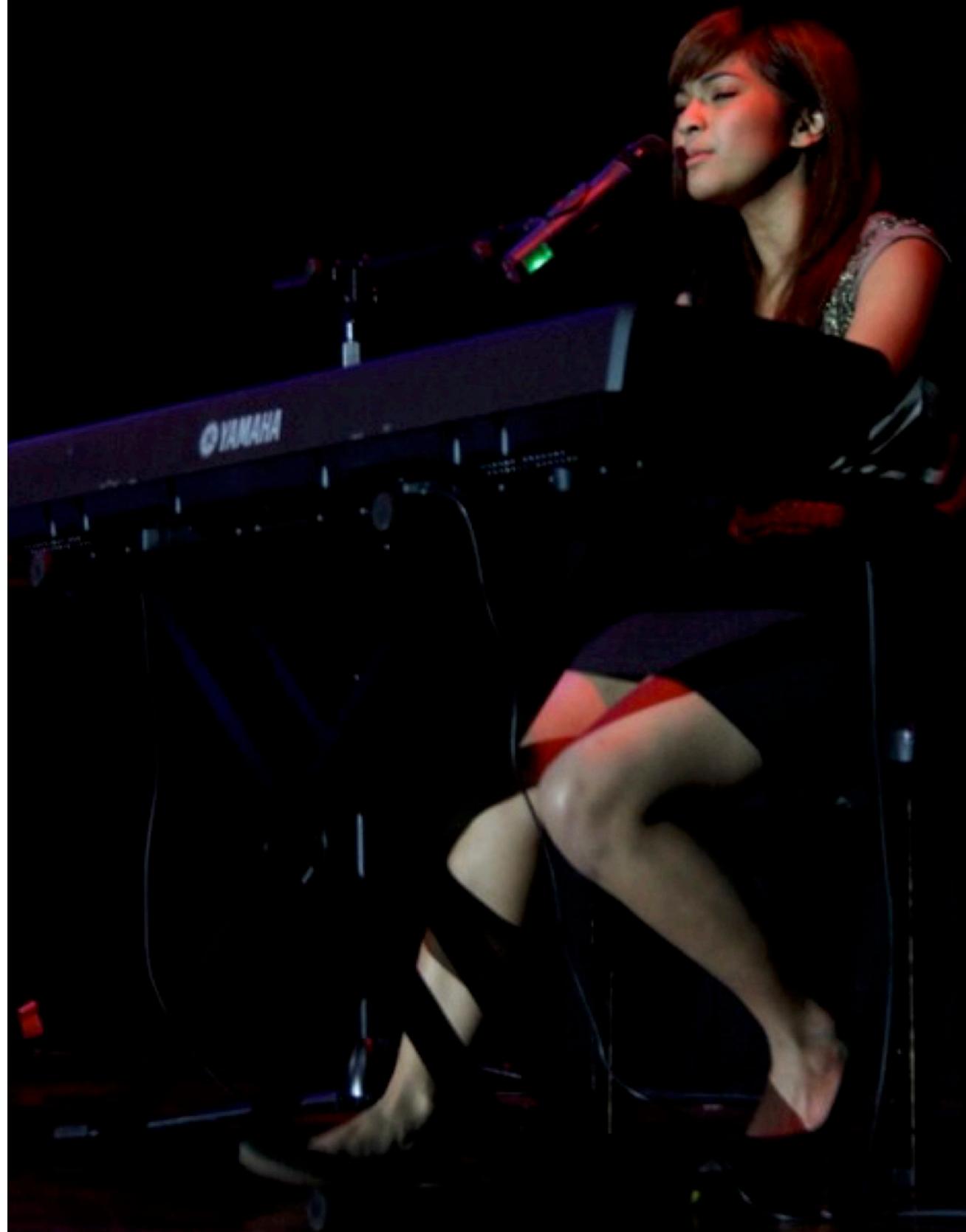


Australian Voice





Australian Voice

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Cover

Ana Mateo, Australian singer and songwriter

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From the editor

Helen Mitchell

I am delighted to introduce this volume of Australian Voice to you. AV continues to play a key role in the global singing community by utilising best practice in singing to inform groundbreaking research. Once again, this volume provides an insightful forum for pedagogues and researchers to share their ideas about the singing voice.

It gives me great pleasure to introduce our new Australian Voice Editorial Board, each of whom has generously given their time and expertise to help guide the next phase of the journal. I would like to thank the Editorial Board and the expert reviewers who read these articles and shared their astute insights and comments with the authors.

The current volume contains four articles by Australian researchers, focused on the theme of *Trajectories in vocal pedagogy and practice*.

In the first article, Di Hughes, Veronica Monro, Anne Power, Belinda Lemon-McMahon, Sarah Powell and Naomi Cooper form an expert team to present a variety of approaches to singing in Australia. They link singing practice and research to consider answer the thought-provoking question 'why sing?' and give 'snapshots' of our diverse Australian singing community.

Belinda Lemon-McMahon considers the way in which different pedagogic practices affect singers' developing identities, and how teachers

and singers can navigate learning to effectively cultivate an unique vocal identity.

Vocal identity is considered in a different way by Veronica Monro, as she investigates the impact of professionalism on singing identity, style and wellbeing of contemporary singing artists.

Di Hughes and Veronica Monro provide a fascinating analysis of the way in which professional artists fuel their creativity in singing performance with technology.

The field of singing research continues to expand exponentially, and this volume of AV confirms that, as the journal of ANATS, it is ideally placed to facilitate the discussions on vocal pedagogy and practice within the global singing community. I would like to thank all the authors for their outstanding contributions and hope you enjoy reading the 2014 volume of Australian Voice.

The journal relies on contributions from experienced voice professionals and is an ideal place to share your research, teaching and clinical experiences. Australian Voice welcomes your submissions for 2015!

Helen Mitchell

Approaches to singing: ‘Snapshots’ of Australian contexts

Diane Hughes* Veronica Monro* Anne Power# Belinda Lemon-McMahon* Sarah Powell# Naomi Cooper#

*Macquarie University, #University of Western Sydney

ABSTRACT: This article brings together performers, researchers, practitioners and educators to discuss approaches to and experiences of singing in Australia. The impetus behind this article was a round table discussion, “Why Sing?”, presented by the authors at the 31st International Society of Music Education Conference, Porto Alegre, Brazil, 2014. By linking practice and research in specific contexts, the authors address the reasons as to why some people sing, the roles and purposes of different types of singing, what motivates some to sing, and how to effectively communicate through singing in particular contexts. In the discussion and in relation to particular contexts, expressivity through singing (personal and collective), creativity and singing, healthy singing, and technology and singing are highlighted. The article concludes with implications for vocal pedagogy and for music education more broadly.

KEYWORDS: singing, health, authentic, voice, Australia

INTRODUCTION

Australia is a large and geographically diverse continent. In many ways, its peoples are equally diverse. It is not surprising then that the singing voice is often heard in various socio-cultural contexts and locations, and that approaches to singing and motivations for singing vary greatly. The impetus for writing this article was a round-table discussion, “Why Sing?”, presented by the authors at the 31st International Society of Music Education Conference, Porto Alegre, Brazil, in July, 2014.

This article brings together six practitioners who report on different aspects of the singing voice. The article does not purport to be a comprehensive view of singing in Australia. Rather, each author provides a unique perspective and approach to singing in a particular context. The focus of each perspective is on a particular approach to singing and learning. Some of the approaches are documented practice; other approaches relate to recent research findings. The article concludes with implications that stem from the perspectives of the individual authors.

The first approach presents the singing and learning of two adolescent indigenous

singers. In this context, the different mentoring of both singers is seen to correlate to their development.

WHEN AUSTRALIAN ABORIGINAL ADOLESCENTS SING

Anne Power

Like most young Australians, Australian Aboriginal singers in remote locations most often have role models they hear on YouTube clips, in films or on the radio. In two schools in Tennant Creek, in the Northern Territory, in which this author has been working for the past three years, it varies greatly as to whether students hear their teachers sing. To a large extent, observation indicates that the primary school students do not. The High School students do.

The Case Studies

This discussion focuses on case studies of two students, Joseph and Doreena, who demonstrate what is achievable when skills are nurtured. The female and male students were in Year 7 and Year 11 respectively (aged 13 and 17 years). From primary school age, Joseph was taken under the wing of a music instrumental teacher appointed by the Northern Territory School of Music. He learned guitar, through both playing and singing, developing his aural skills as well. Consequently, Joseph learned how to rehearse and interpret a song. Joseph was a participant in an educational video and from an early age, he was used to sharing the spotlight.

Joseph’s story demonstrates resilience, the quality that enables an ability to recover from life stresses (Garmezy, 1991). He became a songwriter and in 2012 Joseph recorded two songs he had written. In Australian Aboriginal culture, there are many examples of performers who have achieved award winning successes including: the vocal ensemble Tiddas, female solo artists such as Jessica Mauboy and Christine Anu, and male solo

artists such as Troy Cassar Daly and Jimmy Chi. In contemporary Aboriginal songwriting that has evolved with Australian Aboriginal musicians like acclaimed singer-songwriter Archie Roach, there is a break with traditional ways in the acknowledgement of songwriting as something human in origin, whereas the most powerful Dreaming songs were created by Dreaming beings (Marret & Barwick, 2007).

While there are significant role models for successful singers, adolescent musicians frequently contend with the notion of 'shame job' where some Australian Aboriginal youth are reluctant to be singled out for achievement or recognition. In such circumstances, talents are often undiscovered or left without nurture and support. That is why the story of Doreena and Joseph, a small part of a much larger research project, is such an interesting one to tell. The larger research project is about arts-based service learning focused on pre-service teachers and their work with communities. Interactions with young musicians in the town brought Doreena and Joseph to my attention.

In 2012, Doreena sang as part of the Stronger Sisters group that was formed and encouraged by the Head Teacher Welfare at the High School. In 2013, Doreena performed at the Desert Harmony Festival as part of the Lady Beats group and demonstrated a developing stage presence acquired with this performance experience. The skills both young people developed included techniques of breath control, pitch matching, learning how to rehearse and to interpret, and how to extend their vocal repertoire.

The Learning

The nurturing within each case study was undertaken in different ways. In both cases, family has been supportive and is as variable (no more, no less) than any family in low socio-economic circumstances. There were teachers at the school, including a teacher from the Northern Territory School of Music who provided early contact with music of different genres: folk songs, ballads, classical airs and pop. There was also a recording studio, the Winanjikari Music Centre. Finally, in Tennant Creek, there was an annual music festival called Desert Harmony, at which local talent performed alongside top billing artists; and for this festival, visiting mentors were engaged to particularly support emerging artistry. For these two young singers, the 'village has raised the child' and made it possible for them to sing.

In the next approach, singing and learning is linked to healthy vocal production. The correlation between vocal health and vocal identity is also evident in this perspective.

CONSIDERATIONS FOR THE VOCAL HEALTH AND INDIVIDUAL IDENTITY OF THE CONTEMPORARY SINGER

Belinda Lemon-McMahon

Singers of popular culture musics (PCM) (Hughes, 2010) are required to be unique and innovative in their performances, in musical arrangements and in their vocal sound. Singers' artistry is typically related to "how" they sing and "why" they sing, and is underpinned by the individual sound of the voice.

