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Seeing yellow: 'Connection' and routine in professional musicians' experience of music performance

Andrew M Geeves[1,2], Doris JF McIlwain[1] and John Sutton[2]

Abstract

What is it like for a professional musician to perform music in front of a live audience? We use Strauss and Corbin's (1998) Grounded Theory to conduct qualitative research with 10 professional musicians to investigate their experience of music performance. We find performance to extend temporally beyond time spent before an audience and to include performers' rituals of separation from everyday life. Using the abridged version of the model emerging from this data that we present in this article, we investigate how professional musicians' experience of music performance centers on forging 'connection' with an audience and the ways in which this process is facilitated by the pre- and post-performance routines in which musicians engage. We find musicians' understandings and experiences of 'connection' during performance to differ greatly, being influenced by their positioning on two spectra that emerge in this study and indicate the extent to which, during performance, musicians: a) value attentiveness and/or attunement in an audience and b) are open to variability.

Keywords

communication, expertise, grounded theory, performance, phenomenology, professional musicians, qualitative

Music is just the in-between part, between people performing and understanding.

Emily

[1]Department of Psychology, Macquarie University, Sydney
[2]Department of Cognitive Science, Macquarie University, Sydney

Corresponding author:
Dr. Andrew M. Geeves, Department of Psychology, Macquarie University, Balaclava Road, North Ryde, Sydney, NSW 2109, Australia.
Email: andrew.geeves@mq.edu.au

Live music performance may require professional performing musicians to recall musical structure, notes and/or lyrics accurately, execute effectively techniques consolidated across hours of practice, convey emotion convincingly, communicate clearly and synchronize movements with onstage musicians, improvise, manage unexpected contingencies, and negotiate the dynamics of a relationship with an audience. How do professional musicians experience live music performance? What do they think and feel? What do they attend to and ignore? What are they trying to achieve during live performance? Does this experience vary between different performances, musicians, and genres?

Such questions are not addressed extensively in past research, which prioritizes the music listener over the performer and favors experimental over non-experimental methodologies. Focus on the investigation of isolated elements of music performance has precluded understanding how component parts combine to form the experience of music performance for professional musicians. So, our research question 'What is live music performance like for the professional musician?' has, despite its deceptive simplicity, been under-researched.

After identifying gaps in past literature, we outline our use of Grounded Theory (Strauss & Corbin, 1998) to analyse qualitative data from interviews and fieldwork observations with 10 professional Australian musicians. We then examine our finding that 'connection' – specifically, musicians' diverse understandings of how their experience of performance should overlap with that of their audience – occupies a central role in musicians' experience of live performance, and examine how this is facilitated by the musicians' pre- and post-performance routines.

Past experimental research

Experimental studies examining perceptual and cognitive processes in music listeners have dominated research within music psychology. Music listeners discern a diverse array of music's constituent variables – including pitch, rhythm, emotional valence and phrasing (for overviews see Juslin & Sloboda, 2001; Sloboda, 1991, 2005; Thompson, 2009). The smaller body of research that has taken the music performer as its subject has also favored an experimental methodology. Most examines a particular music performance variable or set of variables rather than exploring musicians' entire experience of music performance (see Gabrielsson 2001, 2002, 2010). Such studies investigate music performance and action-perception links (Haueisen & Knosche, 2001; Loehr & Palmer, 2007; Repp & Knoblich, 2004; Shaffer, 1984; Shove & Repp, 1995; Zatorre, Chen, & Penhune, 2007), gesture and facial expression (Clarke & Davidson, 1998; Davidson, 1993, 2007, 2012; Davidson & Correia, 2002), memory and memorization strategies (Lehmann, 1997; Palmer, 2005; Rubin-Rabson, 1940a, 1940b), motivation and personality (Woody, 1999), performance anxiety (Steptoe, 2001) and rehearsal and learning practices (Krampe & Ericsson, 1995; Reid, 2002). These studies do not aim to, and cannot explain *how* these elements coalesce to form musicians' experience of performance. For example, while Gabrielsson and Juslin (1996) found that professional musicians changed the musical features in a short piece of music to convey successfully six different emotions to subjects with and without musical training, they did not ask musicians in their study *how* they imbued the same piece of music with six distinct emotions or *what it was like* for them to do this.

Past non-experimental research

Most past non-experimental research has examined elements of musicians' performance experience. In individual interviews with 15 professional pianists, Persson (2001) found that

they used conscious recall of memories with a particular emotional valence to help 'get into the mood' (p. 281) of their performance piece. Gabrielsson and Juslin's (1996) musicians possibly used a similar strategy to convey six different emotions through the same piece of music. Similarly, Lamont's (2012) content analysis of free reports from 35 university-aged music performers about their strongest experience of performing music suggests something of what performance might have been like for the musicians in Gabrielsson and Juslin's (1996) study. Lamont found that these Strong Experiences of Music (SEM – a term coined by Gabrielsson [2001] himself) were colored by the experience of positive and negative emotions and a sense of engagement and meaning.

Yet these non-experimental studies did not examine musicians' holistic experience of performance. Instead, they focused on specific factors that influence performance experience such as the process of collaboration (Blank & Davidson, 2007; Ford & Davidson, 2003; King, 2006), decision-making strategies (Bangert, Fabian, Schubert, & Yeadon, 2014), familiarity with a piece of music (Dogantan-Dack, 2013; Oliver, 2013), musicians' sense of identity (Davidson & Burland, 2006; McDonald & Wilson, 2005, 2006), memory (Chaffin, 2007; Chaffin & Imreh, 1997, 2002; Chaffin, Imreh, & Crawford, 2002; Ginsborg, 2004; Williamon, 2002), performance anxiety (Roland, 1994) and practice and performance preparation (Chaffin & Imreh, 2001; Chaffin, Imreh, Lemieux, & Chen 2003; Chaffin, Lisboa, Logan, & Begosh, 2010; Chaffin, & Logan, 2006; Greasley & Prior, 2013; Hallam, 1995; Miklaszewaski, 1989). While such studies enrich our understanding of elements of music performance, they do not attempt to explain how these combine to shape musicians' performance experience.

A smaller amount of non-experimental research has focused on exploring musicians' overall experience of music performance. Dunsby (2002) inferred that the performance experiences of Glenn Gould and Dietrich Fischer-Dieskau were characterized by their concentration on achieving specific goals in the performance moment, yet his reliance on quotations from these musicians cited in secondary sources limits detailed understanding of performance experiences. Clark, Lisboa, and Williamon (2014) conducted semi-structured interviews in which classical music performance students majoring in either piano, string or voice shared thoughts and perceptions experienced before and during two past performances: one successful, one unsuccessful. Musicians associated successful performances with possessing a positive mindset, feeling sufficiently prepared, and experiencing a high yet attainable level of challenge, and unsuccessful performances with inadequate preparation, negative mental outlooks, frustration, and lack of enjoyment during performance. Davidson (2004) also conducted semi-structured interviews in her work as an action researcher with young singers in rehearsal for an opera production. Themes identified as shaping musicians' experience of performance included: atmosphere (an emergent feeling of increasing cohesion within the group of young singers), creativity (an increase, as rehearsals progressed, in the exploration of different possible answers to questions asked), role flexibility in rehearsal and individual performer progress.

