Musical bedroom:
Models of creative collaboration in the bedroom recording studio

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Submitted in fulfilment of the requirements
of the degree of Master of Fine Arts (Research)
July 2017
Abstract

In the late twentieth and early twenty-first centuries, high quality audio recording and music production technologies have become physically smaller and more accessible outside of specialist professions, and previously highly structured industrial models of creative labour in record production have become more mutable. Along with these changes, the physical spaces and recording studios themselves have been transformed, something particularly notable in the rise and ubiquity of the home recording studio. In this research project I have explored the ways that home recording studio spaces influence creativity and collaboration, in particular the simultaneous role that the bedroom can play as place of creativity, collaboration and place of rest. Through creative practice frameworks that utilise action research and autoethnographic methods – combined with interview data collected from collaborators and other practitioners – I have found that the bedroom studio occupies a precarious role between ‘professional space’ and ‘hobbyist space’. The monetary and creative advantages are relatively easily identified in bedroom studios, although the establishment of the bedroom studio as a place of professional creative collaboration is more challenging; in this way, the quality of recording technologies in the bedroom studio does not guarantee effective creative collaboration and outcomes, and may in fact inhibit these aspects in ways not associated with more traditional recording studios. As the bedroom studio has become a space and model for record production, acquiring a greater understanding of how this space functions will contribute to our understanding of the music industry and to changes in the nature of creative practice and record production today.
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Statement of Originality

This work has not previously been submitted for a degree or diploma in any university. To the best of my knowledge and belief, the thesis contains no material previously published or written by another person except where due reference is made in the thesis itself.

Signed: Anders Kile Groenningsaeter

Date: July 2017
Acknowledgements

I am grateful for the help I have received from my supervisor Dr. Gavin Carfoot, who has led me through this process with patience and understanding, and who has been instrumental in keeping me inspired and motivated throughout the process. This also goes for my collaborators, JW, FD, AK and JK, who all have left a large imprint on the practical component of this thesis, in addition to inspiring me and motivating me through their talents as performers and songwriters. I would also like to thank all the interviewees who, through fascinating conversations, have helped me gain new understandings of the nature of collaboration and creativity and bedroom studio practice. I would also like to thank Mr. Yanto Browning for his feedback and advice on the practical component, illuminating aspects of creating music I was not yet aware of. Lastly, I would like to extend my gratitude to Dr. Martin Reese and Ms. Margaret Power for their help with, and comments on, my writing, as well as propelling me over the finish line.
Chapter 1 – Introduction

The introduction and use of digital technologies has contributed to substantial changes in the ways that recorded music is produced and consumed. As the writing, arranging, mixing and mastering of recorded music has shifted away from a hierarchical industry model, so too have methods of distribution shifted dramatically through changing mediums: from records to cassettes, digital files and streaming services. These changes in the consumption of recorded music have been well documented (Nguyen, Dejean & Moreau, 2014), as have increasing changes to the ways that music is produced and understood (Zagorski-Thomas 2014; Watson 2013, Edmonds et.al., 2005). As the accessibility of recording studio equipment has increased, such equipment has increasingly found a place in people’s homes, resulting in the ubiquitous ‘home studio’ or ‘bedroom studio’ model. While the bedroom was previously a space in which recorded music was consumed, it has emerged as a significant space for creation of recorded music as well, something that has received less scholarly attention. This change might lead us to ask some questions on how this space – also a place of relaxation and sleep – might function as a place of creativity and collaboration. Changes in the location of recording studio technology have had an impact on the ways that recorded music is created and the kinds of creative labour involved, resulting in models of production that contrast with more traditional models of labour in the music industry.

These models challenge the industrial processes involved in creating a commercial recording, both in terms of the technology and the level of skill of the producer or musician. Recording studios generally have had gatekeepers (in the form of A&R representatives for a record label) or gatekeeping mechanics (in terms of the monetary cost or social network limitations) that limit access to technologies; the existence of such gatekeepers has contributed to the rise of the bedroom or home studio for decades. While this increase in access to studio technology has been enabling, it also introduces constraints. Generally, the recording technology is cheaper and lower quality; the space is not purpose built and may not have the desirable acoustic characteristics of formal recording studios; the practitioner may not have the experience, skill or knowledge to set up and perform recordings on par with formal recording studios; and the practitioner may occupy the roles
of the artist, producer, sound engineer, mix engineer and mastering engineer. There are variations on these factors depending on the practitioner, but in general the bedroom/home studio is a one person operation in an unconventional space with lower cost equipment and gear.

In this project I aim to explore how creativity and collaboration occurs in the context of these bedroom recording studios, and how this differs from practices associated with traditional recording studios. I start by examining some of the differences between these two creative spaces, identifying the differences and similarities between bedroom studios and traditional studios. In particular, I aim to identify specific factors within each space that might enhance or inhibit creativity and collaboration by looking at the space through two different but interconnected lenses. One such lens will be viewing the recording studio as an emotional space, focusing on the ‘feel’ or the ‘vibe’ of the room. How does the furnishing and lighting affect how the room ‘feels’ to artists? Are there specific items in the room that distract or enhance the creativity and collaboration of the practitioners? Another lens will be viewing the space as a container of technologies. What technologies are available to work with in the room? Are they set up in a way that invites interaction and play, or are they getting in the way of the musical idea? These two models are presented in order to better understand the ways that bedroom studios both constrain and enable musical creation and collaboration.

**Recording technology in context**

Much academic work has focused on changes to technologies in music consumption in the twentieth and twenty-first centuries (Leyshon, 2009; Watson, 2013; Marrington, 2011), although technologies in music production have also undergone dramatic shifts. These changes can be identified in musical instrument technologies, along with the technologies of record production. Musical instrument technologies underwent a notable shift through experiments and research in synthesised electronic music in the mid-twentieth century, pioneered by Harold Bode (Doty, 2016), followed by broader developments of synthesisers by drum machines in the 1960s, and the development of the computer as a musical instrument.
The development of digital instruments occurred alongside the development of digital formats as recording mediums. While digital recordings were recorded and commercially released in Japan in 1971 (Fine, 2008), commercial developments in the digital recording medium did not become common until some years later. Throughout the mid- to late-1970s, digital recordings were occasionally used as backup recordings of orchestral music, while the tape versions would act as masters. The digital recording technology of the late 1970s could not accommodate the newfound recording practices, like overdubbing, that bands quickly came to expect in the recording process (Barber, 2012).

Crossing these eras was the Fairlight CMI, a powerful sampler for the time, allowing chromatic mapping and performance of digital audio samples, costing between 18,000 and 60,000 pounds (Leete, 1999). This musical instrument was released as an iPad app in 2011, demonstrating developments in computer processing power and the diminishing cost of such musical technologies over time. The personal computer also played a part as a sequencer of musical information with the MIDI format, whereby multiple musical instruments could be sequenced and played back by one programmer. In a sense, this collapsing of multiple aspects of the creative labour in recording music was also followed by discourses about the role of the individual’s creative work, as electronic musician Moby demonstrates in these comments made in a video interview with Electric Independence, uploaded to YouTube by Geroin31337 (2011):

“Like, when you’re a band, you’re always waiting for the other musicians to show up. Logistically, being in a band is quite difficult. ‘Cause you have four people in a band in a suburb, like one of them is drunk, one of them is at work at the mall, the other is with his girlfriend, you’re trying to find a place to rehearse and like, ok, well, the drummer’s mum says you can rehearse in the garage from two until four on Thursday afternoon. Whereas with electronic instruments, they’re always waiting. They never complain, they don’t have girlfriends. So, it was like that seduction of having an unlimited sonic palette basically like having musicians that are always there waiting for you. So, you know, a rock band cannot rehearse in the suburbs at three o’clock in the morning, whereas you can make electronic
Recording studio technologies have also moved through various material forms, from large-scale and expensive resources inaccessible outside of music industry models, to broadly available technologies available through global economies of mass manufacture. These large-scale, formal recording studios are still an important part of music production, although they now share the role of recording facility with the bedroom and project studios. The formal recording facility generally consists of two physically and sonically separated rooms, one for recording and one for listening back. They may also contain a large format recording console, hardware gear known as ‘outboard’, microphones and so on. In addition to these, the formal recording studios are easily able to accommodate a group of people as recordings of bands in the most common task performed by a recording studio. Changes in the physical locations of these technologies – from professional, commercial studio facilities, to personal in-house recording studios – have occurred over time, and in a number of ways. This was facilitated by manufacturers such as TASCAM/TEAC who by the 1970s had begun advertising and selling multitrack reel-to-reel recording solutions for domestic environments, which was followed by an increase in popularity during the 1980s as more affordable cassette multitrack recorders became available (Albers, 2003). Taking advantage of these technologies, Phil Collins produced early recordings of In The Air Tonight (1979) at home with a tape machine, an early drum machine, a synthesiser and an electric piano (Cavanaugh, 2016). Similarly, Bruce Springsteen’s album Nebraska (1982) was recorded in his home (Garman, 1996, p. 71) on an affordable four-track Portastudio cassette recorder (Runtagh, 2016, para. 1). In these examples, the home recording process was considered part of the ‘demoing’ of songs, with final production completed in traditional studio spaces. The practice of producing master recordings at home did not become as common until the development of computer-based digital recording technologies, such as digital hard disk recording using digital audio workstation (DAW) software.

As digital formats were adopted as the preferred recording medium, it would “…put an end to distortions imposed on analogue recordings such as hiss/noise, generational loss and print-through.” (Barber, 2012, Para. 9). This was initially done with the use of digital tape and digital tape machines, and would be replaced by hard drives in the early 1990s. As the computational power of
computers grew, the personal computer graduated from a recording medium to a tool that could encapsulate the process of writing, recording and mixing a song. In 1999 Ricky Martin’s *Livin La Vida Loca* was released, becoming the first song to reach a mass audience having been mixed ‘in-the-box’ (Bell, A., Hein, E. & Ratcliffe, J., 2015), a term used to describe processes that take place exclusively in the computer. The role of mix engineer could now become part of the collapsing of the different creative roles in music production and composition. Alongside this, the computational power in personal computers was able to drive advanced sound generation and sample playback software, removing the need for any acoustic sounds to be recorded by the producer. This meant that, with only a laptop, a song could be written, mixed and released. As music and audio software developer Makles describes, ‘Music is by nature a collaborative process, and what DAWs have been doing for 15 years now, maybe 20, is promoting an exception in music history – making music alone’ (cited in Carson, 2014).

These developments in music technology and computer processing allowed for the collapsing of the creative and technical roles and processes previously embodied by several practitioners in music production practice. Makles’ observation about the increasingly solitary aspects of music production enabled through new technologies reflects the understanding that bedrooms and computer screens are not inherently collaborative. However, with the strides made in communication technology and the ubiquity of the internet, Remote Music Collaboration Software (RMCS) has become a new way to collaborate (Koszolko, 2015). These services range from always online, real time collaboration focused DAWs, to streamlined methods to share audio files for remote collaboration. Many music producers today start out creating and recording music in their bedrooms with little or no knowledge of formal recording studios and practices, and this trend may become more common as we see development in music technology and the surrounding technologies that allow for bedroom studio practice.

**Personal background**

My personal background as a bedroom producer provides an important context for the research in this thesis, relying on the move to DAW production on the computer. The first step I took into
bedroom music production was purchasing an iMac computer, a two-channel audio interface, affordable microphones and speakers. At this point, I did not have any aspirations other than recording myself playing guitar and singing as a hobby. I had virtually no experience with recording prior to this, and enjoyed the learning and experimentation that came with learning how to operate the recording equipment. With experimentation came many epiphanies, including the creative freedom of a virtually unlimited number of tracks, the power of software instruments and sampled instruments, the sonic flexibilities of software effects and the possibilities of sample manipulation. Very soon, the computer had evolved from the recording medium to becoming the most important instrument in my bedroom studio, located in a shared apartment in Oslo, Norway. The room featured a single bed, a desk with my computer and speakers, some guitars leaned up against the wall and a closet. It was in this space that I would work and do my first production experiments. As my recording and song writing developed, I began reading and researching music production practices and techniques, increasing my awareness of the technologies of music production. Through instruction and promotional materials, the technologies of music production were positioned as necessities connected to the creation of a ‘certain sound’. Through this research, I also became familiar with the model of large format recording studios with acoustically treated rooms, large mixing desks and expensive speakers; although, importantly, this awareness came not through personal experience but through representations in the media. The image of these studios provided the basis for how I thought of and designed my bedroom studio. I tried to emulate aspects of these spaces within my own bedroom, pursuing the idea of a bedroom studio that could produce professional-sounding recordings.

After having spent two years establishing my bedroom studio, I decided it was time to learn about music production in a more formal way in the hope of turning music into a career. This desire coincided with my roommate moving out, and I was able to set up my production equipment in his former bedroom. Having a dedicated space outside of my sleeping quarters appeared to give my workspace more ‘legitimacy’, most notable in the lack of a bed frame and mattress. I also purchased some acoustic treatment and a rug to dampen reflections in the room, and outfitted the built-in wardrobe as a vocal booth. Despite these improvements, the room was too small to work as a reliable mixing space, and recording an instrument proved hard due to space constraints. While in this small bedroom studio I purchased my first hardware synthesiser, the sizable Yamaha DX7.
had also invested in a pair of monitors that took up space, and with those additions I felt that I had already outgrown the room, moving my bed out of the master bedroom and setting it up as a recording space. Moving into this bigger space was liberating; I had more space to experiment with acoustics while recording, to incorporate my laptop as an instrument in the creative process and to collaborate more freely, without feeling like the collaborator thought they were intruding on my personal space. In addition to this, I could fit all my instruments into the studio, having everything within reach. It was in this space that I produced my first extended record (EP), for which I was awarded Most Promising Student in my music production class. During the production process, I experimented with combining software instruments and recorded instruments, attempting to bring these different technologies together. The space itself played an audible part in the EP, most notably in the stereo recording of my singing and playing ukulele in the living room, through microphones that were placed in the adjoining bedroom studio capturing the acoustics of the space itself.

Shortly after this creative period, I relocated to Gold Coast, Australia to continue my studies in music production. With this move, I was again producing music and sleeping in the same room. Without monitors, acoustic treatment and musical instruments (which remained in Norway) the perceived ‘legitimacy’ of my bedroom studio was low, and, more importantly, I had considerably less space to move around in and work in, and very few collaborators. With this move, the impact of the bedroom recording space became especially apparent. Having spent a considerable amount of time working in various bedroom studio configurations – and being conscious of how all these spaces had affected my creative practice – served as the inspiration for taking on this project and researching the different qualities affecting collaboration and creativity in bedroom studios.

Issues of space, legitimacy, and collaboration seemed especially marked in these settings; with the bedroom being a personal space at the offset, aspects of intimacy naturally remain when the bedroom is turned into a bedroom studio. Moreover, with most bedroom studios, the selection of equipment and gear reflects the bedroom producer’s investment in the space and a way of representing musical and professional legitimacy. There may be a significant emotional and financial investment on the part of the owner of the bedroom studio, such that being a guest and collaborator in this space – where the ownership of the space is so clearly defined on intimate terms – could potentially be experienced as a spatial intrusion, or as a factor that may limit the investment
from outside collaborators. In addition, the positive creative and sonic potentials of the bedroom studio may not be immediately apparent to the collaborator, especially at first; the cultural image of a recording studio is the large format studio, and to a visitor with no emotional or financial investment in the bedroom studio he/she is visiting – and perhaps little experience with bedroom studios – the space might seem underwhelming and the technical requirements for creating a commercial quality recording may not be apparent. All of these issues have come to the fore through my personal experiences of music production in bedroom spaces, and it is through this research that I hope to reveal some critical insights into these issues.

