Creative Music Production

Professional Project

Glyn Keegan

How does the acoustic nature of recording environments influence listener perception of songs and how does it inform bias surrounding recording practices as it relates to the folk genre?

April 28th, 2026

David Christophers

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Abstract

Environments have been documented in having both an emotional effect on the listener as well as a profound affinity to encapsulate a story and the memorialising the time of the recording and performance in the space. This thesis attempts to dissect what factors contribute, addressing qualities of field recording that are most beneficial in achieving this effect. The research seeks to expose the importance of environments regarding recording folk music. Interrogated and dissected from a personal slant of songwriting in the folk genre, probing the underlying qualities of environments with unique character and sonic features. Setting out to unilaterally understand how certain songs are better suited to certain environments, solely from the content of the song itself; including tone, timbre, theme, narrative, performance and instrument choices. The hypothesis set out to — based on the three songs utilised for this project — determine if personal songs, with vintage sounding guitar, nostalgic and poignant lyrical content require more intimate and natural spaces to best facilitate the evocation of relatability and enjoyability. Furthermore, to investigate if songs of grander, less personal and poignant storytelling are better suited to more conventional studio settings. Lastly the hypothesis attempts to discover if songs of a sparser nature are better suited to more reverberant environments that showcase the dead space between playing and singing.

Introduction:

This project is, in essence, an attempt to understand how the environment of a recording impacts how audiences perceive a song emotionally. It further questions the biases we have innately ingrained in us that perhaps hinder our reception of music in the context of folk, and whether these are strictly to do with musical elements or whether it extends to factors such as environment and recording techniques. Whether the informal and natural aesthetic of playing in a live environment, with its own unique characteristics represent this bias or if it enhances the overall emotional impact of folk music. This undertaking attempts to understand and provide rationale for recording decisions, interrogating the place of space, silence and sonic qualities that present themselves uniquely in different environments. With the genre stemming from a verbal lineage, where songs are repurposed and reinvented to tell stories and communicate musical ideas, through generations and culture evolutions, it posits the question of if the means in which we inherent this music is crucial to its identity.

Literature Review

Introduction

The research covered in this section attempts to pertain to and understand the important elements of recording folk in the context of field recordings and environment. To explore through expressly objective research as well as more subjective research to formulate a perspective and a cohesive model to ascertain the significance of environments as they relate to recording of folk music.

Academic Study

In *Automated Analysis of Performance Variations in Folk Song Recordings* by Meinard Müller, Peter Grosche and Frans Wiering folk music and its performance-related variances are discussed. It expresses folk music's unique oral tradition of learning, while capturing — through quantitative means — data; measuring temporal, melodic and timing iterations. It explains the importance of capturing the actual performance in notation rather than the presumed intention of the singer, as is often done when notating folk music, given its fickle — and difficult to pin-down — nature.

The main attribution this paper provides is a method to reasonably articulate the musical information of a given performance through a method they call a “Chroma Template”. Attempting to aggregate information about a performance in a matrix-style representation, to infer information about the performance (namely melodic and temporal characteristics). The goal of the paper is to assist in providing means to extract motivic relationships between a wide array of Dutch folk tunes and ascribe musically familial ties in folk tunes. It offers a computational approach to wide collections of digitised work. Impressing that there are often-overlooked elements present in performance given the format of modern recording. It attempts to unlock essential elements of a performance, such as variance in musical information from take to take, or stanza to stanza. It notes that within a performance in the tunes it is common for major deviation from the perceived melody, highlighting its imperfections and inconsistencies as well as its subtle and intentional uniqueness. In the book they mention the various issues with field recording as it pertains to consistent performances, having to heavily adjust their chroma template to image the information in a less deviating manner, due to factors like undulating and inaccurate pitches whilst performing.

Field recordings serve a crucial purpose in many disciplines (Gallagher, 560) and are a useful component in capturing an environment and its character through audio. Portable recordings offer a method of integrating a space into a recording, where studios and traditional, static mixers are otherwise limited. They serve many facilitative functions such as “travel writing, documentary film making, landscape painting, and photography, field recording is a set of cultural practices through which a wide variety of people are engaging with spaces, places, and environments.” (Gallagher, 560).

Field recording allows focal perspective on an environment as if the listener was in place of the microphone “Such performances reconfigure present space, with acoustic traces from the recorded space–time folding into the playback space–time, effecting a doubling or thickening of space.” (Gallagher, 561). There are many ways of approaching a field recording, with the differences from actuality constructing the acoustical landscape. Stereo X/Y microphones can be used to capture sound from a single source, providing spatial depth and information which informs the listener on movement and distance from the sound source and environment at large (Gallagher 566). “One popular technique is binaural recording, in which mics are attached near the recordist’s ears or to the ears of a dummy head. (3)”. Which when played back in headphones provides a very authentic listening experience. Another popular method suggested is an abstraction of source, he refers to as the acousmatic style (Gallagher 566). Utilising the “decontextualisation to invite “‘reduced listening’, attending to the aesthetics of recorded sounds rather than trying to discern their sources (Chion, 1994)” (Gallagher 566).

Removing the context garnered inherently by their position in space and situ and melding the aspects to produce an abstracted soundscape, stripping a recording of its (otherwise indelible) attributes. Many recordings may unintentionally adopt this identity, if they remove the context of the environment from which the performance, and thus recording originates from. Ultimately this method provides an uncertain and atmospheric sound, which provokes imagination and detaches from the reality of a space (Gallager, 567).

In the *Leonardo Music Journal*, an article titled *The Sonic Witness On the Political Potential of Field Recordings in Acoustic Art* by Gerald Fiebig covers the topic of space as it relates to recordings is discussed. Expressing that it provides a medium for immersion, and showcases how environments contain an "aura", that necessarily ties a time and place to a recorded event (Fiebig, 14). Fiebig contrasts music and other forms of field recordings, supposing that musical creations are novel works (prior to reproduction), whereas other field recordings are superlatively original works and cannot be replicated in exact orders, as per the acoustical reality (Fiebig, 14).