Stylistic effects

In PCM, there is a wide array of vocal styles and nuances that are explored and utilised by singers. A singer's vocal style relates to the "vocal 'choices' made by the artist" (Soto-Morettini, 2006, p.ix). These include characteristics such as whispers, shouts, gravels and vocal fry (Soto-Morettini, 2006). Vocal qualities such as a "rasp" (Kayes, 2004) sound, and even a "constricted" (Kayes, 2004, p.174; Soto-Morettini, 2006, p.47) sound, are sometimes used for effect; a variety of onsets of sound ranging from "hard" to "soft" are also utilised in a range of genres (Soto-Morettini, 2006). Healthy vocal production involves singing with a combination of "physical and acoustic efficiency...[and] vocal conditioning" (Thurman *et al.*, 2000a, p.492). However, it is widely acknowledged that utilising vocal effects such as vocal constriction are not efficient means of phonation and may result in vocal health problems (Angsuwarangsee and Morrison, 2002; Callaghan, 2000; Feindel, 2006; Harris *et al.*, 1998; LoVetri, 2006; McCoy, 2012; Miller, 1996; Morrison, 1997; Sundberg *et al.*, 2004). Kayes (2004) and Soto-Morettini (2006) suggest that qualities such as rasp, creak, and rumble/growl are also inefficient and potentially deleterious to the voice. Inefficient or unhealthy phonation requires "unnecessary" (Thurman, *et al.*, 2000b, p.646) vocal effort as laryngeal muscles need to work harder to ensure complete closure of the vocal folds. This increase in vocal effort may negatively impact the vocal tone, limit the range of the voice, affect pitch and breath control, and cause the voice

to fatigue early (LoVetri, 2006; Hughes, *et al.*, 2013). There is also an increased risk of several pathologic voice disorders such as muscle tension dysphonia, vocal fold haemorrhage, nodules, polyps, cysts, sulcus, ulcers, and granulomas (McCoy, 2012; Hughes, *et al.*, 2013). As these qualities are commonly used in popular singing for expression (Hughes, *et al.*, 2013), and to help create the “wilder, more interesting parts of the vocal palette” (Soto-Morettini, 2006, p.48), there is an obvious conflict for singers of PCM between singing with a healthy and efficient phonation and maintaining a strong vocal identity through the utilisation of stylistic effects.

Vocal Identity and Vocal Health

There are several influencing factors to a singer’s vocal identity. These include the vocal timbre, the individual morphology of the voice (Sundberg, 1987), and the implemented stylistic choices (Soto-Morettini, 2006). Contemporary singers are free to choose the stylistic effects they use; it is these choices that largely determine the vocal identity or signature of a particular singer (Soto-Morettini, 2006). However, performance demands on PCM singers, combined with endurance limitations in individual voices, can make it difficult for singers to continue to withstand the perpetual use of certain stylistic effects (McKinley, 2011; Soto-Morettini, 2006). Understanding good vocal health practices may help counter-act this issue. Singers should ensure they remain physically fit, eat a healthy diet, have adequate vocal rest and sleep, ensure a proper warm-up and cool-down routine is followed, sing with-in a comfortable vocal range, and sing with a healthy vocal technique (Bunch Dayme, 2009; Callaghan, 2000; Hughes, 2012; McCoy, 2012). Other factors that may lead to poor vocal health include inadequate hydration, vocal strain or misuse, allergies, respiratory disease, drugs, alcohol, smoking, hormonal changes, and illness (Bunch Dayme, 2009; Callaghan, 2000; Hughes, 2012; McCoy, 2012). Research undertaken that involved Australian singing teachers, Ear, Nose and Throat specialists, and speech pathologists (Lemon-McMahon, 2012) also identified that it is advantageous for singers of PCM styles to learn from a singing teacher that has knowledge and an understanding of these styles and their vocal demands. As each individual voice will have a different threshold for the use of these stylistic effects it is also important for the singer and singing teacher to be aware of any negative effects on the voice (such as those listed above, e.g.

limited range, increased fatigue, etc.) that may be due to the use or overuse of PCM stylistic effects and/or insufficient vocal care.

Australian singer Keith Urban is one of several well-known singers who has recently experienced vocal health problems (Keeps, 2014; McKinley, 2011). After initially experiencing frustration at the lack of resilience of his voice Urban is cited by Keeps (2014) as saying “I had to start thinking like an athlete and not a musician” (p.1). By maintaining good vocal conditioning and vocal health practices, singers of PCM may reduce the negative impact of lifestyle and stylistic choices while maintaining integrity to their style and their vocal identity.

While healthy vocal production (or lack of) is often a challenge that many singers and teachers of singing face, stereotypes and gender biases may also limit the opportunity for some to sing. This next section addresses these types of issues identified in the perceptions of boys involved in choir singing.

PERCEPTIONS OF BOYS (AND MEN) WHO SING IN A CHOIR

Sarah Powell

The dominant ideology of Australian masculinity is defined in terms that denote power and strength. Men are depicted as competitive, aggressive, dominant, and non-feminine. This is made particularly apparent by the significance placed on sport in Australian society perpetuated by the commitment and coverage provided by the media. Connell (2008) argues that Australia has seen a culture emerge in education that perpetuates a hegemonic masculinity, not only through the emphasis placed on sport, but through confrontational approaches to discipline, and narrow views about boys’ learning styles. Sport epitomises dominant masculine tendencies and values, such as “physical confrontation and (legal) violence” (Connell, 2008, p. 140). Boys are taught from a young age to embody this form of manhood (Talbot, 2010; Vaccaro, 2011). At school it is accepted they will be “active, competitive and physical with their bodies” (Vaccaro, 2011, p. 72), endure pain, and use their bodies to inflict physical pain on others as a way of asserting their masculinity and dominance (Hauge & Haarvin, 2011; Vaccaro, 2011). In this socio-cultural context, boys may align themselves with

hegemonic masculinity, learning to avoid that which does not reflect this image, afraid of being stereotyped or harassed as feminine or gay (Adler & Harrison, 2004; Summers, 2013).

Singing in a choir represents a deviation from this construction. Instead it is associated with a 'soft' masculinity and, consequently, participation has feminine and homosexual implications. Harrison (2001; 2010) suggests that boys who play sport as well as sing in choir provide a strong exception, arguing, however, that their participation in choir is made acceptable by their participation in sport. Whilst it is acknowledged that this is not the case in every school or community in Australia, research suggests that the mere existence of such an ideology is damaging and far-reaching, and that even well-intentioned efforts to address the issue, unintentionally perpetuate stereotypes surrounding boys and singing (Connell, 2008; Harrison, 2001; 2009; 2012; Summers, 2013).

The Research and Design

This research study explored the perceptions of boys (and men) who belong to a choir, in terms of their beliefs about success and masculinity, and the role of identity (using the theory of possible selves) as it related to decisions regarding choir.

The study combined elements from three methodological approaches. It sought to understand the lived experiences of the participants (phenomenology) by looking at specific examples (multiple case study) and using participants' voices as much as possible in the reporting of findings (narrative inquiry). Ethics approval was obtained and participants provided their consent to be involved with the option to withdraw at any time without penalty.

Data were collected in a range of ways including surveys (choir and audience), individual interviews and focus groups, and observation of rehearsal time and public performance (audio-visual recordings). There were four choirs involved, each of which represented a different age group and context (Junior School; Secondary School; University; Community). Video recordings were used as an observation tool and all data were analysed according to emergent themes. Themes were then refined and aligned with the three main research themes: success, masculinity, and possible selves.

The Findings

The theory of possible selves was used to consider how to promote positive experiences of singing in a choir during boyhood and establish it as an integral part of boys' identity. The theory suggests that past experience and visions of the future will affect present decisions. Simultaneously, past and present experiences will influence future directions. For a boy to remain in choir throughout his life, he must be able to envisage himself in that future space (a successful space) and this is primarily based on his current space.

Perceptions of success and notions of masculinity were closely connected to boys' possible selves. As stated, participation in choir was dependent on positive past and present experiences. These experiences were defined by boys' beliefs about the meaning of success and whether participation in choir satisfied these. Choir also needed to satisfy integral elements associated with boys' definitions of manhood.

For boys to embrace the choral space choir needs to be successful in terms that are meaningful to boys, which includes displaying a high standard of musical and technical skill, and it must provide authentic opportunities to perform and display expertise. Choir must provide a legitimate space where boys can enjoy positive relationships with each other. It must foster healthy expressions of physicality and allow for such interactions without the damaging ramifications of hegemony and stereotypes.

Just as this section has discussed the ramifications of hegemony and stereotypes that may limit boys' experiences of singing, the next perspective discusses the steady increase in the number of choirs in Australia, which is enabling increased opportunities for community singing.

THE COMMUNITY CHOIR AND THE DEMOCRATISATION OF COMMUNITY SINGING

Naomi Cooper

Ever since the advent of recording technology, people have increasingly become music consumers rather than music makers. The commercialisation of the music industry has also contributed to this, fostering the misconception that music should only be made by 'the experts' (Bridges, 2009). This has resulted in many people believing they are

unmusical and cannot sing. To the contrary, Christopher Small insists “every normally endowed human being, is born with the gift of music” and that “our present-day concert life, whether ‘classical’ or ‘popular’, in which the ‘talented’ few are empowered to produce music for the ‘untalented’ majority is based on falsehood” (1998, p. 8). The community choir movement, which began to flourish in Australia in the 1980s and continues to expand, has sought to counter this non-singing culture with the philosophy that everyone can sing (Rickwood, 2010).

The Research and Design

Observation and interview of nine Australian community choral directors demonstrates that they employ a range of strategies to make choral singing accessible to self-professed ‘non-singers’. These include choosing interesting and relevant repertoire, a holistic teaching approach, and writing arrangements that are simple yet satisfying. It is this accessibility which appears to have contributed to the burgeoning of community choirs in Australia.

The Findings

Repertoire choice plays an important role in making choral singing appealing to people who may not have sung in a choir before. One director reflects on how choirs that emerged in the late 1980s differed from other choirs at the time, “I think it was making singing more accessible to people and I think maybe more interesting than choral societies which had a very, you know, the classical and very, certain repertoire. They didn’t sing pop, they didn’t sing gospel, they didn’t sing jazz necessarily. So something that my choir and a couple of others that turned up at the same time were doing [was] different material and making it look like fun for start”. At that time, world music and a cappella gospel, as well as pop, rock, folk, jazz and barbershop styles provided an exciting foray into singing for many people (Rickwood, 1998). They offered secular alternatives to church choirs, and more relevant alternatives to classical choirs. The diversity of choirs in Australia has continued to expand and now reflects an extensive range of repertoire.

Many directors in Australia have adopted a teaching approach which allows singers with no vocal experience or music reading skills to sing in choirs. This includes an aural transmission approach where all elements of the music are

transmitted to the singers through simultaneous vocal demonstration of pitch, rhythm, dynamics, articulation, tone, pronunciation, expression and style (Chadwick, 2011). This approach gives singers immediate access to the musicality of any given song without the need for prior knowledge, experience or skill through the universal instrument of the singing voice.