**Conclusion**

The developments in music and information technologies, and their impact on music production, has created a musical climate in which anyone with a laptop is able to take on music production, create music and release it into the public sphere. The democratisation of this process – traditionally reserved for resource expensive environments – has ramifications in many different areas, including the re-positioning of the personal bedroom as a prime site of the cultural labour of record production. By describing my own experience in bedroom-based music production and that of my collaborators, this project aims to offer some insight into these changed aspects of creativity and to understand both the constraining and enabling results of such changes.
Chapter 2 – Literature review

In this chapter I review some of the existing research on recording studios, contextualising the study of the bedroom studio alongside what I refer to as the ‘traditional’ or ‘formal’ recording studio. While there is existing research on traditional recording studios (Leyshon, 2009; Bates, 2012; Gander, 2015; Thompson & Lashua, 2014), it is only recently that research has begun to address the proliferation of home studios as a prominent alternative to the traditional recording studio (Kaloterakis, 2013; Wilson, 2012; Bell, 2014). Traditional recording studios have come under economic pressure as consumer technologies, such as the iPad and iPhone, have been increasingly presented as viable mediums for producing music (Building an iPad recording studio, 2014; Pierce, 2017) and new modes of music consumption and models of payment have emerged, decreasing the monetary value of music (Nguyen, Dejean & Moreau, 2014). In addition, music production software has become more accessible through subscription plans (Kahn, 2015) or freeware options (Kahn, 2015), and training in music production has become more accessible through online means, such as YouTube videos, countering the highly-specialised nature of audio engineering that underpinned the music recording industry in the historical and commercial context (Zlatic, 2015). It is in this context that scholarly work on bedroom studios becomes critical; as the prevalence of bedroom studios crosses over both amateur and professional spheres, it has become a primary space where the creative labour of popular music production occurs today.

The traditional recording studio

In his study of recording studios, Bates identifies floor plan, interior decoration and technology as factors effecting the collaborative interactions of musicians (Bates, 2012). One of the main functions of a traditional recording studio is the limiting of acoustic interaction between spaces, with isolation of the live room and the control room being integral to many modern recording techniques. This isolation also results in obstructed visual communication as well as auditory communication, such that the participants are depending on ‘talkback’ technology to communicate.
(that is, verbal interactions occur through microphones and speakers). Separating collaborators in this way evokes a power relationship between the artist/band and the producer/engineer, providing a spatial indication of the industrial division of labour associated with classic models of the recording industry, separating performance and analysis (Gander, 2015). Studying studio floor plans in his case study of Turkey, Bates notes “… none of the recording spaces was large enough to comfortably accommodate more than four musicians at a time. Thus, studios were not spaces where groups came to experiment or where through collective jamming new arrangement ideas were developed” (Bates, 2012, p. 18). Such aspects of design and function provide a good example of how the recording studio space directly affects (and in this case, limits) the creative and collaborative practices within it.

Bates offers another example of the role of space in recording studios, citing a Turkish musician who identified that interior decoration and acoustic treatment was in fact discouraging women from participating in studio practice (Bates 2012). In contrast, Bates mentions his time in Hyde Street Studios in San Francisco, where the walls connecting the different rooms were covered “… with framed record jackets that provided visual evidence of the great albums that had been produced in the studio in the past – all this contributed just as much to the vibe of Hyde Street as the unique acoustics of the main recording rooms.” (Bates, 2012, p. 18). These aspects contribute to the notion of ‘vibe’; a common term in music production, closely connected with discourses of collaboration and creativity. It pertains to there being a certain ‘wavelength’ between the practitioners, and that they are having a ‘good time’. The perception is that a good vibe will result in a good take of the recording, and, as such, vibe is a highly sought after characteristic in studio spaces. As Watson and Ward have explored in their research, many factors contribute to the vibe in the recording studio, something that, in turn, connects to the concept of emotional labour (Hochschild, 2012). For the participants of a creative recording project (artists, producers, engineers and so on), emotional labour describes the adjustment of one’s own mood to induce a desired mood in the person or people one is interacting with, in order to facilitate the creative process of recording: “This management of emotions is often referred to, by producers and engineers, as creating the right ‘vibe.’” (Watson & Ward, 2013, p. 2904). To achieve this, the producer/engineer is expected to cultivate a sense of trust with the artist/band, which can be thought of in two ways: emotive trust, a trust based on the personal feelings between people; and capacity trust, a trust in your collaborator’s
ability to perform the tasks needed in the job ahead (Ettlinger, 2003). Where the research by Watson and Ward focuses on the emotional labour undertaken by the producers, it fails to address the emotional labour involved with all participants in collaborative content; their research frames the musician as a passive participant who is led through the recording process by the producer/engineer (Watson & Ward, 2013).

There have been discussions of the emphasis placed on vintage or classic recording equipment and its place in the modern recording studios, both in the home and traditional settings. Bennett (2012) states that there is very little evidence showing that the modern music producer’s use of vintage gear is due to ‘technostalgia’, fashion, trends or sentimentalism, but acknowledges that romanticism may have an impact on the continued use of this equipment, to where certain studios will attract bands based on the equipment present in the studio. In an era with digital technologies allowing for faster workflows and recalls, as well as more accurate manipulation of audio signals, Bennett finds that the vintage, analogue equipment imprints ‘character’ and ‘warmth’ onto the audio, while the digital plug-in emulations do not sound as good. While these are attractive qualities of music recorded in the analogue domain, several interview subjects in Bennett’s paper exhibit some frustration with clients’ under-appreciation of the requirements on performance the use of analogue technologies place on artists, providing a good example of a possible interaction between studio professionals and self-taught bedroom recordists. The role of analogue equipment in bedroom studios, or the concept of a hybrid studio, where the majority of processes take place in the digital realm and is complemented by a small selection of analogue equipment, is not discussed, leaving some room for further studies of the impact of this hybrid approach to music production, both in the bedroom and in formal studios, especially as these studios are emerging on both ends of the spectrum.

An example of be software focused bedroom studio being turned into a traditional space can be found in Toronto, Canada, where producer Noah ‘40’ Shebib has set up his studio:

You can come into this place and literally bring your laptop, and I plug in two cables, and boom, you’re hooked up to [Native Instruments’] Maschine, you’re hooked up to [Native Instruments’] Komplete Kontrol, you’re hooked up to all the screens, you’re hooked up to all the keyboards, you’re hooked up to the console.
You won’t see many studios that have these pieces embedded into them the way I do, because I am a producer, so I built this from the standpoint of a producer. (Shebib, 2016)

During a video interview, Shebib shows off his studio, a space that blends the production approaches of traditional recording studios with the approaches and techniques of home or bedroom studios. A studio built around MIDI controllers and software production, in the space of a traditional studio, with the separated live and control rooms. Another example of this is Justin Vernon of Bon Iver’s recording studio, April Base, where studio manager Chris Messina states that they “…We want a more electronic, in-the-box workflow, with lots of table space for people to put their laptops and gadgets on, and desktop patch panels everywhere so you can just plug in and go. The idea is for the space to encourage on-the-spot collaboration” (cited in Tingen, 2017, p. 120). While the studio itself has stronger ties to the traditional recording studio, Messina is looking to incorporate software focused, bedroom production techniques.

Another aspect of traditional recording studios that is easily overlooked in the current discourse is that several techniques credited as staples of home recordings – such as limitations in resources and physical space – are not specific to home recording. Producers like George Massenburg, Dan Was and Daniel Lanois are all known to use a one-room approach to recording, gathering the entire ensemble in the room with the engineer and producer, and tracking the song that way. One example of this is Darrell Scott, who recorded with Massenburg in his room at Blackbird Studios in Nashville: Massenburg employed close microphones as well as a set of microphones close to the ceiling to record the entire band at once, and “even the engineer was in there with us” (Touzeau, 2008). Daniel Lanois’ work is another example of bridging the gap between the traditional studio and the home studio. Lanois has used unconventional spaces as recording studios, approaching the recording session more like a rehearsal, utilising PA systems instead of headphone monitoring, sharing the space with the band or artist to better facilitate communication:

I also got tired of somebody trying to talk to somebody else in the studio and they're waving their arms and their microphones aren't on and their frustrations would build. I thought [about] why these people don't have problems when they're up on stage, and it's because they're relatively close together and there's no glass,
no segregation. So I became fascinated with recording in an open room. (Lanois cited in Sokal, 2003, n.p.)

Lanois employed this technique for parts of the recording process of U2’s *Unforgettable Fire* (1984): the sessions were set in Slane Castle (located in Ireland), the vocals and overdubs recorded in the control room (Sokal, 2003; Frosty, 2015). Lanois states that the control room was the “brainstorming center”, a great space for creation that “… shouldn’t belong to an engineer or producer, it should be the room where all the smart people get to hang out.” (Lanois cited in Sokal, 2003, n.p.) This example blurs the lines between a home studio and traditional studio, where Lanois outfitted the space with equipment equivalent to what would be found in a traditional recording studio. More recently, Lanois set up a recording studio in his house in Silverlake, Los Angeles for Neil Young’s album *Le Noise*, outfitting the house with three Neve BCM10 consoles, a Neve Melbourne desk, an IZ Radar recorder, some outboard gear like the Eventide H3500 and a selection of high quality microphones including an AKG C24 and the RCA44 (Tingen, 2011).

I think that if you’ve customized the environment to the project itself, then that is another level of commitment that people feel. If you do a setup that’s specific to the record you’re working on, and you don’t have to dismantle it by 5pm for the other session, then you’re really building a custom sound for that record. (Lanois, quoted by Frosty, 2015)

Home studios depend on and use technology and software to their advantage, often to compensate for the limitations of the space they are located in. However, these advances in technology are not exclusive to the home studio, and are common in traditional studios as well. While traditional studios generally have access to guitar amplifiers and the capacity to record them, a great deal of flexibility and convenience comes with the use of their software counterparts, as does the use of other virtual recording gear. As exemplified above, there is overlap in many of the processes taking place in home and traditional recording studios, and to illuminate these, a closer look at the home studio may be warranted.
The Home Studio

The home studio is the most common place for musical recording today. Whereas the traditional recording studio needs to fulfil a range of technological criteria to be considered a recording studio, the only technology needed for a home studio to be defined as a home studio is a laptop and a practitioner naming it his/her home studio (Helgheim & Anthun, 2014). As a result, home studios come in many different forms and “… represents different things to different people, depending on the user, his [sic] relationship to music and his financial condition” (Kaloterakis, 2013, p. 4); from a laptop with a microphone (Wilson, 2012) to a professional grade recording studio, such as Dave Grohl’s home studio where the Foo Fighters recorded their seventh album *Wasting Light* (Doyle, 2011). In Kaloterakis’ (2013) research on creativity in the home studio, the interviewees state that the home studio is a more relaxed space, where there is room for mistakes as no one is there to judge, waiting for the right performance. This is echoed by Max Martin, stating that “Artists sometimes feel uncomfortable in studios where every hour feels like it costs money,” (cited in Gradvall, 2016, para. 31) Still, the relaxed nature of the home studio is not perceived as exclusively positive. With no hourly rate for the use of the home or bedroom studio, the pressure to finish a project within a set timeframe is considerably diminished. “… in a professional studio, the artist is more focused…” (Kaloterakis, 2013, p. 4). Without a producer to guide the process and give feedback on the recordings, an engineer to make sure that it all sounds right and the vibe of a professional studio, the project can easily get off track.

Another challenge with the home studio is the need for equipment and knowledge to achieve a professional sounding recording. As De Carvalho notes in her study of how home recording is represented in magazines and online message boards, the home recordist is expected to fill all the roles in the home studio, from artist, engineer and producer, to being the studio designer (De Carvalho 2012). De Carvalho identifies discourses that often model the home studio on the traditional recording studio, where it is expected that “… given the ‘accessibility’ of home recording, anyone can and thus should concentrate on reaching a professional sound at home.” (De Carvalho, 2012, p. 4). To achieve this sound, initially a significant monetary investment was needed: the ADAT 8-track recorder came to market in 1992 (as the first such recorder to lay claim to “professional quality sound”) and these were sold at just under $4000 USD; coupled with a
Mackie mixer, this “…spawned the birth of the ‘project studio’” (Cole, 2011, p. 450). The term “project studio” has been defined by Bell (2015) as a home studio performing commercial work. As computers became more affordable, they started replacing the ADAT, and in turn “…not only drastically reduced the cost of high quality recording, but substantially decreased the gap between ‘home’ and ‘professional’ recordings.” (Cole, 2011, p. 450) This allowed home studio owners to utilise software (Leyshon, 2009) to emulate the recording technologies associated with traditional recording studios.

Before changes in computer technology made DAW recording viable, a typical home studio setup may have consisted of digital tape as recording medium and a mixer. As already established, this was not an very affordable setup, and would require additional investments to achieve high quality recordings. As argued by Cole,

> Since high quality recordings also use numerous effects like digital reverb, compression, and equalization, project studios also needed to invest large sums of money in ‘outboard’ effects units. In sum, although the price/quality index was substantially lower than ever before, a fully functional project studio still required a large outlay of money if one was to even begin competing with large commercial studios. (Cole, 2011, p. 450)

The computer had a role in this model of home recording as a MIDI sequencer, though not as a recording medium. The early Atari computers were very capable and intuitive to use, compared to the stand alone MIDI sequencers of the time, and could sequence any MIDI enabled synthesiser, sampler or drum machine, allowing for a single person to operate and record several instruments at the same time. The challenges of creating a digital user interface for computer-based composition and music production, as well as the impact of these user interfaces on the production process, has been discussed by Bell, Hein & Ratcliffe (2015). While discussing the limitations of the skeuomorphism in audio production, Bell, Hein & Ratcliffe point out the time sensitivity of these interfaces, stating that they are generational and beholden to tropes that are often out of date. The example used in this article was that of the 3.5-inch floppy disk as a logo for the save button. While useful for anyone growing up alongside computers in the 1980s, they are unlikely to mean anything to someone born later than the mid-1990s.
The plethora of emulations and variations on classic recording gear, audio repair and enhancement tools – as well as software aimed at emulating the professional control room monitoring in your headphones – are sold and marketed as a means to bring the home studio one step closer to the traditional recording studio, without the associated cost and space implications of the actual hardware. In this sense, the home studio is defined in part by the technologies that it lacks in comparison to traditional studios. However, this lack of hardware also renders the home studio more mobile and nimble, enabling experimentation with the configuration of space and technology, and potentially resulting in a more personalised workflow. This sense of ‘personalisation’ leads to discourses in which the home studio is considered a more ‘relaxed’ space (Kaloterakis, 2013), both in terms of space, technology, time and education. “While the practices and learning histories of professional audio engineers is well documented, little is known about the habits of home studio users” (Bell, 2014). Bell notes how the learning processes taking place in a bedroom are to some degree “trial-by-fire” and improvisatory. As bedroom and home producers are learning and honing their craft, they are to a large degree depending on online resources such as YouTube to learn about techniques and to find answers to queries. In his study of a home studio practitioner living in a studio apartment in New York City, Bell describes the methods and techniques employed by the artist to create a song. In detailing the process, the artist-engineer separates the song writing and recording process as one would expect in a formal studio setting, but combines the process of arranging the track with that of recording and mixing. This article gives a good insight into an example of how home studio practice may be structured, perhaps specifically for a bedroom musician mainly working within ‘acoustic sounding’ genres. I will, in this thesis, provide other examples of how the process of making music in a home or bedroom studio can be structured. The creative use of DAW techniques also means that the practitioner can achieve recordings beyond their performance level, either by manipulating the pitch and timing of the take or by recording to a slower version of the song and speeding the recording up after the fact, or (more commonly) by editing the existing take (Marrington, 2011).