Fiebig denotes the "sound recording as a "witness" of certain places and conditions. The recordist acts as a reporter gathering information in places of danger" (Fiebig, 14). Which makes them useful markers of history, gathering information and relaying it, much like video of historical events would (Fiebig, 15). Fiebig imparts that field recordings make use of what is there but also have the power of presence to indicate what isn't there, personifying the space in its noise floor and quietest moments. "As Tim Ingold argues, the sound of a place enters the listener's body just like breath, which creates a compelling symbol for the listener's connection to a place and the bodily presence of others that were there before her" (Fiebig, 15).

This implies physical characteristics of a room alter the way we hear recordings and give meaning to qualities of a room. Environments can shape the way we negotiate sound and more specifically music, with elements like reflections, diffraction, standing waves and resonant frequencies all altering the sonic characteristics of a room. "The resulting resonant drones heighten the sense of looming danger" (Fiebig, 15).

A journal by Hollis Taylor titled *In Field Recordings as Invitation and Transportation* Hollis explores the emotional effects that field recorded environments have, arguing a marked link between nature and pro-environmental behaviour (Hollis, 24). It details, furthering the point about sonic characteristics influencing listeners "recordists have documented to stunning effect places not traditionally considered beautiful. For instance, acoustic ecologist Peter

Cusack's (2012, 2014) 'sonic journalism' explores Sounds from Dangerous Places: 'Caspian Oilfields', 'Bradwell Nuclear Power Station', and 'Chernobyl'" (Hollis, 25).

Proving to be sonically provocative and gripping environments.
It discussed acoustic ecology, stating it's a term that describes the "relationship between listeners and their sonic environment" (Hollis, 26).
It further discusses the personal interconnectivity between place and people. Detailing the debate on ethical the obligation of presenting earth in an authentic and holistic light, as opposed to processing field recordings.
Hollis suggests that field recordings and "music both express and arouse emotions and aesthetics (Reybrouck 2013, Prum 2017)" (Hollis, 27), furthermore stating that they access "ancient emotions and aesthetics (Reybrouck 2013, Prum 2017)" (Hollis, 27).
Hollis articulates that people react in spaces emotionally pointing to Michael Gallagher's work "Gallagher (2015, 560) catalogues 'sensations of joy, sadness, or a sense of the uncanny', as well as 'more mundane affects such as boredom, irritation, or indifference'." (Hollis, 28). Further stating that "That field recordings evoke emotions seems uncontroversial" (Hollis, 30).

In *Listening Against Soundscapes,* an article by Stefan Helmreich, an argument is presented suggesting that acoustic experiences, must be actively sought after and produced as opposed to occurring naturally, expressing that a soundscape is a sonic form of a landscape (only absent of mechanical noise), presupposing the listener with an attitude toward spatiality. Suggesting it requires abstraction from reality and needs to be reverse engineered to create the desired effect.

Helmreich pokes holes in the idea that soundscapes are always naturally inferred by the listener without imaginative and post-production means: "The underwater realm is not immediately a soundscape for humans. Sound travels four times faster in water than air, and human eardrums are too similar in density to water to permit the transduction of most vibrations into tympanic movement in the ear." (Helmreich, 10).

He further explains that immersion is quintessentially mystification, it offers some attempt to characterise a space but doesn't make the point of being entirely honest to what it entails from a real-world perspective. Of course this isn't always necessarily true, given binaural and stereo recordings as an example. These methods make no attempt to alter a soundscape and attempt to honestly resemble the environment as a listener would perceive it on sight.

In the *Journal of Radio & Audio Media* an article titled *Urban Soundscapes as Narrative: Intentions and Interpretations of Field Recordings* The idea is expressed that the role of duration and temporal elements in a field recording generates a narrative in and of itself, showing subtleties and evolutions in a piece, that is not present in other forms of media. It stresses the importance of the duration as it provides more room for narrative conclusions. It also impresses the importance of the human voice, stating it has an "inner intentionality" (Seaward, 301), and that it contains intimate connection and meaning. Seaward details how the elements of silence present in radio production provides narrative cues "could be the intention with radio production is hidden in the fissure between the words spoken and the supporting soundscapes, the sum of the two parts creating the arresting listening experience" (Seaward 301).

He elaborates on the argument between synthesised and processed elements to a recording and their impact to the listener. "As there is an emotional poignancy in listening to the timbres of human experience with a new musical focus, there is no reason why a more synthesized piece would be any less emotional than the uncut words" (Seaward, 301). Suggesting ultimately that sounds with processing, such as filtering may provide more evocation than unedited sounds of the same nature. He offers examples such as Westerkamp's Kits Beach Soundwalk, which utilises narration layered with natural sounds in the environment, using filtering and adjusting gain to certain elements to emphasise them "Her editing of this piece uses primarily band pass filters; the city will disappear, the clicking of barnacles comes forward and she reveals to us a real world, not a composed world." (Seaward, 302).

Presenting its efficacy when blended in to create a more immersive presence in the soundscape, as opposed to leaving it raw and unadulterated. Another example used is the work of a field recordist called Felicity Ford. "Ford speaks of how usually most field recordists view the instances of everyday chatter and speech amongst the public as intrusive to the recording (Carlyle and Lane, 2013, p. 89) but this denies what the real world is" (Seaward, 302).

She makes use of public chatter, which is often interpreted
by other field recordists as unwanted noise, in her recordings such as Convivial Chatter in the Square and Compass Inn (Nd) (Seaward, 302).
Ultimately it appeals to both schools of thought with regards to field recording. Offering instances of unadulterated work, that compromises some elements of clarity for imbuing a soundscape as well as altered or processed work that affects meaning of its own accord.

Conclusion

The research discussed in this section exemplifies the significance of environment on emotion and listener perception of music. Which can be ascribed to folk music, with the correct trials, data and feedback.

Methodology

Introduction

To delineate the different sections of the methodology, this chapter will be segmented into subheadings to denote the stages involved in the undertaking of the project and expressed below.

