

CHORAL BLEND: SOUND OR SENSATION?  
AN INTERPRETATIVE PHENOMENOLOGICAL  
ANALYSIS OF PROTO-PROFESSIONAL SINGERS'  
PERCEPTIONS OF ENSEMBLE SINGING.

James Lee Slimings

A Thesis Submitted for the Degree of PhD  
at the  
Royal Conservatoire of Scotland  
&  
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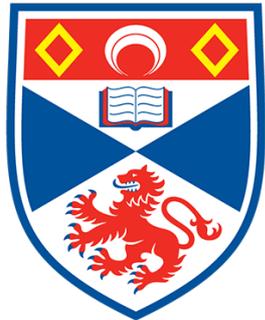
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Choral Blend: Sound or Sensation?  
An Interpretative Phenomenological  
Analysis of Proto-Professional Singers'  
Perceptions of Ensemble Singing.



University of  
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Royal Conservatoire  
*of* Scotland

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A thesis submitted to the University of St Andrews for the  
degree of Doctor of Philosophy

November 2021

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## Abstract

'Choral blend' is ill defined in the literature surrounding ensemble singing. The phenomenon is variously described as a noun, the aesthetic product of a choir singing; and as a verb, the technique of singing associated with ensembles. With such wildly varying definitions, the use of this term in rehearsals has become a topic of contention between singing teachers and ensemble directors. This thesis takes a singer-centric approach to investigate the phenomenon of ensemble singing, with a particular focus on 'choral blend'.

Twelve proto-professional training singers with experience of expert ensemble singing were recorded both individually and collectively during a rehearsal led by the researcher. These two auditory perspectives were given as an interview stimulus for participants. Interview data was then analysed using Interpretive Phenomenological Analysis. The use of close microphone techniques in ensemble settings, and their use as auditory interview stimuli, are novel methodological techniques in IPA.

Key findings reveal the significance of familiarity in the building up of auditory images, and expectancies as a way to describe the individual modifications needed in an ensemble. These two concepts are drawn together through the Embodied Music Cognition paradigm, and blend as a dynamic and ever-changing concept is advocated.

Community of Practice frameworks are proposed as a useful tool for describing the ensemble experience of participants. These communities of practice are created afresh with each group in every session they meet. Some elements of the joint repertoire that spans across experiences are discussed. With these communities of practice being created by singers, the role of the conductor and the agency of choral sound is also interrogated.

The sensation of an individual singing well in a choral group is attributed to their being in a flow state. A discussion of how participants achieve flow in peak ensemble experience, and the prerequisites for this state, form a major finding of this thesis. The conflation of blend technique with flow state is interrogated.

While individual flow state is equated with blend the verb, the aesthetic object of the choir is equated to blend the noun. This sensation of group flow can lead to an emergent choral instrument being co-created by singers during performance. This new choral instrument, greater than the sum of the parts of the individual singers goes some way to explaining the physical sensation of being 'within the choir'.

The word blend is used in many different contexts, and participants had an embodied knowledge of that concept. This thesis argues that use of the word blend can be unhelpful in attempting to form a particular aesthetic, and that acknowledging the agency of singers over the creation of the choral sound is more likely to result in a peak ensemble experience for all stakeholders.

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# **1. Introduction**

## **1.1 Introduction**

*JS Blend. What does it feel like?*

*B1 Equilibrium, I guess. There's just the feeling that there's no resistance at any point of anything, really. You know just that everything's correct and you're just in the eye of that particular storm.*

If you are reading this thesis, it is likely that you have experienced group singing in some capacity. You will understand what it means to be within a human instrument, creating a world of sound and emotion with a group of people. You may also know of that feeling that we ascribe as 'choral blend'. While you will likely understand this term, and be able to point to it when it happens, how would you describe choral blend? This thesis aims to explore precisely that.

The ability to sing with a group of peers, to create a beautiful piece of music together and collectively move an audience is a special feeling. When a chord is tuned just right, when you catch the eye of another performer in performance, when a particularly tricky passage of music is accomplished well, the sense of satisfaction becomes addictive.