Commercially available arrangements (such as those produced by Hal Leonard) are not always suitable for the membership, skill level and interests of community choirs in Australia. Therefore, many directors compose and arrange repertoire for their own choirs. These arrangements are tailored to the composition of voice parts in the group, such as singers’ ranges (which may be narrower than those used in commercial arrangements), or female tenor lines (which tend to sit in a slightly higher range than male tenor lines). The arrangements are composed in such a way that each line is inherently satisfying to sing, which plays an important role in singers’ enjoyment both in rehearsal and outside of rehearsal. This is achieved by avoiding awkward intervals and writing inner parts that move melodically rather than remaining static. As each line makes musical sense in isolation, singers can sing their parts at home without requiring the other voice parts for context.

The steady increase in number of choirs in Australia indicates that perhaps the lack of singing in the community is gradually being overcome and examples from Australian choirs demonstrate that strategies are being implemented by directors to make singing as accessible as possible (Cooper, 2013).

The collective singing opportunity afforded through community singing provides a stark contrast to the individuality of the contemporary singer-songwriter. While both approaches relate to expressivity in singing and song, the next perspective discusses the vocal expression of those who choose to sing, write and influence the production of their own songs.

VOCAL EXPRESSION AND THE SINGER-SONGWRITER

Veronica Monro

The domain of the singer-songwriter exhibits a craft that is traditionally associated with

naturalistic singing, acoustic self-accompaniment, folk music and well-articulated story-telling. Yet, through rapid developments in technology paralleled by fusions of musical genres, a modern form of the singer-songwriter is emerging. By deconstructing the term singer-songwriter and by acknowledging individual vocality - a term defined by Meizel (2011) as one that potentially encompasses the personality, history, identity and vocal characteristics of a singer - the vocal expression of original artists who primarily sing, write and heavily influence the production of their songs is explored.

Contemporary Singer-Songwriters

Through observing singer-songwriters of popular culture musics (PCM; Hughes, 2010), it can be seen that singer-songwriters commonly engage with varied technologies, instrumentation and vocal production techniques in their creative processes. Collectively, these elements influence their songs and extend their reach beyond the traditional singer-songwriter genre. The voice and its ability to convey meaning is also influenced by elements of contemporary performance such as those found in live, recorded or online streamed performance environments (for example, acoustic qualities, audience reaction and performer wellbeing at the time of performance). These elements may influence overall vocal expressivity, or vocality (Meizel, 2011) in the process of songwriting. Therefore, contemporary singer-songwriters utilise multiple forms of authorship and practice principles (Burnard, 2012) that extend beyond the traditional boundaries of recording, performance and composing music in order to overcome limitations as well as broaden their creative process and craft. These include engaging in contexts that span and cross through various genres of PCM, vocal styles and soundscapes, musical projects and performance settings. Such influences may enhance creative intent and song construction and meaning.

Influence and Vocal Expression

The term expression may be defined as the representation of meaning through a tangible medium. In relation to the voice of the singer-songwriter, "creating meaning" is an "essential marker of vocal style" (Potter, 1998, p.158). The pairing of influences to engagement in a form/s of authorship result in written and performed songs that exhibit layers of personal expression and constructed meaning. Of these, the voice is the

primary medium for sharing expressive qualities, personal style and the story-telling of life experiences (Frith, 1996); voices serve "as perceptual markers for deeply intertwined ideas" (Meizel, 2011, p.267). Many things influence contemporary vocal expression. These influences include the preferred aesthetic, the creative processes including production techniques (e.g. recording preferences, production choices and technological applications), the underpinning musical influences, the stylistic leniencies and the artistic intent.

Vocal Expression and Sound

The tonal qualities of vocal expression highly depend on the influences that impact artists throughout their creative work. These can range from socio-cultural factors through to musical preferences, formal or informal training, individual physiological makeup and levels of vocal skill and acuity. The stylistic and expressive qualities are delivered by subtle or obvious vocal nuances that may include timbral shifts, dynamic variation, voiced and un-voiced sound, pitch changes and rhythmic modulation. Expressive sounds used may also include the fusion of one or more stereotypical genre specific vocal sounds such as the use of vocal/glottal fry typically associated with pop or rock songs, a speech-like, or breathy/airy delivery as heard in indie styles of music, or a rich, wailing melismatic delivery as heard in R&B or soul (Soto-Morettini, 2006). Australian artist, Sia Furler, is often perceived as an emotive singer-songwriter that uses a broad range of expressive qualities. She displays an extensive palette from the use of vocal fry to soft, breathy tones in her song entitled "Breathe Me" (2004); in her song "Chandelier" (2014), she displays a louder, more energetic use of hard vocal onsets, vocal fry and heavy belting. The vocal expression delivered in these songs point to an abstractive use of the voice loaded with sound cues that are potentially associated with different emotional states (Scherer, 1995, Juslin & Laukka, 2003). These elements of vocal expression, tonal qualities and timbral characteristics offer artists and listeners alike with broad interpretative potential that is often beyond the literal meaning of lyrics.

The individuality of the contemporary singer-songwriter reflects the individuality required of contemporary singers more broadly. The ways in which individuality is fostered and encouraged in a group learning context forms the focus of the next approach.

CONTEMPORARY SINGING AS AUTHENTIC LEARNING

Diane Hughes

Singing is the combination of vocal and musical expression; the vocal instrument is physically embodied. The significance of singing has been demonstrated in recent articles and research in areas such as neuroscience (e.g., Dalla Bella & Berkowska, 2009), voice science (e.g., Trollinger, 2007), music therapy (e.g., Tamplin et al, 2013) and music education (e.g., Jacobi, 2012). While research identifies that singing provides opportunities for both personal and collective communication, studying singing may also facilitate ‘authentic learning’ in a number of ways and often in ways that extend beyond the singing voice.

The Learning Context

The learning context in this article relates to the group learning undertaken by contemporary vocal students in a tertiary music major program of study in Australia. Contemporary vocal studies are offered in a suite of units for 1) foundation, 2) intermediate and 3) advanced vocalists. There is an additional fourth unit, Musical Creativity, in which vocal students combine with other music students to explore multiple creativities and projects. Foundation students focus on vocal technique and anatomy and physiology; intermediate students explore expressive techniques and nuances of various musical styles; advanced vocalists consolidate their individual artistry.

Vocal studies are offered as a study option for music majors as well as for other interested students from across the university. The method of delivery is in a weekly lecture and tutorial format. Lectures focus on content to aid learning, anatomy and physiology, expressive techniques, theories of creativity, the business of music and on forms of authorship (Burnard, 2012). Tutorials are centered on practical exercises and singing in which strategies for hearing the individual voice in the

group context have been implemented. The scaffolding of assessment tasks within each unit reflects their formative intent and design (Hughes, forthcoming 2015).

Reflective student summaries (journals and post-performance statements) identify that students are able to engage in learning suited to individual needs and goals even when the teaching occurs in a group context. This outcome is achieved through specific curricula and assessment tasks that facilitate reflexivity in learning processes while also underpinning individual vocal and personal development. Collaborative and individual tasks provide opportunities for students to improve confidence and performance presence; critical analyses engage students in active listening that is in direct contrast to the passive musical listening often encountered in daily life. Experiencing technologies (e.g., amplification; recording; looping) that impact on the sound of the voice facilitates a deeper understanding of the implications of the perfected sound that is often heard in popular culture musics (PCM; Hughes, 2010). The authentic learning experienced through singing in contemporary vocal studies therefore extends into real world applications.

Authentic Learning

Authentic learning is the learning process and related outcomes that reflect real world contexts and challenges. Within the nine key elements of authentic learning as identified by Herrington (n.d.) are six elements that form the focus of curricula content and delivery in contemporary vocal studies discussed in this section. These include authentic context and activity, collaboration, reflection, coaching and scaffolding, and authentic assessment. The curricula content and delivery include singing as a real world experience that reflects contemporary experiences. Learning in a group context is also a shared experience with its emphasis on collaboration, collective musical arranging and ensemble performance. Contemporary vocal students also experience communicating with sound technicians in performance and recording, and collaborating with accompanists for performance.

For the purposes of this discussion, student reflection is used to exemplify aspects of reflexivity and autonomy in learning. This is achieved through formally structured assessment tasks through journal entries, reflections on the processes of learning and post-performance reflection statements. Informal reflection also occurs in tutorial discussion. Within the reflective

process, students formalise goal setting and associated actions, reflect on their progress and often detail additional inter-personal aspects that have evolved through their learning.

Case Studies

The following examples draw on the journals of fourteen advanced vocal students. Each of the fourteen students consented to their journal assessment tasks being analysed and cited as examples of reflective content and authentic learning. Authentic learning was evident in reflection on 1) the process of learning, 2) on real world performances/contexts and 3) on other areas of transformative development such as the individual growth and progress “as an artist, as a person” (2014 Reflection; #12). The following examples are indicative of the level of authentic learning evident in the student reflections. An example of reflection on the processes of learning includes:

This week I have really been thinking about my artistry, and what defines me as an artist. Although previous weeks of this journal have delved into these questions, it is only now that I am starting to realise my trends as an artist and what defines me (2014 Journal Reflection Week 4; #9).

The following is an example of the development of performance identity and intentions that were evident in several post-performance reflections:

The thing that motivates and inspires me to sing is the feeling of euphoria when I do. Every time I sing I feel full of life and am overwhelmed with happiness. When I perform I usually ‘lose’ myself in the process and can hardly remember the performance when I’m done, which is maybe to do with nerves or adrenaline as well. I believe I am also motivated by the reactions of audiences when I sing, the pursuit to impress with singing abilities or to move people. I hope to make people feel something through each time I sing (2014 Reflection; #8).

The journals revealed that a level of autonomy in learning is facilitated through individual programs and practice, and in related aspects such as purposeful repertoire selection. Also identified were the real world contexts (e.g., communicating with a recording technician) explored in the vocal studies units that assisted students in authentic real world applications and in their ongoing learning and artistic development.

IMPLICATIONS FOR SINGING AND LEARNING

Each of the approaches discussed in this article focuses on singing and learning in various contexts. Within each context, singing is inextricably linked to both the ability to express and to be creative musically. While each perspective is presented by an Australian researcher and/or practitioner and discusses a particular Australian context or provides Australian examples, each approach has broader relevance and implications. For example, there are significant challenges identified throughout the discussion that include the challenge to encourage singing in meaningful ways, the challenge to develop vocal technique in ways that aid expressivity and individuality, and the challenge to provide equitable access to singing opportunities. Such challenges have implications for singing and learning, and for providing comprehensive authentic (real world) experiences for those who love to sing.

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BIOGRAPHIES

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Belinda Lemon-McMahon has worked as a private singing teacher in her own studio for fifteen years. She has also worked as a contemporary vocal tutor and guest lecturer at Macquarie University in Sydney, as a peripatetic singing teacher, and as a registered voice tutor for the University of New South Wales. Amongst a long list of performance credits, Belinda's tribute to Bette Midler was her most successful show, touring for over five years around Australia as a featured act in Cabaret festivals. Currently

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Sarah Powell studied Music Education at the Sydney Conservatorium of Music before embarking on her teaching career. She has worked as a classroom Music teacher for over ten years, teaching children aged from Preparatory School through to Year 12 HSC level. Although majoring in flute, her particular musical passion was always voice. She completed a Master of Education at the University of Western Sydney, a Master of

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Naomi Cooper is a PhD candidate at the University of Western Sydney, Australia. She has directed children's, school, university and community choirs. Her current research is focused on the teaching and learning practices of community choirs in Australia, in particular choirs where the membership is not auditioned and the score is not the primary teaching tool. She is a sessional academic for choir at the University of Western Sydney and vocal studies at Macquarie University.

