or does…

E: You know, in the video of him—one of the videos of him singing with a singer—and I think I have three videos, so I don't know if I sent you all of them or not. But there's one

where he's standing up when he's singing with her, and then when he's done, he lies down. But he doesn't always—I mean, sometimes he howls while lying down. With me, he usually is lying down when he howls. But with Brooke, he was maybe more standing up. But she was also standing up, and, well, I guess I stand up too. So I don't know why he stood up when he was howling with her, but I'll have to have more singers come to stay and see how he reacts to their singing.

S: Because I've found that, for me, with the dogs, like with a wind instrument, kind of using those breathing gestures, the dogs respond to that. And they know when the sounds start and end because of the physical gestures.
Is there—have you noticed any of that? I mean, it sounds like you…

E: No, I've noticed him more reacting to—like, he comes in after the sound. My own sound comes in. I had, years ago, a dog, and I don't think he reacted when we played music. This was like 25 years ago. But I remember one time I was listening to a piece of music, a recording of a piece of music, which had some wolf howls in it. And when the wolf howls came in, that dog started howling as well. But I guess it must have been—I don't even remember it. But anyway, it was back in the days—I don't remember whether it was a CD or a cassette tape. It was back in the days when you would fast-forward things, and you'd hear something going by at, like, 10-times speed so you could figure out where we were going. Yeah. So I remember it was fast-forwarding through that, and it was fast enough that I couldn't really hear what was going on, like which part of the piece it was. But when it got to the howling part, the dog started howling, even though it wasn't the complete howls—it was just, you know, samples of the howls, every one out of every ten samples or something. So there was clearly something in the timbre or something that he was hearing that told him to howl there.

S: Yeah. Yeah, I mean, that's what I've noticed in everything I've done: that they are most reactive to, like, high, elongated, siren-like sounds that quite closely resemble howls.

E: Idris doesn't react to recordings at all. So even if I play a recording of wolf howls, he doesn't care.

S: Right. Yeah, I think that—I mean, I'm just speculating—but not being able to see where the sound comes from is probably a bit disorienting for them. So they sort of think, "Oh, that's not a natural sound."

E: He doesn't seem upset either. He just ignores it.

S: Yeah. Interesting. Yeah. And so you said he—how old is he?

E: Uh, 3.

S: And what, um, what's his history? Like, do you know anything about where he came from, or maybe his individual history? Does it play into the singing at all?

E: I don't think so. I mean, we got him from a breeder when he was seven weeks old. And I don't think his breeders were musicians, you know, but he came from a happy home. He was very well loved and cared for. But yeah, when he came to us, I mean, he was seven weeks, so he was still quite young. So I feel like we raised him from when he was basically still a baby.

S: Yeah. He learned music from you.

E: Right. Exactly.

S: Yeah. Yeah, I mean, you've done a good job of kind of giving me the overview, which is great. Yeah, I mean, I've got lots to write about just from chatting to you, and it's really actually very validating to talk to someone who is coming to the same kinds of conclusions that I am. Because I do feel like a bit of a crazy person doing this research, because it's so, um, it is quite obscure and pretty unusual.

E: Yeah. Well, my theory—because I feel like zoömusicologists or, you know, just artists thinking about animals—I feel like very often discover something 10 or 20 years before scientists do. And I'm sure that within the next 10 to 20 years there will be a paper, a scientific paper, about dogs and vocal learning. But I guess because it's easier for us to talk about single anecdotes, whereas scientists can't do that as science is currently configured.

And science—scientists tend to have this assumption that things aren't happening unless it's been proved that they are, when obviously, you know, they could well be happening. We just haven't noticed.

S: Yeah, I think this—did I send you that video of the Border Collie and the piano?

E: I don't remember.

S: Maybe I'll send it to you. It was this Border Collie which could match the pitches of this piano.

E: Yeah, I know. It's amazing.

S: I've seen lots of examples of that kind of thing. And there's another one that I think I talked about in my master's thesis where the woman would play a piano, and there was this sort of piano that looked like organ pedals—kind of big, big piano keys—and the dog would match the pitch. It would press the pedal of the correct pitch, which is just mind-blowing, really. I mean, who knows what's going on in these videos and what sort of practices have motivated that, whether there's like a Clever Hans effect or something happening. But still, I just think all that kind of anecdotal stuff really makes you think there's so much more going on than we even can fathom.

E: So again, you know, I remember years ago when I was teaching piano, I had a student who was six, and she was just not ready to be looking at music. I mean, she couldn't read yet, and she couldn't read music. But she would have the book in front of her, and then she'd look at me to see my reaction to where she was placing her fingers. So again, you know, humans also use the Clever Hans method of learning how to do things. So, yeah, I mean, my personal belief is that music-making is not one thing. For some people, music is completely an athletic activity, and they wouldn't even have to, in a sense, hear it or feel anything. And for other people, it's—you know, for some people, pitch is very important, for some people it isn't. For some people, rhythm is very important; for other people it isn't. For some people, it's all about timbre; for some people, it's all about narrative. And obviously these things can overlap, and probably most people sort of engage most of those facilities for making music. But I feel like

a person could actually completely lack one parameter of music-making and still be a great musician. And, you know, for example, there are musicians out there who can't hear, and they still play music and, I guess, feel it or interact with it in other ways. And, you know, I've certainly known people—for example, pianists—for whom it's a very fine-scale athletic activity.
S: And often a solo activity as well, where it's not at all about collaboration or improvisation or anything that—that maybe other people think of as a sort of sacrosanct part of music.

E: Yeah.

S: Yeah.

E: So, yeah, first of all, you know, just because dogs are doing some, or one dog is doing something in one way and not another way, I don't think that means it's not related to music. But second of all, I think probably dogs, like people, will have a wide variety of reasons for interacting with these sounds—like maybe one just loves their person and wants to please them and sees that it makes their person happy, and another one maybe thinks it sounds interesting, and another one likes the sound or thinks it feels good to howl. And another one doesn't really know what's going on but doesn't want to be left out, or, you know.