As a singer in a proto-professional conservatoire environment who has chosen to specialise in ensemble music, as well as having significant professional experience singing in choirs, I am used to the word 'blend', and become frustrated when conductors simply ask a group to 'blend that'. Similarly, as a conductor I avoid using the word blend in ensemble rehearsals, acknowledging the various lived understandings of that word by singers. However, I am also conscious of the way I personally blend, I know how it feels to alter my voice to work with others and have a well-known set of interventions away from my usual singing that I employ when singing in ensemble. These are familiar feelings, and it is something that I seek every time I'm singing with a group of people. Exploring the way that the sound created by colleagues interacts with your own, and particularly examining the feelings and sensations during and after these events were an appealing research topic for me.

In attempting to draw together and learn from the different understandings and experiences of the concept of 'blend' as understood by singers, conductors, audiences, and others, this thesis focuses on those sensations of the singers. Moving not only the epistemological focus to the singers, but also through the ontological lens of allowing participants to create their own meaning of the word blend, this study seeks to illuminate the felt phenomenon of blend in ensembles with expert singers-in-training.

Singing, and the singing voice is unique among instruments in that it is entirely embodied by the performer (Vitale, 2008). It also serves a duality of purpose, musical sound is not the only use we have for the mechanics that create the singing voice, ensuring that food does not travel to the trachea, creating a seal in the lungs to facilitate the lifting of heavy objects, and human communication (The Editors of Encyclopaedia Britannica, 2015) are also imperative biological processes that share anatomy with the instrument of the voice.

In the exploration of singing, then, we are limited in scope to investigations of an instrument that not only we cannot see, but also one that serves a dual purpose. This unique quality of the voice as an instrument poses challenges to 'real world' rather than laboratory-based research, given that we are reliant on the singers themselves to accurately portray how they have manipulated the instrument in a particular session. While there are some non-invasive techniques that provide a clue as to some aspects of the use of the singing instrument (such as acoustic, and electro-glottographic measures) the feelings associated with the use of the voice in chorus with others must be explored through the singers' understanding of their instrument.

Ensemble singing as an artform, particularly how professional musicians perceive choral blend, is neglected in the literature. A lack of rehearsal time and either commercial or liturgical pressures of heavy performance schedules, along with a thriving hobbyist culture, could go some way to explaining this gap. Much professional ensemble singing in the UK derives from the liturgical Cathedral tradition, coming through university collegiate and cathedral systems (Day, 2000). While there is a strong history

of amateur music making in choral societies throughout the UK, members of these ensembles generally use these activities for either social or psychological benefits of ensemble singing (Clift et al., 2010). Professional singing groups that are not liturgical are yet to be studied in detail.

University Chapel choirs are a major source of ensemble music in the UK. Conservatoires, however, provide a large proportion of operatic productions, with graduates often moving to pursue a career in operatic and solo work. Conservatoire education at undergraduate level concentrates on performance as a soloist, with a great deal of credit-based learning based around 'principal study' provision. This emphasis on soloistic training stands at odds with the credit structure of many courses in traditional universities where performance is not the sole focus of the course. Many performance and assessment opportunities are therefore closely aligned to professional working environments, with conservatoire students performing side-by-side with professional musicians. As part of their quality assurance processes, the Royal Conservatoire of Scotland, where this thesis was undertaken, speak of this as a proto-professional environment (QAA Scotland, 2018), in which *'the conservatoire has established a shared understanding between staff and students of what it means to combine professional skills with higher education'* (p.4). Using the term proto-professional throughout this thesis situates the participants, and all conservatoire students, as those who have an understanding and experience of professional working environments, but with the critical and reflective skills expected from higher education students.

These differences in focus can lead to a perception that Conservatoire education is for soloists, whereas the heavily extracurricular timetables of chapel choirs lend themselves to ensemble training. These two distinct paths can lead to some friction between solo and choral singing techniques, with some singers feeling that their solo voice is 'compromised' through singing with others (Ferrell, 2015; A. Goodwin, 1980). This study attempts to chart a middle ground between these two groups, with participants drawn from a conservatoire environment, but with a special interest in ensemble singing.