1) Preproduction
    a) Preproduction Decisions
2) Recording
    a) Studio 1
    b) Sun Studios
    c) Bridge
    d) Living Room
    e) Kitchen
    f) Bedroom
3) Mixing and Mastering

Preproduction

Testing was done of different environments, utilising the guitar and the Zoom H6 Handy Recorder. This testing involved common spaces, such as a living room, kitchen, and outdoor areas. The initial recordings after this testing involved a mandolin, to provide some transients in the high end. This instrument choice was suitable for recordings of folk music. The inspiration for the entire project was to assimilate the sound of vintage and renowned folk music, and to discover the environments that best suit that style of music and its respective narrative, tonal and timbral elements.

The common denominator of each recording and in its application broadly was the Zoom H6 recorder, allowing 4 channels in its interface allowing XLR/ TRS connections. It proved to be useful, unsurprisingly as portable recorders are a versatile and commonplace instrument in the practice of field recording. To maintain some consistency this mic was used repeatedly, combined with typical miking positions for vocal, guitar and mandolin — albeit with different mikes (miking the 12th fret for the instruments, and the vocal mikes were proximal and accompanied by an isolation shield and a pop filter).

The intended methodological framework as it concerns the application of techniques used was that of laterally applying miking techniques as they fit the environment and not

implacably following a predetermined rubric. As is succinctly expressed in the closing comments of *Urban Soundscapes as Narrative: Intentions and Interpretations of Field Recordings:* "Research has demonstrated both sides of the creative spectrum available when recording and presenting a piece of field recorded work. Microphone techniques in the field are only a small part of a wider approach. Theoretical methodology, concerning narrative and poetic intent, also lend influence on the trajectory taken. It could be argued that only by working with the sound retrieved, will all creative possibilities then become apparent." (Seaward, 303). The importance of the recording environment is to most accurately represent the songs in their intent and effect; its emotional and inscrutable pertinence to the listener: how they connect to it.

2	**Environment**	
3	**Kitchen**	Zoom H6 (room mike: vocal gtr, mandolin), AT2020 (vocal mike)
4	**Living Room**	Zoom H6 (room mike: vocal, gtr, mandolin), AT2020 (vocal mike)
5	**Bedroom**	Zoom H6 (room mic: vocal, gtr), TLM103 (vocal), NT5 (gtr)
6	**Bridge**	Zoom H6, (field mike: vocal, gtr, mandolin), TLM103 (vocal), NT5 pair (field mike (ORTF): gtr, vocal, mandolin
7	**Studio 1 Unbaffled**	Zoom H6 (room mike: vocal, gtr, mandolin), AT2020 (room mike: vocal, gtr, mandolin), U87 (vocal), SM57 (mandolin), SM57 (gtr)
8	**Studio 1 Baffled**	Zoom H6 (room mike: mandolin), SM57 (mandolin), U87 (vocal), SM57 (gtr), AT2020 (room milke: vocal, gtr)
9	**Sun Studios Unbaffled**	Zoom H6 (room mike: vocal, gtr), U87 pair (ORTF: vocal, gtr), C414 (vocal), C451B (gtr)
10	**Sun Studios Baffled**	Zoom H6 (room mike: vocal gtr), C414 (vocal), SM57 (gtr (machine head)), C451B (gtr (12th fret))
11		
12	**FINAL TAKES PRE SURVEY**	
13	**UNUSED, UNMIXED**	

Figure 1.

Lower gauge nickel strings were chosen as they dull quickly and create a unique tone for folk music, especially vintage folk. The playing style was predominately finger picking and strumming with the skin and nails. A smaller body guitar was used. Combining these factors netted in a sound that was saccharine and close to the assumed method of achieving Nick Drake's sound for songs like Hazy Jane.

All the songs take on a ballad-like structure, telling different stories in different ways. The first and second songs are more conventional of the genre of folk at large, and the third song harks back to artists like John Martyn and Nick Drake, miring the listener in the emotion of the story as is told more personally.

The songs were formulated before the project took hold, writing each piece over different periods of time between other songs. The first song (*Song 1 - The Old Crusader*) was namely

inspired by Doc Watson and Townes Van Zandt. The playing style developed for the song is reminiscent of Doc Watson's style, especially his 16th note runs and non-diatonic soloing and playing style, and similar chord choices such as E minor, B7. The theme of the song, is of a crusader, mirroring former crusades stories from monotheistic texts such as the Torah, denoting the long stretches people would wait to hear of messianic figures, prophets and messengers to deliver news and moral teachings from those supposedly in touch with God.

The story focuses on members of a town, from all ranks of society and how they obsequiously and tractably follow their pastor, who collects taxes from them. He is touted as the moral arbiter on behaviour, and therefore punishment. Finally, in the story an alleged heretic arrives and questions the word of this pastor. He performs miracles which engenders trust amongst the inhabitants, recodifying the word of God; placing the pastor in an anathema and uniting those most humble to be in his orbit.

The second song (*Song 2 - Untitled*) is a slow, long ballad-like story about a failing musician in his quotidian life, who plays gigs habitually without being awarded notoriety or praise for his efforts. It describes his lifestyle of and going to the bar after his set to dampen his inner turmoil. It shows a low point in his life, relying on a friend to escape his burdensome situation, as he fails to pay rent and is ousted from his flat. The music is inspired by the likes of Leonard Cohen, Bob Dylan, Tom Waits and Guy Clarke; along with inspirations drawn from the same artists by way of story beats, phrasing and general atmosphere. The narrative is akin to the film *Inside Llewyn Davis* a 2013 film by Ethan and Joel Coen, which showcases the struggle of musicians in a challenging and unforgiving industry.

The third and final song (*Song 3 – Open D Song*) is a long, and nebulous story; allegorically underpinning the narrative using symbolism: of a bird with a broken wing. Reflecting personal struggles and failings to create a story that can be related to or interpreted in manifold ways. Inspired by Nick Drake, John Martyn and Joni Mitchell. Featuring high-pitched vocals, that manoeuvre around the rich and deeper instrumentation.
It tells the story through less conventional means of songwriting apropos of various codas, middle 8s and dispersed choruses. The song was written in open D tuning, a tuning common in vintage folk music for its rich and enigmatic tone (due to its ability to divest from conventional chordal relationships). The music was written using unusual chord shapes, attempting to approximate the sound of standard tuning at times, providing a clear contrast to the chorus which showcases the tuning explicitly. The dull strings of the guitar provided a darker and richer tone than would be otherwise achieved through Phosphor Bronze strings or other means of playing, such as rigid plectrums.