S: Yeah, I mean, I think I've framed it in my writing as—as—I'm not necessarily looking at musical adeptness or musical virtuosity. Like, I'm looking more at musical curiosity and, like, enthusiasm and willingness to—to collaborate. So that feels just as important in many ways than, like, any kind of arbitrary technical measure of—of, like, musicality. And the ability to socialize feels like a kind of fundamental part of music, and…

E: Yeah. Yeah. Which I think gets ignored because we're so focused on what it sounds like. Yes. Which—actually—I think what music sounds like is really actually a means through which we accomplish the other ends of music rather than the other way around. Perhaps. I mean, again, I think there's lots of musics. So, maybe some of them are all about what they sound like.

Have you found any scientific papers which have any acknowledgment of the possibility that dogs might have some music-like and, uh, inclinations?

S: Well, there's some—there's some scientific papers that are about, like, chorus howling—where they use the term in wolves—and there's one about, um, dingoes as well. There's a few different ones. Um, I can send you my references for those, um, which talk about, like, basically the complexity of—of howls and, like, the way that there's, like, individually distinct kind of markers for each animal within the pack. And I—I'm not a scientist, so I'm not, like, really good at all the data part of it. Um, you'd probably be a lot better at that, having worked with scientists. But, um, yeah, I mean, I can't find much where they say anything much about music. It's—it's—it's still very much, like, communication. They're thinking of it as communication, as a—like a form of, like, proto-language, but I don't think they even put it in those terms. Um, so yeah, that's where I'm at at the moment. I mean, there's lots of artists who are thinking about it, definitely. And there was somebody who presented on it, um, in—in RASCAL.

E: Um. There's two other people who do dog research. Kate.

S: Anyway, I can send you—I'll send you a list of things that I've found kind of the most relevant because I—I mean, obviously there's a lot of reading I do that's very broadly about, like, environmental humanities and, like, more-than-human geography—all these kinds of methodological stuff that I've been looking at. But there's a few things that are, like, just pinpoint—like, kind of exactly what I'm doing, so—

E: Well. Yeah, I would love to see your reading list, and obviously I will want to refer to your research. So, yeah. Do you have anything published yet, or—

S: I don't have anything published. No, I mean, I've got the master's thesis that I wrote, which you marked.

E: I'm sure I will be referring to that. Maybe at some point I can refer to our conversation or something like that. Research is, you know, credited. Let me know if you have any more questions, and we can always chat again if you have any more.

S: Yeah. It's just, like, everyone sort of has a different take on it, which is really great, and, um, and a different way of thinking about it, and each individual relationship with every dog seems to be quite unique. And yeah, it's great. Thank you so much.

E: I mean, I spent a lot of time just marvelling at how strange and wonderful it is that we have dogs because, like, imagine if people had never domesticated any pets and then suddenly people started to want to do that now—like, we wouldn't be allowed. Nobody would let us take squirrels and domesticate them or whatever. And it's just a—I mean, it's a collaborative relationship that grew up over so many thousands of years. Like, it's just—it's incredible we get to live with these things. And I mean, sometimes, like, you know, sometimes I just look outside and I see everybody walking by with their dog and I just find it hilarious that we have all these wolves on the strings and we're walking around.

S: It's—it's absurd!

E: Like, my kids are really into, you know, lots of fantasy novels and TV series, and there's always, like, familiars or—or whatever—daemons or whatever you call your animal friend. But we actually have them. We have—we live with animal friends.

S: And they love us so much. It's kind of unbelievable how much they love us.

E: Yeah. I think he just loves nothing better than to—you know, if I'm working at home, I'll sit in the bed and he'll just curl up next to me and he's so cuddly and—yeah, and—and it's so—it's so fascinating—like, clearly he loves hugs. He likes it when I hold him. He doesn't mind when I carry him around. But, like, in the wild, a dog would never get—you know, wolves never got carried around in arms because, like, wolves don't have arms. Um, so it's like there's all these things that they love that they only love because we have evolved together with them. Yeah.

S: And they're so outside of—of what is considered sort of natural or, like, in the wild, which is—um, yeah, I—I think that's one of the reasons why I've done this research and—and with dogs is because they're so accessible, you know, they're—they're there and they're—they're

already participating in music, whether we like it or not. They're sort of—they're interrupting us and—and a lot of those videos on the internet are, like, kids practicing—like, kids practicing saxophone—and then their dog is, like, joining in. It's like we didn't ask for that. It's happening. You know, they're—they're enthusiastic participants.

E: I mean, I'm sure dogs have been doing it for as long as we've had dogs. I wonder if anybody has historically written about dogs howling with…

S: Yeah, I mean, I've—I've got this big long book. It's called, like, Amazing Dogs. And it's just, like, extraordinary dogs throughout history. And there's some stuff about, like, um, people who've tried to make dogs play instruments. Um, yeah, like piano and stuff like that. I—I think I—I think I got the reference from—from Kate, um, for this book. Yeah, I mean, I—I haven't found much reference to it. Um,

yeah, but I—again—I haven't done an exhaustive sort of historical study of—of, like, dogs in, like, history.

E: I think that kind of—one thing I found really helpful when I was writing a Hermit Thrush paper I wrote a couple of years ago about, sort of, the history of how people talk about Hermit Thrush song: I got a subscription to Newspapers.com, which is American newspapers. But I think there's things like that in different countries. So it was, like, digitization of a huge number of American newspapers going back to 1600 or something. And it was really helpful, because you may find, like, little articles, you know, about somebody making music with their dog from, you know, 200 years ago or something.

S: Yeah, that is it. That's a really interesting idea. I mean, my—my, um—in fact, my—my database of, like, historical records of—of dogs making music with humans is through, like, kind of reality TV and the sort of, like—like YouTube and all this sort of, like, early internet kinds of stuff as well—like that. That was—yeah, that was what my master's thesis was all about. Um, and there's a—there's a—a strong lineage of musical dogs on, like, the Got Talent franchise and all this sort of, um, kind of talent show, um—um, TV shows.