Ethnographic research conducted with music performers also offers an invaluable perspective. Perhaps due to the complexities of its improvisatory practices, jazz has been the most popular genre of study for ethnographic researchers. Honouring the insider nature of musicians' perspectives, Berliner (1994) closely documented 60 professional jazz musicians' acquisition of improvisational skills, contextualizing their complex interchanges within the community-learning environment from which they originated. Monson (1996) also interviewed jazz musicians, finding that they had strong ideas about the particular role and personality of each instrumentalist in a jazz ensemble. Musicians viewed being open to contextual demands by practicing active listening as important for all instrumental roles and

described attuned interaction between all ensemble members as vital to establishing 'groove,' a connected, effective, smooth exchange between improvising musicians that was considered vital for successful performance.

Reinholdsson (1998) conducted ethnographic work with Swedish contemporary jazz musicians to explore the meanings of social interactions in the music-making process. Reinholdsson concludes that the experience of music-making can be likened to a game-activity in which music-related symbols are manipulated by professional players during performance. It involves the dynamic interplay of subjectivity and objectivity within a stream-of-consciousness dialectic, is based on fine-tuned self-awareness of the body over time, and involves a tension between the exercising of personal creativity and collective constraint (pp. 191–193). Reinholdsson's satisfyingly detailed findings raise a series of questions. How might a performing musician *experience* the tension between an individual and a collective? During performance, in what ways do professional musicians manipulate, consciously or not, music-related symbols and to what extent does an awareness of doing so feature in their experience of performance? What is it like for a performing musician to be involved in a stream-of-consciousness dialectic? Reinholdsson takes us to the brink of such questions but does not venture into the realm of personal experience.

Sudnow (1978) is *himself* the sole subject of his pioneering work, profiling and reflecting on his experience of learning how to improvise on jazz piano. As his learning progresses, Sudnow experiences his playing as becoming increasingly embodied. His thinking during performance expands centripetally from individual notes to chords to smooth transitions between chords to the relationship that his arms and hands share with his body and the keyboard. The more Sudnow advances in his improvisation training, the more he experiences the various affordances (the action possibilities offered to an organism by the environment, see Gibson, 1977) offered to him in the immediate musical environment.

Some ethnographic studies feature musicians from genres other than jazz. Berger (1999) worked with jazz, metal, and rock musicians to understand the sociocultural impact of these genres and their performances in Cleveland, Ohio. Berger found the affective meaning of music for the performer was strongly linked with the structure of the music itself and the broader aspects of the performer's social life. Preston (2012) worked closely with rock musicians to explore their improvisatory and collaborative practices during the songwriting process as part of her broader exploration of the social ontology of action. She found improvisatory agents organize their activity around three strategies: appropriate-and-extend, proliferate-and-select and turn-taking. Appropriate-and-extend is exemplified where musicians creatively add to the sequence of actions that precedes the present moment in a way they view as in keeping with situational expectations and constraints. Proliferate-and-select involves musicians extending the material they are provided with, generating a number of different options and then choosing between them during the songwriting process. Turn-taking can take place either at a macro-level via the explicit formulation of rules by a musician or set of musicians or at a micro-level where this formulation is subtler and less conscious.

The biggest strength and weakness of past ethnographic research has been its focus on specific genres and elements of musicians' experience of performance. Every researcher other than Berger worked with musicians from one musical genre, and all researchers homed in on a particular area of music performance. So, the extant ethnographic research offers a rich understanding of specific areas of interest within music performance including: the role of the body, attention to everchanging contextual demands, the significance of music performance's socio-cultural situatedness, and the tension between the individual/the collective and subjectivity/objectivity. While these may shape musicians' experience of performance, the

specificity of existing ethnographic research makes it difficult for its findings to be extrapolated and assembled to form an understanding of the experience of music performance for a musician and to gauge the extent to which cross-genre commonalities exist within this experience.

In surveying relevant extant experimental and non-experimental research, it is apparent that no past research has had the explicit aim of attempting to understand – at a general, non-genre-specific level without any preconceived intent to focus on a particular element of performance and its experience – the experience of music performance for a musician.

Method

Grounded Theory

We used Strauss and Corbin's (1998) take on Glaser and Strauss's (1967) Grounded Theory (GT). GT emphasizes bottom-up theory-building derived from strict adherence to data and is useful when close examination of experience is sought and there is a paucity of existing theory on a topic (Henwood & Pidgeon, 2003). The two interrelated processes of asking questions and making comparisons underpin GT. Data are simultaneously collected and analysed, a rigorous coding process giving rise to emergent categories of interest. Rather than a priori selection of a group of research participants, GT requires 'theoretical sampling', a piecemeal recruitment strategy in which each new participant is recruited based on their relationship with one or more of the emergent categories. Theory forms as categories are linked and elucidated. As theory is refined, the criteria by which participants are selected narrow. Sampling continues until 'theoretical saturation' is reached, a point in time when no new information emerges from coding. The grounded theory generated at the end of this cumulative process should provide research participants with a perspective on their experience that is new yet uncannily familiar.

Participants

Ten Australian musicians (3 female, 7 male) aged between 21 and 30 participated in the study. Defining a 'professional musician' is contentious; no widely accepted definition currently exists. Here, all participants were considered to be professional musicians because members of the public were willing to pay for their performances. Participants performed two to five times per month on average and differed across: self-identified music genre (rock, folk, country, indie, pop, and classical), main instrument played (bass guitar, guitar, drums, piano, voice, and violin), whether they typically performed solo or with a group and years spent playing (5–30 years) and performing (3–15 years) (see Table 1 for further demographic information).

Procedure

We conducted semi-structured interviews with participants, constructing an interview guide based on concepts Geeves had become sensitized to from awareness of past research. This did not list questions to be asked in order but rather sketched potential areas of interest and corresponding questions as flexible prompts during interviews. Following Fassinger's (2005) recommendation, Geeves conducted a pilot interview to test the interview guide with his bassist friend, Jeremy Kelshaw.[2] Given the richness of this pilot data, this became the first of 10 semi-structured interviews together totaling 13.5 hours of data. Subsequent participants were recruited following theoretical sampling guidelines (Strauss & Corbin, 1998), with variables

Table 1. Sample demographics.