Pedagogical implications of vocal learning and neuroplasticity

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ABSTRACT: This article discusses the potential influence of teaching practices on the development of a singer's vocal identity. Vocal identity is shaped by *how* a singer sings, *why* a singer sings and the individual morphology of the voice. Recent research into neuroplasticity has increased our understanding of how learning changes our brains. The connectedness of a singer's mind, body and voice means that pedagogical methods that affect neuronal connections may also impact on the emotions, feelings, perceptions, and memories of the singer. A singer's exploration of their own vocal identity may also be affected by mimicking or imitating other artists or teachers. This discussion will conclude with the pedagogical implications of vocal learning and neuroplasticity.

KEYWORDS: neuroplasticity, vocal identity, vocal pedagogy

INTRODUCTION

Contemporary singers aspire to be unique. These singers need an identity which goes beyond the physical or the aesthetic to encompass a vocal identity that defines them. Among other influences (Hughes, 2014), as the following discussion details, the pedagogical environment in which the singer is engaged may impact on the development of a singer's vocal identity. This is due to the interrelatedness of the singer's mind, body and voice. A lack of pedagogical understanding about this connection may result in the singer's vocal identity being restricted or inhibited. This article discusses this relationship and focuses on the impact that imitation and mimicry can have on the development of vocal identity.

Vocal Identity

Vocal identity can be defined as the characteristics of the sound that are unique to the individual singer. The voice is an expressive instrument that is shaped by the personal, musical and cultural experiences of the singer. It is something very "personal" (Sundberg, 1987, p. 2) and Soto-Moretini (2006) states that "the voice gets right to the heart of who we are" (viii). Frith (1996)

suggests that you can "hear someone's life in their voice" (p. 186). Vocal identity is shaped by *how* a singer sings, *why* a singer sings and the individual morphology of the voice (Sundberg, 1987). The "how" relates to the technical and stylistic choices of the singer, the "why" relates to the personal motivation to sing and the emotional response or connection to singing, and the individual morphology refers to the characteristics of the individual voice organ.

It is widely acknowledged that a person's identity is "negotiated" (Faircloth, 2012, p. 186), "fluid" (Faircloth, 2012, p. 187), has a "socio-cultural context" (Kaplan and Flum, 2012, p. 175) and is a "consequence of interaction between people, institutions and practices" (Sarup, 1996, p. 11). In educational settings the process of identity formation is influenced by the teachers, the contextual cues that are given, the motivation, and the interaction between "teachers, students and academic content" (Kaplan and Flum, 2012, p. 175). As a result, teachers, learning institutions, and pedagogical methods will create contexts in which identities are shaped. A singer's vocal identity can be regarded similarly to a person's identity. It is rarely static and it can be influenced by social and cultural factors. There is also the potential for pedagogical methods and techniques to impact the development of vocal identity.

Imitation and mimicry

Singing and vocal pedagogy have been practised in Western countries for hundreds of years (O'Bryan & Harrison, 2014; Williams, 2000). Traditionally, the main pedagogical model was in the form of the master-apprentice and the one-to-one method of teaching. This traditional method can involve large amounts of vocal modelling and vocal demonstrations by the teacher (Callaghan, 2000). More contemporary pedagogical methods, particularly in the context of the contemporary singing voice, give credence to individuality and the socio-cultural context of the singer (Soto-Moretini, 2006).

The use of vocal demonstration by the teacher may inadvertently lead to the student imitating vocal sounds or the vocal sound of the teacher. Research has shown that imitation can lead to inefficient phonation that can negatively affect the vocal health of the singer (Lemon-McMahon, 2012). However, it is not just the vocal health that can be impacted. Imitation and mimicry can also be detrimental to the development of a singer's vocal identity as it may result in a singer trying to emulate the sounds he or she is hearing rather than explore their own voices capabilities and sounds. This is applicable to student's imitating teachers as well as imitating other artists. The development of a singer's vocal identity can be affected by imitation or mimicry due to the interrelatedness of the mind, body and voice and the principles of neuroplasticity. The following sections of this article will explore how the mind, body and voice connection, as well as the plasticity of the brain, can impact vocal identity.

The mind/body connection

Thurman and Welch (2000) use the term "neuropsychobiological selves" (p. xxiii) and say that the "state of our neuropsychobiological selves is reflected in the state of our voices" (xxiii). The term neuropsychobiological self is referring to the connectedness, or interrelatedness, of a person's neuroanatomy, biochemistry and physiology. This connection occurs because of the communication between biochemical transmitter molecules and the biochemical receptor sites. These receptor sites are located in the surface cells of bodily systems (such as nervous, endocrine and immune systems) and organs throughout the whole body. When communication processes occur between the transmitter molecules and the receptor sites then feelings and emotions are activated. These processes also affect memory, learning, behavior and health (Thurman and Welch, 2000). In relation to learning, every learning experience we have changes our brains. Hale (2013) states that "teaching is changing brain functioning" (p. 55) and Thurman and Welch (2000) strongly emphasise the fact that just as "physicians change the anatomy, the biochemistry, the physiology and the health of people. SO DO TEACHERS [emphasis in text]" (p. xii).

This mind/body connection is relevant to the voice and vocal pedagogy because all vocal functions and muscles of the voice are controlled neurologically (Callaghan, 2000). Specifically, there are two neural systems involved in the control of vocal functions and muscles; one

voluntary and one reflexive (Sundberg, 1987). When a singer has the intention to phonate a "prephonatory voluntary activity" (Sundberg, 1987, p. 58) occurs the moment a singer takes a breath that involves the intrinsic and extrinsic laryngeal muscles, the diaphragm, and the articulators. With experience and practice the larynx and breathing apparatus will adjust unconsciously to produce the desired vocal sounds. This ability is further improved with practice (Sundberg, 1987).

The second neural control system is reflexive. There are three low threshold reflex generating systems held in the laryngeal tissues with-in and below the larynx. These reflex systems, also known as mechanoreceptors, are continuously controlling laryngeal musculature activity. Similarly to the voluntary control system mechanoreceptors can become more efficient with training (Sundberg, 1987). The process of communication between these receptors and the brain will activate feelings and emotions, memory, learning and behaviour.

In summary, when a singer has the intention to phonate a series of voluntary prephonatory adjustments occur based on prior practice and experience to create a sound that matches the intention. Once phonation has begun the intra-phonatory reflex system uses mechanoreceptors to subconsciously send "status reports to the brain" (Sundberg, 1987, p. 59). The brain consequently decides how to adjust the muscular activity; which muscle to contract, how much to contract it, and when to contract it. These voluntary and reflexive patterns are comparable to skilled pianists being able to play complicated patterns without looking at their fingers, or people being able to scratch their back without being able to see the location of the itch (Sundberg, 1987).

Neuroplasticity

Systems and neuronal connections within the brain become more efficient with continued training. This is due to neuroplasticity, or the ability of the brain to change itself. Research undertaken in recent years has resulted in the brain no longer being considered "hard-wired" (Arden, 2010, p. 1). Rather, the brain's structure alters and its circuits are perfected when activities are performed (Doidge, 2007). The discovery of neuroplasticity impacts our understanding of how learning changes our brains, however, neuroplasticity can have both positive and negative effects on learning. Doidge (2007) refers to this as the "plastic paradox" (p. xx), the paradox

being that the ability of the brain to change enables new skills to be learnt and mastered. However, once that plastic change has occurred and is well established it can hinder further plastic changes.

Neuroplasticity actually refers to changes in the neuronal connections in the brain. Changes in the brain occur when synapses either strengthen and increase, or weaken and decrease, the number of neuronal connections (Doidge, 2007). These connections, and the shape and size of the synapse, are altered whenever we learn something new (Arden, 2010, p. 6). To strengthen the neuronal connections the neurons need excitatory signals so they continue to fire together. The more they fire together the stronger the connection gets. The phrase “neurons that fire together wire together” (Doidge, 2007, p. 63) has become the catch phrase for neuroscientists to describe this process. Similarly, the reverse of this is “neurons that fire apart wire apart” (Arden, 2010, p. 10). If a person is experiencing unpleasant feelings during a particular action then inhibitory signals will be activated and it is less likely that the experience will be voluntarily engaged in again (Thurman and Welch). If they are experiencing pleasant feelings excitatory signals will be activated and it is more likely that the experience will be voluntarily engaged in again (Thurman and Welch).

Learning and plasticity

When learning and practising a new skill the synaptic connections involved in that skill are strengthened. However, if that skill is not used for a period of time those synaptic connections will weaken (Arden, 2007). As neurons fire together frequently they fire at a faster rate and become more efficient. It also has an effect on the amount of brain space, or size of the brain map, allocated for that action. Brain mapping studies have identified that certain areas of the brain are responsible for certain actions or processes. Brain maps are neither universal nor fixed within an individual and are changed and reshaped by actions and experiences (Doidge, 2007). It is the plasticity of synaptic, or neuronal, connections that causes brain maps to be different amongst individuals. When a person becomes more talented at a particular skill a larger amount of brain space is allocated to that action. For example, the cortical maps in blind people are larger for their braille reading fingers than their other fingers (Arden, 2010), the fingers used by violinists for fretting have a greater cortical space than non-violinists (Arden, 2010, p. 10), and the laryngeal cortical space, or brain map, will be larger in

“experienced, expressive singers and speakers” (Thurman and Welch, 2000, p. xiii). Therefore, plasticity is a positive for the higher or more repeated skills as it enables those actions to have stronger and more efficient neuronal connections as well as more cortical space. However, it can have a detrimental effect on the underutilised brain maps or spaces (Doidge, 2007) due to the competitive nature of plasticity. For a skill to be able to increase its cortical space it will take the space (or brain map area) of an underutilised area. Hence, competitive plasticity results in underutilised skills not only being forgotten but the cortical space for that action will be turned over to another skill.

Competitive plasticity can increase our understanding on the difficulty of changing or “unlearning” (Doidge, 2007, p. 60) negative habits or behaviours. Every time a negative habit or behaviour is repeated it increases its control on that cortical space, that is, it gains a “competitive advantage” (Doidge, 2007, p. 60) in the brain. This, therefore, limits the ability of a positive new habit or behaviour to claim space. When applied to singing the principle of competitive plasticity means that the initial vocal techniques learnt or developed by a singer will gain the competitive advantage in the brain. This may have an impact on the ability of a singer to learn new techniques.

PEDAGOGICAL IMPLICATIONS

While the field of neuroplasticity is still very young (Erickson, 2013) the recent discoveries have exciting implications for learning. Hale (2013) states it is the “future of education” (p. 63). The preliminary understandings of brain plasticity, competitive plasticity, and competitive advantage can be applied in learning situations to help develop pedagogical strategies that work with the brain’s ability to change. When these concepts are specifically related to singing teaching there are several implications which will be discussed in this section.