I—I was writing something about that the other day mostly in relation to the way that people perceive—perceive pain in—in dog howls. You know, they hear it as, “that's—the dog's in pain.” Um, some sort of distress.

E: Why are people obsessed with thinking dogs are in pain when they are?

S: I don't—yeah, I don't know either. I—I've always been baffled by that. Um, like it hurts their ears or something, but if it hurt their ears, they wouldn't stay there, they'd just move away.

E: It's so weird. But I know when I posted one of those videos, like, a lot of people were like, “I'm sorry to tell you, Emily, but that dog is in pain.” Like, no—he would go, he was in pain and—like—he doesn't like the baritone. He goes, and I mean,

S: They also—they stick nearby—they just sit right close to you. So anyway, it—it's strange. Very strange.

Cool. OK, great. Well, that's, um, been a really great chat. Thank you so much, and I'll send through some of those, um, those references because, um, it sounds like you're on a path that I'm—I'm also heading down. So, thanks so much.

E: Yeah. OK.

S: Thanks so much.

E: Thank you to you.

S: Yeah, bye.

E: Bye.

Appendix B Documentation of Animal Ethics Approval

Animal Ethics Approval Letter



THE UNIVERSITY OF SYDNEY

RESEARCH INTEGRITY &
ETHICS ADMINISTRATION

Animal Research Authority (ARA)

This ARA must be kept in the facility/farm where animals are housed or carried with you during field work

Animal Research Authority

Project title:	Collaborative Interspecies Music: Disrupting Exclusively Human Perceptions of Creativity through Musical Means
Project number:	2022/2208
Chief investigator:	Catherine Ingram
ARA approval period:	10/10/2022 – 10/10/2023 An annual report must be submitted and approved prior to the ARA expiration date above.
Project type:	Privately owned animals

In compliance with Section 27 of the NSW *Animal Research Act 1985*, this Animal Research Authority (ARA) remains in force for a period of 12 months, unless cancelled sooner.

Renewal of the ARA is conditional upon submission of a satisfactory annual report to the AEC in accordance with the *Australian code for the care and use of animals for scientific purposes 8th Edition 2013*.

Research Integrity & Ethics Administration
Research Portfolio
Level 3, Michael Spence Building (F23)
The University of Sydney
NSW 2006 Australia

T +61 2 8627 8174
F +61 2 8627 8177
E animal.ethics@sydney.edu.au
intranet.sydney.edu.au/ethics

ABN 15 211 513 464
CRICOS 00026A

THE UNIVERSITY OF SYDNEY

RESEARCH INTEGRITY &
ETHICS ADMINISTRATION

Animal Research Authority (ARA)

This ARA must be kept in the facility/farm where animals are housed or carried with you during field work

Monday, 10 October 2022

Dr Catherine Ingram
Musicology Unit; Sydney Conservatorium of Music
The University of Sydney

Email: catherine.ingram@sydney.edu.au

Dear Dr Ingram

I am pleased to inform you that the University of Sydney Animal Ethics Committee (AEC) has approved your project entitled **"Collaborative Interspecies Music: Disrupting Exclusively Human Perceptions of Creativity through Musical Means"**.

Project duration: 10/10/2022 – 10/10/2025
At the end of the project duration (3 years) a completion report must be submitted.

ARA expiry date: 10/10/2023

Authorised investigators: Ingram Catherine; Frank Solomon; Taylor Hollis;

Project description:
This research will document experiences of playing music with dogs. Previous experiences and online examples show dogs vocalising in humanly musical ways in response to human musicians. As such, the researcher will spend time with and play clarinet with dogs in animal shelters and homes, building a relationship with each dog while observing their vocalisations and behaviour in response to the clarinet. The researcher aims to make and record music with domesticated animals to explore the potential of music as an enriching and socially bonding activity (similar to other activities dogs and humans partake in i.e., walking, playing, sleeping etc.). Additionally, the project is an artistic and compositional procedure as the researcher will musically improvise and compose music with the dogs. This artistic practice aims to expose an apparent canine musical curiosity (evident in the many examples of musical dogs found on YouTube and TikTok and on TV talent contests). The researcher is hoping to demonstrate overlooked musicality in species beyond humans, songbirds and whales. Throughout the fieldwork (taking place over 3 months), the researcher will collect qualitative data, including behavioural descriptions and written musical analysis of the researcher's experience playing music with the dogs. The outcome will be both compositional—an album of recordings—and research-based—a written thesis documenting, analyzing and deliberating on these experiences. In a world plummeting over the precipice of environmental ruin, novel ways of bridging the perceived divide between humanity and the rest of life are sorely needed; we must see ourselves as part of, not above, nature.

Documents approved:

Date	Type	Document
05/10/2022	Application Form	AE Application Form_Approved
27/09/2022	Monitoring Sheet	Music monitoring_v2
15/09/2022	Other	Clarinet range and dog hearing range
15/09/2022	Consent Form	Consent Form
15/09/2022	Other	Inclusion Exclusion Criteria
15/09/2022	Information Statement	Information Statement V3 12 September

Animals approved:
Please refer to the document at the end of this letter, which details your approved animal usage and location(s).

THE UNIVERSITY OF SYDNEY

RESEARCH INTEGRITY &
ETHICS ADMINISTRATION

Animal Research Authority (ARA)

This ARA must be kept in the facility/farm where animals are housed or carried with you during field work

The Committee approved the application in the absence of ethical objections and on the basis of satisfactory scientific merit. The **special conditions of approval** are as follows:

Special Conditions of approval

1. To ensure that animals are not negatively impacted, it is a condition of approval that the recordings of the initial interactions with the first two dogs are submitted to the Animal Welfare Veterinarian team (resint.veterinarian@sydney.edu.au) for review, prior to proceeding with further dogs.