Closely linked to modern bedroom studio practice is the utilisation of the internet as a means of learning bedroom production, acquiring new software and effects used in music production, and, more recently, as a means of collaboration with other home or bedroom producers. The utilisation of asynchronous and real time collaboration tools have opened up the bedroom studio as a
collaborative space, from it generally being restricted to one or two collaborators, to it becoming a space for a practically unlimited number of collaborators (Koszolko, 2015). In this article Koszolko discusses the various Remote Music Collaboration Softwares (RMCS) available to bedroom producers and provides evaluations on how successful the different RMCS are in facilitating collaboration, looking at ease of inviting someone in, its immediacy and its effect on the collaborative process, and provides qualitative data on his experiences with instigating collaborations with strangers, available to him through forums, and the benefits to his own musical practice.

There may also be a distinction between what is known as a ‘home studio’ and a ‘bedroom studio’; whilst these terms are often used interchangeably, they have distinct elements. For example, a home studio may imply a dedicated room or space in the home for music recording activities, while a bedroom studio may refer to cases where the space is a shared space for music making and rest, most obviously represented by the co-location of recording technology and technologies of sleep (a bed, pillow/s, linen, and so on). As a place and site of culture in its own right, the bedroom has been a site of significant research, pioneered by McRobbie and Garber (Lincoln, 2014), who identified the bedroom as a previously-unrecognised personalised safe space, and an important site of girls’ cultural identity (McRobbie, 2000). While McRobbie situated the “bedroom practices and cultures of young working class girls in the United Kingdom” as an important aspect of popular culture (Wilson, 2012, p. 49), her critical perspective is relevant in the study of bedroom studios. As Wilson writes, “McRobbie’s idea of bedroom culture have gone largely uncontested” (Wilson, 2012, p. 3), and my own critical perspectives on bedroom culture have the potential to contribute to the ongoing understanding of the place of bedroom cultures in popular culture more broadly.

“Although the role of music in private spaces has been addressed in the subculture’s literature, for example in McRobbie and Garber’s (1991) account of teenager girls’ bedroom culture in the 1970s, the relationship between music and every day, ordinary young people in private space has remained under-explored.” (Lincoln, 2005, p 400.) As Lincoln has recognised (2005; 2014), bedroom cultures are not inherently restricted to girls, but that boys also partake in bedroom cultures, and that the items in a bedroom become part of, and represent, the identity of the person living within. Lincoln provides insight regarding the role of music in teens’ bedroom cultures, stating that it “…is not just significant as resonant sound in contemporary bedroom culture, but also as a complex tool of
identity construction, reflection and evolution.” (Lincoln, 2005, p 413.) This was also discussed by Larson (1995) in his study of adolescents’ engagement with media and need for alone time, using examples of the bedroom as an arena for temporary self-isolation and cultivation of a ‘private self’, and by Baker (2004) in her study of young girls’ private and social time spent in the bedroom. Both studies identify the bedroom as an important arena for youths to explore and construct their personalities. There may be connections to be drawn between this initial need for interaction with music as a medium, the need for alone time, the increased accessibility to music making software, and the rise of the solitary electronic artist/producer and his/her quest for sonic individuality through music production. Expanding on this, Lincoln explored how youths decorate and fill their bedrooms with items representing memories, interests and other identity-revealing qualities in the room’s occupant, noting how “Consuming and producing music is both an individualised and a unifying practice” (Lincoln, 2005).

Bedroom music production is often limited by the technology available – or what is practical – in a bedroom studio, rendering the musical output of the bedroom studio limited in some sense as well. While very capable of music production, many bedroom studios are not well equipped for recording live bands or large ensembles, in a sense restricting the recording of jazz, rock and other similar genres in a traditional manner without the use of overdubbing. Genres like EDM and other electronic or sample based music lend themselves to bedroom production as they can be written, produced, mixed, mastered and released using only a computer and a set of speakers or headphones (Rosen, 2014), without the need for any external audio to be recorded or outboard gear for processing the audio. In this regard, the term ‘Producer as composer’ was coined by Moorefield (2005) and describes the practice of the modern producer, who is able to compose and produce music without the help of musicians. The advancement in musical technologies have resulted “…in the increased blurring between the roles of artist and producer, particularly in electronic music genres” (Watson, 2015), whose musical practice and technological requirements in large part overlaps with that of the bedroom producer.

Though electronic genres of music are the first to come to mind when thinking of music made on a computer, the capability and versatility of software instruments gives the bedroom producer access to full orchestras, electric pianos, guitars and a plethora of other traditional, acoustic instruments, all
accessible as instruments in an all-digital composition. In a bedroom studio with the capability to record one or two channels of audio, vocals or live instruments can be recorded, either through a microphone or by plugging a guitar directly into the audio interface. Bell (2014) describes how the producer participant in his research would overdub himself several times, “assembling a choir consisting solely of Brendans” (Bell, 2014, p. 302). The process of recording Neil Young described by Daniel Lanois earlier in this chapter is also an approach to creating music that can easily be replicated in a bedroom studio with the capability to record through two microphones simultaneously.

Creativity and Collaboration

With regards to collaboration, Schuman (2006) has very neatly laid out the factors effecting a collaborative project, identifying “mutual knowledge”, “error rates”, “sense of progress and engagement” and “trust” important components working on several levels of feedback loops, including solitary feedback loops where, for example a high error rate will feed back and contribute to an even higher feedback rate. Following this example, we can show how this high error rate will negatively impact the sense of progress and engagement, which in turn will effect trust in the same manner, resulting in an even higher error rate. This model also identifies areas where the practitioners can make changes in order to negate the negative feedback loop. These systems then convolve into “collaboration”, which Schumer defines as “the confluence of engagement of the parties involved: the higher the engagement, the higher the collaboration achieved” (Schuman, 2006, p.81).

Combining these factors of collaboration with the models of musical collaboration identified by Bennett (2011) is helpful in formalising a framework within which musical collaboration in the bedroom may function. These models are based on various styles and combinations of collaboration. He mentions the Nashville model, where the songwriters work together with little technology, mainly using acoustic instruments and a “pen and paper” approach. Another example is the Jamming model where the songwriters or the band jam out a song in a rehearsal room.

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Additionally, Kealy (1990) identified the modes of musical collaboration, as they have changed with technology over the years. The earliest mode of collaboration was labelled as Craft, where the artist and producer worked together in a formal, sometimes impersonal way to create a recording as close to a live version as possible. When moving from lathe to tape, the collaborative relationship turns entrepreneurial, according to Kealy, where the focus shifts from creating realistic recordings to create hits, and smaller studios become more common as opposed to the large, institutionalised studios of earlier years. With the introduction of multi-track recording, we move on to a model of collaboration Kealy named Art. Recordings now starting pushing what was possible to achieve in a studio, creating sounds not found in nature. Producers and engineers adopted ideas of mastery and artistry in their respective fields, and perceptions around producing and engineering as a performance started to evolve.

With regards to creativity, McIntyre’s (2008) definition builds on Csikszentmihalyi’s (2015; 2014) systems model of creativity, and provides a good framework for the musical work performed in a bedroom, as it acknowledges the processes and ideas generated through creative efforts, as well as the pre-existing conditions and the agency, skill and knowledge of the practitioners themselves. Employing this definition of creativity allows for the bedroom to be considered as a condition that shapes both the process of creating music as well as the final product:

> From this search it can be seen that creativity is a productive activity whereby objects, processes and ideas are generated from antecedent conditions through the agency of someone, whose knowledge to do so comes from somewhere and the resultant novel variation is seen as a valued addition to the store of knowledge in at least one social setting. (McIntyre, 2008, para. 2)

Of we consider this alongside the modes of musical collaboration identified by Bennet (2011) and Kealy (1990), we can see some avenues for establishing a framework of collaborative bedroom music production.
Research question

This thesis will attempt to investigate the bedroom recording studio by firstly asking in what ways does the bedroom studio affect creativity and collaboration in music production, and what different roles do spaces such as the bedroom studio and the traditional recording studio play in the process? In considering the bedroom as an already personalised space, a container of emotional as well as technological qualities, this line of inquiry leads to a range of complimentary sub-questions, namely: What specific factors present in the bedroom affects creativity and collaboration, and in what way will they affect it? What role does the expectations of the collaborators invited in play, and should they be managed in any way? If so, which approach to managing these expectations should the bedroom producer take? Should the bedroom producer adopt a different approach to his bedroom collaborations than his formal studio collaborations? What changes can be made to the bedroom to enhance creativity and collaboration? Comparing the traditional recording studio and the bedroom studio, is one space inherently more creative and prone to collaboration than the other? By investigating these questions, I hope to address the gap in our knowledge about the role of musical creativity and collaboration in bedrooms, not only considering the bedroom as a space for recreation and leisure, but also as a semi-professional space and site of the “modern amateur” (Merrill, 2010), as well as identifying future areas of enquiry. In addition, the findings should be applicable in other bedroom and home studio settings, hopefully outlining specific changes one could make to inspire creativity and collaboration in the bedroom studio.
Chapter 3 – Methodology

In order to answer questions about the place and function of bedroom recording studios in the creative labour of popular music production, this thesis is a qualitative study that draws on elements of creative practice, critical reflection, participant observation and ethnography. The project incorporates a practice-based approach, whereby I have produced creative outcomes through collaboration in the bedroom studio. Both the actual creative results themselves and the reflections on those results (my own and the reflections of my collaborators) are presented as forms of data in answering the research questions. During the research period, I recorded two collaborative projects, primarily produced in the bedroom studio. The interviews that I have conducted with other studio practitioners and with my own collaborators also contribute important data that reveals much about the nature of creative collaboration in bedroom studio contexts.

Research methodology

My research incorporates a practice-based approach through which the practical and exegetical come together as one product, drawing a nuanced understanding of the insights gained throughout the research period. These insights may reveal “philosophical, social and cultural contexts for the critical intervention and application of knowledge outcomes” (Barret, 2010, p.2). In employing a practice-based methodology, the creative outcome and the creative process itself will become part of the data set. As suggested by Smith and Dean (2009), practice-based research can be divided into two different but related approaches to data collection. Practice-led research is a framework within which both the work of art itself and the process of creating the art are considered as a form of research. The process of creating art will generate “research insight which then might be documented, theorized and generalized” (Smith, & Dean, 2009. P.7). Research-led practice is a complimentary terminology that emphasises the research itself as an avenue for generating creative
works, “… research work is directed not only towards the elucidation of falsifiable ideas but also towards the production of practical outcomes.” (Smith, & Dean, 2009. p.7). Another outcome from practice-based research is the “very specific knowing” (Bolt, 2009. p. 29) that is generated through practice. “This form of tacit knowledge provides a very specific way of understanding the world.” (Bolt, 2009. p. 29). Bolt argues further that this new knowledge can “be seen to emerge in the involvement with materials, methods, tools and ideas of practice” (Bolt, 2009. p.31).

This knowledge and understanding will document knowledge utilising qualitative research methods. As qualitative research has found its place as an accepted research method over the past 30 years, some criticisms and concerns regarding its validity and objectivity have shaped, guided and eventually refined the methodology, creating a means of research that allows for, and places value in, the subjective information to lay the foundation for research and creative practice. This approach to research “locates the observer in the world” where he/she performs a “set of interpretive, material practices that make the world visible” that “turn the world into a series of representations, including field notes, interviews, conversations, photographs, recordings and memos to the self” (Denzin, & Lincoln, 2005, (1) p.3). Qualitative research uses multiple methods, or triangulations, and through this “reflects an attempt to secure an in-depth understanding of the phenomena in question” (Denzin, & Lincoln, 2005, (1) p.3). In approaching research in this manner, there are several different perspectives, or paradigms, available to the researcher. This project has aligned itself with the postpositivist perspective, in that it contends there is a reality, a world of events to explore and understand, but differs in arguing that this reality can only be approximated and never fully apprehended, as “all methods are flawed” (Denzin & Lincoln, 2005, (1) p.15). As such, postpositivism depends on several methods to capture as much of reality as possible, placing value in the actor’s perspective, detailed interviews and observation, as well as in rich descriptions of the world and the subject. To achieve this, I have employed two specific methods to generate this detailed description of the processes in question in this project, namely auto-ethnographic research as well as semi-structured interviews with participants and other practitioners in the field of enquiry.

The auto-ethnographical part of my research will provide specific details of the insights that will become apparent during the research project. In doing auto-ethnographical research, the journey of
the researcher him/herself is an important and valid source of data; one key feature of analytical
auto-ethnographical research is that that the researcher must be a complete member of the field of
study (Anderson 2006), where the benefits of being a complete member is the closeness to the
subject, whereby the researcher is able to approximate “the emotional stance of the people they
argues for the value of auto-ethnography’s ability to convey a detailed, vivid and honest account of
the process in question, to describe a “lived experience”. By having the researcher be an integral
part of the process, stories like the ones depicted by Thompson & Lashua (2014) of the challenges
of gaining access to recording sessions is bypassed. For the creative project discussed in this
exegesis, the participant researcher will be able to recount the details of both the creative and
collaborative processes, providing a deeper understanding of the process overall, and offering the
insight to analyse the effects of the creative and collaborative processes on the final musical
product. This approach does not propose an objective or unbiased account of the subject being
researched. Rather, the researcher’s dual role as participant and researcher means that they are also
observing themselves. Engaging in the process in this manner lets the researcher bypass the issue of
gaining access to recording sessions. As Thompson and Lashua (2014) point out, it can prove to be
difficult acting as a silent, ethnographic observer during sessions, as most producers and bands are
very protective of their creative processes during recording sessions. Anderson’s second suggested
feature of analytical auto-ethnography is what he refers to as “analytical reflexivity” (Anderson
2006). Analytical auto-ethnography requires the researcher to be aware of his/her effect on, not only
his/her self but the situation. This is especially true in a scenario where the researcher is guiding the
practice being studied, such as when the researcher is acting as the producer during a music
recording session: “reflexivity expresses researchers’ awareness of their necessary connection to the
research situation and hence their effects upon it.” (Davies, 1999, p. 7). With this in mind, it is
necessary for the researcher to be visible in the text, acknowledging and demonstrating the
connection between themselves and their field of study.