Name	Age	Location	Years playing music	Years performing music	Other musicians regularly performed with	Musical releases	Instrument/s played (bolded instruments = currently played)	Performance frequency (average)	Self-identified musical style
Jeremy Kelshaw	25	Sydney	20	4	Cloud Control (quartet)	1 EP	**Bass**, Vocals, Drums, Guitar, Percussion	5/month	Indie, alt-folk, pop
Brendan Maclean	21	Sydney	5	3	Solo	Upcoming EP	**Piano, Vocals**, Guitar	2/month	Folk, blues and alt country
Bart Denaro	28	Sydney	13	10	Kid Confucius (8 piece), Dusker (5 piece)	Kid Confucius, Dusker	**Drums**, Bass, Guitar, Piano/Keyboard	4/month (first 5 years). 2/month (second 5 years).	Kid Confucius: Rock, pop, soul, Dusker: folk/indie/pop
Emily Davis	27	Adelaide	19	4.5	Solo, in a duo that played cover songs	1 album	**Guitar, Vocals, Bass**, Piano, Harmonica, Banjo, Ukulele	at least 4/month	Solo: Folk, blues, alt country Duo: Dixieland/bluegrass
Emma Dean	25	Brisbane	22	12	Solo/with backing band	2 EPs, 1 album	**Vocals, Violin, Piano, Melodica**, Guitar	~4/month	Pop cabaret
Ben Stewart	30	Brisbane	30	7	Solo/with backing band	2 EPs, 1 album	**Vocals, Guitar**, Piano	1–2/month	Indie, pop, theatrical
Alister Wright	23	Sydney	~18	4	Cloud Control	1 EP, 1 album	**Vocals, Guitar**, Drums, Piano, Computer	4 Australian tours and 2 UK tours in 1 year	Rock
Luke Webb	27	Sydney	15	12	Solo/with backing band	1 EP, 1 album	**Guitar, Banjo, Vocals**, Piano, Bass, Drums, Percussion	2–4/month	Indie folk/country
Lucy Hall	23	Sydney	20	6	Solo	1 EP	**Guitar, Ukulele, Vocals, Music Box**, Saxophone, Piano	1–2/month	'Flying Folk': soul/folk/pop/jazz
Kahne Rajaratnam	29	Sydney	24	15	Metropolitan Chamber Orchestra, local string quartet		**Violin**, Piano, Guitar	1/month	Classical

Figure 1. The 'Wheel of Frank Confession'

such as genre, instrument played and years of performance experience influencing participant sampling. Geeves recorded interviews on a Sony IC Digital Audio Recorder (ICD-UX80) to which a Sony Electret Condenser Microphone (ECM-DS70P) was connected. While the final sample size was relatively small and sampling was not exhaustive in regards to variables such as music genre, age, fame level and performance experience, theoretical saturation was reached in this study. Geeves conducted all the interviews and attended and made field notes during at least one live performance of every musician interviewed.

Semi-structured interviews were supplemented by fieldwork with *The Wheel of Frank Confession Tour* (WOFCT). The WOFCT saw Brendan Maclean, Ben Stewart, Emma Dean, and Emily Davis, four traditionally solo artists, perform and tour together an act that was a unique hybrid of talent show and cabaret. The structure of each WOFCT show was dictated by the spinning of a 'Wheel of Frank Confession' by audience members. Once spun, the 'Wheel of Frank Confession' could land on one of six 'emotions' – love, death, pride, hate, fear or indulgence (see Figure 1) – and musicians then had to make a confession to the audience and play a song that corresponded to one of these emotions. Fieldwork was conducted with WOFCT musicians over a 12-day period in 2009 (eight performances on a tour to Brisbane, Sydney, and Melbourne) and a 13-day period in 2010 (six performances in the Adelaide Fringe Festival). All WOFCT rehearsals and performances were videotaped, yielding over 23 hours of footage. Interviews were conducted with musicians throughout both tours, yielding over 9 hours of audio and video recordings. Geeves took extensive field notes and diary entries (together totaling 35,338 words) each day of WOFCT fieldwork (see Browne & Sullivan, 1999). Geeves transcribed all semi-structured and fieldwork interviews. To ensure reliability and validity in the coding and analysis process, Geeves and McIlwain coded each interview transcript separately, then compared and discussed their coding. Sutton was privy to coding and analysis,

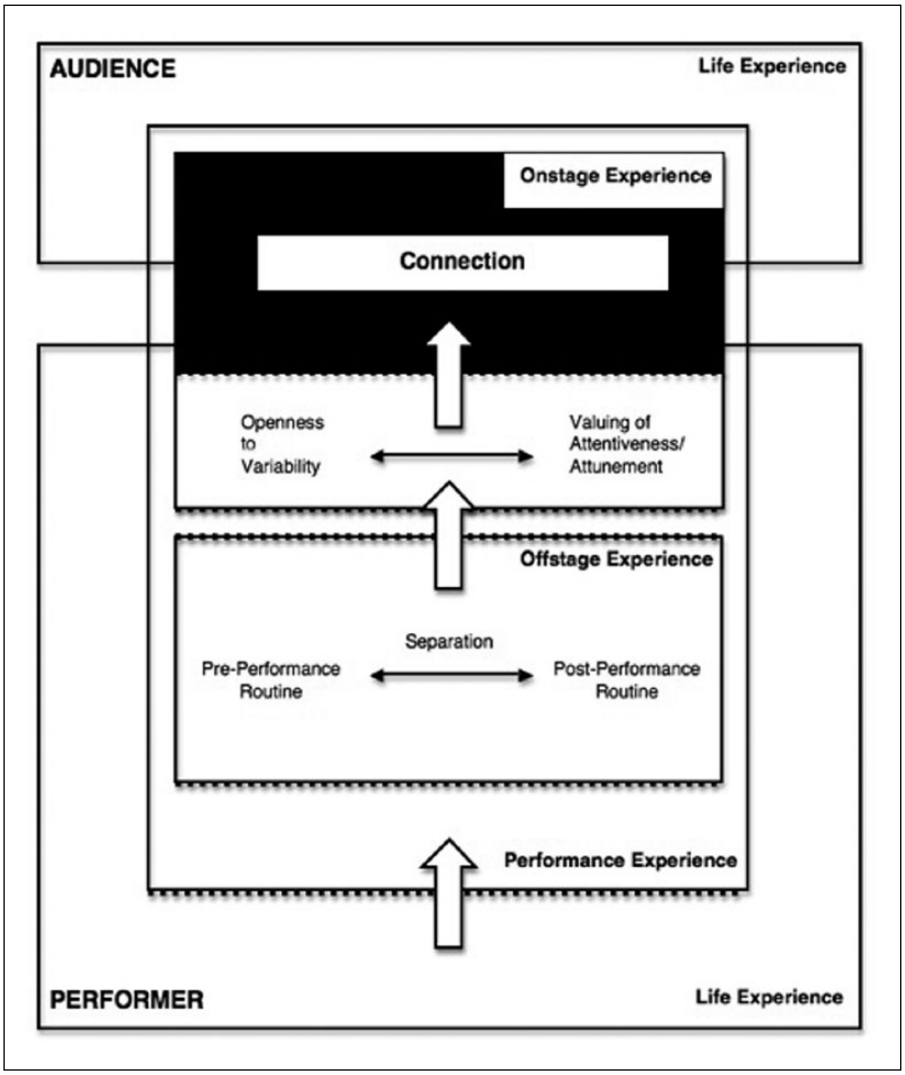

Figure 2. An abridged model of the grounded theory of music performance for the professional musician

providing feedback and guidance throughout. 'Connection' arose as the overarching theme in our data. Our grounded theory of the experience of music performance for the professional musician formed around this concept.