Understanding neuroplasticity can increase a teacher’s awareness on the influence their teaching methods may have on the development of a student’s voice and the vocal habits they are forming. When engaging with a student a teacher has the ability to affect the student’s whole “bodymind” (Thurman and Welch, 2000, p. xiv). It is not only the way they use their laryngeal musculature or their breathing apparatus that is being altered. Rather, when a teacher is assisting a student in gaining an increased proficiency at a

task they are changing their neuronal connections, they are changing the student's brain mapping. In response to these processes, emotions, feelings and memories and perceptions on learning and behaviour are activated or effected (due to the mind/body connection). It is also important to recognise that the brain is more plastic in younger years. In this context, the techniques that singers learn when they are younger will gain a competitive advantage in the brain. This obviously highlights the importance of establishing positive habits early before negative habits gain a competitive advantage.

A knowledge of neuroplasticity can also increase our understanding of how imitation or mimicry can affect the development of vocal identity. Thurman and Welch (2000) state that if teachers lack an understanding of the connectedness of the body and mind this may result in "crushing self-identity" (p. xv) and limiting "self-expression" (p. xv) in the student. If a student is imitating or mimicking their teacher, or other singers, they are establishing a habit. While such mimicry may not be a bad habit, it may not be true to the singer's own vocal identity. Therefore, the use of vocal demonstration as a primary pedagogical tool may affect the development and exploration of vocal identity and limit the student's experience to that of the voice teacher (Soto-Moretini, 2006).

There are also learning implications regarding the student's emotional responses or feelings whilst learning singing. If there are unpleasant feelings associated with the learning action, then inhibitory signals will be activated and the neurons are more likely to fire apart. If it is a pleasant experience then the excitatory signals will be activated resulting in the neurons firing together and, with repetition, wiring together. Therefore, the actions and words of teachers can trigger emotional responses in the student that can impact the connections in the brain, or how the brain works in that particular situation. This impacts a student's ability to learn and may, in time, become a habit with a competitive advantage in the brain.

The principles of competitive plasticity and the plastic paradox can also help teachers understand, and explain to students, why unlearning old vocal habits can take time, and similarly why it can take time to learn the new habits. Teachers can also encourage students to adopt some lifestyle approaches that can optimise brain health and increase its plasticity (Davis, 2013). These include: doing moderate amounts of vigorous exercise to promote stem cell development, having adequate amounts of sleep to

strengthen new synaptic connections, and minimising stress to increase learning and memory abilities (Arden, 2010; Medina, 2008). Arden (2010) also states that activating the pre-frontal cortex (PFC) (which is at the "forefront of the frontal lobe" (p. 5) of the brain) increases the potential for neuroplasticity to occur. He suggests a four-step method, known as FEED (focus, effort, effortlessness and determination) (p. 17) to activate the PFC and establish new neuronal pathways. The first step of the FEED system is to focus on, or pay attention to, the new desired behaviour. The second step involves actioning the new behaviour with conscious effort to create new neuronal connections. The third step is to make the new behavior effortless, and the fourth step is to continue to practice and secure the new behaviour. This four-step method can be applied to vocal pedagogy to assist students with learning and mastering new vocal techniques.

CONCLUSIONS

Similarly to the development of a person's identity, a singer's vocal identity is influenced and shaped by learning experiences. The concept of the neuropsychobiological self (Thurman and Welch, 2000) means that pedagogical methods not only train muscular actions when singing, but may also affect the neuronal connections and the emotions, feelings, perceptions, and memories of the singer. A singer's exploration of their own vocal identity may also be limited or affected by mimicking or imitating other artists or teachers. The principals of neuroplasticity dictate that every time a singer makes a sound through imitation or mimicry, the neuronal connections involved in that sound become stronger and gain a competitive advantage in the brain. The plastic paradox means that once those sounds have gained their competitive advantage, it is harder for new sounds, and therefore new techniques, to establish strong neuronal connections. While vocal demonstrations are a very useful tool, other pedagogical approaches can also be incorporated to guide and encourage a singer through an exploration of their own vocal identity. These may include an increased level of autonomy for the student (McPhail, 2013), and/or more engagement with the student's identity in the lessons. Thurman and Welch (2000) urge teachers to gain a "deep contextual knowledge" (xxiii) and avoid relying upon "'technique lists', 'tricks', and method procedures' alone" (xxiii). An understanding of the relationship between neuroplasticity and vocal

learning can help teachers and students explore healthy and expressive singing whilst also encouraging the development of the singer's unique vocal identity.

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BIOGRAPHY

Belinda Lemon-McMahon has worked as a private singing teacher in her own studio for fifteen years. She has also worked as a contemporary vocal tutor and guest lecturer at Macquarie University in Sydney, as a peripatetic singing teacher, and as a registered voice tutor for the University of New South Wales. Amongst a long list of performance credits, Belinda's tribute to Bette Midler was her most successful show, touring for over five years around Australia as a featured act in Cabaret festivals. Belinda is currently living in New York and focusing on her PhD research.

Professionalism in singing: Workplace conditions, implications and considerations for singers of popular culture musics

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ABSTRACT: Professional singers of popular culture musics (PCM) are expected to juggle elements beyond the craft of singing and stage performance. Despite this, professional singers are committed to their work, sometimes at the cost of undermining their work and compromising the quality of their performance. This research investigated the work environment of professional singers in Sydney, Australia, with an aim to identify elements that exist in the workplace. This paper highlights the various factors that emerged and how they influence and surround the overall work of the singer¹.

KEYWORDS: *professional singing, popular culture musics, workplace/occupational issues, music industry, industry conduct*

INTRODUCTION

Many different skills are involved in the professional singing of popular culture musics (PCM², Hughes, 2010). Professional singers must develop the use, care and coordination of a physiological instrument, while mastering musicality and performance skills. Working in music industries that are constantly evolving (Baskerville, 2001) means that an understanding of business and entrepreneurial skills is required. Self-image, artistry (Hughes, 2010, p.246) and the aesthetics of vocal styling are also relevant. The popularity of PCM, which include the genres of rock, pop, blues, jazz and musical theatre, means that there are increasing performance and employment opportunities for professional singers. Despite this, only a limited number of research studies identify the professional environment of contemporary singers (e.g., Hughes, 2014; Bartlett, 2011). The research discussed in this article aims to add to existing literature through an investigation of factors in relation to business and industry conduct, expectations and workplace conditions associated with professional singing in Sydney, Australia, and how these factors influence the overall performance, vocal efficiency and wellbeing of PCM singers. The research was undertaken in the second half of 2012; the data analysis was completed in 2013.

BACKGROUND AND CONTEXT

Contemporary singers of PCM are stylistic, highly individual and artistic in nature (Hughes, 2014). Potter (1998) states that a singer's way of "creating meaning" through creative voice use is "an essential marker of vocal style" (Potter, 1998, p.158), adding that style is the sum of "the complex interaction of the many factors that go to make up performance rhetoric" (*ibid*). This view stated that elements other than music and vocal style may impact the creative use of the voice. Investigating these "extra-musical factors" (Potter, 1998, p.158) can benefit singers by informing and preparing them of the elements that influence their craft.

There is limited literature that discusses the occupational requirements of professional contemporary singers in Australia. The author could find few research-based studies that focused on contemporary singers and their professional environment (e.g., Hughes, 2014; Hughes, 2012; Bartlett, 2011). Hughes (2012) offered the findings of a study that identified "technology as a primary influence on vocal artistry" (p.64), adding that "sound monitoring should not be underestimated" and that "poor monitoring...administered by inexperienced technicians or being conveyed through low quality equipment, carries potential vocal health risks" (p.65). Hughes also suggests that singers should "have people management skills" (*ibid*) to "confidently communicate their sound requirements" (*ibid*) in order to preserve the quality and integrity of their performance and to facilitate a sound environment conducive to healthy vocal production.

Based on a survey of 27 professional contemporary gig singers (PCGS³), Bartlett (2002) stated that this group of professional singers were "expected to perform a diverse range of music styles" (p.70) and that the songs performed by professional singers "demand vocal qualities deemed unacceptable in the western classical tradition" (*ibid*). After completing a larger survey

sample (N=102 PCGS), Bartlett (2011) adds that there are many elements that impact singers, primarily in the area of vocal health:

Many elements of behaviour and work environment can impact on the vocal health of PCGS. In particular, the frequency and duration of rehearsals and gig performances, the activities of the individual performer at rehearsal, between sets and after the gig, the type and quality of the performance venue, and conditions of employment in work other than singing performance all present problems for PCGS in terms of vocal health and career longevity (p.95).

Within the existing literature, self-help and business related books provide information about working within music industries (Babbitt, 2011; Rusch, 1998; Baxter, 1990). These are written by experienced PCM singers who have worked extensively in the fields of live and recorded performance, session work, backing vocals and/or as singer-songwriters and recording artists. Baskerville (2001) explains that the “music industry today is a group of interrelated subsystems” (p.15), and that “no performer today can ascend to stardom or hang there in orbit without an array of qualified supporting satellites” (p.6). Baskerville defines the “music business” to include “the art, the profession and the business of music” (p.4). Rusch (1998) discusses “unethical conduct” (p.118), and cites case studies that involve fraudulent activities, illegal activities, legal proceedings, and other negative non-performance related situations. This suggests that singers should be aware of such behaviours within the music business in order to avoid problematic situations that may affect their career. In the Australian context, there are some organisations that provide general assistance to musicians in the form of small events and workshops related to creative business practices (See Appendix: Table 7, for examples of these organisations).

What singers do and what their lived experiences are, influence and affect their singing (Hughes, 2014; Dayme 2006). As the act of singing moves through areas of physiology, psychology, and lifestyle (Edwin, 2009; Dayme, 2006; Sataloff, 2000), it serves that appropriate pre-professional training should be seen as a pre-requisite to an already complex mix of vocal health, musicality, image and creative artistry. there is growing acknowledgement that many singers are required to take on several roles to fit the demands of the music business (Oliver, 2010). As progression is made towards the support and understanding of artistry in PCM singing, Hughes (2014) stated that “consideration of the embodied voice alone, devoid of its influencers, processing and treatments” may be “perceived as limiting potential artistry” (p.287). It therefore serves that “influences and influencers” (Hughes, 2014) and the ways in which these change with time, should be understood and continuously researched. Dayme (2006) suggested that “we must begin to look to many more diverse areas of research that will aid singers, physically, mentally and emotionally in their quest for achieving vocal excellence and performing in the public arena” (p.63). Progressive and continuous research on the artistry and the environment of professional PCM singers may lead to better pedagogical strategies and a supportive industry culture.

RESEARCH DESIGN

A literature review led to the development of areas of enquiry (see Table 1). These were investigated using a qualitative approach (Merriam, 1998) that included semi-structured, information-rich interviews that utilised open-ended questions and allowed singers to discuss their experiences in detail.

Table 1. Areas of investigation

Areas of Investigation
1. Background of professional PCM singers
2. Type of work
3. Singing style, genre and vocal skill in relation to job placement
4. Vocal health, endurance and care
5. Image and marketability
6. Industry conduct, business practices and behaviour
7. Live or recorded performance
8. Working with musicians or other creative industry people
9. Working conditions and environment

METHOD

Participants

A criterion-based selection process (LeCompte, Preissle & Tesch 1993, p.69) was adopted (see Table 2). The study only included PCM singers over 18 years of age with over three (3) years of paid professional experience.

The research project involved a total of ten semi-structured interviews of PCM singers (see Table 3) who were purposively sampled (Chein, 1981, p. 440) on the basis of their professional experience. The average experience of participants was 9.7 years. Ethics consent was obtained through the Macquarie University Ethics Committee.