For noting

2. This project involves working with cats and/or dogs in New South Wales. Please note as part of your annual government animal use reporting (collected by the Ethics Office in January of each calendar year), you will also be required to submit via email to the Ethics Office (animal.ethics@sydney.edu.au) an additional spreadsheet to report on the fate of all dogs and/or cats at the conclusion of their use in the project. We recommend you keep a record of the fate of each animal so this information is available at the time of reporting. More information on fate reporting and a copy of the spreadsheet is available on the Animal Ethics intranet under Managing your project > Annual government usage report.

3. Please find attached with the outcome the approved Word version of the Application Form. If in future, you wish to make amendments to the project, please ensure that this document is updated with Track Changes and uploaded with any modification forms submitted for AEC review.

Conditions of approval

1. An annual progress report or completion report must be submitted and approved before the anniversary of approval of the project.

2. The following documentation must be kept in the facility where your animals are housed or with you when undertaking fieldwork:
   - A copy of this ARA
   - Emergency contact details in case of an animal emergency
   - Approved monitoring records

3. This project must be conducted according to the application approved by the AEC, including continuing compliance with the conditions outlined in this ARA and with the relevant state/territory animal welfare legislation, the Australian code for the care and use of animals for scientific purposes 8th edition 2013 (the Code), the University of Sydney Animal Ethics Procedures and all other relevant legislation.

4. Animals in captivity must be monitored by approved investigators (or animal care staff under a formal agreement with facility management) at least twice weekly (with even spacing throughout the week). Where applicable, more frequent monitoring must be adhered to in accordance with the approved project. The husbandry and environmental conditions of captive animals must be monitored daily. This may be performed by the facility animal care staff.

5. Any changes to the project must receive written approval from the AEC before they are implemented.
   This includes obtaining AEC approval for any changes to experimental procedures, animal numbers, personnel, source of animals or location of animals.

6. All unexpected adverse events that may impact on the wellbeing of an animal must be reported to the AEC within 48 hours, as per Clause 2.1.5 [v] [d] and 2.4.34 [ii] in the Code.

THE UNIVERSITY OF SYDNEY

RESEARCH INTEGRITY &
ETHICS ADMINISTRATION

Animal Research Authority (ARA)

This ARA must be kept in the facility/farm where animals are housed or carried with you during field work

7. Personnel working on this project must be sufficiently qualified for their role by education, training and experience, or adequately supervised.
   All new investigators must successfully complete the Introduction to Animal Research (ITAR) course.

8. All animal enclosures (e.g. pens, cages and containers) must be clearly identified with chief investigator name, number of animals, DOB if provided and date of arrival, sex and strain.

9. The AEC must be notified if rodents are required to be singly housed for more than 4 weeks.

10. Research data must be retained and stored in accordance with the relevant legislation and University guidelines.

11. Any drugs to be used for procedures involving animals must be within date (not expired) and stored appropriately as per the manufacturer's recommendations. It is the responsibility of the Chief Investigator to ensure that relevant and current authority for the use of restricted drugs is obtained.

Please contact the Ethics Office at animal.ethics@sydney.edu.au should you require further information.

Yours sincerely



Professor Kay Double
Chair
Animal Ethics Committee (AEC 1)
On behalf of the University of Sydney

The University of Sydney AECs are constituted and operate in accordance with the NSW Animal Research Act 1985 and its associated Regulations, the Australian code for the care and use of animals for scientific purposes 8th Edition 2013 and the Australian Code for the Responsible Conduct of Research 2018. All personnel named on the project should be conversant with these documents.

AEC Modification Request Approval Letter

THE UNIVERSITY OF SYDNEY

RESEARCH INTEGRITY &
ETHICS ADMINISTRATION

A copy of this modification approval letter must be kept with the Animal Research Authority

Thursday, 4 May 2023

Dr Catherine Ingram
Musicology Unit; Sydney Conservatorium of Music
The University of Sydney

Email: catherine.ingram@sydney.edu.au

Dear Dr Ingram

Title: Collaborative Interspecies Music: Disrupting Exclusively Human Perceptions of Creativity through Musical Means

Project number: 2022/2208

Your request to modify the above project submitted on **21 April 2023** was considered by the University of Sydney Animal Ethics Committee (AEC) at its meeting on **27 April 2023.**

The Committee had no ethical objections to the modification(s) and has approved the project to proceed with the change in procedure.

Details of the modification approval are as follows:

Currently approved investigators: Ingram Catherine; Frank Solomon; Taylor Hollis;

Change to study procedures as outlined in the 'Modification to an existing approved application' form in IRMA:

*Change in procedure – request for interactions with shelter dogs to occur outdoors whilst on a walk (current approval is for interactions within the shelter change to monitoring sheet to include 'ears back' behaviour interpretation whilst playing the clarinet on their walk

Documents Approved:

04/05/2023	Application Form	Application form_approved_20230504
21/04/2023	Monitoring Sheet	Updated Monitoring sheet

Animals Approved:
Please refer to the document at the end of this letter, which details your approved animal usage.

Conditions of approval

1. An annual progress report or completion report must be submitted and approved before the anniversary of approval of the project.

2. The following documentation must be kept in the facility where your animals are housed or with you when undertaking fieldwork:
   - A copy of this ARA
   - Emergency contact details in case of an animal emergency
   - Approved monitoring records

3. This project must be conducted according to the application approved by the AEC, including continuing compliance with the conditions outlined in this ARA and with the relevant state/territory animal welfare legislation, the Australian code for the care and use of animals for scientific purposes 8th edition 2013 (the Code), the University of Sydney Animal Ethics Procedures and all other relevant legislation.

THE UNIVERSITY OF SYDNEY

4. Animals in captivity must be monitored by approved investigators (or animal care staff under a formal agreement with facility management) at least twice weekly (with even spacing throughout the week). Where applicable, more frequent monitoring must be adhered to in accordance with the approved project. The husbandry and environmental conditions of captive animals must be monitored daily. This may be performed by the facility animal care staff.