These contexts help inform the framing of this thesis through participant data. This study stands apart from the high school choir programmes prevalent in both the United States and the literature with a focus on proto-professional singers. Although a large number of Americans sing for pleasure (Bell, 2004), again, professional ensembles are neglected in the literature. Participants in this study, as proto-professionals fall neither in the category of higher education students in the United States, neither as youth (high school), or amateur signers. Many choral based university programmes in the USA would be equivalent to a music education programme in a UK context, with the aspiration of graduates being classroom teaching. This difference is important in the interpretation of participants in literature emanating from the USA. Given the differences in classroom education, equivalent students in the UK follow quite different curricula, with voice not always being a core feature of classroom music education degrees. These traditional research participants, prevalent in the literature, provide the context through which this study, with its proto-professional conservatoire student participants, interacts and intersects with the established literature. Participants in this study share similarities to those used in other research (age, educational background), but are discrete in their skill set (Conservatoire training soloists with an interest in ensemble music), and cultural context (a UK based conservatoire).

Acknowledging these different contexts, and the choral environments in which individuals develop their sense of ensemble singing, there are certain expectations placed on singers that allow them to adhere to prescribed practice in ensemble singing. The sound associated with ensemble singing in the UK has been described as '*pure, otherworldly, ethereal*' (Day, 2000 p.123), with these singers also known for their technical accuracy in the realisation of the score. This can lead to criticism that this type of singing lacks passion, as highlighted by Day (2000). Adjectives such as '*ethereal*' are not at all dissimilar from the singing of other European choirs, particularly those associated with Eric Ericson (Anderson, 2001).

A common definition of 'blend', particularly in conductor-centric literature on the subject is '*an ensemble sound in which individual voices are not separately discernible to a listener*' (A. W. Goodwin, 1980:119). In attempting to achieve this, singers often compare their sound '*point by point with a reference- a set of aural sensations stored in the auditory memory and associated with the concept of vocal blend*' (Goodwin, 1982:34). This will be explored more thoroughly in [Chapter 4](#), however this set of stored criteria for blend, which in turn facilitate the UK choir sound as described by Day is termed 'Choral Aesthetic' throughout this thesis.

Through these frameworks, and a singing-centric view of choral blend, concentrating on the familiar sensations of ensemble singing, this study seeks to answer the question: '*How do proto-professional singers experience the sensation of choral blend*'? By focussing on the experience of ensemble singing, and by selecting participants from an auditioned vocal ensemble at a national conservatoire, the study will elicit responses that concentrate on the artistic elements of ensemble singing.

## **1.2 Background to Research**

Having an interest in acoustics, and being inspired by some of the early acoustical studies by Ternström (1991), Howard (2007a; 2007b; Howard et al., 2012, 2007), and Titze (2002) in looking to research choral blend, it was logical that I would follow these pioneering studies and look to acoustically define the characteristics of blend. However, my knowledge of blend is a deeply held and very real phenomenon and sensation, it is a feeling that I can recall and can identify when it happens. The wish to understand what that sensation, so familiar to me, means for others is the basis for this study.

In my desire to define the acoustic properties of blend, justification of multiple sound sources, and the interaction of these is of paramount importance. Ternström (1991) describes this acoustic picture in detail.

*The sound waves [of individual singers] are linearly superimposed on each other, without interacting at all. In this sense, nothing happens. But while the original wave is still there, the sum of waves usually becomes so intricate that we would not even want to account for it in detail...*

*We are unable to hear the individual singers in a choir, and that is precisely the point. The sonic character of a sum of sounds that are similar, yet not phase coherent, is quite different from the sound of a single source... The sensation of this extraordinary phenomenon, strongly perceived inside the choir, is one of the attractions of choir singing. (p.140)*

In reading this quote, it appears that Ternström is acknowledging the sensations that I associate with choral blend and ascribing it to the acoustic properties of ensemble singing. This accords with my beliefs and understanding of blend in my own musical practice. However, the use of the word phenomenon by Ternström, and his acknowledgement of the acoustic complexity of ensemble singing, led to the decision that qualitative methods would be better suited to an investigation of this ‘*extraordinary phenomenon*’. Similarly, blend being ‘*strongly perceived inside the choir*’ suggests that any stimulus must include an aspect of live singing. The methods employed in this aim are discussed at length in [Chapter 3](#).