Analysis

Analysis was conducted using a constant comparative method (Glaser & Strauss, 1967) to identify themes and recurring topics from each interview. According to Merriam (1998), the constant comparative method of data analysis involves the “continuous comparison of incidents, respondent’s remark, and so on, with each other” (p.179) to form categories and sub-categories. These methods were employed during this research.

RESULTS

Industry people and conduct

All participants (N=10) agreed that the kind of communication and relationships they foster

within the industry, particularly with sound engineers, musicians, and their audience, have an influence in the creative and practical task of performance and impacts on the career opportunities available to them. Although all participants discussed working with various industry staff including venue managers, event producers, booking agents and music producers, there were common themes in relation to communication between sound engineers and musicians, as seen in the summary in Table 4.

All participants were experienced in working with sound engineers and musicians throughout their respective careers. In relation to live performance, all had experienced performing sound checks, and most participants (n=7) agreed that a sound check prior to a performance was integral to their work as it provided “peace of mind” (P2, P6, P7 and P8), allowing them to familiarise themselves with the sound provided, assess their vocal and aural environment and optimise their performance. Despite the importance of sound checks, all participants expressed difficulties when communicating with sound engineers. The most common topic within this theme related to participant perceptions of the personality traits of sound engineers and fellow band musicians. Although all participants agreed that it is not always the case, they suggested that it is common to encounter sound engineers or musicians who display a negative attitude when communicating with singers. For example, despite having over ten years of experience respectively, Participants 1, 2 and 6 defined many of their experiences as “frustrating”.

Participant 2 expressed that most sound engineers do not “relate” to singers, while Participant 6 stated that “dealing with sound engineers is a skill on its own”.

Table 2. Participant sample criteria

Participant sample criteria
1. Singers of PCM
2. Professional singers (over 18 years old), with over three years of paid professional work, ideally at a full-time capacity that is defined as not requiring other work unrelated to singing
3. Recording experience
4. Live performing experience
5. Work with industry people such as sound engineers, music producers and event coordinators
6. Work with other musicians
7. Singers who use self-promotion to gain work (such as through websites and online social media)
8. Singers with touring experience
9. A balance of male and female participants

Table 3. Participant summary

Participant	Male/Female	Years Experience	Work Capacity	Field Experience
Participant 1	Male	27 years +	Full Time	Corporate gigs, cover songs, weddings, live venues (i.e., clubs, bars and lounges) and private functions
Participant 2	Male	10 years +	Full Time	Recording artist, original and cover songs, live gigs, session singer, touring, teaching and artist marketing
Participant 3	Male	4 years	Part Time (Employed in other unrelated work)	Recording artist, original songs only, live gigs and artist marketing
Participant 4	Male	10 years +	Full Time	Corporate gigs, cover songs, weddings, live venues and artist marketing
Participant 5	Female	10 years +	Full Time	Theme show, corporate gigs, tribute show, cover songs, weddings, live venues and singing teaching
Participant 6	Female	4 years	Part Time (Employed in other unrelated work)	Corporate gigs, cover songs, weddings, live venues and private functions
Participant 7	Female	8 years	Full Time	Musical theatre (Contemporary vocal style only), corporate gigs, weddings and touring
Participant 8	Female	10 years +	Full Time	Corporate gigs, cover songs, weddings, live venues, private functions and singing teaching
Participant 9	Male	4 years	Part Time (Studies Music full-time and employed in other unrelated work)	Community gigs, weddings and corporate gigs
Participant 10	Male	10 years +	Part Time (Works in related employment within the music industry)	Gospel singer, church singing, corporate events, music producer, record label A&R and working with other singers

Table 4. Summary of findings: Communicating with sound engineers and musicians

Situations	Participant
Addressing sound engineers deemed as intimidating, condescending or judgmental	Participants 2, 3, 5, 6, 7, 8 and 9
Experience with sound engineers or musicians perceived as unable to accommodate singer's acoustic or musical requirements	All participants
A lack of confidence in communicating with sound engineers and musicians	Participants 3, 6, 7, 8 and 9

This is summarised in the statement of Participant 5:

You can't tell them what to do because they will always be defensive about that. They would also get a bit annoyed if I was making of their job hard so I would try everything to make their job as easy as possible (P5).

Despite this difficulty, participants acknowledged that the sound engineer has control over how they sound during a live performance, while musicians were viewed as musically underscoring a vocal performance. Therefore, it was seen as common practice for singers to accommodate a range of behaviours in order to ensure good sound and an

effective musical environment. An example of this is illustrated below:

If you get a good one [sound engineer], piece of cake, but if you get a not so good one, it can be so frustrating. And you can never afford to lose your cool (P1).

Workplace conditions

The research identified some difficult workplace conditions that affect the quality of performance. A summary of the conditions that participants perceived as having a negative impact on their craft is provided in Table 5.

Table 5. Summary of findings: Workplace conditions

Conditions	Participant
Very cold or very hot temperatures	Participants 1, 2, 6, 7 and 9
Lack of food or water offered to singers	Participants 1, 5, 6 and 9
Lack of sufficient sound reinforcement, foldback or monitor speakers, or very poor sound reinforcements	All participants
Disorderly audiences	Participants 2, 3, 4, 6, 7 and 8
Required or requested to perform repertoire unsuitable to the singers voice	All participants
Requested to perform acts or songs beyond the personal or musical integrity of the singer	Participants 1, 2, 3, 5, 6, 7, 8 and 9

Foldback, temperature and meals

The majority of participants had experienced performing without effective foldback⁴. Their reports suggest that this had affected their ability to hear themselves which made it difficult to achieve their desired vocal tone, pitch and performance intent. In relation to atmosphere and venue temperature, most participants perceived that extreme temperatures changed the quality of their voice and the physical comfort they felt on stage. Participant 2 discussed how his voice has a tendency to “tighten up” while Participant 6 said that it caused her voice to “shake”.

When discussing provisions for food and water, half of the participants (n=5) had

experienced performing for venues or events that did not adequately provide food or water to singers. In some instances, this occurred even when a client had agreed to offer meals as part of their booking.

Repertoire

All participants reported performing repertoire that was unsuitable to their voice. This included difficult repertoire, songs where excessive chest voice was primarily required (P2, P6, P8 and P10) and most especially, songs that challenged the range of the singer (P5, P6 and P8). Singers added that this often resulted in an increased risk of vocal fatigue, particularly during long gigs (between 4-5

hours), or under difficult circumstances such as illness.

Business procedures

Participants identified that having a knowledge of business procedures and an ability to communicate on a professional level is important. All participants had experienced instances of poor business conduct and suggested that having a business mindset helped to avoid or minimise the risk of negative business related situations and exploitation. Participant perceptions of the importance of business skills are summarised in Table 6.

All participants agreed that having a contractual agreement for bookings is important, however Participants 1, 2, 6, and 8 noted that contractual agreements were not always implemented. Participants 2, 6 and 9 discussed situations of exploitation and under-payment. These included being expected to attend unpaid

rehearsals, being offered little remuneration for performances, or being asked to perform without payment. Participant 2 discussed how beginning singers often experienced this and that to some degree it is considered in the music industry as “a rite of passage” for emerging singers. However, he discussed that even after years of experience and free or underpaid work, he is sometimes asked to work for free with the suggested benefit of performing for “exposure” (P2). Participants felt that many industry opportunities often attracted emerging singers who were willing to perform for little or no pay in exchange for advertising, experience and exposure (P1, P2, P6 and P9). These situations may generate environments prone to exploitation and poor work conditions. They may also impact on the broader culture of professional singing, and make it difficult for performers to negotiate better work and payment standards.

Table 6. Participant responses in relation to the importance of business skills

Response	Participants
Business skills are more important than singing	P1, P3, P4, P5 and P10
Business skills are as important as singing	P2, P7, P8 and P9
Business skills are less important than singing	Participant 6

Professionalism

The majority of participants noted that part of the task of the professional singer was to assess a working situation and develop their performance accordingly. Participant 2 added that “it is not always perfect”, suggesting that the number of factors that affect performance can override any preparation by even the most skilled and experienced singer. He stated:

In reality, anything can happen. Anything. You book a gig and they promise you this and that. You get there, and nothing is done. The temperature can drop. The sound will be bad. It's in those moments that you just have to rise above it all and sing (P2).

The findings identify that along with an ability to perform in conditions as detailed previously, singers feel strongly obligated to perform when ill. The majority of participants stated that they had never cancelled a performance due to illness. This led to further questioning as to why singers feel obliged to perform, despite being in situations that were detrimental to their vocal health and posed difficulties to their craft. All participants expressed

that cancelling a gig due to illness was not a usual option, with the majority of participants (n=9) strongly stating that it was often “out of the question” (P1) and only an option if singers were “exceptionally ill” (P5). These responses were fuelled mostly by a need to fulfill the booking. All participants admitted to performing while ill, some of whom described harsh performing conditions were exaggerated by symptoms of physical illnesses (P1, P2, P5, P6, P7 and P9). The types of illnesses included nausea, vomiting, diarrhoea, headaches, exhaustion, vocal fatigue and the flu. Participants indicated that the risk of damaging their professional reputation by cancelling a gig added to the pressure of adhering to a booking, and meant that performing was often “the only option”.

All participants indicated that, at various times, there was a difficulty in communicating their needs and requirements to industry personnel. This was due in part to an inability or difficulty to define and describe their requirements and, at times, a lack of confidence in communicating what they required or how they felt. Thus, singers may, at times, feel forced to compromise the quality of their performance and their personal

wellbeing in order to maintain their professional reputation.

CONCLUSION

Professional singers have a high level of commitment to their work. They are resilient, adaptive and continue to sing despite many factors that may impact their voice and career. Additionally, they are expected to strategically adjust and compensate their aural, vocal and behavioural responses based on factors within their performance environment and the industry people they interact with. Singers learn to maintain a flexible attitude through experience. In order to receive favourable sound conditions, mutual respect and to maintain their reputation, singers are at times obligated to work under pressure, illness or poor working conditions. Despite this, they are expected to provide excellent work ethic, performance and attitude regardless of conflict or difficulty and the lack of an occupational standard.

Through the findings of this research, it emerged that singers are largely responsible for their overall care in the workplace. The influence that these factors have on the overall singer should therefore be addressed when preparing singers for the professional industry. The findings add to the broader body of research and are in line with the results of previous studies of contemporary singers in an Australian context (Hughes, 2014; Bartlett, 2011).

Although experience is irreplaceable in any workplace environment, traits such as tenacity, resilience, effective communication, self-confidence and independence can be developed and supported through purposeful workshops or performance events that model the workplace through the inclusion of sound checks (e.g., Hughes, 2010), communicating with industry people and dealing with criticism. Encouraging further learning in relation to business skills is helpful. An ability to gauge the value of unpaid performances, and an ability to negotiate professionally, are skills that singers should adapt early in their career. Over time, these strategies may help to develop independence, confidence and positive career outcomes for singers.