To complement the analytical auto-ethnographic methods, outlined by Anderson, this study
includes interviews with my collaborators, and with other musicians and producers working within
bedroom studios. By combining the observations and insights gathered throughout the research
project with interviews and statements from other participants, the data collected will provide a rich
and multi-faceted account of the social and cultural contexts of bedroom studios. As Atkinson, Coffey & Delamont write, “We must not lose sight of the ethnographic imperative that we are seeking to understand and make sense of complex social worlds of which we are only part (but a part nevertheless)” (Atkinson, Coffey & Delamont, 2003, p. 57). Anderson also suggests that an analytical auto-ethnographic approach to research is “… its commitment to an analytical agenda.” (Anderson, 2006, p. 386). As Anderson explains, the empirical data is meant to give a deeper and broader insight into the phenomena being studied than what is possible with pure data. It is my intention to use this framework for looking at my own practice in the recording studio, both the bedroom studio and the traditional studio, and, through this, explore the differences in collaboration and creativity that are caused by the space itself. The observations made will then be the subject of enquiry during interviews with my collaborators, as well as more general interviews with other practitioners in the field.

**Research methods**

*Auto-ethnographic reflection*

Throughout the process of writing and recording the two EPs that make up the practical component of this thesis, an auto-ethnographic journal was kept, detailing the interactions between myself and the collaborators as well as my thoughts around the various aspects of the process. This approach turns the emotional and interpersonal aspects of the creative process into data, and generates insights that otherwise would not have been available to the researcher. The auto-ethnographic approach allows the researcher to produce “…meaningful, accessible, and evocative research grounded in personal experience…” (Ellis, Adams & Bochner, 2011). These writings would happen the day after the session, after having spent some time reflecting on how the session went and what could be improved for the next session.

*Ethnographic interviews*

Another part of the data collection for this project consisted of ethnographic interviews with my collaborators. After the collaborators completed their contribution to the project in question, we sat
down to have a semi structured interview regarding the process, their experience of it, the experience of working in a bedroom studio, thoughts on how bedroom studios could inhibit or strangle the collaborative and creative processes unfolding during the sessions. I conducted ethnographic interviews with three collaborators, and another seven with other producers and artists working in their bedrooms. These interviews covered more general thoughts on bedroom productions, the issues with working in a dual purpose room, the different priorities and ambitions they had for their home studios, and also considerations they would make when inviting others over to collaborate or when visiting other bedroom studios.

**Creative practice**

The practical component of this project can be divided into two parts, EP 1 and EP 2. The two parts represent two different approaches to incorporate collaboration when creating music in the bedroom studio. This change in approach when creating the second EP was a direct result of some discoveries made during the first EP, where the need to maintain momentum throughout the recording process became apparent. While being aware that the individual recording sessions benefitted from being effective, I had not considered the effects of the recording period for the entire project as negatively impacted by a long timeframe. Learning from this, I decided to adopt a less co-operative and nimble approach to creating the second EP, with the goal of shortening the timeframe of the production cycle.

The first EP, named “The Hush EP” was written and recorded entirely in my bedroom, with the exception of a series of recording sessions held in Oslo, Norway. The main collaborator for this project was JW, a singer/songwriter local to Brisbane. We would meet up once a week for thirteen weeks and spend about four to eight hours per session working on the EP. The sessions’ timeframes were intentionally left open-ended so as to impose as few restrictions on the process as possible. Before starting these sessions, we spent some time listening to musical reference tracks and deciding on a general style and genre. I then made about twenty sketches of songs that would work as ‘conversation starters’, and after a selecting the ones we felt worked best with our vision of the EP, we started the writing and recording sessions. As opposed to most recording studio practice (but fairly common for bedroom studio practice), we were recording and writing simultaneously. Due to time restrictions, we were not able to meet the goal of having JW sing on all the songs and I had to
bring in two other vocalists. AK did a four-hour vocal recording session for one of the songs in my bedroom, and FD did the vocals for three songs over the course of four days in a formal studio in Oslo, Norway while I was visiting. I then returned home with finished recordings for the EP and did the mixing and mastering by myself.

For the second EP I worked with JK, a Gold Coast based rapper. This process involved less collaboration, as I aimed to have a clearer division of labour to help productivity throughout the process. After having an in-person chat about what style and genre she wanted to work with, I created a selection of about 10 sketches, which I sent to her. She then replied with notes and preferences, and I made adjustments. This process of collaborating remotely sped up the process of creating the instrumentals for the EP, as our written communications were more to the point and focused than the in-person sessions I had had with JW. It also limited the amount of back and forth discussion of certain aspects of a song and forced us to make decisions and move on and not to dwell on creative decisions too long, as we did during the production of the first EP. I should note that for this time period, I had moved my studio gear out of the bedroom and into another repurposed bedroom, without a bed. After four weeks, we arrived at a selection of instrumentals we were happy with, utilising the bedroom studio for final vocal tracking. During this session she put down complete vocals for two of the four songs, and partially finished the third song before she ran out of material. We scheduled a second recording session, but were never able to arrange for her to come in and finish the EP. This lack of material on her part was unexpected and I had to create an additional, instrumental track that could work by itself to achieve an acceptable track count for the album. I also did some editing to extend the length of the track we only got partway through, after which I went on to finish all the mixes and basic mastering.

This research project resulted in three sets of data. The auto-ethnographic journal written during the project, a set of interviews recorded and transcribed, and the creative products in the form of the two EPs. I could return to the auto-ethnographic journal for analysis in pursuit for specific examples and renditions of the emotions, perceptions and general thoughts around a certain session or period of production, as well as the evolution of these as the project progressed. The journal also contains speculations on how a specific tool, social mechanic or technology effected the creative and collaborative processes during the sessions, and from analysing the narrative that is told throughout
the journal, the overall the trends in approach to collaboration and the creative effort become clear. To provide perspective to these observations, a set of semi structured interviews were conducted. The interviewees consisted of two groups, my collaborators and other bedroom music practitioners, both local as well as contacts from Norway (one caveat in the interview data set is that I was not able to secure an interview with participant JK, rap performer from the Gold Coast). I have appended a selection of the questions for the semi structured interviews to the thesis.

Lastly, the creative work itself provides some insight into the process, as well as serving as the product of the process. That The Hush EP has three different singers performing on the different songs is a direct result of the production process and approach taken for that project. The second EP, named The Jesswar EP, features one artist/performer, but only features vocal performances on the first three songs, one of which (One Hunned) is relying on repeated vocal lines to construct a full length song. This lack of performance and trouble scheduling was what initially prompted the question of perceived legitimacy in the bedroom studio. The capabilities of a bedroom studio are also exemplified through the choice of genre and instrumentation for The Hush EP, mostly proven by the absence of any concerns for what would be possible to create in a bedroom studio. In discussing the approach to what would become The Hush EP with my collaborator JW, we did not linger on any questions of what may or may not be possible to do in a bedroom studio. Granted, the guitar tones in the songs consist of a hybrid of guitar pedals (including amplifier simulations) and software emulations of physical guitar amplifiers, and we relied heavily on the use of software instruments. Additionally, apart from the vocal performances and a few instances of sampling and sample creation, no acoustic sound sources were recorded. The genres also dictate, to some extent, the style of collaboration utilised, and will be discussed in the data analysis chapter. Having said this, the genres of the EPs were not the focus during the creation, particularly during the production of The Hush EP. While we had an idea for what type of instrumentation we wanted to use, we were not looking to create something that would adhere to and fit nicely into the specifics of a certain genre. The production of The Jesswar EP was more direct in its approach to the genre it wanted to belong to, mostly due to the artist’s style of performance.
Conclusion

The practice-based methodology utilised in this study involves a critical presentation of creative works (see Appendices) along with ethnographic and autoethnographic data. The combination of these data sets offers a detailed reading of how the bedroom studio has, and does, effect collaboration and creativity. While the data is not broadly generalisable, it does raise a number of key themes that are important in the social and cultural contexts of music production. These themes – about the role of the studio as a place of emotional labour, a container of technologies, and factors such as perceived or real legitimacy – are explored in the data analysis chapter that follows.
Chapter 4 – Data analysis

In this chapter I draw on the forms of data mentioned in the previous chapter in order to help answer the question about how the bedroom studio affects creativity and collaboration in music production. Firstly, I provide some personal reflection on the creative process that underpins the EPs, and then insights that emerge from critical discussion of this. The data can be organised according to three factors that influence the creative and collaborative process: firstly, the physical attributes of the space; secondly, the personal nature of the space; and thirdly, issues of creative workflow.

**Introducing the creative work: Personal reflections.**

The first EP was written and recorded in my bedroom studio, with the before-mentioned exception of the recording sessions held in Oslo, Norway. At the time, the studio consisted of an iMac, a MIDI keyboard, a Moog synthesiser, a Native Instruments Maschine drum pad controller, a pair of Alesis audio monitors, a Focusrite audio interface, a TLAudio microphone pre amp and compressor channel, a Fender electric guitar, a Taylor acoustic guitar, a selection of guitar pedals and other bits and pieces you might find in a recording studio. It also contained a queen size bed, another desk for
and a closet. Being a bedroom studio with no dressers, a lot of the smaller items were placed on the desk itself or on the bookshelf. In addition to this, the bedroom had its own balcony and air conditioning. For the first EP I planned on writing and recording 5 songs with a local artist who, for the purposes of anonymity, I will call JW. We had an already established relationship as we are both graduates from the Bachelor of Popular Music at Queensland Conservatorium of Performing Arts. JW has experience with recording in formal recording studios, and is an experienced live musician. He traditionally plays funk, rock and singer/songwriter style music, something we decided to draw on for this project. The initial plan was to meet up once a week and work until we felt like we had run out of ideas and energy. The timeframe for the sessions was intentionally kept open-ended in order to have as few restraints as possible imposed on the process. Ideally, we would write and record everything together, and he would perform on all the tracks. However, in the month or so before we started working, I wrote up about 20 sketches of songs leaning into different genres to act as conversation starters or as springboards to the writing process. These sketches varied between almost finished arrangements and 30-second rhythmic or melodic ideas. In hindsight, I understood that these sketches served a purpose outside of solely being musical conversation starters. With this being the first time JW and I had done any collaboration a bedroom studio, and the first time I had collaborated with anyone in this specific bedroom studio, I was unsure of what he might expect in terms of how, and to what degree the space functioned as a space for musical creation. By providing these sketches, I was able to internalise how I envisioned the project progressing musically, preparing myself and the studio for a collaborative effort, and I could give JW an indication of the studio’s capabilities as a recording space. The sketches I sent over included recordings of acoustic guitars, electric guitars, various sampling that I had done, and a lot of purely digitally created sounds. Through these sketches I proposed to JW that the bedroom studio is able to house a broad spectrum of musical styles and aesthetics. Additionally, this also relieves some pressure from JW as he does not have to perform creatively immediately as the project
started, and could spend some time getting used to the location and establishing a rapport for the collaborative effort.

The sketches were then sent to JW via email, to which gave feedback. Through this process of light, preliminary collaboration we arrived at 5 sketches we were confident about and started our in-person collaboration from there.

For the second EP I made some changes to the process. One of the biggest lessons from the first EP was that the unrestricted timeframe and my dedication to doing as much of the work on the tracks together inhibited the process and hindered progressing and finishing the music in a timely manner. It also seemed like the extended timeframe made it harder for both myself and my collaborator to stay focused, and before long the collaborator stopped showing up. I would call to remind him of the session, but as the project went on, this happened more frequently. So, considering this, I decided I would apply a different model of collaboration for the second EP.

By working in the Hip Hop genre, I could create instrumentals without placing too much consideration on the vocal range of the artist, nor would we spend much time on creating harmonies. In sung music, the relationship between the vocal melody and the instrumental is closely intertwined, whereas in rap music it is less so. This division allowed for a less hands-on collaborative process, and meant that communicating by email for the preparation of the EP worked well. I had already connected with JK, a rapper from the Gold Coast, and we spent four weeks working remotely by email correspondence. In this time, I created about 10 instrumentals to varying degrees of completion, which I then sent to JK for feedback. We eventually arrived at 5 instrumentals that JK connected with and set a date for recording. We then gave ourselves a week, as per JK’s suggestion, for her to write the lyrics and for me to polish the instrumentals and get ready for the session.

As with the first EP it was difficult to arrange an appropriate recording time with the artist. The first session was cancelled by the artist, and we rescheduled for the following week. We then started recording, and halfway through the third track the artist ran out of lyrics and left with a promise to return the following week. The session for the week after was then cancelled by the artist, and she suggested she would come back the week after. Upon calling her that week to confirm the session,
the artist informed me that she had an overseas trip booked and that she would be back in a month, and was happy to record then. I was not able to get in contact with her after that. Thus the second EP does not exhibit as much of a collaborative process. By not working together as closely as I would have liked, I did not know what to expect from JK other than what I had assumed from a brief previous collaboration, and what I knew of her other works.

Having been a practising bedroom producer for a few years, I have become very comfortable with creating music in the bedroom, and the idea that one can create quality music in such a space is something I take for granted. However, collaborators may not share this view, and the bedroom studio may be considered more of an experimental space where demos and concepts can be created and worked on. As I had spent most of my time making music in a bedroom studio, that space was the default music-creating space for me, and for the music I was making, I could not really see any need for a formal recording studio as part of the process. Considering this, I was interested in taking a closer look at other practitioners’ views of the bedroom studio, and, more importantly, I wanted to analyse the use of the bedroom as a creative and collaborative space.

The creative and collaborative process

Once JW and I had arrived at the selection of sketches to base the first EP on, we began meeting weekly to work on the songs. We did not set a strict timeframe for our process or for the way we were working, apart from that we would work during the day, starting at 10am to minimise noise pollution for my roommates and neighbours. JW, being a guitarist and singer, would bring his guitar and pedal board to my apartment, and we would record guitar tracks almost every week. In the interview I conducted with JW after the project, he stated that the process of setting up in the bedroom studio was quick and that it was easy to get into it when we started the session.

“Yeah. I feel like in the bedroom setting it’s much quicker too, as in you could just set up, you’re there.” (JW, personal communication, 2016)

Usually, in a formal recording studio, the session starts with the setting up of microphones, microphone pre amplifiers, and possibly compressors and equalisers. The formal recording studio is 40
a much bigger ship to steer, while the bedroom studio is often very nimble and easily adapted to the task at hand, although sometimes limited in performing the task. The sonic mobility and ease of setting up gave a sense of casualness to the recording sessions. Setting up in a formal recording studio can in some ways feel like a ritual of sorts, a rite of preparing, concentrating on the process ahead as well as a time for small talk. The setup process is obviously very important to a recording session, but it is also not very demanding work. It is generally busy work of setting microphones on microphone stands, plugging in leads, moving drum kits around and so on, and so it is a natural time to have small talk and connect with your collaborators. Considering the process of recording in a bedroom studio, where there is no significant setup process, the small talk often happens as a result of us taking a break, or before we decide to get started, and there was a hint of guilt and procrastination around the small talk JW and I engaged in during our sessions, that I don’t think I have experienced in the same way during a recording session in a formal studio. A big part of setting up in a formal studio is also finding the right sound for the part that is being recorded. This process is in the bedroom studio more of a case of browsing through menus and folders, as it all exists in the digital domain, which means that we can go back and change and recall sounds or settings at any point. In the bedroom studio this is not an issue.