5. Any changes to the project must receive written approval from the AEC before they are implemented.
This includes obtaining AEC approval for any changes to experimental procedures, animal numbers, personnel, source of animals or location of animals.

6. All unexpected adverse events that may impact on the wellbeing of an animal must be reported to the AEC within 48 hours, as per Clause 2.1.5 [v] [d] and 2.4.34 [ii] in the Code.

7. Personnel working on this project must be sufficiently qualified for their role by education, training and experience, or adequately supervised.
All new investigators must successfully complete the Introduction to Animal Research (ITAR) course.

8. All animal enclosures (e.g. pens, cages and containers) must be clearly identified with chief investigator name, number of animals, DOB if provided and date of arrival, sex and strain.

9. The AEC must be notified if rodents are required to be singly housed for more than 4 weeks.

10. Research data must be retained and stored in accordance with the relevant legislation and University guidelines.

11. Any drugs to be used for procedures involving animals must be within date (not expired) and stored appropriately as per the manufacturer's recommendations. It is the responsibility of the Chief Investigator to ensure that relevant and current authority for the use of restricted drugs is obtained.

Please do not hesitate to contact the Ethics Office at animal.ethics@sydney.edu.au should you require further information or clarification.

Yours sincerely



Em Professor Michael D'Occhio
Chair
Animal Ethics Committee
On behalf of the University of Sydney

The University of Sydney AECs are constituted and operate in accordance with the NSW Animal Research Act 1985 and its associated Regulations, the Australian code for the care and use of animals for scientific purposes 8th Edition 2013and the Australian Code for the Responsible Conduct of Research 2018. All personnel named on the project should be conversant with these documents.

Participant Information Statement (Animal Ethics)

Collaborative Interspecies Music: Disrupting Exclusively Human Perceptions of Creativity through Musical Means

Dr Catherine Ingram (Lead Investigator)

Sydney Conservatorium of Music

Email: catherine.ingram@sydney.edu.au

Student: Solomon Frank (Bachelor of Music [Composition] with 1st class Honours, Masters of Research [Geography and Planning], current PhD candidate)

Phone: +61434592701

Email: sfra7572@sydney.edu.au

---

1. What is this study about?

We are conducting a research study about collaborative music making and animals. Enrolling your animal/s in this study is voluntary.

The aims of this project are as follows:

- Explore the place of collaborative music making with dogs in settings where animals and humans cohabit and its potential role as a socially and sensorially enriching activity;
- Build musical practices and interpersonal relationships with domesticated dogs (in similar ways to human musicians' collaborations);
- Sensitively record and analyse the resulting music
- Use these recordings and analysis to discuss overlooked musical abilities in species beyond humans, songbirds and whales;
- Challenge established human musical definitions to question a belief in the human uniqueness of music.

Please read this sheet carefully and ask questions about anything that you don't understand or want to know more about.

2. Who is running the study?

The study is being carried out by the following researchers:

- Solomon Frank, PhD candidate at Sydney Conservatorium of Music, University of Sydney
- Dr Catherine Ingram, chief investigator, senior lecturer at Sydney Conservatorium of Music, University of Sydney
- Dr Hollis Taylor, co-investigator, ARC future fellow at Sydney Conservatorium of Music, University of Sydney

Solomon Frank is conducting this study as the basis for his degree of Doctorate of Philosophy at The University of Sydney.

This study is being funded by Australian Research Council through Dr Hollis Taylor's grant, "The nature of music and the music of nature" (Grant no. FT190100605).

3. Who can take part in the study?

We are seeking dog owners and organisations housing dogs willing to participate in a 2–3-month study investigating interspecies music and its potential impact as environmental enrichment for captive and domesticated animals. The study aims to examine and document potential creative and musical capacities in species beyond humans.

You have been invited to take part in this study because you run a dog shelter or are a dog owner.

4. What will the study involve?

If you decide to take part in this study, you will be asked to give Solomon Frank regular access to your dog(s) over a 2–3 month period to record his musical experiments with these dogs.

During the research period, Solomon will visit each dog 2-3 times a week. When Solomon arrives for each visit, 10-15 minutes will be devoted to building and maintaining a social bond with the animal (greeting animal caretakers, patting the dogs, potentially going for a short walk etc.)

Solomon will play clarinet with each dog for 10-30 minutes within a space familiar to each animal (i.e., a garden or yard, a living room, bedroom). His music will be reactive to each dog's diverse vocal tendencies; hence he will attempt to build a distinct musical practice. Given your consent, you (or someone within your organisation) agree to be present or nearby for the duration of each session.

The dogs will not be restrained or held captive with a space against their will.

These musical experiments will be recorded using a Zoom H5 portable microphone and a video camera.

5. Can I withdraw my animal/s from the study?

Being in this study is completely voluntary, and your animal/s do not have to take part.

Your decision will not affect your current or future relationship with the researchers or anyone else at The University of Sydney.

If you decide to enrol your animal/s in the study and then change your mind you can withdraw your animal/s by by contacting Solomon Frank or the chief investigator via email or phone.

If you decide to withdraw, we will not collect any more information from your animal/s. Any information that we have already collected will be kept in our study records and may be included in the study results pending your approval.

6. Are there any risks or costs?

Aside from giving up your time, we do not expect that there will be any risks or costs associated with taking part in this study. All measures will be taken to observe unusual or distressing behaviour and the experiment will cease in the event of any discernible distress or unease.

As sound is a variable during the procedure, the dynamic level of the experiments will never be excessive or prolonged (experiments will never exceed 30 minutes) thus will not cause hearing damage to the dog. Excessive is defined as a dynamic level that exceeds a level that the animal would normally be exposed to in day-to-day life. Thus, the unamplified dynamic level of the clarinet would not constitute excessive.

If you choose to participate in the study, you understand that the animals will be cared for as normal by you or your organisation.