Preproduction Decisions

The mikes were placed in similar manners for the most part as the vocals and guitar typically required close microphones respectively to hear the full content and array of frequencies that may be otherwise lost given further away, and purely spatial condenser mikes. The Zoom was typically used as a room mike as it can with relative consistency capture a lot of side information that is useful for reverberations off of walls and surfaces, other large capsule condensers such as the AT2020 and the U87s were utilised as they can provide a lot of detail and capture quieter elements that are unique to each recording. Providing more space, and depth to the recordings. For the most part small capsule condensers were used on the guitar, but at various points an SM57 was used. The style of playing was consistent in temperament, though picking and strumming were both done, depending on the environment. Folk music is often regarded as a medium where stories are told, but never identically, many of the more famous contemporaries and folk music pioneers such as Dylan made it a condition that each iteration was different, the only variable being how severely so.

Recording

Studio 1

This studio is a large and versatile space in Temple Bar, Dublin. Various mike setups were tested before tracking and recording, ultimately deciding that to capture the room in its entirety the Zoom was to be angled away from the corner, combined with an AT2020 mirroring it in the other corner 108cm from the Zoom H6 capsules and 166cm from the corner behind it, and higher than the Zoom, to pick up the sound overhead. An SM57 was placed facing the mandolin, 12cm away to the front right of the guitar and vocal, and another 57 for the guitar, 27cm away. A U87 was used for the vocal, 115cm from the floor 50cm from the vocalist; enveloped in a vocal isolation shield and pop filter, to the mandolin player's left.

The intention of these recordings was to capture the room's tone with intentionality, while blending in some close perspectives for clarity in balancing and independence.
A boxed off section was created with baffles, surrounding the vocalist and the guitar, using the same vocal mike in a vocal shield (that being the U87) as well as the same mike positionings for all but the Zoom H6 and the AT2020.

The room mike (AT2020) was placed in the back left corner behind the guitar and vocals, 3m and 60cm from the vocal microphone. The mandolin remained miked with an SM57 though the Zoom H6 was positioned to it (as opposed to the room itself) and closer.

The first few takes were done without tracking, and then with headphone tracking. It proved difficult within the baffles, though it worked better as it allowed for the mandolin to be heard with more clarity when playing in real time, but less audible inside the baffles. There was a loud bass sound emanating from the downstairs of the studio for much of the session, which provided some interference in the bass frequencies, and the pad on the Zoom H6 was left on for the guitar mike, leading to many of the takes to be unusable.

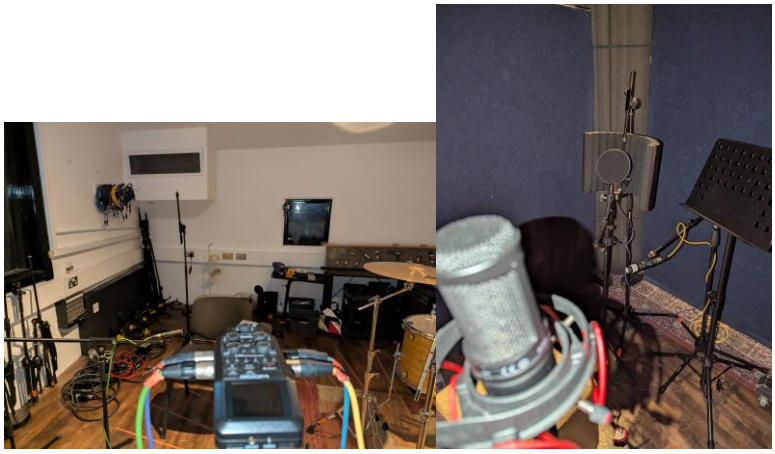

Figure 2.

<u>Sun Studios</u>

A large and modular studio, with small drum and re-amping rooms useful for isolation.

The first iteration was recorded in a small room, with baffles on every wall and surface, including the doorway. Everything was miked near the vocalist and the guitar on account of the limited space of the room. For these recordings an AKG C414 was utilised for vocals, along with a vocal shield placed roughly 20cm from the vocalist. An SM57 was miked near the fretting hand, roughly 15-20cm from the guitar alongside an AKG C451B miked facing between the sound hole and the 12th fret, it was 68cm from the floor. The Zoom H6 was facing towards the vocalist, and 34cm to its right side was the C414 in cardioid mode.

For the unbaffled recordings with naturally garnered more room tone and brighter sounds, a pair of U87s was placed on a stereo bar in ORTF position, 20cm from the centre respectively at 110° angle. Capturing a wide stereo field, and not negating the centre, as XY might. Facing towards the vocalist, roughly 2 metres from the vocal microphone and adjacent mikes, 27cm from capsule to capsule. The vocalist sat at the back of the room. The guitar was miked at the 12th fret, with the C451 being 68cm from the floor, and 29cm from the guitar. The zoom was placed in the corner on the back, left side of the vocalist.