Familiarity with the equipment in the bedroom studio is also a factor worth considering, as JA explains.

“In terms of equipment like, ok, we’ve got nice gear at Uni in studio A, but I feel like I am able to make my gear sound better because I know it so much better and I’m used to using it, and there’s no creative barrier there in terms of if something goes wrong.” (JA, personal communication, 2016)

The dependency and prominence of software in the bedroom studio allows for quick recalls and practically eliminates the setup process of a session. This also means settings, like the guitar sound, can easily be adjusted later as we had plenty of digital emulations of guitar amplifiers and microphones. This allowed us to quickly find the sound we wanted, or if we didn’t, we could always settle for “good enough for now” and come back later to tweak the sound in question. We also had the ability to save the state of the guitar amplifier emulation we arrived at and copy and paste that onto other tracks, or easily bring it back at any point weeks later to redo a guitar part, and
still have it sound consistent with what had been recorded earlier. This enabled us to focus on one part over the course of weeks, as we did not have to worry about recreating a sound from a previous session.

A normal day would start with us setting up and laying out his pedal board, tuning the guitar, opening up the session on the computer and talking about what we were going to work on that day. After that we would find the section we wanted to work on, play it back and then talk about what needed to be done and how to do it. In this situation, I played the role of producer/engineer and sat with the control of the computer, pressing record, soloing tracks, making quick edits and so on. The way the bedroom studio was laid out meant that I was sitting next to the midi keyboard and drum pad controller, and could easily find software instruments and sounds and record them into the track. JW mentioned that he preferred this sort of working arrangement to that of the formal studio as we were not separated by a wall, as is often the case when recording in a formal studio.

“I reckon it was easier to communicate in a bedroom studio than through the glass of a regular studio. You can get your message across easier, yeah. And to be like ‘Is the talkback working? Can you hear me out there?’” (JW, personal communication, 2016)

In a formal studio, the separation of the control room and the live room serves a particular purpose. In the live room, the intention is to create a sonically isolated environment so that the recordings are free from outside sounds that don’t belong in the recordings themselves. On the other side of the glass, the separation allows the producer, and anyone else in the control room, to move around and talk without worrying about ruining a recording. More importantly, it allows the producer to listen back to what is being recorded on a set of speakers without worrying about the sound from the speakers leaking to the microphones on the other side of the glass and without having to worry about the sound from the instruments in the room polluting the sound emanating from the speakers. The speakers play the part of the playback medium, the medium through which the finished record will eventually be played. Having this perspective on the recording process allows the producer to make choices based on a good estimate of what the final product will sound like, and not what the instrument sounds like in the room, which can be a very different thing. This is especially important when recording full bands. We were not recording any acoustic instruments apart from vocals for
this project, and so we were not encumbered in this way, although JW did comment on the lack of a physical guitar amplifier.

“The only thing I miss in the bedroom is that I find it harder to get a better performance guitar wise without an amp. I feel like it’s not really there.” (JW, personal communication, 2016)

JW also commented on the approach we took when working on the songs. In comparing our process to the one he was used to from a formal recording studio, he pointed out that in the bedroom we were working on music section by section. We would spend a day on the drums, keyboards, guitar and the bass arrangement in the verse or chorus, and we would track these elements before moving on to the next part of the song. In a formal studio environment, the traditional approach to recording an album or an EP is to either record the entire band at once or record the instruments one by one for the entire project. This means that you usually would dedicate an entire day to one instrument, starting with what the performer is going to do, setting up the microphones, recording, commenting and iterating the recordings and moving on to the next song until all the songs are done and then move on to the next instrument. This approach makes sense in a formal recording studio where setting up is a big part of the process and where, most likely, time is limited and at a premium. This approach guarantees a cohesive sound for the instrument in question throughout the record which, depending on the genre, is generally a good thing.

“…but it was cool, cause we could actually work on that area (read: part of the song), and the ideas that popped into our heads as we came, we could just keep flying those ideas. Instead of forgetting those ideas when you’re coming through different parts of the song, tracking it all at once or… And we kinda wrote it as we tracked it as well, instead of writing it and then tracking it, which is the traditional way of doing things.” (JW, personal communication, 2016)

The sectional approach to recording that we utilised for this EP is a direct result of the nimble nature of the bedroom studio. With all sounds and instruments available to us at the click of a mouse, experimentation and discovery is hugely encouraged. With access to software synths and sampled instruments we could easily swap between a Rhodes and a Wurlitzer electronic piano; we
could swap between a Fender and a Marshall amp; and we could swap between a Juno 106 and an Oberheim OB-X, all at a moment’s notice, with no other downside than having to make a choice about which alternative suited the track better. I should also mention that the lack of any direct monetary restraint on the use of the space also had a significant impact on the way we approached the making of this EP, as mentioned by JW. Though I have booked and recorded in formal studios, the bedroom studio’s lack of time or financial limits, in terms of booking fees or schedules, was something I had become so accustomed to that I did not appreciate it until it came up in conversation.

I did notice in my own workflow that collaborating with someone in the room altered my process a bit. While we recorded and wrote parts at the same time, there was definitely a need to work fast. Though access to the bedroom studio was unlimited, JW’s time was limited to the one day a week that we had reserved for the project. This meant that I could not spend the same amount of time I normally would on finding the right samples, tweaking parameters in synthesisers or mixing. When working by myself, I would generally mix the different parts as I wrote and designed them. This was a major difference in practice that I only realised after reflecting on the process. The sound design aspect of the production included the mixing of different tracks, and sonic issues were delimited as a particular step in the design phase. To do this while JW was in the room – and to keep him waiting for me as I was making minute changes to sound parameters – would not only be a waste of his time, it would also be boring and very likely stagnate the creative process we were both partaking in. As a result, I had to get used to leaving something that was imperfect while JW was in the room, and return to that issue later when I was on my own. This sentiment has been echoed by other bedroom producers interviewed for this project:

“Yeah, they want to do the things they were supposed to do. I don’t want people to sit and wait for too long, trying to get to what they are supposed to do. Most of what I do happen in post production.” (KM, personal communication, 2016)

This would delay the entire process, as I found it hard to return to a project I had been involved with the entire day prior, and I would struggle with finding the motivation to do so. In my conversations with other bedroom producers and artists, the question of motivation has been a recurring theme. It is a more or less unanimous verdict in the interview data that the bedroom studio, or any home
studio, might suffer from lack of motivation on the part of the practitioner. Many have found that working in the same room as the bed, or the same apartment/house as the relaxation areas, like the living room, posed a problem when it came to sitting down and working on projects. The most commonly suggested solution to this is to find a space that is outside the home, and treat the musical projects like work, where leaving home in the morning to go to work and coming home at night to relax is the ideal situation.

“…it is in my home so, because it still feels like a bedroom and everything, you tend to kind of, it’s hard to get in the zone, like a work zone.” (JA, personal communication, 2016)

For some producers who do a significant amount of recording work, and whose ambitions are to be recording full bands at home, this is not a solution, as it would be too expensive. JA is a bedroom producer who would rather create a formal studio setting in his home, and work there. His thinking is that in creating a formal recording studio, the legitimacy of the space enforces a feeling of separation between home and work, and that this helps fight the lack of motivation he sometimes experiences when working in the bedroom studio.

As JW and I moved through the songs, we started hitting spots where we would stagnate and have issues solving problems with the arrangement or in finding a good guitar line or a sound for a specific part. Being the producer, I felt I was responsible for controlling the pace of the process, deciding when we should move on from one part to maintain the creative momentum. This was a skill that I would work on while collaborating – deciding how many attempts were sufficient before moving on and agreeing to come back to it later. At first, I kept trying for the right sound a bit too long, which probably to some degree impaired the creative momentum we had achieved. For the first month or so, we usually worked straight through without any breaks or leaving the bedroom, but as we got further into the process, we made leaving the room a habit. It was also further into the process that we started stagnating a bit, and getting out of the bedroom for food or coffee was a result of this. There was a restaurant across the street from my apartment and so we started going there for lunch. I found that beer tended to make it harder to get back into recording and to concentrate when returning to the apartment.
As the weeks went by, JW stopped showing up for the sessions. We were at a point where I did not think I’d have to confirm the sessions at the start of the week, and for the weeks prior to this it had not been necessary. After waiting a few hours to rule out that he was just running late, I got in touch with him. He apologised and said he’d be there the following week. And he was. However, he failed to turn up two weeks in a row and gave no message in advance. When discussing this in the interview I described it as losing momentum. JW agreed with this and explained that, in his case, it had to do with the duration of the project. By the time we finished, we had spent about 3 months, meeting almost every week.

At the end of the three months, we had managed to finish four songs with some ideas for vocal melodies and with most of the lyrics done. At this point JW was busy with other things and we were not able to continue our collaboration. JW by this time had recorded vocals for one song, meaning I was missing vocals on four other songs. In addition to this, I was returning to Norway to celebrate Christmas with my family. My goal was to have the EP finished by Christmas. I was not being able to meet that deadline. To remedy this, I decided to record the vocals with another vocalist in Norway. I was able to secure a singer and a recording studio at Westerdals School of Arts, Communication and Technology, in Oslo, Norway, for a week in early January. This turned out to be four very productive days in a formal studio setting. The singer, FD (who had booked the studio) and I spent about 8-10 hours every night recording vocals for three of the four remaining songs. The studio space was located in the Oslo CBD and was part of the studios available to students of the school there. The studio itself was a formal studio, with a live room and a control room. It was fairly sparsely equipped, with little outboard gear and no additional microphone preamps to the ones that were on the 24-channel Toft console. The quality of the microphones available to us was fairly low, so I ended up using a microphone that I had brought with me from Australia just for such a situation as this.

As this was January in Oslo, it was fairly cold, and during the week of recording we struggled to get a comfortable temperature in the studio. I took on much more of a producer role in this situation than when working in a bedroom studio. The setting was also different, as I wasn’t really collaborating in the same way as I had been with JW. In this setting, my collaborator only had input into the vocals and not the entire track. It was not a situation where I had asked her to collaborate
with me on some music, but more that I had asked her to perform on some songs that I had written. The space also made it feel like we were in a more professional environment than what I had experienced at home, and working in that space, I noticed I stepped back into the instructional, more evaluating producer role, rather than the collaborator role I had been in previously. I believe we spent more time working on the task at hand and less time with small talk. We were very regular in taking breaks, and once every session we would leave the studio and go outside to get some food. While we did take breaks while working in the bedroom studio, it always felt a bit harder to go back to work. I believe the lack of time constraint on the studio time made it feel less pressing, and the sense of working within the framework of a formal recording studio, assisted us greatly in staying focused. We did one session per song, and spent the fourth session adding to the different songs, as well as revisiting parts that we weren’t entirely happy with the first time around. Apart from some emails, a skype call and an in-person meeting the day before, I had never met FD or heard her voice in person. As we met up for the first session, we spent some time developing what would become the vocal sound of both her and AK who would perform on the last song when I returned to Australia. The approach of recording three to five voices in unison for the lead vocal, and at least two harmonies all doubled or tripled for the various parts of the song was, I believe, not only a reaction to hearing how her voice sounded and how it could fill out the songs nicely, but also because we were in a space that was inspiring, even though it didn’t compare very well against most formal recording studios, there was a sense of “this is what we do here”, that did not exist in the bedroom studio I worked in at home. There was, of course, a sense of urgency to this whole process as well, as I was to return to Australia fairly soon after the sessions ended. We knew there would be no second chances and that we had to try to get it right the first time.

Upon returning to Australia, I scheduled with another local singer, AK, to perform on the last track. I set the bedroom studio up in the same fashion as I had with JW. Suspended between rolled up carpet and a box in the closet, a bed comforter acted as acoustic baffling, and the microphone was set up in front. AK spent the first part of the session experimenting with melodies and vocal delivery, and we eventually arrived at a style we were both happy with. The vocals were tracked using the same approach I had used in Norway, leaning heavily on doubling, harmonies and doubling of harmonies, and as with the recordings made in Norway, this yielded a full and lush vocal sound. As AK is a skilled singer, the session spanned about four hours, with no breaks. After
listening back to a quick mix of the recordings, AK decided he was happy, and we concluded the recording session. After AK had recorded his vocals, I contacted JK regarding the second EP, and we conducted a recording session, also with the same setup. This recording session was fairly quick as the precision with which the artist performed was very high and demanded very few re-takes or edits. Once we had recorded all the material that JK had prepared, we ended the sessions and agreed on meeting up the coming week. As mentioned earlier in this chapter, this did not happen.

*Motivation*

In the making of music, there is not always a monetary element inspiring or motivating the process. In some cases, there are potential financial gains at the end of the process, either as a direct result of sales or royalties, or indirect gains in the form of fame or attention to the artist or the project, which in turn could open up for new opportunities in the future and the potential for financial gain. When asked about if he would have approached the project should it have been a commissioned one, JW stated that he would have aimed to start and finish the project as soon as possible, saying that “the sooner you finish the project, the sooner you get paid.” JW approached The Hush EP mainly as a creative endeavour, which, as most musical projects, did not commence with a promise of financial gain, but instead relied on creative fulfilment to motivate him and keep the momentum going. This mean that we have to motivate ourselves and work on maintaining focus throughout the process. This self-motivation can be very fragile and sensitive, and could easily be crippled or muted when the trust in the quality of the outcome of the project itself is weakened. It is here that the legitimacy/capability of the bedroom studio comes into play. It stands to reason that the practitioners of arts and creative industries, who find themselves in these self-motivated processes, will always be evaluating where the best investment of their time lies, constantly asking: which project has the highest potential for a beneficial outcome of some kind? As mentioned earlier, it is paramount for the collaborator to trust that their time on a creative project that has no immediate promise of financial reward or success is well spent. The perceived legitimacy of a bedroom studio plays a big part in establishing this trust. Making it apparent that the bedroom studio is a
professional space, capable of creating professional sounding recordings, reinforces the collaborator’s trust in the space and, by extension, the bedroom producer. I will return to this when discussing perceived legitimacy.

Overall, I believe a stricter time restraint would have benefitted the first EP, especially as JW was used to recording music in traditional spaces where the process for an EP takes place over a few days to a week. As he mentioned earlier, the longer process impacted his motivation to finish the EP. This was echoed by another interview subject who commented on the importance of deadlines:

“I think deadlines are always gonna motivate me”…”and you know that ‘I've got this many days until this is due, so I have to put in this much time every day’. If I procrastinate for an hour, if I put something off, I’ve only got this many sets of working days, this many working hours left before this thing is due. And that’s higher pressure.” (ZH, personal communication, 2016)

JW brings up another point regarding the process in general, where he states that the modular approach we utilised, finishing parts of the song like verses or choruses first, instead of writing a song through and then elaborating on arrangement and structure, deflated his motivation. This combined with the lack of deadlines allowed us to get hung up on specific areas of the song.