7. Are there any benefits?

You and your animal/s will not receive any direct benefits from being in the study other than the potential musical and creative enrichment your dogs may accrue from their involvement.

You may choose to publicise your involvement in this study and, if applicable, use this involvement to promote the aims of your organisation i.e., you have permission to post about the study on social media or on your website.

8. What will happen to information that is collected?

By providing your consent, you are agreeing to us collecting information about your animal/s for the purposes of this study.

Any information we collect will be stored securely and we will only disclose it with your permission, unless we are required by law to release information. We are planning for the study findings to be published. Given your permission, recordings (audio or video) made during the experiment may be published.

Data collected will be securely stored using the university's online cloud storage and copies of this data will be available to you on request.

You or your animal will be named in these publications if you agree by checking the tick box on the consent form.

9. Will I be told the results of the study?

You have a right to receive feedback about the overall results of this study. Please indicate on the consent form if you would like feedback on the results of this study. This feedback will be in the form of a brief lay summary and/or a copy of the finished thesis. You may also elect to have individual feedback on how your dog/s responded to the musical material.

10. What if I would like further information?

When you have read this information, the following researcher/s will be available to discuss it with you further and answer any questions you may have:

- Solomon Frank (email: sfra7572@sydney.edu.au ph: +61434592701)

11. What if I have a complaint or any concerns?

The ethical aspects of this study have been approved by the Animal Ethics Committee (AEC) of The University of Sydney according to the *Australian code for the care and use of animals for scientific purposes (2013).*

If you are concerned about the way this study is being conducted or you wish to make a complaint to someone independent from the study, please contact the university using the details outlined below. Please quote the study title and number.

Animal Welfare Veterinarian, University of Sydney:

- **Telephone:** +61 4 8100 8721
- **Email:** animal.ethics@sydney.edu.au

This information sheet is for you to keep

Version 2, 20/07/22 AEC Project Number: 2022/2208

Consent Form (Animal Ethics)

Research Study: Collaborative Interspecies Music: Disrupting Exclusively Human Perceptions of Creativity through Musical Means

Dr Catherine Ingram (Chief Investigator)

Sydney Conservatorium of Music

Email: catherine.ingram@sydney.edu.au

Student: Solomon Frank (Bachelor of Music [Composition] with 1st class Honours, Masters of Research [Geography and Planning], current PhD candidate)

Phone: +61434592701

Email: sfra7572@sydney.edu.au

I agree to take part in this research study. In giving my consent, I confirm that:

- The details of my animal/s involvement have been explained to me, and I have been provided with a written Information Statement to keep.
- I understand the purpose of the study is to investigate interspecies musical practices with dogs.
- I acknowledge that the risks and benefits involved in this study have been explained to me to my satisfaction.
- I confirm that any costs associated with my animal/s involvement have been explained to me.
- I understand that this study involves Solomon regularly visiting your animal/s to play music with and spend time with them.
- I understand that information collected may be used in future research.
- I understand that enrolling my animal/s in this study is completely voluntary.
- I am assured that my decision to enrol my animal/s will not have any impact on my relationship with the research team or the University of Sydney
- I understand that I am free to withdraw my animal/s from this study at any time and that I can choose to withdraw any information that has already been collected (unless the data has already been de-identified or published).

- I understand that the results of this study may be published, but these publications will not contain my name or any identifiable details of my animal/s unless I consent to being identified using the 'Yes' checkbox below.

  ☐ **Yes**, I am happy to be identified / I am happy for my animal to be identified

  ☐ **No,** I do not want to be identified / I do not want my animal to be identified

- I confirm the following:

  I would like feedback on the overall results of this study Yes ☐ No ☐

  I would like feedback on my animal/s individual results Yes ☐ No ☐

  If you requested feedback, please provide your preferred contact details (email/telephone/postal address):

  _____

  _____

  _____

- I understand that after I sign and return this consent form it will be retained by the researcher, and that I may request a copy at any time.

Animal Owner Name _____

Signature _____

Date _____

Animal Welfare Monitoring Sheet

CI name: *ENTER CHIEF INVESTIGATOR'S NAME*	**CI mobile:** *ENTER MOBILE NUMBER*
Project number:	**Animal IDs:**
Date:	**Person completing this record:**
Endpoints: [1] If observations marked [1] are observed repeatedly on three subsequent visits future visits will be discussed with owner or the experiment will terminate [2] If observations marked [2] are observed for >30 seconds the experiment will terminate [3] If observations marked [3] are observed at any time the experiment will terminate [4] If observations marked [4] are observed in combination with observations marked [5] are observed for >30 seconds the experiment will terminate	

Observed emotional state of dog on arrival: Happy/relaxed/anxious[1]/aggressive[1]

Time / Observation	0 mins	5 mins	10 mins	15 mins	20 mins	25 mins	30 mins	Notes
NAD[1]								
Face								
Licking lips[2]								
Yawning[2]								
Ears back[2*]								
Dilated pupils[2]								
Behavioural								
Heightened vigilance[2]								
Panting/trembling[2]								
Pacing/other repetitive behaviours[2]								
Attempts to escape[2]								
Inappropriate urination/defaecation[3]								
Aggression[3 5]								
Destructive behaviours[3]								
Activity								
Raising a paw[2]								
Rolling over displaying belly[2]								
Posture								
Low posture[2 5]								
Tail tucked[2 5]								
Stiff posture[2 5]								

[1] If no abnormalities are detected (NAD) mark the 'NAD' column. If abnormalities are found record this in the appropriate column and in the 'notes' section.

Vocalisations								
Aggressive barking directed at researcher [4]								
Whimpering [4]								

If dog is on leash								
Pulling at the lead to escape experiment area[2]								
Biting the lead[2]								

***** *If ears are positioned backwards for more than 1 minute, and this is the only behavioural change observed, the clarinet playing will stop and dogs will be given a couple of minutes to rest before session resumes. If this happens more than twice in a session, the session will end. If this behaviour persists over multiple visits, discussions with animal owners will be had and termination of the procedure with this dog may occur (depending on these discussions).*

[1] If no abnormalities are detected (NAD) mark the 'NAD' column. If abnormalities are found record this in the appropriate column and in the 'notes' section.