NOTES

- [1] This article draws from the author's honours research thesis titled *Singer perspectives: Industry conditions, expectations and conduct*. Macquarie University, 2012

- [2] Popular Culture Musics (PCM, Hughes, 2010) include commercial and non-commercial popular genres such as pop, rock, R&B, soul, nu-folk, indie, electro and fusions of such genres of music.
- [3] Professional Contemporary Gig Singers (PCGS, Bartlett, 2011) refer to professional singers who work primarily in the context of live performance (i.e., 'gigs').
- [4] Foldback refers to sound monitoring speakers that feed sound reference back to the singer.

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BIOGRAPHY

Veronica Monro is a contemporary singing and performance coach based in Sydney, Australia and works as a vocal studies tutor and guest lecturer for Macquarie University. She runs the Sydney Voice Studio, a performance space that aims to support singers through all facets of their creative work. Currently in her PhD candidature, Veronica's interests include vocal creativity, song writing and singer wellbeing and enjoys passing on relevant and practical information to others.

APPENDIX

Table 7. Examples of organizations in Australia that support creative business practices through professional development events

State	Organisation	Conference Event / Courses
All States	The Australian Performing Rights Association limited (APRA), Australasian Mechanical Copyright Owners Society Limited (AMCOS) www.apra-amcos.com.au	
NSW	Music NSW www.musicnsw.com	Song Summit www.songsummit.com.au Music NSW Workshops and online video library http://www.musicnsw.com/workshops/
QLD	QMusic www.qmusic.com.au Youth Music Industries www.youthmusicindustries.com.au	Big Sound Conference www.qmusic.com.au/bigsound
WA	The West Australian Music Industry Association (WAM) www.wam.asn.au	WAMi Music Business Conference www.wam.asn.au/events
VIC	Music Victoria www.musicvictoria.com.au	Face the Music www.facethemusic.org.au
SA	Music SA www.music.sa.com.au	Music SA Music Industry Training Program www.music.sa.com.au

Looping Vocals and Applied Effects in Contemporary Vocal Studies

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ABSTRACT: Since the advent of sound capture and replication, the contemporary singing voice and applied technology have developed symbiotically. At a rudimentary level, the technological facility to capture and reproduce sound has enabled the contemporary singing voice to be heard in live and recorded contexts; the development of applied effects on the singing voice has facilitated the creative crafting of vocal aesthetics and production options within these contexts. While a variety of contemporary instruments have implemented 'looping', the more recent development of vocal looping and loop stations designed for vocalists has furthered a myriad of vocal creativities. This article outlines the practice of looping and documents the introduction of vocal looping as a pedagogical practice in contemporary vocal studies.

KEYWORDS: *looping, singing, voice, technology, vocal processing, contemporary vocal pedagogy*

While the use of amplification for performance and facilities for recording the voice are not new concepts, the frequent developments in musical technologies presents continual challenges and opportunities for the contemporary singer. Challenges are typically in relation to the implementation and/or cost of such technologies, while the opportunities afforded by them typically relate to creative prospects and musical independence. In the past decade, the ability to record looped sections and to utilise these sections in performance has increased in musical practice.

This article outlines the history and context of sampling, looping and vocal looping. It provides examples of how these technologies are used by contemporary artists in live performance. The discussion also focuses on the implementation of live looping in contemporary singing pedagogy and concludes with consideration of future developments and applications.

TECHNOLOGY AND THE SINGING VOICE

The use of technology on the singing voice began with the capability to capture and playback sound.

The concept of sound reproduction dates back to 1877 when Cros discussed at the Académie des Sciences his proposals for sound reproduction (Shawe-Taylor, 2007). Since then, the facility to capture and reproduce music has constantly evolved with new technologies and applications that are continually being developed.

For the singing voice, the microphone is the entry point into the processing chain. Singing into a microphone that is connected to an amplifier and speakers (live) or in recording, enables the transmission of the acoustic voice to be converted to electrical signal, processed, and either returned as audible output or stored in recorded formats (Hughes, 2010). Processing of the singing voice (vocal processing) usually involves a range of effects being applied to the voice such as reverb, delay and graphic equalisation.

THE PRACTICE OF LOOPING

A loop is a section of music that is recorded and edited in ways "that it can be seamlessly repeated indefinitely by technical means" (Media Music Now, 2014). The length of a musical loop section varies from being very short to quite long (i.e., seconds to minutes). Typically, the purpose of a loop section has been to provide rhythmic patterns or to create rhythmic interest, to highlight sampled sounds (i.e., a sample of sound that is generally reconstituted), or to underscore a composition or musical arrangement. In live performances, looping and layering usually occurs in real time.

Musical Sampling

In a discussion of the incorporation of recording technologies into live performance contexts, Knowles and Hewitt (2012) discuss the 1960s 'dub' process in which "the mixing console is used performatively to create extended alternative mixes of a track, usually with heavy use of real time effects processing" (Knowles & Hewitt, 2012, p.1). In this context, the technological "control" in

musical performance foreshadows subsequent DJing practices, and the use of sampling and looping.

Emerging in musical practice in early 1980s DJ sets, sampling is a “process in which a sound is taken directly from a recorded medium and transposed onto a new recording” (Fulford-Jones, 2007). Sampling and looping have since been standard musical characteristics of such genres as DJ production, technomusic and hip hop. Early sampling methods typically “looped short samples taken from popular dance records to create ostinatos” (Fulton, 2007). The sampling of existing records into subsequent recorded tracks was also common:

... the practice of ... looping these fragments [small sections of existing records] to form the basis of a new musical track. Producers such as DJ Mark, the 45 King, had become experts in discovering obscure records from the past and transforming them into music that combined the spontaneity of the old with the technological impact of the new (Toop & Cheney, 2007, p. 4).

However, such sampling practices may contravene copyright when relevant clearances are not secured (Sutcliffe, 2012).

According to Fulton (2007), it was American DJ and producer, DJ Premier, who assisted further development of sampling techniques by implementing a process of “chopping”. Chopping reconstitutes samples and the process is one where:

...short segments of a given sample are reshuffled to create new rhythmic and melodic patterns that can be looped over a steady drum beat, which itself might be the product of other chopped samples (Fulton, 2007).

The chopping process highlights the layering capabilities of sampling and looping. In many ways, chopping resembles track compilation and layering that is typical in digital recording practices albeit that chopping involves smaller segments.

Contemporary sampling now includes the recording of non-musical sounds or sounds that are not produced by musical instruments and then the reconstitution of such sounds into musical tracks and soundscapes for film and media.

Musical Looping

Looping has developed since the 1950s when musicians began using “electronics in live performance” (Garza, 2008):

Tape loops began to pop up in the avant garde music scene and eventually spread to popular music ... [Terry Riley] created the first tape

delay/feedback piece in 1963 ... [Riley] created a double tape recorder tape delay system he called the “Time Lag Accumulator” ... Brian Eno and Robert Fripp adopted Riley’s “Time Lag Accumulator” using it with guitars (Garza, 2008).

In the 1980s, the Fripptronics loop system was developed (Garza, 2008). These early attempts at looping technology were precursors to the digital era that has seen a proliferation of looping opportunities both in software, and in pedal development and hardware units.

Loop pedals, particularly floor pedals for electric guitars, have been used extensively in popular culture music (PCM) (Hughes, 2010). Until recently, vocal looping has not been as common as the looping of other instruments. This has been particularly true in the context of live performance. However, recent developments in technology have facilitated advances in loop pedal design and in the design of loopers specifically for vocals. This has enabled artists from a broad range of PCM to incorporate looping as part of their performance style and artistic identity. This includes the use of looping as a way of creating a sound bed of voiced or un-voiced sounds, such as beat-boxing or the layering of harmonies, that underscore the subsequent performance of melodic or spoken lines.

Vocal Loopers

Vocal looping is achieved in utilising different formats. The main current formats are through the use of foot pedals, rack mounts or stand loopers, and/or through computer software. Often looping is utilised with a range of effects including equalisation [1], reverb [2] and delay [3]. There is a capacity for vocal loopers to facilitate individual and independent song creation:

You can get so many tones out of the voice as an instrument. The VoiceLive [a type of looper]... helps you to do that on the fly without needing to be in a studio (Kimbra, n.d.).

Contemporary Vocal Artists and Looping

It is beyond the scope of this article to detail the specific equipment used and the processing involved for each of the following examples. The purpose of their inclusion is to demonstrate the types of looping equipment in terms of their physical position and the embodiment required for their operation. It was also after investigating such looping options that the authors chose to incorporate a specific type of looper into their pedagogical practice. The authors also note that

they have chosen to focus on live looping artists (those who use looping in performances) in this discussion as the facility for looping in real time was a primary focus of the development of their pedagogical strategies.

The following section outlines different vocal looping formats used in the practice of contemporary artists. For each of the following artists, the use of vocal looping focuses a level of autonomy in performance that is typically not achievable when vocalists are solely reliant on other musicians. The examples also highlight the application of vocal looping as a compositional tool and/or for the realisation of creative musical arrangements.

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Imogen Heap

English artist, Imogen Heap, utilises technological effects and specialised equipment as a means of creating songs and influencing her vocal performance outcomes. For example, Heap's song, "Hide and Seek" from the album *Speak For Yourself* (Heap, 2005), shows the use of effects which alter her voice to deliver a slight robotic, choral and harmonic sound, as well a looping effect to layer harmony and melodic phrases at the end of the song. In Heap's song, "Just For Now", also from the album *Speak For Yourself* (Heap, 2005), there is a heavy use of vocal harmony. However, and in contrast to her recordings, **Heap utilises a combination of technologies and instrumentation in performances so that she can effectively perform using only her voice.**



Figure 1. Heap's control set up in a performance "Hide And Seek" for Indie 103 (Heap, 2006b).

In an interview on a live performance of "Just For Now" (Heap, 2006a), Heap explains that **she chooses to perform an a cappella version that is loop driven and uses a four-track sampler. The outcome is an elaborate arrangement of vocal parts**

that includes harmony, melody and body percussion. When questioned on her affinity with technology and its influence on her songwriting and singing, Heap discusses a preference towards **experimentation and improvisation with technology:**

I have a little four-track sampler over there and I sing something to it and it repeats back to me...I do love messing around and noodling about and I do spend a lot of time doing it (Heap, 2006a).

On her influences and experience with technology, and as a contemporary singer-songwriter known to also co-produce some of her original works, Heap's use of **technology is discussed as an important tool for independently creating songs.**

Ed Sheeran

Since the release of his debut album in 2011 (Doyle, 2012), English singer-songwriter, Ed Sheeran, has been displaying multifaceted musicality and embodied performance in his performing with loop pedals. In a recent review of a Sheeran performance in London at Camden's KOKO venue, Khan (2014) comments on Sheeran's guitar and loop pedal ability saying that "his practice and hard work is evident as he plays like they're a part of him". Certainly, the level to which **Sheeran seamlessly integrates these components in performance is evident in the myriad of live performances and YouTube examples.** Sheeran uses looping to create rhythmic interest, to musically arrange and to layer the various musical components. He demonstrates his process of building a song for performance using floor pedals through looping his guitar as a bed track and then vocally looping and layering, finally adding harmonies and improvised vocal syllables (102.7 KIIS-FM, 2012).



Figure 2. The floor pedal set up for Sheeran in his loop pedal tutorial (102.7 KIIS-FM, 2012).

Bernhoft

Norwegian artist, Bernhoft, is a singer-songwriter and musician who extensively uses looping in live performance contexts. In a performance of his song “Ever Since I Was a Little Kid” (TEDx, 2013b), a foot pedal is used in the recording, looping and layering of vocal harmonies and body percussion.