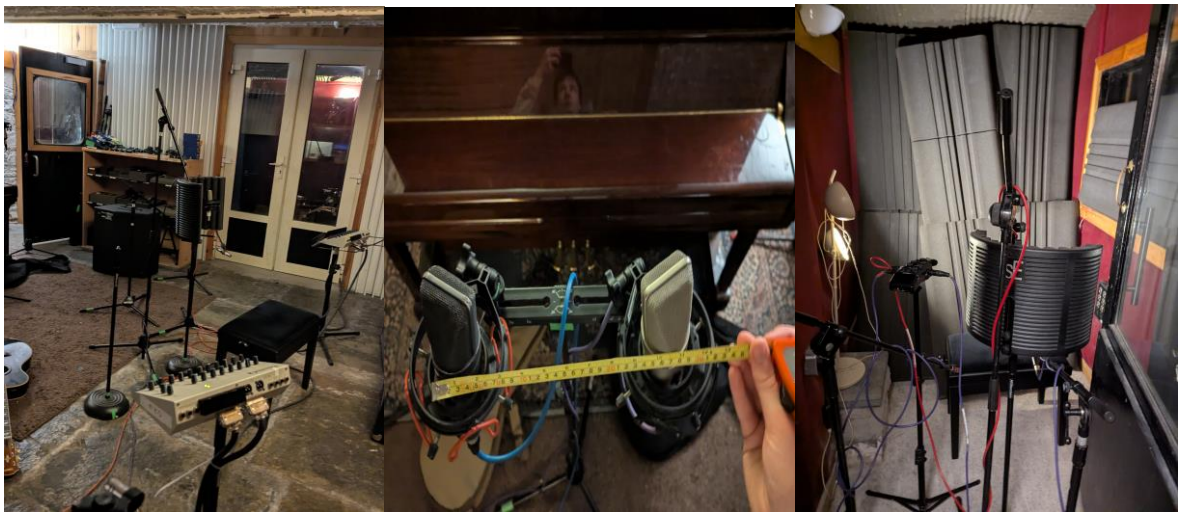

Figure 3.

Bridge

Earlier versions were recorded under a bridge in Co. Mayo, this proved to be a challenge as there was a lot of low-end rumble and wind sounds, with people cycling and running through tunnel. Windshields were placed on the affected microphones, various positions were explored, though it was difficult to parse the noise from the playback and the wind that was occurring in real time.

The left. A stereo pair of NT5s were facing towards the guitar, as well as a TLM103 as a vocal microphone with 86cm between them. The Zoom H6 was facing towards the walls of the bridge at a 45° angle, so it would pick up the reverberation from the other side as well, but predominately the performers.

Figure 4.

Living Room

The songs were recorded with a mandolin and a guitar in a living room, a common yet unique environment, as the acoustic elements are affected by the shape, walls, windows, furniture and surface. It was an early trial demo of a common room, utilising the AT2020 for the vocals and the Zoom H6 for the mandolin and the room.

Kitchen

Recordings in a kitchen were made with the guitar, vocals and incorporating the mandolin for some takes. Zoom H6 and an AT2020 on vocals were utilised, as the mandolin was loud and transient enough to be heard no mikes were used directly on it. Measurements were not taken of this as the room was mostly bare and the layout had little to no dampening, therefore it was not conducive of a good recording.

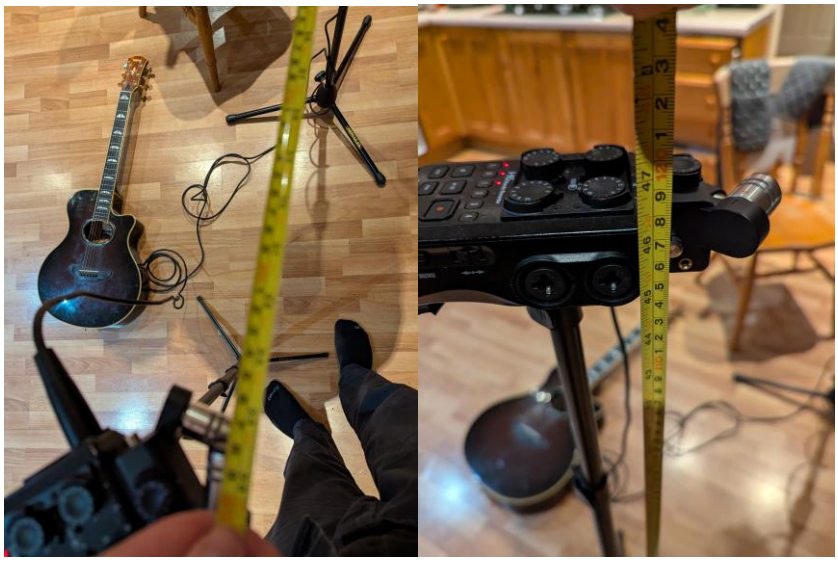

Figure 5.

Bedroom

Recordings of all songs were taken in a bedroom environment. Using the TLM103 as a vocal mike, absent of an isolation shield though considering it has a cardioid polar pattern this was not a concern. An NT5 was used as the guitar mike (miked to the 12th fret). The Zoom H6 was facing the guitar and vocals, and more to the left than the other mikes, capturing more of the centre of the room.

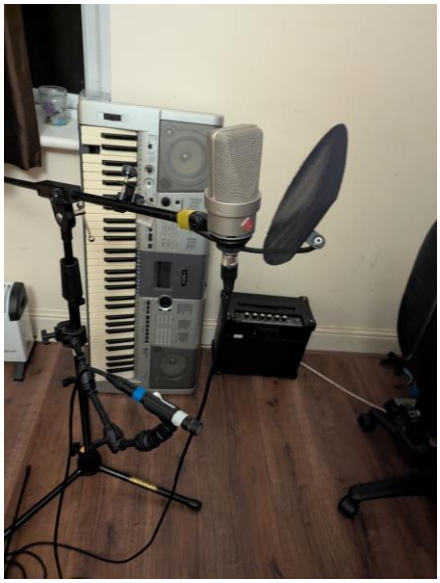

Figure 6.

Overall, a similar distance was maintained throughout the process, to preserve the relationship between microphones and the sound source, excluding entirely room microphones which were positioned uniquely and varied in their application in each space. Using the room microphone and the XY Zoom H6 for experimentation of room tone and texture via phase differences contrasting that were closer to the sound source(s).

Cardioid condensers were used predominantly as they work better for quieter sound sources and provide more detail as compared to dynamic microphones; that being preferable for the acoustic nature of the recordings. This decision was informed by the essential degree of space in field recordings and with respect to the environment of recording articulated by Fiebig and Hollis in the prior section. Small diaphragm condensers were used for the non-vocal recordings, and large diaphragm condensers for closer miking to the vocal.

The presence of vocal, and guitar performance variations determine the genre. Folk music relies on oral tradition and characteristically brings new life and energy to a performance or interpretation.

Mixing and Mastering

Decidedly the best takes were summed up in a total of 9 songs (3 of each song) and mixed to highlight the better qualities of each multitrack. The songs were respectively mixed to similar loudness levels in ProTools. The tracks were phase aligned and then panned and balanced in accordance with their position at the time of recording. They were processed using parametric EQs, compressors and multi-band compressors, utilising the dynamic control of FabFilter Pro-Q 3.