As with other research focusing on subjects' experience and using semi-structured interviews as methodology (e.g. Downey, 2002, 2005, 2010 on capoeira; McIlwain & Sutton, 2014 on yoga), there is an inevitable discrepancy between a subject's experiences and report of those experiences. We make inferences about the experience of performance from *reports* of this experience. Like any self-report data, these reports may be fallible and exclude experience outside of the subject's conscious awareness, simultaneously providing evidence *for* a subject's understanding of phenomena and being influenced *by* this understanding. In this study, by

triangulating codings of three researchers across interview and fieldwork data, we obtain richer understandings of the experience of music performance than possible if relying solely on self-report data.[1]

Results

Musicians' experience of music performance comprised three interrelated components: performance-related elements of life experience, offstage experience, and onstage experience. These culminated in the overarching notion of 'connection'. Musicians mostly described connection to an audience but links to other musicians onstage and to the music also featured. Here, we restrict 'connection' to that which transpires between a performer and an audience and define it as an understanding held by musicians about how their experience of performance should relate to that of the audience. All musicians believed that connection with an audience could be readily experienced during performance. However, what they viewed *as* connection varied. Some musicians sought a strong sense of felt connection and resonance with an audience and saw this as indicative of a successful performance. Other musicians equated successful performance with a more 'removed' audience-performer connection. While performance-related elements of musicians' life experience (such as their personality, sense of identity and beliefs about music) shaped their experience of performance, we present here an abridged version of the model that emerged from the data. We focus on the study's two most unique findings: the complexity of musicians' understanding and experience of 'connection' and the link between onstage and offstage experience in musicians' performance experience (see Geeves & McIlwain 2009a, 2009b; and Geeves, McIlwain, Sutton, & Christensen, 2014 for detailed explorations of other elements in this model). The abridged model is illustrated in Figure 2.

Connection

Creation and maintenance of connection was central to musicians' performance experience. Musicians' positioning on two different spectra influenced their understandings and experiences of connection. Emerging from the analysis of research data, these spectra capture the extent to which, during performance, musicians: a) value attentiveness and/or attunement in an audience and b) are open to variability. Regardless of their positioning on these spectra, musicians recognized that connection during performance was never guaranteed and described how they gauged and attempted to regain connection with an audience if it was lost. They also named variables outside of their control that influenced the forging of connection.

Spectrum 1: Attentiveness and attunement

What musicians recognized *as* connection with an audience varied along a spectrum that describes the importance that performers placed on their perception that: a) their experience during performance overlapped with that of the audience (termed the 'attunement' end of the spectrum) and b) the audience was paying attention to their performance (termed the 'attentiveness' end of the spectrum) (see Figure 3). Musicians closer to the attunement end of the spectrum were more likely to experience connection if performance culminated in the reciprocal resonance of elements of their experience with those of audience members. 'Everything is about the audience. If they're not happy, I can't be happy,' stated Brendan. Connection and performance satisfaction hinged on the perceived mutuality of high

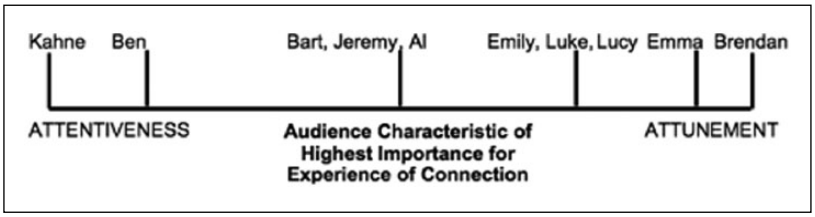

Figure 3. Importance of audience attentiveness/attunement in musicians' experience of connection during performance spectrum

attunement with an audience for such performers. Performing for a non- or misattuned audience was experienced as futile and unenjoyable. In contrast, musicians closer to the attentiveness end of the spectrum viewed connection as possible when audience and performer experience were separate but somewhat aligned as a result of attentive perceptivity. These musicians experienced connection as long as they perceived that audience members were providing uptake for their performance. 'There has to be a level of perceptiveness in the audience, but how the audience receive what's going on is not as important to me,' said Ben.

Spectrum 2: Openness to variability

All musicians viewed performance as inevitably momentary, yet thoughts about how best to handle this differed between musicians. Each musician could be placed along a spectrum of openness to variability, indicating the extent to which they were open to flexible, online modification of performance to accommodate shifting contextual demands (see Figure 4). Performers with higher levels of openness to variability valued the ever-changing nature of performance and were open to responding to the subtleties of varying situational contingencies during performance with the belief that this would deepen audience connection. Such performers believed awareness of playing to *this* audience at *this* time in *this* moment to be at the crux of successful performance. Musicians with lower levels of openness to variability recognized a consistently stable, replicable and unwavering performance as pragmatically impossible, yet nevertheless ideal. These musicians believed that reducing possible interference and variability would minimize potential factors that could hinder the depth of audience connection with performance; playing *this* piece in *this* way across *all* situations was the key to performance success.

Elements strongly influencing musicians' positioning on the openness to variability spectrum spanned the conventions of music genre as well as practical restrictions due to the number of other musicians regularly co-performing. Kahne, a classical violinist who always performed with at least three other musicians, was the least open of all the musicians to variability in music performance while Brendan, a predominantly solo performer in the pop/rock genre, was one of the musicians most open to variability in music.[3] The amount of performance experience and fame level also influenced musicians' openness to variability. More performance experience was linked to higher confidence levels that allowed musicians to be more open to variability during performance if genre permitted. In tension with this, greater levels of fame restricted musicians' openness to variability even where their genre permitted variability. Emily and Bart both described how they experienced an increase in fame as being linked to audiences' expectation of a consistent musical product, necessarily restricting the extent to which performances were free to vary.