“I think it was the longer process, cause the way we were doing it. Instead of doing the song as a whole and adding to it, we were writing it piece by piece, so we were kinda maybe spending too much time on that one area, and maybe that’s why it took so long and kinda lost momentum, cause maybe we were like, running out of ideas.” (JW, personal communication, 2016)

An example of this is the sessions held in Oslo, Norway, with FD. Comparing these sessions with the sessions held with JW, the rate at which we worked was much higher, due to the limited time we had in the recording studio and my limited time in Norway. It is worth noting that, though not insignificant, the contribution needed from FD and AK was not as big compared to JW’s contribution to the project. JW contributed significantly to the writing and recording process of the EP and, to a large extent, shaped the final outcome. With the workload being significant, the
motivation to keep working may have impacted negatively. I believe there are a few approaches to possibly negate this. One way would be to set deadlines for smaller items that need to be completed in order to progress, establishing a sense of progression throughout the process. Alternatively, swapping between different production approaches would have kept the process of making music more interesting throughout. JW mentioned in his interview that we were “… maybe spending too much time on that one area [of a song]” adding that “… maybe that’s why it took so long and [we] kinda lost momentum…” (Personal communication, 2016).

The writing and recording sessions during both EPs were impacted in some way by the lack of professionalism on the participants’ part (myself included) and the bedroom studio itself. It is clear that to take collaborative musical practice from a spare time activity to a project aiming to create a viable, commercial product, participants need to adopt an approach that appreciates individual time investment, and perhaps adopt a more business-like approach to achieve this. As mentioned, there are aspects of the bedroom studio that need consideration in terms of deciding the scope and process of creating a product.

**Audio considerations**

*Lack of separation*

During the sessions with JW, he would sit next to me with his guitar and pedal board, through which he would run his guitar before routing it into the audio interface. This meant that he was in charge of, and had control over, the sound of the guitar before it was recorded. Apart from the guitar sound, I was responsible for, and had control over, the rest of the sonic palette. Being the producer, I would sit at the computer controlling the session, muting and unmuting instruments (including the guitar), and work with software effects and instruments. I would initiate and stop recordings, and together we would comment on takes and edit the recordings. Even though the power relationship was skewed in the producer/engineer’s direction, as it most often is when recording, we still had communication continuously throughout the session; being in the same room, recording the guitar and listening through the same speakers, made this collaboration and
communication easier and clearer. Without the glass pane and microphones between us, we were comparatively unencumbered in discussing the part of the song that we were working on. This was also mentioned by one of the interview subjects.

“Being in the same room, it removes that physical barrier of a wall, between the two, so communication can be a lot quicker and a lot easier. I find that when recording harmonies and stuff, I find it easier for me to try and explain it if they are literally in the same room, instead of them being in the other room.” (JA, personal communication, 2016)

In a traditional recording setting, where the producer and the artist are separated sonically, there are often elaborate setups where artist and producer listen to different mixes of the song. Pairing this with the difference in monitoring means that the part, or sound, being discussed may be perceived very differently by collaborators, forcing one part (often the artist) to move into the other’s listening environment. In the bedroom studio, the only similar condition is when recording vocals using a condenser microphone, which meant wearing headphones to avoid a feedback loop.

When both practitioners are using headphones, the headphones get in the way of communication by sonically isolating the practitioners from each other. This made parts of our sessions somewhat awkward when we were recording vocals. Giving feedback between takes and adjusting levels took a little bit of getting used to, and a talkback system would have been a nice addition to the setup as a means of avoiding this, though after a few takes we were able to intuitively sense when the other person was talking and when they were not, and communication became more fluid. Taking off and putting on headphones was a minor inconvenience compared to the complete sonic separation one experiences in a traditional recording studio.

“I reckon it was easier to communicate in a bedroom studio that through the glass of a regular studio. You can get your message across easier, yeah. And you don’t have to be like ‘Is the talkback working? Can you hear me out there?’” (JW, personal communication, 2016)
When discussing communication with FD, whom I recorded in a formal studio for this EP, she mentioned that verbal communication was not an issue while in the live room, but the understanding of what was being recorded was very different.

“No, I didn’t really experience any difference in the communication, but my understanding was better in the control room. When I heard myself on the monitors, it was easier to understand what you were saying when you said ‘this take was really good’. Because the headphone sends were so bad there, I wasn’t able to hear it the same way as you guys did, and I sort of had to hear my own performance in the same context as you did before I understood what was good about a take or not.” (FD, personal communication, 2016)

Other participants have echoed the ease of communication when working in the same room.

“It was nice not being separated. It was nice seeing how you were reacting to what I was doing, and it felt like you could see how I was reacting to your input in a far clearer way than through a few panes of glass in different rooms, that kind of thing.” (AK, personal communication, 2016)

Though, performance-wise, one artist said that she preferred the separation of rooms to that of working in just the one room as it gave a sense of privacy.

“Yes, I prefer the separation between the rooms. And I do prefer it when you’re able to dim the lights. Sometimes I feel a bit uncomfortable when I feel like I’m being watched while I’m singing, and being able to dim the lights helps create that feeling of privacy.” (FD, personal communication, 2016)

Another aspect of the lack of separation was that it was perceived to be a less of a legitimate space:

“Yeah, I think that the separation between the control room and the live room is a - not the official - but a very good indicator of a serious space. So maybe not having a lot expensive equipment, but these two rooms, double the rooms dedicated to this one thing.” (ZH, personal communication, 2016)
This idea of the separation of the rooms being an indicator of the legitimacy of the studio was mentioned by several of the interview subjects, though the same interviewees also insisted that it was not an imperative for achieving a professional sounding recording. This would indicate that, while adding to the perceived legitimacy, the one-on-one style recording sessions often practiced in the bedroom studios are not dependent on the sonic separation between the control room and the live room. Additionally, the interview data, as well as the auto-ethnographic data indicates that communication is improved in a one-room setting. Discussion of more complex tasks like harmonising, and broader conversations on how the song is sounding so far, seem to benefit from taking place in the same space, uninhibited by microphones and talk-back systems. Another form of sonic separation, generally lacking in bedroom recording studios, is the separation of inside and outside of the recording space.

Lack of sound proofing

The lack of soundproofing in a domestic recording studio can be an impediment when creating music, especially music in genres that feature heavy use of guitars and drums. Artists in these genres of music often use the bedroom studio as a space for creating demos and sketches of songs that later will be recorded in full in formal recording studios. In discussing the bedroom studio workflow with another bedroom producer, who mainly produces bands dealing in these genres, he explained how he would do preproduction on songs from his home:

“I’ve literally just been doing preproduction for a singer, a country singer, and I’ve had like a drummer come around with his Roland SPDX pad thing. And he’s got a kick pedal as well, an electronic kick pedal, and we’re just plugging in USB and bringing out the sounds on Toontracks Superior drummer [sampled drum kit software]. And doing preprod with me playing guitar and him playing drums on the pad in my little studio, like, in the same room. You know, you don’t need a big drum kit set up or anything, you know, obviously you wouldn’t use that as your final drum track, but for preproduction it was perfect.” (JA, personal communication, 2016)
Elaborating on this, JA explains how the recording process of a single may look when working with acoustic instruments, demonstrating what instruments he is happy to record at home and what instruments he needs a formal recording studio for.

“So, I was doing that at uni, but 99% of the time I’m doing drums and anything bigger at Uni, and the rest at home. So for example, I did a single for [local artist] last year, and we did drums out of [local studio], and then we did bass, electric, acoustic, keyboard, saxophone and something else and vocals at my house and then I mixed it. So, I tend to do everything at home.” (JA, personal communication, 2016)

When JW was recording his guitars during our sessions, we did not use a physical guitar amplifier. There were a few benefits to this. The main benefit being that we were able to record fairly quietly, limiting the sound pollution experienced by neighbours. JW would run his guitar through some guitar pedals, including a guitar amplifier simulator, emulating the overdriven tone of a classic amplifier. This would then be recorded through a Direct Input (DI), to which I could non-destructively apply further amplifier simulation by using software later in the process should it be necessary. During the interview with JW after finishing the recording of the EP, he presented a counterargument to the use of amplifier simulations:

“The only thing I miss in the bedroom is that I find it harder to get a better performance guitar wise without an amp. I feel like it’s not really there” … “I suppose, you gotta be quiet, cause you don’t wanna upset the neighbours and so you couldn’t crank up a big amp. (JW, personal communication, 2016)

This was an aspect of guitar recording I had not considered, but is one that I have since heard echoed by other guitarists. While bedroom studios generally do not have room for a full drum kit, were one able to be fitted, the lack of soundproofing would put limitations on the drum performances recorded in the space, as drums, commonly, are loud.

Another aspect of the lack of soundproofing often present in bedroom recording studios is the limitations imposed on playing back the music loudly for collaborators or clients. Most recording
studios have large speakers able to play music loudly. While most bedroom recording studios cannot fit such large speakers, bedroom studio monitors still have the ability to play back at high volumes; however, doing this in a domestic setting may have sound pollution implications for the immediate surroundings. The bedroom studio itself contributes to sound pollution if there is insufficient acoustic treatment in the space, which creates a sonic imprint on the performances acoustically recorded in that space.

*Lack of acoustic treatment*

Unlike the abovementioned aspects of the bedroom studio, acoustic treatment is something that can be remedied easily and fairly cheaply. For this project, I did not try to negate the sonic flaws of the bedroom. With the bedroom studio being in a rental apartment, any application to hang panels of acoustic foam on the walls and ceiling would most likely be declined. There are other options, such as free-standing absorption and/or diffusion panels, though these solutions could impose on the available space in the studio. With many rental apartments, tenant permanency is open to question for many reasons. Investing time and money in acoustically treating a room that may only remain a studio for another few months may seem futile. A common solution to this problem is to work with headphones when mixing and producing, and to remove the sonic characteristics of the room from the equation when listening back, achieving a more neutral listening space.

This is not a solution to the impact an untreated room can have on the quality of an acoustic recording. For the purposes of this EP, we did not do any acoustic recordings apart from vocals. In preparation for the vocal recordings of JW, AK and JK, I improvised some acoustic treatment in the form of a quilt hung between the microphone and the wall behind it. This helped eliminate some of the immediate reflections from the wall and, though this was far from an ideal solution, helped the overall quality of the recorded vocals. AK raised a point regarding this “guerrilla acoustic treatment”, stating that it helped improve the legitimacy of the bedroom studio as well as myself as the bedroom producer.
“You had me singing into the cupboard, right? And there was a doona? That’s what I mean, there was thought put into that, more than just me singing into the expanse of the room.” ... “Yeah, it wasn’t a totally professional setup, but it wasn’t totally amateurish, because, as I said, you’ve put thought into it, and you’ve used your skills as a... You know what I mean though, you made the space practical.” (AK, personal communication, 2016)
This lack of acoustic treatment also impacts the quality of the monitoring. The audio monitors in this bedroom studio were affordable, but generally accepted as quality monitors, though perhaps not something a large budget record production would be mixed on. Having a set of expensive, high quality monitors in an average bedroom studio would probably not improve the mixing experience much due to the lack of acoustic treatment in the space. The moment the audio enters the room, it is subject to the acoustic qualities of this room, and an unbalanced, untreated room would greatly impact the perceived sound of what is being played back. Standing waves, a phenomenon where the audio waves echo off walls that are positioned in such a way that they create a perfect loop in an audio wave, would create perceived increased loudness for a given frequency in the mix, often creating the illusion that the bass is very loud. Early reflections would create a perceived elongated decay at a given frequency, and could result in a kick drum that sounds as much longer than what it is, due to it bouncing between the walls.

All of these issues were in this case solved by listening and mixing on headphones, eliminating all the sonic imperfections in the room from a mixing point of view. The headphones used for mixing were a pair that I have been using for 5 years, and that I have done a lot of mixing on. The challenges with mixing on headphones can be many. Isolating the left channel to the left ear only, and the right channel to the right ear, results in an exaggerated stereo field that does not convey what someone listening to speakers in a room would hear. There are also issues with frequency response, and the experience of ‘feeling’ the frequencies on the body instead of just in the headphones. This becomes especially obvious when mixing bass, and the room is shaking as a result of the energy pushed from the speakers. With these issues in mind, I was still more comfortable mixing on the headphones than on the monitors. I did rely on other sets of monitors in other spaces to check the mixes, making sure that they translated well to different listening environments.
Size of the space

“I think, physically I think the size of my room, and my room in particular, not all home studios obviously, can be a bit of a hindrance sometimes because it’s so small.” (JA, personal communication, 2016)

Another issue with the bedroom studio is the size. More often than not, the space will not be able to accommodate more than a few people comfortably, let alone any large instruments like a full acoustic drum kit. Finding room for an artist to feel comfortable in a bedroom studio is important in order to get a good take. Artist AK tells of a session he had in a friend’s newly set up bedroom studio in Melbourne, Australia:

“It was just in his apartment, and his apartment was really, really small. Amateurish, and I don’t mean the negative connotation of the word amateurish, purely because I know that wasn’t what he was ideally after, and I feel like the word amateurish is more like, due to lack of experience, but this was more just circumstance.” (AK, personal communication, 2016)

The size of the room is, in this context, used as a factor in assessing the legitimacy of the bedroom studio, and although AK clarifies that it does not necessarily reflect the proficiency of the bedroom producer himself, it is clear that the size of the space had implications outside of the practical restrictions of working in a small room.

“Yeah, so if I could paint you a picture, I was sitting at the end of his bed on a little stool and I had my back to the wall, and there would’ve been two mikes over me, and in order to get in and out of that space, mikes would’ve had to be moved, you know what I mean, things would’ve had to be tilted so that I could sort of edge my way past something. So stuff like that, I mean, I was totally happy to do it, but you know, in a professional setting, it’s not ideal.” (AK, personal communication, 2016)
Again, AK is commenting on the legitimacy of the space, explaining that in a “professional setting” this space would not have been ideal, indicating that he would most likely go elsewhere were he to record a song professionally.

In the case of working with JW, AK and JK in my bedroom studio, the size of the room was not an issue, as the room was large enough to comfortably accommodate two people. The most demanding sessions – space wise – were the ones where JW brought his pedal board and one or two guitars. This was most sessions, and we were never encumbered by this.

The space and acoustic qualities of the bedroom studio has, unsurprisingly, a limiting effect on the recording process and the quality of the recorded product. The bedroom studio will in most cases not be able to accommodate all the instruments that are often featured in contemporary music – the acoustic drum kit is an obvious example of this. It is also not a given that a distorted, electric guitar will be suitable for recording in a bedroom studio setting, nor are larger ensemble singers. Similarly, multitrack recordings of full bands will be severely compromised in terms of space and amplitude available for the performance. Considering this, the bedroom studio seems to lend itself to one-on-one collaborations and electronic music. The bedroom studio has long been an electronic music focused space, as the music made and recorded in bedrooms has been computer dependent for a long time. Software sequencers, tracker software and the DAW are, to a large extent, what gives the bedroom studio its usability and versatility.