Before adhering to survey results or issuing the survey for comparison at all, the songs were mixed down into stereo interleaved wavs and mastered to –14 LUFS~ and –1 dBTP (corresponding with typical streaming normalisation levels). Elements of the sound were adjusted and altered for the purpose of loudness and clarity in the mastering stage, including the use of a dynamic resonant suppressor known as Soothe 2 which provided control over specific harsh frequency bands and adjust them accordingly. FabFilter Pro-Q 4 was also availed of for its parametric EQ and dynamic control, alongside limiters to excite and tame the transient elements as well as to provide clarity to the tracks.

The videos were then cut into smaller segments of equal length and loudness and placed side by side in a random order for the survey.

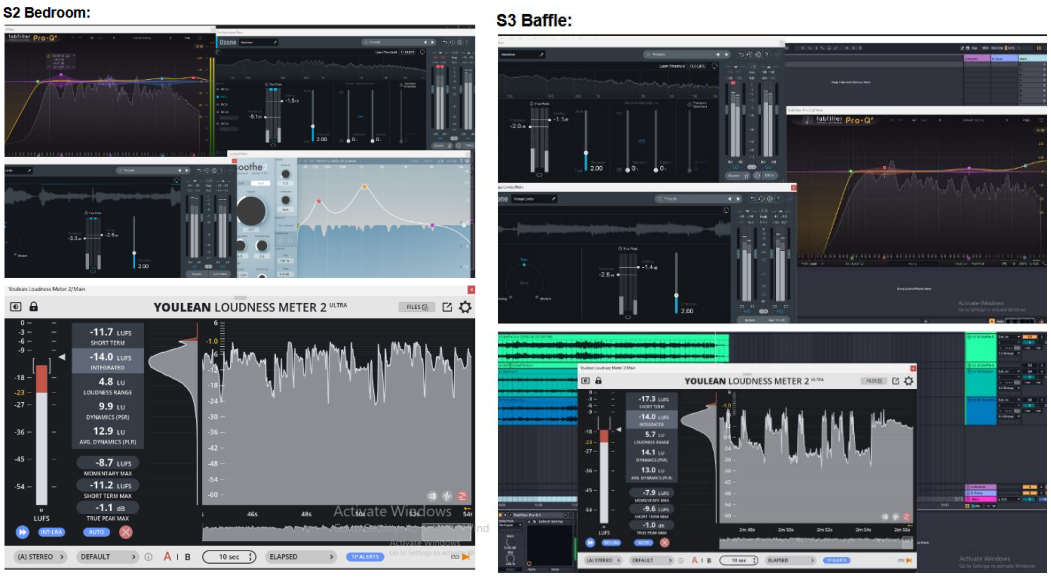

Figure 7.

Conclusion

The Methodological considerations were relative to fair comparison insofar as this genre of music can be categorically deciphered and juxtaposed. Allowing error also for circumstantial elements such as weather, wind, and other extenuating elements that disrupt the clarity or consistency of the recordings.

Analysis

Introduction

To glean insights from the recordings and subsequent mixes, a survey was required to understand how well they faired among listeners, and to see if the recordings — and thusly their environments cleaved to the song and its intention.

The expected and explicitly subjective results were that the environments would coincide and therefore meld well to the intention and tone of the songs. Meaning, that for instance, the first song would be better received in a larger, more reverberant environment due to its ballad-like storytelling and being the most light-hearted song of the three. Whereas the second song would be better received in a smaller environment as it is a less optimistic song, expressing the lulls of a character, without much in the way of an uplifting undertone.

The third song, it seemed, would work in a personal, non-conventional environment, as it would appear reflective of the songs tone and message. The live aspect of the song seemingly adds an authenticity that may be otherwise lost in a more professional sounding environment.

The survey consisted of 9 participants, those with some training in music production. They were asked to rank the songs based on which version they preferred: between the baffled, unbaffled and bedroom recordings. They were then asked about what informed the ranking.

Song 1

Version 1 (baffled) ranked #1 among 4 participants (44%), it ranked #2 by 2 participants (22%) and ranked #3 by 3 people (33%) (Appendix A.2).

Version 2 (unbaffled) ranked #1 among 3 participants (33%), it ranked #2 by 2 participants (22%) and ranked #3 by 4 participants (44%) (Appendix A.2).

Version 3 (bedroom) ranked #1 by 3 participants (33%), it ranked #2 by 2 participants (22%) and ranked #3 by 4 participants (44%) (Appendix A.2)

Two of the participants highlighted the close and cozy element of the baffled environment, remarking that the 3rd version was harsher, and the 2nd version had resonance which detracted from the song. One participant thought the levels were unique in the 1st version. Another participant remarked that the clarity is better in the 1st version, and further said the 3rd version has a quality preferable to the 2nd (Appendix A.7).

Song 2

Version 1 (unbaffled) ranked #1 among 4 participants (50%), it ranked #2 by 3 participants (38%) and ranked #3 by 1 person (13%) (Appendix A.4).
Version 2 (baffled) ranked #1 among 2 participants (25%), it ranked #2 by 3 participants (38%) and ranked #3 by 3 participants (38%) (Appendix A.4)
Version 3 (bedroom) ranked #1 by 2 participants (25%), it ranked #2 by 2 participants (25%) and ranked #3 by 4 participants (50%) (Appendix A.4).
The finger picking was preferred in the 1st iteration, and its absence was missed in the 3rd version. Version 1, 2 and 3 all netted positive responses and critique, mainly the closeness of the third one, and noticeably the absence of more microphones (Appendix A.8). Version

Song 3

Version 1 (unbaffled) ranked #1 among 5 participants (56%), it ranked #2 by 2 participants (22%) and ranked #3 by 1 person (22%) (Appendix A.6).
Version 2 (baffled) ranked #1 among 3 participants (33%), it ranked #2 by 3 participants (33%) and ranked #3 by 3 participants (33%) (Appendix A.6).
Version 3 (bedroom) ranked #1 by 1 participants (11%), it ranked #2 by 4 participants (44%) and ranked #3 by 4 participants (44%) (Appendix A.6).