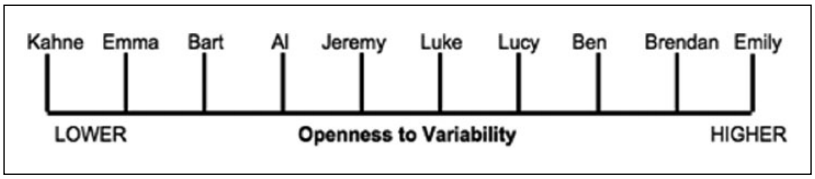

Figure 4. Openness to variability spectrum

Gauging and regaining connection

Taking note of audience members' body language and amount of chatter was the predominant method through which musicians gauged whether they shared connection with an audience. More audience talk indicated lower levels of connection. Higher levels of connection were signaled by body language such as foot tapping, eye contact and dancing. Musicians located and concentrated performance energy on one or more engaged audience members to regain connection they felt had been lost or, at least, mitigate the potentially negative effects of lost connection. Turning in – whereby performers created a display of focusing attention inwards – was another technique to regain connection. Rather than working to fill the space left by a disengaged audience, turning in exaggerates this space, creating interest and intrigue and placing onus on the audience to work to close this gap.

Non-performer-related variables affecting connection

Musicians identified a number of variables outside of their control affecting connection. Of these, musicians believed that audience size had the greatest effect on connection with large numbers of audience members in a small venue as optimal. Layout of the performance venue also shaped connection, with variables such as a gap between the stage and where an audience could stand potentially obstructing connection. Performance in front of a familiar audience also affected connection, providing a source of comfort for some performers and anxiety for others.

Offstage experience

Another crucial element of musicians' performance experience was the close relationship between offstage and onstage experience. Musicians' offstage experience revolved around preparing for and recovering from their onstage experience. By engaging in pre-performance and post-performance routines (henceforth abbreviated as pre-PR and post-PR), musicians were able to ready themselves and then recover from the work of creating connection onstage.

Pre-PR. Pre-PR were engaged in anywhere from minutes to days before musicians went on stage. Some involved physical preparation but most aimed to prepare a musician mentally for performance. Musicians saw pre-PR as vitally important but struggled to describe how and why components influenced performance. Despite this mystery, musicians identified time to self, activities strengthening collective focus, inspecting the performance environment, planning elements of performance, physical appearance and use of alcohol as elements of pre-PR that helped with mental preparation for performance. Musicians named warming up and adequate technical preparation of instruments as elements of pre-PR that aided physical preparation for performance.

Post-PR. Performers believed post-PR to be as important as pre-PR. Like pre-PR, post-PR served to buffer musicians from the potentially negative effects of performance. Post-PR predominantly comprised procedures that allowed musicians to detach and recover from onstage performance. Due to the energy and adrenaline it demands, musicians commonly experienced performance as all-consuming and were exhausted in its aftermath. Post-PR helped musicians recover from the overstimulation of performance. Crucial elements of musicians' post-PR include drinking alcohol, having an opportunity to debrief with fellow performers and not having to interact immediately with audience members.

Discussion

Connection, diversely construed, and pre- and post-PR occupied central positions in musicians' performance experience. To take this exploration further, we now turn to a discussion that synthesizes past research findings with a more detailed examination of data mostly from the four WOFCT musicians. Emily, Ben, Emma, and Brendan occupied such diverse positions on the attentiveness/attunement and openness to variability spectra that we can take them to represent effectively the range of data gathered from all musicians in the current study.

Connection

Although existing studies have not explicitly used the term 'connection' or examined in any detail the concept to which the term points, it is not an unfamiliar notion that engaging with the audience is an important element of performance for musicians. Berliner (1994) described how improvising jazz musicians planned performance strategies around the anticipated responses of the audiences to whom they were playing: the more 'sophisticated' the audience, the greater number of opportunities created for soloists within each piece. Musicians' 'turning in' to regain lost audience connection links with the 'active listening' and the 'attuned interaction' that transpired between musicians in Monson's (1996) study. Berliner used conversation as a metaphor to capture the way in which he observed audience members responding to musical statements made by performing musicians. For Berliner, audience members are interlocutors who have just as much influence as musicians over the cumulative 'conversation' that evolves during jazz performance: 'Performers and listeners form a communication loop in which the actions of each continuously affect the other,' he writes (p. 459). The words Emily used to describe her experience with an audience to whom she felt a strong sense of connection echoed the kind of reciprocal exchange described by Berliner:

> The audience is so responsive. They give you a chunk of stuff and that lets you construct your song with that energy . . . you give it back . . . and then they build and build. We're all building together. It's like a convection current of energy.

While Berger's (1999) rock musicians expressed an explicit desire to engage their audience, his jazz musicians seemed nonchalant, being 'mostly unconcerned with inviting attention . . . the fickle nature of their crowds and the demanding nature of their music ma[king] it impossible for them to try to compel the crowd's regard' (p. 44). However, Berger then goes on to describe the way in which members of the Whisler jazz quartet – who regularly perform in the corner of a restaurant – go to great lengths to tailor their performance to their audience, aiming to play non-intrusively and interacting with the audience in a way that does not excessively command attention. Contrary to Berger's initial suggestion, it would seem instead that the Whisler

quartet are just as concerned as Berger's rock musicians with inviting attention from the audience. However, they seek to do so by accommodating the particularities of their audience, genre and venue. If Berger's results are interpreted through the lens of the model presented in this study, rock and jazz musicians would be considered to vary not in the value they place on connecting with an audience but in the way in which they understand and go about achieving this connection. Both groups value connection with an audience but seek to forge it using strategies designed to maximize its achievement and strength given the constraints of genre and context and, by extension, given musicians' possible positioning on the attunement/attention and openness to variability spectra.

Our findings demonstrate the rich complexities involved in the ways musicians understand and experience connection, and how these relate to musicians' positioning on the attentiveness/attunement and openness to variability spectra. For Emily, who was highly open to variability and seeking an attuned audience, adaptability during performance was the key to forging connection. Emily said, 'You have to be responsive and willing to adapt when you're performing. The strategies develop from one fundamental principle: know your audience, read your audience.' Emily's sense of connection was based primarily on her capacity to respond flexibly to the demands of a particular audience in a particular environment. Her recognition that her performance would be restricted at times by certain situational demands allowed her to be at peace with the varying outcomes of her flexible responsiveness. Emily described her experience of connection when she felt able to meet the demands of an audience:

> I feel like I'm standing by myself singing this song. I can't see or feel anything else apart from the colour yellow . . . I can't feel the outline of my body any more. I feel like it's dissolved into everything else. I've dissolved myself.

In addition to the themes of unification, transformation, focus and transcendence present in Emily's account of connection, bliss, effortlessness and timelessness were recurring features of musicians' descriptions of their experiences of connection. The presence of these features suggests that the experience of connection for musician may be similar to Csikszenthmihalyi's (1990) idea of a state of flow in which an individual is entirely absorbed in an immersive task they find energizing and enjoyable.