Appendix C Documentation of Human Ethics Approval

Human Ethics Approval Letter

Research Integrity & Ethics Administration
Human Research Ethics Committee



Wednesday, 9 August 2023

Dr Catherine Ingram
Musicology Unit; Sydney Conservatorium of Music
Email: catherine.ingram@sydney.edu.au

Dear Catherine,

The University of Sydney Human Research Ethics Committee (HREC) has considered your application.

I am pleased to inform you that your project has been approved.

Approval is granted for a period of four years from **09/08/2023** to **09/08/2027.**

Project No.: **2023/542**

Project Title: **Collaborative Interspecies Music: Disrupting Exclusively Human Perceptions of Creativity through Musical Means**

Authorised Personnel: **Ingram Catherine; Taylor Hollis; Frank Solomon;**

First Annual Report due: **09/08/2024**

Documents Approved:

Date Uploaded	Version number	Document Name
05/06/2023		Oral Consent Statement
05/06/2023	Version 1	Participant Consent Form
05/06/2023	Version 1	Participant information statement
05/06/2023		Sample Questions

For Noting

- Please include a version number and date in the footer of all public-facing documents and revise these each time changes are made to the documents. This allows identification of original, updated, and approved versions and to assist the committee in any future modification requests.

Condition/s of Approval

- Research must be conducted according to the approved proposal.
- An annual progress report must be submitted to the Ethics Office on or before the anniversary of approval and on completion of the project.
- You must report as soon as practicable anything that might warrant review of ethical approval of the project including:
  - Serious or unexpected adverse events (which should be reported within 72 hours).
  - Unforeseen events that might affect continued ethical acceptability of the project.

- Any changes to the proposal must be approved prior to their implementation (except where an amendment is undertaken to eliminate *immediate* risk to participants).
- Personnel working on this project must be sufficiently qualified by education, training and experience for their role, or adequately supervised. Changes to personnel must be reported and approved.
- Personnel must disclose any actual or potential conflicts of interest, including any financial or other interest or affiliation, as relevant to this project.
- Data and primary materials must be retained and stored in accordance with the relevant legislation and University guidelines.
- Ethics approval is dependent upon ongoing compliance of the research with the *National Statement on Ethical Conduct in Human Research*, the *Australian Code for the Responsible Conduct of Research*, applicable legal requirements, and with University policies, procedures and governance requirements.
- The Ethics Office may conduct audits on approved projects.
- The Chief Investigator has ultimate responsibility for the conduct of the research and is responsible for ensuring all others involved will conduct the research in accordance with the above.
- The Clinical Trials Support Office has been notified as outlined in the University's Clinical Trials Policy where a clinical trial is being undertaken.

This letter constitutes ethical approval only.

Please contact the Ethics Office should you require further information or clarification.

Sincerely,



Associate Professor Helen Mitchell
Chair
Conservatorium Review Committee (Low Risk)

The University of Sydney HRECs are constituted and operate in accordance with the National Health and Medical Research Council's (NHMRC) current National Statement on Ethical Conduct in Human Research (2018) and the NHMRC's current Australian Code for the Responsible Conduct of Research (2018).

Version 2, 23/05/2024 HREC Approval No.: 2023/HE000542

THE UNIVERSITY OF SYDNEY

Participant Information Statement (Human Ethics)

Collaborative Interspecies Music: Disrupting Exclusively Human Perceptions of Creativity through Musical Means

Dr Catherine Ingram (Lead Investigator)

Sydney Conservatorium of Music
Email: catherine.ingram@sydney.edu.au
Student: Solomon Frank (Bachelor of Music [Composition] with 1st class Honours, Masters of Research [Geography and Planning], current PhD candidate)
Phone: +61434592701
Email: sfra7572@sydney.edu.au

12. What is this study about?

We are conducting a research study about collaborative music making and animals. Enrolling in this study is voluntary.

The aims of this project are as follows:

- Explore the place of collaborative music making with dogs in settings where animals and humans cohabit and its potential role as a socially and sensorially enriching activity;
- Document the diverse perspectives of dog owners/carers on the role of music in their individual canine-human relationships;
- Build musical practices and interpersonal relationships with domesticated dogs (in similar ways to human musicians' collaborations);
- Sensitively record and analyse the resulting music;
- Use these recordings and analysis to discuss overlooked musical abilities in species beyond humans, songbirds and whales;
- Challenge established human musical definitions to question a belief in the human uniqueness of music.

Please read this sheet carefully and ask questions about anything that you don't understand or want to know more about.

13. Who is running the study?

The study is being carried out by the following researchers:

- Solomon Frank, PhD candidate at Sydney Conservatorium of Music, University of Sydney
- Dr Catherine Ingram, chief investigator, senior lecturer at Sydney Conservatorium of Music, University of Sydney
- Dr Hollis Taylor, co-investigator, ARC future fellow at Sydney Conservatorium of Music, University of Sydney

Solomon Frank is conducting this study as the basis for his degree of Doctorate of Philosophy at The University of Sydney.

This study is being funded by Australian Research Council through Dr Hollis Taylor's grant, "The nature of music and the music of nature" (Grant no. FT190100605).

14. Who can take part in the study?

We are seeking dog owners and organisations housing dogs willing to participate in interviews regarding the role of music in canine lives. The study aims to examine and document potential creative and musical capacities in species beyond humans.

You have been invited to take part in this study because you work at a dog shelter or are a dog owner (potentially with a history of musical interaction with your dog)

You are welcome to tell other people about the study.