Conclusion

Overall, the versions most preferred were:

- Version 1 of song 1; a baffled and acoustically close environment that lends itself to the style of guitar playing and vocals. Providing the guitar a means to utilise its body and allowing the low end to appear in a small-bodied acoustic guitar where those tones would otherwise be absent.
- Version 1 of song 2; an unbaffled performance, which allows the sparser guitar to sit in the room more noticeably, capturing depth from the array of microphones used to hear the room.
- Version 3 of song 3; a close and personal recording in a bedroom, that lends itself to the close, unaltered home recording aesthetic. It reflects the earlier assumption that given the nature of the song, being a more personal narrative and less descriptive, it would be best showcased in a bedroom or natural setting.

Discussion:

Introduction

The project involved subjective analysis and preferential ranking of spaces, takes and final mixes for a shortlist of wav files to be ordered and ranked in turn by participants in a survey. The purpose of this was to determine which environments suited each song, operating on the initial assumption that the narrative, intent and tone would influence this decision and preference. The research cause reflection onto biases about the recording industry as it relates to folk, and field recordings.

Survey Findings

The survey data reflected this assumption in part, providing insight into the perspectives of listeners as opposed to the same information from a biased perspective of the writer, producer and mixing engineer. The insights gleaned from the survey indicate that:

- Song 1 (Old Crusader) was best suited to closer and more baffled environments. Presumably because of the complex nature of the guitar playing being best suited to closer mics and a more contained environment.
- Song 2 (Untitled) faired best in an unbaffled, untreated environment with a long reflective arched ceiling, and flat, semi-reflective walls. This song has a slower pace than the previous, with limited picking and strumming, serving itself to the space, and allowing the environment to be heard and appreciated. This data confirms earlier assumptions made about which environments would suit this style of song and performance.

- Song 3 (Open D Song) was ranked highest in the bedroom recording, which is indicative of the fact that the personal element innate to this song is best characterised and expressed in a common, and quiet environment. With only 3 mikes setup to record the vocal and guitar, this environment served to create a hollower sound than the otherwise full and vast sound of the unbaffled environment, or the intense closeness of the baffled environment.

Reflection

The environmental factors of this survey were outlined in expected ways, reifying biases maintained from the outset. It must be understood that with such a small sample size, and subsequently a smaller picture of what would be preferred en masse, it the songs were to be compared by a wider audience or released commercially. The acoustical space undoubtedly affects the performance, the recording, mixing and lastly audience perception. Due to the plethora of variables involved in assessing the environmental factors, given extreme differences of environments logically it would be no surprise that some environments would be preferable to others. The project consisted of less extreme differences which netted in positive affirmation to the presumed effect, requiring more subtle differences to showcase the environmental importance.

The similarities were to do with mike choice and positioning, singing and playing style (for the most part) as well as limited alterations by way of post processing.
The songs were played in short segments of roughly 1 minute in the survey. Given that the length is between 3 and 6 minutes for these songs, it is safe to say the full picture and identity of the songs was not represented. The survey results may have panned out differently given a longer survey to listen to the songs in their entirety.

Given a wider sample size, more controlled and consistent, invariable means of miking, performing and controlling similarity in variance through spectral imaging, a more substantial claim could be asserted. The limitations of this research are evident in the small survey set, takes that did not manifest into versions for comparison and lack of contrast (environmentally) in the extreme. Comparing highly reverberant spaces such as hallways or churches, noisy spaces such as airports, and natural environments such as forests or fields might provide better focus to the environment. Incorporating urban and natural sounds in and comparing them to other — more typical environments).

Conclusion

The survey sample was markedly small. With a broader and larger survey pool more homogenous opinions could be discovered, relying less on contingent data that cannot be as easily quantitively assessed or extrapolated from. The results from the survey reflect the

initial presumptions of the project, though they are lacking context of the whole song, and there are too few responses to consolidate a strong conclusion.

Conclusion:

In conclusion, the songs are best represented and perceived respectively in a good light in the environments presumed from the outset, insofar as one can extrapolate from the size of the data set and from opinion. Furthermore, the research is not fully conclusive and provides merely subjective and tenuous finality to the initial question. The songs were not recorded in enough environments to garner validity to bolster up the superlative question.

The overall question of bias is difficult to assess and solidify in any objective means. The biases in question are too obscure to concretely evaluate.

The testing did however, on a small scale represent the songs in the environments that suit them best, this is of course an opinion and not measured absolutely.

Given the limitations of people available to assist with recording and performing, this project was shrunk from its inception. The weather, and unforeseen conditions had hand in affecting recordings as well. The bridge recording was rendered null and void due to insurmountable wind. The recordings of studio 1 were also unusable for the most part due to the pad being on, on the Zoom H6 for the guitar, as well as audible rumble from a gig underneath the studio.

Bibliography:

Taylor, Hollis. “Field Recordings as Invitation and Transportation.” Continuum:

Journal of Media & Cultural Studies, 10 July 2023, pp. 1–13,

https://doi.org/10.1080/10304312.2023.2234112.

Helmreich, Stefan. “Listening against Soundscapes.” Anthropology News, vol. 51, no. 9, Dec. 2010, pp. 10–10, https://doi.org/10.1111/j.1556-3502.2010.51910.x.

FIEBIG, GERALD. “The Sonic Witness: On the Political Potential of Field Recordings in Acoustic Art.” Leonardo Music Journal, vol. 25, 2015, pp. 14–16, www.jstor.org/stable/43832522, https://doi.org/10.2307/43832522.

Seaward, Matthew Ronnie. “Urban Soundscapes as Narrative: Intentions and Interpretations of Field Recordings.” Journal of Radio & Audio Media, vol. 22, no. 2, 3 July 2015, pp. 299–303, https://doi.org/10.1080/19376529.2015.1083362.

Gallagher, Michael. “Field Recording and the Sounding of Spaces.” Environment and Planning D: Society and Space, vol. 33, no. 3, June 2015, pp. 560–576, https://doi.org/10.1177/0263775815594310.