Musicians less open to variability and seeking an attuned audience forged connection via staid, transparent, unchanging dedication to the performance moment. According to Emma, 'If you're honest and truthful then you've got the best chance of connecting with your audience.' Emma possessed a strongly relational understanding of connection linked to a desire to completely reveal herself to an audience. However, feelings of vulnerability and fear led Emma to generate meticulous plans for her performances based on strategies she had carefully calculated to optimize connection with an audience. Unable to deviate from these plans once performance had begun, the way in which Emma was able to remain 'honest' and 'truthful' to the performance moment was therefore much more tightly controlled, structured and premeditated than it was for a musician such as Emily.

Musicians more open to performative variability and seeking an attentive audience tried to forge connection by acknowledging audience members while ensuring performance remained unaffected by their reactions. 'Part of being a good performer is acknowledging the people that have come to see you, but acknowledging them is different to being affected by what they're doing,' said Ben. Connection for Ben centered on sharing with a perceptive audience a creativity he believed was closely linked to a potentially subversive authenticity. For Ben, music

performance could lead to the emergence and fostering – in him and his audience – of personality elements that are unique and largely unaffected by external forces. Observing how audience members reacted to his display of creativity played a central role in Ben's experience of performance: 'Just to have people react to something I've created would be reason enough to do it. Being an observer and observing people throughout the show is as interesting as having a chat afterwards,' he stated. Positioned during performance as a self-reflective observer, connection for Ben was about taking note of how an attentive, rather than attuned, audience reacted. Ben wanted a reaction and was open to whatever arose without needing to modulate his performance to audience needs in an ongoing way.

Musicians less open to variability and seeking an attentive audience aimed to forge connection by faithfully conveying to an audience the intentions underlying the music they performed. 'People who come to a concert know what a good Beethoven Seven sounds like and want to hear the orchestra perform that,' said Kahne, 'when you tell that story properly, you've won. Everyone who wanted that product got it so they are really happy.' For Kahne, connection with an audience could only be achieved when members of an orchestra or ensemble collectively agreed on how best to convey the composer's original intention for the piece of music. Kahne believed it necessary for musicians to bracket any sense of personal connection to leave room for and hence facilitate a broader type of connection with an audience, describing how musicians must 'work out how to express the idea of the musical composer without getting in their way emotionally . . . drop any feeling and try to perform the music in the state in which it was intended to be performed.'

Pre- and Post-PR

Berliner's (1994) findings hint at the importance of pre- and post-PRs in musicians' performance experience. Berliner describes how jazz musicians' warm-up routines serve a separative function by effecting 'a transition from their normal world . . . to the precomposed world of sounds' (p. 171). Similarly, the most important function of pre- and post-PR for musicians in this study – above and beyond whatever benefits they provided at physical and logistical levels – was the way in which they helped musicians separate who they were onstage from who they were offstage. Musicians used pre- and post-PR to shore up the work of performance by creating clear boundaries between their professional and personal selves. 'I need a separation between Emma the performer and Emma the person,' said Emma, 'If I haven't separated those two people, "Oh, I don't like your songs" turns into "Oh, you don't like me".' In this way, pre- and post-PR insulated musicians from any criticisms they might receive on stage and energized them for the work of forging connection with an audience during performance.

Musicians greatly valued being able to engage in pre-PR and felt distressed if various contextual factors altered these routines. 'Routine is so important to me . . . [it] equals strength. I get panicked if it doesn't happen the way I want it to,' stated Brendan. While the pre-PR in which WOFCT musicians engaged were diverse, these processes served a protective function for each musician. A large part of both Brendan and Emma's pre-PR involved the taking on of a specific character that they would channel for onstage performance. Brendan's character imbued him with confidence for performance: 'The character lets you get up on stage. I need it. It's a safety net . . . It's Brendan Maclean but it's got little quotation marks around it, no one can touch that. He's superman.' Emma described how the ritual of putting on makeup to get into character as part of her pre-PR helped calm her performance anxiety.

Like Berliner's (1994) description of the 'stage personas of jazz musicians . . . [reflecting] diverse personal values and individual tastes' (p. 460), Brendan and Emma's characters comprised elements of their everyday selves that were exaggerated to create protective, performative personae. Similarly, Emily's pre-PR involved a protective, idiosyncratic ritual in which she would 'do a zipping technique where you do a big circle around yourself and mime zipping yourself up. It's like a big imaginary sleeping bag that protects you.' Ben did not aim to channel a particular character, but his pre-PR did involve donning certain items of clothing that together constituted something he believed anchored his performance character: 'I've worked to incorporate elements that'll make [performance] more consistent . . . wearing a hat when I perform or wearing this big jacket with a star on it . . . a physical constant that people can associate with me.'

Post-PR were equally important, helping performers recover from the overstimulation and exhaustion of performance. Asked to describe what he did after performing, Brendan replied 'You numb yourself down. Whether that be through having a vocal warmdown or having a drink, you just detach and let it emotionally go and then it's done.' The numbing down process summarized by Brendan and described by other musicians involved a purposive dissolution of focus around performance, a way in which the tension associated with the increase in concentration needed before a performance was released and a method by which elements in the pre-PR were counterbalanced. Simply understood, the numbing down around which post-PRs were built was one way that performers intentionally separated from the highs and lows of performance. For Emily and Ben, this process involved having a drink with their friends and audience after the show, while for Emma and Brendan it was more likely to involve having some time alone to reflect on the performance.

Conclusion

In keeping with the conventions of Grounded Theory (Strauss & Corbin, 1998), the next step for future qualitative research would be for musicians who did not take part in the research – especially musicians from genres of music that were not represented in the current study such as opera, jazz, hip-hop and electronica – to have their experience of music performance run through the model that emerged from the current study. If the theory can capture faithfully similarities and differences in these experiences as it did when individual participants who did partake in the research were run through the model, this would provide further evidence of the model's robustness. As an additional step, the performance experience of professionals in non-musical performance domains could also be run through the model to attempt to disrupt and expand the model while examining the extent to which this model characterizes the experience of expert performance before an audience at a more general level. Quantitative research could also be carried out in the future to operationalize the two major parameters of the model of connection: audience attunement/attentiveness and openness to variability. Similarly, it would be useful to operationally define elements of pre- and post-PR so that it might be possible to test their independent or more structured effects on a wide variety of performance-related dependent variables and performer wellbeing and success.

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Notes

1. Approval from Macquarie University Ethics Committee was obtained before each stage of research in this study was carried out.
2. Each musician in the study consented to being identified and directly quoted in future publications. Full names are used to initially refer to participants and, thereafter, participants are referred to by their first name.
3. If there had been any jazz musicians in our sample, we hypothesize that they are likely to have been even more open to variability in music than was Brendan.

References

Bangert, D., Fabian, D., Schubert, E., & Yeadon, D. (2014). Performing solo Bach: A case study of musical decision-making. *Musicae Scientiae*, *18*(1), 35–52. doi:10.1177/1029864913509812

Berger, H. M. (1999). *Metal, rock and jazz: Perception and the phenomenology of musical experience*. Hanover & London: University Press of New England.