**Dependency on software**

The bedroom studio has certain limitations on its practice as a recording studio that affects the quality of the recordings due to it being on a budget, not only in a monetary sense but also with regard to the space available and its acoustic qualities. The average bedroom studio practitioner may not have the finances or space to incorporate expensive hardware components, large format recording desks or acoustic treatment commonly found in the formal studio, of which much of the bedroom recording practice is ultimately based upon. In achieving a ‘professional sounding’ recording, it is generally accepted that ‘professional’ components need to be present to some
degree. A major part of this issue can be resolved with software. Software emulations of classic audio gear can be purchased at a fraction of the original item’s price while not imposing on the physical space available to the producer. These software emulations have a few additional benefits associated with them. Firstly, the bedroom producer is not limited in the number of instances an effect can be used at any one time, other than the computational power of the computer itself, meaning they can use the same $3000 software compressor on as many tracks as the computer will allow, and play it back in real time. The traditional studio version can only be applied to one mono track at any one time; a second simultaneous instance would require the producer to acquire an additional compressor of the same brand and model. Secondly, the effect will be saved along with the project file, making it much easier to recall a previous project. When doing recalls while using hardware gear in the traditional studio, the process of recalling the session often involves photos or drawings of the patch settings as well as the settings of the individual effects themselves, and then manually adjusting all of these components in order to pick up where you left off previously. The use of software bypasses this process and delivers a huge convenience for the bedroom practitioner. While electronic instruments used patch saving technology fairly soon after they found a place in mainstream music production, the software emulations contribute to the convenience for bedroom practitioners to work “in the box”.

Similarly, software also allows for quick auditioning of sound and audio effects. While changing amplifiers or keyboards in the hardware realm may have the engineer go into the live room and physically change amplifier and reposition the microphone, the software equivalent of this process only demands a few clicks of a button. This ease of use encourages trial and error, and – as the process is non-destructive – allows for changes to be made later in the process. This also means that the act of committing to a decision is postponed until the very end, before the song is exported out of the software in its entirety. This could render the practitioner to more likely stagnate in their creative process while auditioning sounds and effects, second-guessing their way through the production of the song. A local bedroom producer and musician explains how this affects his process when collaborating:

“You know, obviously, you’re trying to get the best sound at the time, but the creative process is taking a hit because you’re focusing on that now other than
the… So, for me, I try to find a sound that is close enough, I’m not gonna spend any more than 5 to 10 minutes trying to find a sound, I really just wanna get things done that are productive in that session while I’m collaborating, while I’ve got another brain in the room. I wanna be as collaborative as possible.” (LB, personal communication, 2016)

JW also noted how this impacted our process compared to a recording process in a formal recording studio, where physical instruments and effects are used.

“There is almost sometimes too many options. The only thing that we get caught up in was like “oh, what sound? So many things, what can we do?”, instead of like the kind of do the traditional, old school way of doing things where you go and pull out the a real Wurli, and you’d place it in front of the microphones and play it, and that was their final Wurli, there wasn’t like 15 options of a Wurli they could choose from.” (JW, personal communication, 2016)

Music production software is not limited to being digital recreations of already existing hardware, but also functions as a medium for new effects and sound generators. This is especially pertinent with regards to new types of synthesis and the lengths to which classic methods of synthesis can be stretched within the computer.

However effective this can be, music created mainly with software faces some challenges as well. Most prominent would be the sterile quality to the sounds within a computer created song. There is a certain ‘plastic’ quality to a lot of the sounds in a lot of electronic music, and it has become a part of the aesthetic of electronic music, so much that we often do not notice. For The Hush EP, JW and I were recording a fair amount of guitars and samples as part of the process, but this was not the case for The Jesswar EP, and I found some of the songs to take on the ‘plastic’ quality. To combat this, I used an old cassette player with an audio input, and recorded certain parts for certain instruments onto tape. I then placed an SM58 on the speaker for the cassette player and recorded back into the computer. This process added two layers of distortion, one when the audio signal from the computer hit the tape, and one coming out of the speaker on the cassette player. These recordings would then be layered with the original source, letting me dial in the amount of
distortion I felt appropriate. An example of this can be heard on “Celebrate” in the very beginning with the distorted snare drum and clap and the underlying bass line, and on “One Hunned” in the musical break that happens around 1:40. Being able to bring the sounds out of the computer and have them exist outside the digital domain gives the sound a sense of ‘realness’ that is hard to recreate solely with software. Having said all this, as the computer has become a standalone, virtual studio, the physical location of the computer and the virtual studio has become less important, and is often found in the bedroom of the laptop musician. While it is a practical space for someone making music virtually, it may present some challenges for collaborators.

**Intrusion of personal space**

The implications of inviting someone into a space that is culturally recognised as intimate and private may cloud the creative output of the visitor/collaborator, as well as the bedroom producer, as both may find it uncomfortable sharing this space despite also sharing a common creative goal. This perceived intrusion by the collaborator into the bedroom producer’s space might negatively impact the vibe during sessions, inhibiting both the creativity and the performance of the practitioners. It is therefore important that the producer instil a sense of comfort and trust in the collaborator, allowing the collaborator to feel welcomed, relaxed and safe in the space. It is highly unlikely that the collaborator will treat the space as their own, regardless of how welcome they may feel. Compared with the commercial space and context of a formal studio space, this sense of being a guest will impact some of the practices occurring within the bedroom studio.

“When it came to like, things like, I needed to charge my phone, can I use this power point, that kind of stuff, it was like, you’re still... But I guess you’d ask if you’re in someone’s studio that you’d ask to use their power point. But stuff like that, yes. I’m in Anders’ room, I must ask for permission, because I’m not rude. I don’t know. But that was probably the extent. Being careful not moving stuff around too much because it was your room.” (AK, personal communication, 2016)
When I asked my collaborators about this they said that being invited into the bedroom negated any feelings of intrusion; but in answering the question, their tone of voice was not entirely convincing.

“No, because you invited me there, so it’s fine... In a way…” (AK, personal communication, 2016)

Before every bedroom recording session with collaborators, I would make sure that the room was tidy and clean. As mentioned earlier, I did not have a lot of dressers to hide away smaller items, and so the room could feel quite cluttered. For my own sense of comfort, most important part of cleaning of the room was making the bed. The bed in the bedroom studio is the strongest reminder of the room’s dual purpose and also the most intimate material object in the room. Of all the different areas of the bedroom, this was – unsurprisingly – the most sensitive one, and I felt that, as the owner of the room, a tidy bed might attract less attention, reminding the collaborator as little as possible of the room’s primary purpose, and hopefully have a lesser impact on our level of comfort working together in the bedroom.

There is another important and related aspect of the dual purpose of the bedroom studio: on the one hand, the bedroom producer is working alone on music and the process may take on a more exploratory quality with experimentation and exploration of sounds and effects. On the other hand, it is a collaborative space, often with an agenda or a goal. KM, a bedroom producer from Norway gives an example of this.

“Yes, and it’s really personal, the bedroom studio. It’s sort of something I choose to do by myself in my bedroom, experimenting and playing around. If I’ve got people in the studio, I’d rather get stuff done, but when I’m alone working I like to play around and experiment.” (KMA, personal communication, 2016)

I found this to be the case for my own process as well. On the second track, “Change”, on the Hush EP, some percussion can be heard from the very beginning of the song. These were samples recorded in the bedroom, using a bowl of noodles and some chopsticks to act as drumsticks. I placed a stereo pair of microphones on the bowl of noodles, and spent some time hitting it and the
tiny shelf it was sat on with the chopsticks, searching for interesting sounds. I went on to create a beat with these, which would become the starting point for the song itself. Another example of this is the last track on the Jesswar EP “Hi My Name Is”, where I have sampled myself making sounds with a half empty soda can, which I used as part of the percussion. As per the noodle bowl samples, these sounds are very much a result of me being in the bedroom studio, initially doing other things than making music, like eating, reading or watching videos and coming across interesting sounds just by happenstance. With the bedroom studio being a dual purpose space, I have the opportunity to react and elaborate on ideas the moment creativity strikes as I have all the necessary equipment available to me, all connected and ready to go. These ‘downtime spurts of creativity’ would not have happened, had I not firstly; been in the bedroom studio, and secondly; been there by myself, free to explore and come up with ideas and make mistakes without worrying about wasting someone else’s time in doing so.

This aspect of bedroom collaboration and creativity is also hugely dependent on the collaborator and the bedroom producer’s relationship with the collaborator. During my sessions with JW, the bed did not seem to be a factor at all. During a session where we were exploring the different vocal harmonies available to us in a song, JW lay on his back on the bed while trying out various harmonies. It was clear to me that he was comfortable, and while I don’t have a way to gauge the actual impact of this, it is safe to assume that his comfort did not hurt his creative or collaborative output.

**Discourses of legitimacy and the bedroom studio**

The concept of legitimacy can be understood as a metric on a scale that takes in the spectrum from imitation/unreal to real/bona fide, associated with a certain object or subject (Schuman 1995). In this sense, the perception of legitimacy incorporates both the “evaluative and cognitive dimensions”, and “explicitly acknowledges the role of the social audience in legitimation dynamics”: “Legitimacy is a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions.” (Suchman 1995, p. 574) The question “is this a legitimate studio?” can often mean
“can we make real music here?” or “is this studio capable of producing radio quality recordings and music?” This tension between the proposed legitimacy of the space (by the bedroom producer) and the perceived legitimacy of the space (by the collaborator) is one that can have a direct impact on the creative and collaborative process (de Vajuany & Vaast, 2014). The distinction between proposed and perceived legitimacy is significant, and many factors come into play for collaborators around this distinction, such as genre of music, skill level of the operator, dependency on live recording, quality of equipment, quality of acoustics and sound proofing, the number of collaborators and their specific roles (De Carvalho, 2012).

Concepts and discourses of legitimacy are an important theme in the creative practice component of this research, and is a theme that also arose in the interview data. For example, a sense of legitimacy for the bedroom studio seems to be a significant part of what motivates and propels the creative and collaborative effort of artists. As one interviewee told me,

“I think there’s a sense of legitimacy in a formal studio, whereas there’s a stigma attached to having a home studio, or bedroom studio. It doesn’t seem as legitimate as a real studio might.” (CH, personal communication, 2016).

Despite the fact that this interviewee – a bedroom producer – has invested considerable amounts of time and money into their bedroom studio, the perception of the space as less legitimate than a traditional or commercial studio space remains. Discourses of legitimacy are also strongly correlated with the ways that space is organised in traditional and bedroom studios, and the perceived skill of the producer in the space. As artist AK told me,

“I think the separation adds a degree of legitimacy. I mean, if I came into your place and you had a sound booth, I might feel slightly different … I’d say the pressure would be on because … Cause the way you approached me about it was really casual, so I think I came into it with a really casual demeanour about the project. So if I had seen you had a separate room, where you could see me, that kind of thing, I’d be like ‘whoah, I underestimated this in its casual nature’” (AK, personal communication, 2016)
This perceived legitimacy may attract or deter potential collaborators, inciting or inhibiting creativity and collaboration. Reflecting on a recording session he experienced in a bedroom studio in Melbourne, one participant described to me how the small and cramped nature of the space could be excused on financial grounds:

“If you go over to a mate’s place and you record some stuff, and you haven’t paid anything … versus you’ve paid a guy to come over and record some stuff in a more serious of context, the presence of some sound proofing and a lava lamp, if you’re into that, and good ergonomic space… Presence of that when money has been exchanged would be hugely reassuring. Just like it would be reassuring if I hadn’t paid, we were just mates, but the difference is there’s much more weight if you’ve paid. You’re sort of evaluating if your investment in a person” (AK, personal communication, 2016)

As this artist states, he would have been uncertain of the quality of the product they would be able to produce in a bedroom studio had he not had further context or evidence of successful work emanating from that space. The artist also mentioned that the perceived legitimacy of the producer could help counteract the lack of perceived legitimacy of the bedroom studio, meaning that the artist’s trust in the producer can make the artist feel at ease, even though the bedroom studio might not be to the standard the artist was hoping for, or expecting. As he summarised:

“So I think, you know, I think the person operating the machinery is more important than the machinery itself” (AK, personal communication, 2016).

In this sense, establishing trust is important in a creative collaborative process: trust in the collaborator’s skills, trust in the equipment used and, eventually, trust that the product will be of a quality that is worthwhile the effort in engaging the process.
Perceived legitimacy of the space

The perceived legitimacy of the bedroom studio can be affected by a selection of components and factors. These components and factors are emulations based on recording techniques and practices generally found in formal studios, and are to some degree emulated or approximated in all recording studios and, to a more significant degree, in bedroom studios (Bell, Hein, & Ratcliffe, 2015). Having already discussed a few aspects that affect the quality of the recordings emanating from a bedroom studio, it is worth mentioning these factors’ effect on the perceived legitimacy of the bedroom studio.

Though the bedroom studio is a domestic space, it may benefit the perceived legitimacy of the room as a music recording studio if it were separate from the rest of the dwelling. Not in a physical sense, but in a perceived sense. Clear, visual cues conveying that the room is intended for creative practice would help practitioners get into the right mindset and separate themselves from the outside world. The sense of walking into a space that is special, that has qualities outside of what is expected of a regular domestic room, would affect the sense of perceived legitimacy in the visitor. There is an interior design aspect to this that I will return to later, but for now I will discuss the effects of already mentioned traits of formal studios that are easily installed or emulated in a bedroom studio. In discussing these factors, I will not take into account their impact on the quality on the recorded product beyond the benefits gained through having the collaborator’s trust.

Factors affecting perceived legitimacy

While the visitor may have little or no experience with formal recording studios, an image of how these music recording spaces should look have been established through popular culture in movies and music videos. Identifying the most recognisable visual factors of these spaces and applying them to a bedroom studio may, in the visitor’s eyes, allow the bedroom studio to take on some of the perceived qualities of a formal studio. Acoustic treatment is one such factor that stands out and conveys that the owner of the studio has considered the acoustic quality of the space. Rarely being
aesthetically pleasing, it has still become recognised as part of the recording studio aesthetic, and is, for most, an expected component in a recording studio, even a bedroom recording studio.

A less obvious component is the outboard gear. To an outsider entering a formal recording studio, the array of boxes with knobs and faders are the visual trademarks of the recording studio. Installing outboard gear into a bedroom recording studio may incite the same emotion in the visitor; I have had collaborators or house guests visit my bedroom studio and they usually comment on the knobs, buttons and boxes with fascination. Recording practice, and music practice in general, seems an impenetrable art for those not experienced in the field, and it seems from my encounters in my bedroom studio that most are excited at the prospect of trying various instruments and making interesting sounds, while also maintaining a fascination with the inaccessibility of the equipment. Drawing on some of these emotions in collaborators would add to the sensation that this is a special place.