Figure 3. Bernhoft performs with a foot pedal to loop vocal sounds and body percussion. (TEDx, 2013b)

When commenting on Bernhoft’s musicality, Lester (2012) writes:

...what he [Bernhoft] did with those few tools was quite extraordinary. Using them, and via a process of instant recording, looping and layering, he was able to create the sound of a full band – including all the instrumental parts plus backing singers on rich harmonies – and it was all just him (Lester, 2012).

Here, Lester highlights the potential level of autonomy achievable through looping in live performance.

Tom Barton



Figure 4. The rack mount for looping and effects used by Barton in “Hyperballad” (Barton, 2011).

Australian, Tom Barton, is a vocalist, composer, performer and lyricist (Barton, 2014a). In his practice, Tom utilises “extended vocal techniques, and live electronic looping and effects processing”

(Barton, 2014b). Barton’s website contains video examples of his practice (Barton, 2014c) including a cover of Björk’s “Hyperballad”. In this version, Barton performs live “using only the voice, plus looping and effects units” (Barton, 2011).

Kimbra

New Zealand born singer-songwriter and music producer, Kimbra, engages with the use of technology and vocal effects in recordings and performances. An example of this can be heard in her song “Settle Down” from her album titled *Vows* (Kimbra, 2011). In a live version of this song, Kimbra creates the underpinning instrumentation using mostly her voice. She does this by actively using a loop machine for her performance (e.g., SXSW, 2012). In an interview, Kimbra discusses her process of recreating the music production heard in the recorded version of “Settle Down”. She achieves this through the use of her voice and a simple synth sound added towards the end of the performance:

I use the octavo [effect] ...to put down a bit of a bass line and different effects to create the percussive elements, and then different tones (Kimbra, 2012).



Figure 5. The stand looper set up used by Kimbra in “Settle Down” (SXSW, 2012).

Tom Thum

An Australian beat-boxer and vocalist, Tom Thum combines mouthed, voiced and un-voiced sounds in a variety of ways. These range from percussive beat-boxing and rhythmic “noisemaking” (TEDx, 2013a) through to voiced mimicry of instrumentation and singing. Although Thum is not a contemporary singer *per se*, he credits the voice

as his primary instrument and includes singing as part of his overall craft. His voice use combined with his “musical creativities” (Burnard, 2012) may be considered as one of the innovative ways in which the voice and forms of singing (such as ‘singing’ being couched in more melodic forms of beat-boxing) are utilised in today’s musical landscape. Thum is described as having “swallowed an entire orchestra and several backing singers” (Gardner, 2009) and “pushes the limits of the human voice to create soundtracks of impossible beats and phenomenal sounds” (Sennheiser, 2014).



Figure 6. Tom Thum (Thum, 2013) performing with two Kaoss sampling pads for a sung cover of Aloe Blacc’s “I Need A Dollar” (Blacc, 2010).

Thum offers live video performances online of songs performed using only his voice and technology (e.g., Thum, 2013). The use of the looper to facilitate song arrangement is evident in his performances. In a live performance for TEDx Sydney 2013 (TEDx, 2013a), Thum discusses the use of two Kaoss pads. This is his preferred equipment for creating songs as they allow him “to do a whole lot of different things with my voice” (TEDx, 2013a).

LOOPING AND CONTEMPORARY VOCAL PEDAGOGY

Implementation of Vocal Looping

While the authors acknowledge that there are a number of choices available for vocal looping, for pedagogical purposes and for ease of accessibility/operation during performance, a stand looper was the preferred option. The TC Helicon VoiceLive Touch 2 was selected because of its key pad position which can be angled towards the singer and for its range of applied effects including a harmonisation capability. Designed for vocalists, the VoiceLive Touch 2 allows users to:

...explore adding and removing effects and tonal colors seamlessly while you sing. Use the slider bar to rock, flutter and transform your sonic landscape. Each preset also has the Hit button ready to launch multiple effects with a single touch (TC Helicon, n.d.).

Figures 7 and 8 show the adjustable height level of the VoiceLive Touch 2 when positioned on a microphone stand. This position allows for looping operation to be fluid within the performance rather than being a distraction during the performance. It also facilitates an ease of integrated gesturing and operation as Figures 7 and 8 also demonstrate. The images below were captured during a teaching preparation session.

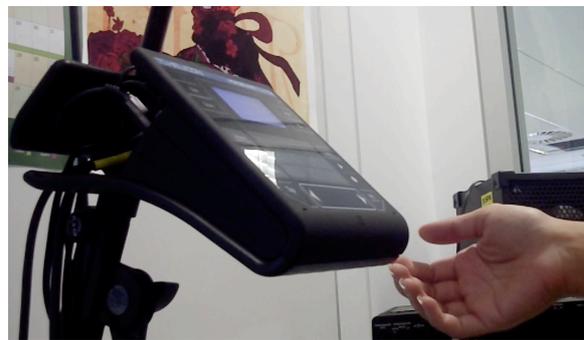


Figure 7. An example of hand gesturing/position enabling accessibility to the looper.

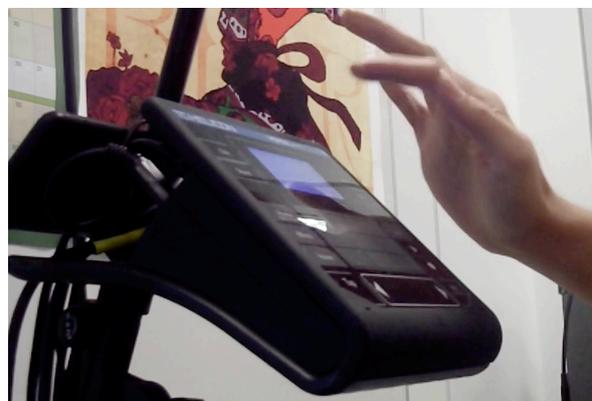


Figure 8. Examples of the gesturing effect when changing or adjusting loop settings.

Curriculum Delivery

The focus of the pedagogical strategies outlined in this discussion was specifically to implement vocal looping in a suite of contemporary vocal studies units (foundation, intermediate and advanced) delivered at Macquarie University, Sydney, Australia. In these units, unit content is delivered through lectures and group tutorials. As contemporary singing practices are continually evolving, along with the development of associated technologies, the authors were keen to introduce vocal looping to all students in all levels of study. This was to fulfill the aims of utilising current technology for both learning and creative purposes.

Looping Aims for Levels of Vocal Study

Tutorials provide the format for practical curriculum content. The delivery of 'looping' tutorials varied for each level of vocal studies and was aligned to the specific learning outcomes and focus of each particular level.

Foundation Vocal Studies

The focus of vocal looping at this level of study is exploratory. Students are encouraged to use the looping facilities to explore musical concepts such as layering harmonies and devising rhythmic patterns. After a lecture on vocal looping, students undertake the exploratory exercises in tutorials under the direction of tutors; these exercises are not assessed *per se*, however, if students choose to implement looping in subsequent performance assessments, then such implementation is assessed in the context of integration within the particular performance assessment.

Foundation level students are required to "communicate through singing" (Macquarie University, 2014a). In a contemporary sense, communicating effectively through singing involves the use of technology. Tutorial content in relation to looping focuses on the operation of the VoiceLive Touch 2 and on simple layering tasks (e.g., harmony and rhythmic bed patterns). The exploratory nature of tutorials enabled students to "gain practical experience of the role of the contemporary singer" (Macquarie University, 2014a).

Intermediate Vocal Studies

For intermediate students, vocal looping is assessed as a creative exercise that is used to develop aspects of musicality. Students have access to loopers both in tutorials and to take home for

extended practice. The focus of intermediate level studies is exploring elements of style. In this context, students are required to demonstrate a creative pattern (up to 2 minutes) suited to a particular style such as country or pop. Additionally, if students choose to implement looping in subsequent performance assessments, then that implementation is assessed in the context of the particular performance assessment and the integrity of the style being performed.

With the focus on style and nuances of style, intermediate vocal students are required to demonstrate implementation of the VoiceLive Touch 2 in a way that either utilises the style and genre presets or utilises their own presets and appropriate effects. This is undertaken in an exercise assessment task and assists in meeting the learning outcome of "implement stylistic nuances" (Macquarie University, 2014b). It is interesting to note that the VoiceLive Touch 2 has a genre feature that enables users to "choose a style ... and VoiceLive Touch 2 will list the presets that fit your preference" (TC Helicon, n.d.).

Advanced Vocal Studies

Advanced vocalists have the option to include vocal looping throughout this unit if it is relevant to their artistry. As is the case for intermediate students, advanced vocalists have access to loopers both in tutorials and to take home for extended practice. If advanced students choose to integrate looping in their recording and performance assessments, then such implementation is assessed in the context of the particular performance assessment; seamless looper integration is a desired outcome in this level of vocal studies.

Utilising the VoiceLive Touch 2 for advanced vocalists aligns to the learning outcome of "apply effectively and analyse the use of technology to the [contemporary] singing voice" (Macquarie University, 2014c). In all tutorials and masterclass style pre-performance critiques, looping facilities are available. Students are able to use the looping facilities in their audition, recording and performance assessments.

Reflections on Looping Implementation

Vocal looping can be effectively implemented in contemporary vocal studies as a pedagogic tool. Utilising the VoiceLive Touch 2 in a pedagogical environment allows for forms of experimentation, exploration and engagement with the singing voice outside the usual contexts of singing and performance. Microphone skills, vocal placement

and an ability to coordinate hand movement in relation to singing and performance are skills that are encouraged. At times, the use of such equipment can be daunting to students, particularly to those students unfamiliar with music technologies. However, as the objective of introducing the looper is to facilitate exploration of musical concepts (e.g., arranging) and individual vocal sounds, students are exposed to practical performance skills and related technologies.

Student feedback on the implementation of vocal looping has been through reflective journal entries and teaching evaluation surveys. Students have been positive in relation to looping tutorials in the vocal studies units. Several advanced vocalists, in particular, have been keen to implement vocal looping in their performances when it suits their artistry and artistic intent.

FUTURE CONSIDERATIONS

Accessibility to and the use of looping equipment/technologies have become increasingly more viable for singers in recent years. As further developments occur, it is within the realm of possibility that looping will become more pervasive in professional practices. This means that contemporary vocal pedagogy needs to embrace such technologies in the same way as amplification is embraced in performances. Singers are already using loopers in ways that recreate or mimic instrumentation, and they create elaborate song arrangements independently of other musicians. Such engagement invariably develops a singer's musicality.

Future applications in relation to vocal pedagogy could see vocal loopers being used to facilitate or underpin songwriting. Loopers could also be used to facilitate and/or focus performance confidence as using looping equipment requires preparation, which, in turn, requires students to prepare and practice. Perhaps one of the most important considerations for future applications is the ways in which loopers may be creatively developed to facilitate nuances of style that are considered potentially damaging if repeatedly produced by the acoustic instrument alone.

NOTES

1. Equalization (Hughes & Keith, 2013, p.106).
2. Reverb (Hughes & Keith, 2013, p.106).
3. Delay (Hughes & Keith, 2013, p.105).

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BIOGRAPHY

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Trajectories in vocal pedagogy and practice

Editorial

From the Editor i
Helen Mitchell

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