Berliner, P. F. (1994). *Thinking in jazz: The infinite art of improvisation*. Chicago, IL: University of Chicago.

Blank, M., & Davidson, J. (2007). An exploration of the effects of musical and social factors in piano duo collaborations. *Psychology of Music*, *35*(2), 231–248. doi:10.1177/0305735607070306

Browne, J., & Sullivan, G. (1999). Analysing in-depth interview data using grounded theory. In V. Minichello (Ed.), *Handbook for research methods in health sciences* (pp. 576–611). Frenchs Forest, NSW: Addison-Wesley.

Chaffin, R. (2007). Learning Clair de Lune: Retrieval practice and expert memorization. *Music Perception*, *20*(4), 377–393.

Chaffin, R., & Imreh, G. (1997). 'Pulling teeth and torture': Musical memory and problem solving. *Thinking and Reasoning*, *3*(4), 315–336.

Chaffin, R., & Imreh, G. (2001). A comparison of practice and self-report as sources of information: About the goals of expert practice. *Psychology of Music*, *29*(1), 39–69.

Chaffin, R., & Imreh, G. (2002). Practicing perfection: Piano performance as expert memory. *Psychological Science*, *13*(4), 342–349.

Chaffin, R., Imreh, G., & Crawford, M. (2002). *Practicing perfection: Memory and piano performance*. Mahwah, NJ: Lawrence Erlbaum Associates.

Chaffin, R., Imreh, G., Lemieux, A., & Chen, C. (2003). 'Seeing the big picture': Piano practice as expert problem solving. *Music Perception*, *20*(4), 465–490.

Chaffin, R., Lisboa, T., Logan, T., & Begosh, K. T. (2010). Preparing for memorized cello performance: The role of performance cues. *Psychology of Music*, *38*(1), 3–30. doi:10.1177/0305735608100377

Chaffin, R., & Logan, T. (2006). Practicing perfection: How concert soloists prepare for performance. *Advances in Cognitive Psychology*, *2*(2–3), 113–130.

Clark, T., Lisboa, T., & Williamon, A. (2014). An investigation into musicians' thoughts and perceptions during performance. *Research Studies in Music Education*, *36*(1), 19–37. doi:10.1177/1321103x14523531

Clarke, E., & Davidson, J. (1998). The body in performance. In W. Thomas (Ed.), *Composition, performance, reception: Studies in the creative process in music* (pp. 74–92). Aldershot, UK: Ashgate.

Csikszenthmihalyi, M. (1990). *Flow: The psychology of optimal experience*. New York, NY: Harper & Row.

Davidson, J. (1993). Visual perception of performance manner in the movements of solo musicians. *Psychology of Music*, *21*, 103–113.

Davidson, J. (2004). Making a reflexive turn: Practical music-making becomes conventional research. In J. Davidson (Ed.), *The music practitioner: research for the music performer, teacher, and listener* (pp. 1–9). Aldershot: Ashgate.

Davidson, J. (2007). Qualitative insights into the use of expressive body movement in solo piano performance: A case study approach. *Psychology of Music*, *35*(3), 381–401.

Davidson, J. W. (2012). Bodily movement and facial actions in expressive musical performance by solo and duo instrumentalists: Two distinctive case studies. *Psychology of Music*, *40*(5), 595–633.

Davidson, J., & Burland, K. (2006). Musician identity formation. In G. E. McPherson (Ed.), *The child as musician: A handbook of musical development* (pp. 475–490). Oxford, UK: Oxford University Press.

Davidson, J., & Correia, J. S. (2002). Body movement. In G. McPherson & R. Parncutt (Eds.), *The science and psychology of music performance: Creative strategies for teaching and learning* (pp. 237–250). Oxford, UK: Oxford University Press.

Doğantan-Dack, M. (2013). Familiarity and musical performance. In E. King & H. M. Prior (Eds.), *Music and familiarity: Listening, musicology and performance* (pp. 271–288). Aldershot, UK: Ashgate.

Downey, G. (2002). Listening to capoeira: Phenomenology, embodiment and the materiality of music. *Ethnomusicology*, *46*(3), 487–509.

Downey, G. (2005). *Learning capoeira: Lessons in cunning from an Afro-Brazilian art*. Oxford, UK: Oxford University Press.

Downey, G. (2010). 'Practice without theory': A neuroanthropological perspective on embodied learning. *Journal of the Royal Anthropological Institute*, *16*, 22–40.

Dunsby, J. (2002). Performers on performance. In J. Rink (Ed.), *Musical performance: A guide to understanding* (pp. 225–236). London, UK: Cambridge University Press.

Fassinger, R. E. (2005). Paradigms, praxis, problems, and promise: Grounded theory in counseling psychology research. *Journal of Counseling Psychology*, *52*(2), 156–166.

Ford, L., & Davidson, J. W. (2003). An investigation of members' roles in wind quintets. *Psychology of Music*, *31*(1), 53–74. doi:10.1177/0305735603031001323

Gabrielsson, A. (2001). Emotions in strong experiences with music. In P. N. Juslin & J. A. Sloboda (Eds.), *Music and emotion: Theory and research* (pp. 431–449). Oxford, UK: Oxford University Press.

Gabrielsson, A. (2002). Emotion perceived and emotion felt: Same or different? *Musicae Scientiae, Special issue 2001–2002*, 123–147.

Gabrielsson, A. (2010). Strong experiences with music. In P. N. Juslin & J. A. Sloboda (Eds.), *Handbook of music and emotion: Theory, research, applications* (pp. 547–574). Oxford, UK: Oxford University Press.

Gabrielsson, A., & Juslin, P. N. (1996). Emotional expression in music performance: Between the performer's intention and the listener's experience. *Psychology of music*, *24*, 68–91.

Geeves, A., & McIlwain, D. (2009a). Investigating the reciprocity between body and performance for a professional musician. *Proceedings of the 2nd International Conference on Music Communication Science (IComCS2)* (pp. 121–124). Sydney, Australia: HCSNet, University of Western Sydney.

Geeves, A., & McIlwain, D. (2009b). That blissful feeling: Phenomenological conceptions of music performance from one performer's perspective. *Proceedings of the International Symposium on Performance Science* (pp. 415–420). Utrecht, The Netherlands: AEC (European Association of Conservatories).

Geeves, A., McIlwain, D., Sutton, J., & Christensen, W. (2014). To think or not to think: The apparent paradox of expert skill in music performance. *Educational Philosophy and Theory*, *46*(6), 674–691.

Gibson, J. J. (1977). The theory of affordances. In R. E. Shaw & J. Bransford (Eds.). *Perceiving, acting and knowing* (pp. 67–82). Hillsdale: Lawrence Erlbaum and Associates.