Meinard Müller, et al. “Automated Analysis of Performance Variations in Folk Song Recordings.” CiteSeer X (the Pennsylvania State University), 29 Mar. 2010, https://doi.org/10.1145/1743384.1743429. Accessed 16 Feb. 2024.

Bartlett, Bruce, and Jenny Bartlett. Practical Recording Techniques. 7th edition. | New York, NY : Routledge, 2016., Routledge, 22 July 2016.

Armstrong, James. “Research Portal.” Surrey.ac.uk, 2025,

openresearch.surrey.ac.uk/esploro/outputs/doctoral/Beyond-an-acoustical-understanding-of-the-impact-of-environment-on-musical-performance/995129311023.

Li, Marjorie G, et al. “Cross-Cultural Biases of Emotion Perception in Music.” Brain Sciences, vol. 15, no. 5, 29 Apr. 2025, pp. 477–477, https://doi.org/10.3390/brainsci15050477.

Bartlett, Bruce, and Jenny Bartlett. Practical Recording Techniques. 7th edition. | New York, NY : Routledge, 2016., Routledge, 22 July 2016.

The Physics Classroom. “Reflection, Refraction, and Diffraction.” Www.physicsclassroom.com, 2021, www.physicsclassroom.com/class/sound/Lesson-3/Reflection.

“The Handbook of Field Recording.” Google Books, 2025, books.google.ie/books?hl=en&lr=&id=xkjXLvATB5UC&oi=fnd&pg=PA1&dq=field+recording+music+micing&ots=WIDpONVGuH&sig=pef1wH8BpI5onA5NwxGIWC-bnJs&redir_esc=y#v=onepage&q=field%20recording%20music%20micing&f=false. =

Li, Marjorie G, et al. “Cross-Cultural Biases of Emotion Perception in Music.” *Brain Sciences*, vol. 15, no. 5, 29 Apr. 2025, pp. 477–477, https://doi.org/10.3390/brainsci15050477.

Mulder, Leilah. “How to Master a Folk Song Recording.” *AudioLover*, 5 Nov. 2023, audiolover.com/genres/folk/how-to-master-a-folk-song-recording/.

ronan. “Some Thoughts on the Sound of Recording… on the Anniversary of Nick Drake’s Death. | Ronan Chris Murphy.” *Ronan Chris Murphy | Official Site of Ronan Chris Murphy*, 26 Nov. 2024, ronanchrismurphy.com/2024/11/26/some-thoughts-on-the-sound-of-recording-on-the-anniversary-of-nick-drakes-death/. Accessed 27 Apr. 2026.

"Nick Drake's Tone - an In-Depth Look." *Www.youtube.com*, www.youtube.com/watch?v=EzdQE3fJW2E.

Appendix

Appendix A – Survey

A.1

1. Song 1 (Old Crusader) Rank these in order of your favourite to least favourite More details

A.2

1. Song 1 (Old Crusader) Rank these in order of your favourite to least favourite More details

A.3

3. Song 2 (Untitled) Rank these in order of your favourite to least favourite More details

A.4

3. Song 2 (Untitled) Rank these in order of your favourite to least favourite More details

A.5

5. Song 3 (Open D Song) Rank these in order of your favourite to least favourite More details

A.6

5. Song 3 (Open D Song) Rank these in order of your favourite to least favourite More details

A.7 Song 1:

2. What informed that ranking?

9 Responses

ID ↑	Name	Responses
1	anonymous	3
2	anonymous	The speed was at a good pace.
3	anonymous	i think the quality of the recording
4	anonymous	The first version was dry and clean which I liked, easy to listen to, the 3rd version sounded slightly harsher and more room ambience possibly, and the 2nd version had a lot of room ambience which I didn't personally like.
5	anonymous	I liked how close the vocal felt in version 1, quite cozy I think version 2 the level of ambience felt a little strange with the vocal but the guitar sounded nice with it. 3 I felt had a good balance with both elements benefitting from some ambience but not being overwhelming. Close between 1 and 3
6	anonymous	Version 3 has nice resonance
7	anonymous	Songs recorded live have a rawer feel and connect me to the song compared to studio recordings
8	anonymous	The levels in version 1 are unique
9	anonymous	The vocals and guitar are more clear in the first version, the second version has in-room reverb, and the third has a thin quality that I prefer to the second

A.8 Song 2:

4. What informed that ranking?

9 Responses

ID ↑	Name	Responses
1	anonymous	2
2	anonymous	Version 1 was at a steady speed
3	anonymous	i liked the style of finger picking from the guitar in the first one. the chord strums didn't seem to fit the song in the last one
4	anonymous	I felt like I could hear the guitar and voice the best in the second version, the first version sounded very similar to the second version but I couldn't hear the guitar as well, the third version sounded like there was a single mic picking up both elements, and sounded a bit harsher, as in more hissy sounding
5	anonymous	Again really liked how close 1 felt, didn't notice as much different with 2, 3 felt a small bit harsher this time
6	anonymous	Version 2 sounded clearest
7	anonymous	3 still felt live but the vocals were recorded closer and they are more apparent
8	anonymous	Very Cat Steven's vibe from the third version
9	anonymous	The first and second version is mixed to complement the guitar and vocals, the vocals override the guitar in the third

A.9 Song 3:

6. What informed that ranking?

9 Responses

ID ↑	Name	Responses
1	anonymous	1
2	anonymous	The rhythm was very enjoyable
3	anonymous	i really liked the embellishments played on the guitar in the last one.
4	anonymous	Version 2 sounded dry and clean, easily hear all elements, the first version I could hear moving around of someone's jacket or clothes, with room ambience too, the third version sounded harsh and a lot of room ambience, hard to hear each element
5	anonymous	Found it subtle enough between 3 and 2 for this one and how I'm listening but both sounded a bit fuller than 1. Very nice songs
6	anonymous	Version 3 was clear with good acoustics
7	anonymous	Where ever both takes were recorded help the vibe of the song much better than clear a dead room
8	anonymous	The second version is reminiscent of nick drake
9	anonymous	I liked how the vocals were mixed more in version 2 and 3