In working with collaborators, another aspect of the bedroom studio to consider is where in the house or apartment it is located. In any professional or semi-professional setting, leading the collaborator through the various rooms in the house to reach the bedroom studio, may detract from a sense of professionalism. As one of the interview subjects put it:

“I mean, if you have to go past your Mum and Dad’s bedroom to get to your bedroom studio, that might affect a bit of the vibe, but if you set it up professionally and set it up as formal as possible, then there’s no reason that you can’t achieve good results in a bedroom studio.” (CH, personal communication, 2016)

For someone planning to set up a business making music from home, being able to draw the distinction between a social visit and professional visit may help the progression of the project and enforce the practitioners’ roles as professionals. In pursuit of creating a sense of professionalism and legitimacy in the studio, paying attention to the interior of the bedroom studio is very important.
Visual aspects contributing to perceived legitimacy

Having discussed the audio recording related aspects of the bedroom studio that emulate the formal studio and their effects on perceived legitimacy, it may be helpful to mention other aspects and components of the bedroom studio that may improve perceived legitimacy, as well as enhancing the creative and collaborative relationship, while not being directly audio recording related. For example, the interior design of a studio, bedroom or otherwise, may greatly affect the creativity and sense of freedom in the practitioners occupying the space. Paying attention to lights and colours would help in creating an aesthetic quality to the look and feel of the space, adding to the perceived legitimacy. This is another feature of most formal studios, and, as was established earlier, a way to increase the bedroom’s perceived legitimacy is to emulate the formal studio space. Research has shown that lighting has a tangible effect on a room’s occupants, and that “darkness elicits a feeling of being free from constraints and triggers a risky, explorative processing style” (Steidle & Werth, 2013, p. 67). This sentiment was echoed by one of the interview subjects:

“I think lighting is very important thing. I think they can make it all really warm and bright, or can make it closed off, get some cool mood lighting in, some coloured light all dimmed down so it’s kinda that ‘no distraction atmosphere’.”

(JW, personal communication, 2016)

Another factor that may be worth mentioning is the state of the room itself. Tidiness and cleanliness is an easy way to make sure that the space feels professional and inviting, especially in a bedroom, where much of the mess will be of a personal nature, including clothes, personal items and non-music related objects. These objects may emphasise the dual purpose of the room, negating the perceived legitimacy of the space. Clutter also results from music recording in the bedroom, with wires and leads adding to the visual impact of the bedroom studio. Hiding wires and leads decreases perceived clutter and gives the impression that some time and attention has been spent on making the bedroom studio a comfortable space to work in, and the sense that it is an organised work space, again increasing its perceived legitimacy. Careful planning when setting up the studio is required to solve this problem, with investment needed in electrical tape and cable trays. JA expressed that he would preferably make his studio “feel more like a proper studio”: 
“…like where we are now, if I had the ability to paint the room and stick things to the wall more than what I can at the moment, I could put proper acoustic treatment up, and I could do things to make it feel more like a proper studio, I could put air conditioning in there, I could do whatever. Because we’re only renting, and there’s no point in doing it where I’m at now, it still feels generally like a bedroom, but once you get those kinds of things, and then you get some bass traps and proper diffusion and acoustic panels, it’s gonna feel more like a studio and it’s gonna feel like a professional environment.” (JA, personal communication, 2016)

All of these components and aspects contribute in some way to the perceived legitimacy of a bedroom studio, and are linked with the concept of the ‘vibe’ in a studio. The terms ‘legitimacy’ and ‘vibe’ are interlinked; they represent different results of the same measure, which is in maximising the space’s potential as a professional space. Paying attention to these aspects of the bedroom studio may have beneficial effects on the quality of the creative work: “You know, vibe and energy, it all plays a part in how you capture or write a part in the song writing process” (LB, personal communication, 2016)

It could also be speculated that some of these visual aspects contributing to perceived legitimacy may recede in the future, reflecting changes in the recording industry and the role of recording studios within it. Our enculturated perception of the recording studio as an impenetrable room filled with acoustic foam and boxes with knobs may change, to recognise the ubiquity of the home and bedroom studio as the primary place where the creative labour of the recording process is situated.
Chapter 5 – Conclusion

In this thesis I have explored the bedroom recording studio as a creative and collaborative space in the current music production climate, and I have provided some insight into the evolution of technologies and the history of the concepts that have allowed the bedroom to take its current place in music production. I have examined the physical attributes of the bedroom studio, from both a practical perspective and an aesthetic perspective, and discussed their effects on the creative and collaborative processes as well as the capability of a bedroom studio to create and release quality music. I have also explored questions of legitimacy, both proposed and perceived, in relation to bedroom music production, and its connection to the bedroom studio owner and possible collaborators and visitors. I have not been able to draw any robust conclusions on how bedroom studio practice is affected by the perceived and proposed legitimacy, although in this concluding section of this thesis I will summarise my reflections on the processes as they have emerged from the data, connecting them to what I consider are the important findings to surface through this project and suggest areas for further study within the field of home and bedroom studio practice.

Technological advances have allowed for new ways of creating music, has paved the way for new genres of music, deflated the financial resources needed to create music and changed the physical requirements to the space housing a recording studio. As a result, we have seen new models of collaboration and new frameworks for musical creativity. In my practice I have demonstrated that the bedroom studio, to a large degree, is capable of creating release quality music, and I have given examples of how the bedroom studio can function in the record production process.

As the proliferation of bedroom studios has impacted the music industry – often sharing the blame for the accelerated closure of traditional recording studios – we have seen innovations in music genres, musical expression and new models of music production as a business. The democratisation of recording technology has allowed anyone with an internet connection to create and share their music with a growing audience of possible fans and fellow bedroom music producers, as well as opening up their own bedroom studios to others as a means of remote collaboration through RMCS.

Through my auto-ethnographic study of the production processes that resulted in the two appended EPs, I have documented the approaches taken to create the EPs and the challenges that arose as
results of these approaches. As explained in the exegesis, there is no guarantee that the collaborators will honour the scheduled sessions. I have attributed this to the lack of a monetary transaction being part of the booking of the session. I believe that if the artist was paying for the session, or was being paid for their work during these sessions, this would not be an issue. In discussing this with JW, he agreed, adding that he would structure the sessions differently if that were the case and would finish the project over the course of a few weeks, not with regular meetings across a few months.

For the first EP, the collaborator’s absence was a minor inconvenience that contributed to the need for recording sessions in Oslo, Norway, ultimately resulting in a more desirable outcome for both the study and the final musical product, as it now features a wider selection of performers, which added to the quality of the music produced. The sessions in Oslo with FD and the session in Brisbane with AK were helpful in contributing to the data set in a significant way, providing some new perspectives on the initial work done in the bedroom with JW. The sessions in Oslo, in particular, served as a good example of how a deadline could be conducive to productivity and motivation during the recording process. FD diligently spent 8 hours in the studio after a full day of studies, three days in a row, with no promise of any reward beyond the possible recognition gained upon release of the EP.

The altered approach to the production cycle of the second EP was to minimise the chance of an absent collaborator impacting the project to too severe a degree, and resulting in another change in direction. As this issue occurred anyway, it led me to question the perceived legitimacy of the bedroom recording studio and its effect on the motivation of the collaborators. Through my discussions on this, I connect the perceived legitimacy of the studio to the perceived value of putting in work on the collaborator’s part. If the bedroom studio, and the producer working within it, is not considered by the artist to be capable of creating a satisfactory outcome, the chances of any added effort put in by the artist is diminished. I will return to the concept of perceived legitimacy later in this chapter. In discussing the models of bedroom studio practice, it was suggested by several of the interview subjects that when collaborating in a bedroom studio the time spent exploring and experimenting should be kept brief. This was reflected in JW’s comments about the process as well, stating that we spent too long working on each section of the song and, as a result, we lost momentum. These comments underline the importance of setting deadlines in order to
maintain progression throughout a production, or, at the very least, a sense of progression. I have also discussed how the bedroom producers have veered from traditional music creation, in that most of the work is done in solitary; and through my data analysis, I have demonstrated the value in being aware of aspects of bedroom production that may not suit a collaborative process.

There is ample data, in the form of autoethnographic documentation and interviews, to support the claim that the bedroom studio is a studio space that encourages collaborative musical practice. With the collaborators sharing the one room, communication is unencumbered and more immediate compared with a formal studio setting, enhancing the understanding of what is being discussed, as well as the impulsiveness with which ideas are communicated. The lack of time restriction on the use of the room simplifies the scheduling process, allowing the bedroom studio to be a dedicated to the project in question, something which is very rare in a formal studio setting, where, often, one studio is shared by several people. Additionally, as the bedroom producer is the sole owner of the studio, he/she has the power to make alterations to the interior of the room depending on what the project may need.

The challenges of collaboration in the bedroom are related to the physical attributes of the space itself, as it generally lacks several important components of a formal studio. The limitations placed on the collaborators due to lack of soundproofing are obvious, making it improbable that a bedroom studio will be the site of recording acoustic drum kits or distorted, amplified guitars. The bedroom studio’s size also enforces limitations on what instruments can be brought in, or how many collaborators can work together at any one time. It is difficult to use bedroom studio as a site for producing large ensembles or bands, without there being some rostering of the various musicians throughout the process. Further, there would be the challenge of maintaining momentum, immediacy, interaction, coordination throughout the production cycle, tasks placed on the producer, who must be able to set and follow deadlines to ensure a sense of progress and, indeed, quality.

I have also demonstrated how the bedroom studio can accommodate creativity; firstly, through the ease with which the collaborators can communicate, allowing for the unobstructed flow of ideas and creative outbursts, and, secondly, through the inherent flexibility and immediacy of the software focused workflow, allowing for the swift and effortless implementation of ideas. The prominence of software instruments in most bedroom studios encourages exploration of instrumentation and
arrangements, while the lack of complex hardware systems, with patch bays and multi-channel recording desks, allows for easy setup and recording of physical instruments. This sentiment has been documented both through my own practice as well as in interviews conducted during this thesis. An aspect of the bedroom studio that may inhibit the creative output of a collaborative project is a sense of intruding on someone’s personal space, or the sense of having one’s personal space being intruded on. These are both likely scenarios and are dependent on the relationship between the collaborators. In this sense, the bedroom studio inhibits both creativity and collaboration in a way that formal studios do not, as it may be easier to meet and work with someone on ‘neutral ground’.

Lastly, this thesis has explored the concepts of perceived legitimacy and proposed legitimacy, and its effect on the music production process in a bedroom studio; more specifically, on the collaborative aspects of the process. No two bedroom recording studios are alike, and the defining factors of a bedroom recording studio allow for such a wide array of variations on how it is configured. The tasks it can perform and the degree of quality with which it can enable these tasks relies in part on the to the legitimacy of the bedroom studio, a critical part of this investigation. As the bedroom producer, one may have a very different perception of how the studio performs compared to that of the collaborator or visitor. The relationship between the bedroom producer and the bedroom studio is an intimate and complex one, where, as opposed to most formal recording studio practice, the space is a place for relaxation and recreation as well as for professional or semi-professional practice. The perceived legitimacy of the bedroom studio is linked to the perceived legitimacy of the bedroom producer, much more so than what we usually see in formal recording studios with regards to their producers and engineers. Though the data set in this thesis is not robust enough to draw any distinct conclusions regarding the effect of perceived legitimacy of the studio and the success and quality of a recorded product emanating from it, I believe it is clear that there is a connection and it has an impact on the collaborative process. This thesis suggests further studies that could explore the relationship between perceived legitimacy, proposed legitimacy and their impact on the recording process, identifying more aspects of bedroom studio practice, a field already underserved. Further studies could also identify the degree to which the bedroom has become increasingly central to the recording industry. Ethnographic studies around the expectations for and ownership of collaborative projects in a bedroom studio could illuminate many aspects of
the bedroom studio and its viability as a modern production space in popular music production, which is increasingly focusing on bringing several songwriters and producers onto the same project. Adjacent to this, questions around RMCS and its potential to remotely place the bedroom studio within that same production line are also largely unanswered. Enquiries around collaborator motivation in a bedroom studio could also be explored, taking into account themes of ownership/buy in, the aforementioned perceived versus proposed legitimacy and the ergonomic/spatial concerns of the bedroom studio. I have also identified that there may be connections to be explored between the adolescents’ engagement with music in the bedroom, the increased time they choose to spend alone, and the how they may choose to interact with music production software in the bedroom and the potential utilisation of this as a tool of sonic exploration in identity construction. Broader questions on creativity and how bedroom production techniques have impacted the sonic characteristics on modern popular music are also still unanswered, and could reveal much about the complex relationships between the micro aspects of creative labour in the bedroom, and macro aspects of the broader music industry including recording companies and music publishers.

This thesis has contributed to the understanding of how bedroom studios function as creative and collaborative spaces, through exploration, analysis and discussion of the various factors present in the bedroom studio and their impact on the practitioners working within such a space. Additionally, I believe this thesis is the first to explore issues around legitimacy in bedroom recording, as it is only recently that we have seen bedroom music make it to the collective consciousness, as bedroom produced songs are ever more frequently featuring in playlist rotations on radio. I expect this to become an increasingly common feature of music in the future.
Appendices

Appended are the links to the first and second EP discussed in this exegesis:

The first EP is named The Hush EP and will at some point be released under the artist name Flite.

https://soundcloud.com/minibossaudio/sets/flite-the-hush-ep/s-xF7S9
The second EP is named The Jesswar EP and will at some point be released, though the nature of this release is yet to be decided.

https://soundcloud.com/minibossaudio/sets/flite-the-jesswar/s-HIJUF
Examples of interview questions:

Questions for collaborators

1. Before we started the sessions, what were your expectations of the bedroom studio?
2. What could have made the bedroom studio feel more professional?
3. Did you find that the bedroom studio was more distracting than other recording spaces?
4. Being a bedroom studio, you are always an arms length away from other instruments, did you find that this made it easier for you to experiment and come up with new ideas?
5. Were there any specific aspects of the bedroom recording that you preferred over recording in a formal studio?
6. Are there any changes that could be made to the bedroom studio that would make working there a better experience for you?
7. In what ways did the bedroom studio benefit the collaborative effort?
8. In what ways did the bedroom studio inhibit the collaborative effort?
9. In what ways did the bedroom studio benefit the creative effort?
10. In what ways did the bedroom studio inhibit the creative effort?
11. How would you have approached the sessions if the studio time was paid for by you?
12. In the production of the EP we were using a lot of software instruments, and these are generally played by keyboard, which I did the most of as your main instrument is guitar. Do you feel this affected the collaborative effort?
13. Having just finished another project at [local formal studio], located in [local producer’s] home, do you have any thoughts on his setup? Where on the spectrum of home studio to formal studio do you feel his studio sits?

Questions asked FAD, who recorded in a formal studio

14. Every once in a while you would come out into the control room to talk and listen, did you feel that helped the communication?
15. If so, what factors of the studio made it feel professional? If not, what factors made it not feel professional?
16. If you were to do the same session in a bedroom studio, how do you think that would’ve affected the creative and collaborative aspects of the sessions?
17. Would you have taken a bedroom recording session of the same material as seriously?
18. In terms of collaboration and creativity, did you feel the recording studio facilitated this?
19. What could have been done to better the creative and collaborative efforts?
Other bedroom practitioners:

1. What are the important distinctions between a home studio and a formal studio for you?
2. If you have access to both, what governs what work you’re doing where?
3. If you have access to both, do you bring some collaborators to your home studio and some to your formal studio? If so, what are the reasons for this?
4. Do you feel one space lends itself more to collaborative work than the other one?
5. What part do you think home studios will play in music production in the future? And what part do you reckon formal studios will play in the future?
6. What are important factors in a home studio for you?
7. Do you find it harder to do work when you are working out of your home studio?
References


SKoABlog (2011, Jan 26) *Dave Grohl reveals Foo Fighters’ home studio* [video file]. Retrieved June 10, 2015 from https://www.youtube.com/watch?v=INFIOJQ8lmk


http://bedroomproducersblog.com/2015/02/26/free-resources-for-music-producers/