Ginsborg, J. (2004). Singing by heart: Memorization strategies for the words and music of songs. In J. Davidson (Ed.), *The music practitioner: research for the music performer, teacher, and listener* (pp. 149–161). Aldershot, UK: Ashgate.

Glaser, B. G., & Strauss, A. L. (1967). *The discovery of grounded theory: Strategies for qualitative research*. Hawthorne, NY: Aldine Publishing Company.

Greasley, A., & Prior, H. M. (2013). Mix tapes and turntablism: DJs' perspectives on musical shape. *Empirical Musicology Review*, *8*(1), 23–43.

Hallam, S. (1995). Professional musicians' orientations to practice: Implications for teaching. *British Journal of Music Education*, *12*(1), 3–19.

Haueisen, J., & Knosche, T. R. (2001). Involuntary motor activity in pianists evoked by music perception. *Journal of cognitive neuroscience*, *13*(6), 786–792.

Henwood, K., & Pidgeon, N. (2003). Grounded theory in psychological research. In P. M. Camic, J. E. Rhodes & L. Yardley (Eds.), *Qualitative research in psychology: Expanding perspectives in methodology and design* (pp. 131–155). Washington, DC: American Psychological Association.

Juslin, P. N., & Sloboda, J. A. (2001). Music and emotion: Introduction. In P. N. Juslin & J. A. Sloboda (Eds.), *Music and emotion: Theory and research* (pp. 3–22). Oxford, UK: Oxford University Press.

King, E. C. (2006). The roles of student musicians in quartet rehearsals. *Psychology of Music*, *34*(2), 262–282. doi:10.1177/0305735606061855

Krampe, R. T., & Ericsson, K. A. (1995). Deliberate practice and elite musical performance. In J. Rink (Ed.), *The practice of performance* (pp. 85–102). Cambridge, UK: Cambridge University Press.

Lamont, A. (2012). Emotion, engagement and meaning in strong experiences of music performance. *Psychology of Music*, *40*(5), 574–594. doi:10.1177/0305735612448510

Lehmann, A. C. (1997). Acquired mental representations in music performance: Anecdotal and preliminary empirical evidence. In A. C. Lehmann & H. Jorgensen (Eds.), *Does practice make perfect? Current theory and research on instrumental music practice* (pp. 141–163). Oslo, Norway: Norges Musikkhøgskole.

Loehr, J. D., & Palmer, C. (2007). Cognitive and biomechanical influences in pianists' finger tapping. *Experimental Brain Research*, *178*, 518–528.

MacDonald, R. A. R., & Wilson, G. B. (2005). Musical identities of professional jazz musicians: a focus group investigation. *Psychology of Music*, *33*(4), 395–417. doi:10.1177/0305735605056151

MacDonald, R. A. R., & Wilson, G. B. (2006). Constructions of jazz: How jazz musicians present their collaborative musical practice. *Musicae Scientiae*, *10*(1), 59–83.

McIlwain, D., & Sutton, J. (2014). Yoga from the mat up: How words alight on bodies. *Educational Philosophy and Theory*, *46*(6), 655–673.

Miklaszewaski, K. (1989). A case study of a pianist preparing a musical performance. *Psychology of Music*, *17*(2), 95–109. doi:10.1177/0305735689172001

Monson, I. (1996). *Saying something: Jazz improvisation and interaction*. Chicago, IL: University of Chicago.

Oliver, R. (2013). Groove as familiarity with time. In E. King & H. M. Prior (Eds.), *Music and Familiarity: Listening, Musicology and Performance* (pp. 239–252). Aldershot, UK: Ashgate.

Palmer, C. (2005). Sequence memory in music performance. *Current Directions in Psychological Science*, *14*(5), 247–250.

Persson, R. S. (2001). The subjective world of the performer. In P. N. Juslin & J. A. Sloboda (Eds.), *Music and emotion: Theory and research* (pp. 275–289). Oxford, UK: Oxford University Press.

Preston, B. (2012). *A philosophy of material culture: Action, function and mind*. New York, NY: Routledge.

Reid, S. (2002). Preparing for performance. In J. Rink (Ed.), *Musical performance: A guide to understanding* (pp. 102–111). Cambridge, UK: Cambridge University Press.

Reinholdsson, R. (1998). *Making music together: An interactionist perspective on small-group performance in jazz*. Acta Universitatis Upsaliensis: Studia Musicologica Upsaliensia, Nova Series 14. Uppsala: Uppsala University.

Repp, B. H., & Knoblich, G. (2004). Perceiving action identity: How pianists recognise their own performances. *Psychological Science*, *15*(9), 604–609.

Roland, D. (1994). How professional performers manage performance anxiety. *Research Studies in Music Education*, *2*(1), 25–35. doi:10.1177/1321103x9400200105

Rubin-Rabson, G. (1940a). Studies in the psychology of memorizing piano music II: A comparison of massed and distributed practice. *Journal of Educational Psychology*, *31*(4), 270–284.

Rubin-Rabson, G. (1940b). Studies in the psychology of memorizing piano music III: A comparison of the whole and the part approach. *Journal of Educational Psychology*, *31*(6), 460–476.

Shaffer, L. H. (1984). Timing in solo and duet piano performances. *Quarterly Journal of Experimental Psychology*, *36A*, 577–595.

Shove, P., & Repp, B. H. (1995). Musical motion and performance: Theoretical and empirical perspectives. In J. Rink (Ed.), *The Practice of performance* (pp. 55–83). Cambridge, UK: Cambridge University Press.

Sloboda, J. A. (1991). Music structure and emotional response: Some empirical findings. *Psychology of Music*, *19*(2), 110–120.

Sloboda, J. A. (2005). *Exploring the musical mind: Cognition, emotion, ability, function*. Oxford, UK: Oxford University Press.

Steptoe, A. (2001). Negative emotions in music making: The problem of performance anxiety. In P. N. Juslin & J. A. Sloboda (Eds.), *Music and emotion: Theory and research* (pp. 291–307). Oxford, UK: Oxford University Press.

Strauss, A. L., & Corbin, J. (1998). *Basics of qualitative research: Techniques and procedures for developing grounded theory* (2nd ed.). Thousand Oaks, CA: SAGE.

Sudnow, D. (1978). *Ways of the hand: The organisation of improvised conduct*. London, UK: Routledge & Kegan Paul.

Thompson, W. F. (2009). *Music, thought and feeling: Understanding the psychology of music*.New York: Oxford University Press.

Williamon, A. (2002). Memorising music. In J. Rink (Ed.), *Musical performance: A guide to understanding* (pp. 113–126). Cambridge, UK: Cambridge University Press.

Woody, R. H. (1999). The musician's personality. *Creativity Research Journal*, *12*(4), 241–250.

Zatorre, R. J., Chen, J. L., & Penhune, V. B. (2007). When the brain plays music: Auditory-motor interactions in music perception and production. *Nature Reviews: Neuroscience*, *8*(July), 547–558.