15. What will the study involve for me?

If you decide to take part in this study, you will be asked to discuss your personal personal history with the dog you care for; your experiences with music and your dog; your views on the dog's receptivity/curiosity/aptitude in music; the social or behavioural benefits of music in you and your dog's lives and other issues relating to your experiences you feel are important.

At the end of the interview you will have the opportunity to discuss with the researcher how you will gain access to information you have provided during the interview. At this stage you may also let the researcher know if you prefer not to be identified in the study.

The amount of time involved depends on your preference and availability. Interviews will typically last approximately 40 minutes and will primarily be undertaken online.

16. Can I withdraw once I've started?

Being in this study is completely voluntary and you do not have to take part.

Your decision will not affect your current or future relationship with the researchers or anyone else at The University of Sydney.

If you decide to take part in the study and then change your mind you can withdraw by contacting the researcher via email or phone using the contact details provided. You are free to stop the interview at any time.

If you take part in an interview you may refuse to answer any questions that you do not wish to answer. Recordings and the information you have provided will be deleted upon your request.

If you choose to withdraw, we will not collect any more information from you. Please let us know at the time you withdraw what you would like us to do with information we have collected about you up to that point.

17. Are there any risks or costs?

Aside from giving up your time, we do not expect that there will be any risks or costs associated with taking part in this study.

18. Are there any benefits?

You will not receive any direct benefits from being in the study however your involvement in this study will contribute a better human understanding of dogs' vocal and possible musical capabilities.

19. What will happen to information that is collected?

By providing your consent, you are agreeing to us collecting information about you for the purposes of this study.

Any information you provide us will be stored securely and we will only disclose it with your permission, unless we are required by law to release information. We are planning for the study findings to be published.

You will be named in these publications if you agree by checking the tick box on the consent form or by providing oral consent that will be recorded.

We will keep the information we collect for this study, and we may use it in future projects. We will seek ethical approval before using the information in these future projects.

20. Will I be told the results of the study?

You have a right to receive feedback about the overall results of this study. You can tell us that you wish to receive feedback by ticking the relevant box on the consent form and providing your contact details. This feedback will be in the form of a one-page lay summary, and you can also receive copies of any recordings or transcriptions of your participation in the study. You will receive this feedback after the study is finished.

21. What if I would like further information?

When you have read this information, the following researcher/s will be available to discuss it with you further and answer any questions you may have:

Solomon Frank will be available to discuss it with you further and answer any questions you may have. He can be contacted via email at sfra7572@uni.sydney.edu.au.

If you would like to know more at any stage during the study, you are welcome to contact Dr Catherine Ingram catherine.ingram@sydney.edu.au; Dr. Hollis Taylor hollis.taylor@sydney.edu.au or Solomon Frank.

22. What if I have a complaint or any concerns?

The ethical aspects of this study have been approved by the Human Research Ethics Committee (HREC) of The University of Sydney (project number 2021/735) according to the *National Statement on Ethical Conduct in Human Research (2007).*

If you are concerned about the way this study is being conducted or you wish to make a complaint to someone independent from the study, please contact the University:

Human Ethics Manager
human.ethics@sydney.edu.au
+61 2 8627 8176

This information sheet is for you to keep

Participant Consent Form (Human Ethics)

Research Study: Collaborative Interspecies Music: Disrupting Exclusively Human Perceptions of Creativity through Musical Means

Dr Catherine Ingram (Chief Investigator)

Sydney Conservatorium of Music

Email: catherine.ingram@sydney.edu.au

Student: Solomon Frank (Bachelor of Music [Composition] with 1st class Honours, Masters of Research [Geography and Planning], current PhD candidate)

Phone: +61434592701

Email: sfra7572@sydney.edu.au

Participant Name _____

I agree to take part in this research study. In giving my consent, I confirm that:

- The details of my involvement have been explained to me, and I have been provided with a written Participant Information Statement to keep.
- I understand the purpose of the study is to investigate interspecies musical practices with dogs.
- I acknowledge that the risks and benefits of participating in this study have been explained to me to my satisfaction.
- I understand that in this study I will be required to either (1) complete a short online survey about my experiences as an attendant at the performance Dog Choir or (2) participate in an interview of around 40 minutes to discuss my relationship with the dog I care for and the role of music in this relationship.
- I understand that my participation may be audio and/or video-taped
- I understand that being in this study is completely voluntary.
- I am assured that my decision to participate will not have any impact on my relationship with the research team or the University of Sydney.

- I understand that I am free to withdraw from this study at any time and that I can choose to withdraw any information I have already provided (unless the data has already been de-identified or published).

- I have been informed that the confidentiality of the information I provide will be protected and will only be used for purposes that I have agreed to. I understand that information about me will only be told to others with my permission, except as required by law.

- I understand that the results of this study may be published, but these publications will not contain my name or any identifiable information about me unless I consent to being identified using the 'Yes' checkbox below.

  ☐ **Yes**, I am happy to be identified

  ☐ **No,** I do not want to be identified. Please keep my identity confidential.

- I confirm the following:

I consent to audio recordings	Yes ☐	No ☐
I consent to video recordings	Yes ☐	No ☐
I consent to photographs	Yes ☐	No ☐
I consent to reviewing my interview transcripts where required	Yes ☐	No ☐
I consent to being contacted for future studies	Yes ☐	No ☐
I consent to my data being used in future research	Yes ☐	No ☐

I consent to the audio and video recordings being:

Viewed in entirety by the research team	Yes ☐	No ☐
Viewed by other staff and students at the University of Sydney (within the context of research presentations, and short excerpts only will be played)	Yes ☐	No ☐

Viewed by staff, students and other interested people within the university environment (within the context of research presentations, and short excerpts only will be played)

Yes ☐

No ☐

I would like feedback on the overall results of this study	Yes ☐	No ☐

If you answered **yes**, please provide your preferred contact details (email/telephone/postal address):

_____

_____

_____

_____

- I understand that after I sign and return this consent form it will be retained by the researcher, and that I may request a copy at any time.

Participant Name _____

Signature _____

Date _____