It is acknowledged that my personal experiences, contexts, and preferences could impact upon the interpretation of any data into the qualitative study of blend. The concept of bracketing has been employed during this study and is discussed as part of the methodological framework for data analysis [[3.2.3](#)]. Bracketing involves the acknowledgement of the experiences and opinions of the researcher, and consciously removing them from the analysis process (Heidegger, 1927)[for further details of this process see [3.2.3](#) and [3.6.2](#)]. The combined expertise and experience I have in the choral field are, however, then vital in the final interpretation of this thesis found in [Chapter 7](#). Given this final contextualisation, as well as highlighting the suitability of this research topic to my passions and skill sets, some biographical context is given below.

### **1.3 Professional Experience in Singing**

The following contextual biographical information serves as a demonstration of the embedded nature of the research analysis with the UK ensemble profession. It also provides a reflexive, auto-ethnographic analysis of some of the areas that were 'bracketed' from the analysis of participant data. By demonstrating a lived understanding of both conservatoire education and ensemble singing, there are considerable similarities of skills and experience between participants and myself. This knowledge, as well as the inductive intellectual investigation of participant information, proves the suitability of both methodology and researcher to the investigation.

Like many of the participants, my first experience of singing was through extra-curricular, school-based activities, particularly musical theatre productions and vocal ensembles. I also participated in auditioned county and national level music making; both in the Tees Valley area, and the National Youth Choirs of Great Britain. A lack of opportunity to hear high level classical music performance in my geographical area consequently meant that my consumption of this repertoire was exclusively as performer. It is important to note that there was a perceived hierarchy of ensembles in my social circles, with school-based activity at the bottom, 'county level' music service ensembles as more prestigious, then national ensembles such as the National Youth Orchestra or National Youth Choirs of Great Britain seen as elite.

The journey above is not dissimilar to many of the participants in this study in the following ways:

- I began singing in ensembles *before* taking solo singing lessons.
- My singing tuition was given by my ensemble director.
- Musicianship training was built as part of the ensemble experience, and I didn't take 'classroom' music lessons.
- There is a perceived hierarchy of ensembles, many of which are to do with either audition policies or their marketing on a local, regional, and national level.
- Some opportunities and access to high level music making were geographically, and not necessarily socially, difficult to access.

An important aspect of these groups is the social element to ensemble singing, and this impact on the development of both musical and self-identity through adolescence [discussed further in [4.3.2](#)]. This hierarchical and repertoire based paradigm of musical identity and development has been codified by Tarrant et al. (2002) stating the relationship between music and identity as follows:

*Through the affiliation of [ones] peer groups with certain styles of music, adolescents associate those groups with the meta-information which such affiliation activates... Through intergroup comparison, this affiliation can be exaggerated or diminished according to the value connotation of that meta-information, and in response to social identity needs. (p.140)*

The intergroup comparison between school and county music making has an added value due to the perceived expertise required to accomplish more 'advanced' repertoire associated with the county ensemble. Similarly, the more advanced artistic focus, rather than that of accurate realisation, inherent in these more advanced ensembles informed my idea as to high quality ensemble singing in terms of technique, but also in terms of choral aesthetic. Much of this training and development is not codified in any form of curriculum but becomes embodied knowledge through rehearsal experience and reflection.

I then studied for an undergraduate degree in Vocal Studies at the Royal Conservatoire of Scotland, taking choral scholarships first with the University of Glasgow Chapel Choir, then Paisley Abbey, and finally Glasgow Cathedral. I also was a founding member of an auditioned conservatoire consort, as well as singing with the Royal Scottish National Orchestra Chorus, Edinburgh International Festival Chorus and Ludus Baroque as a professional. Many of the participants in this project described working in similar, if not the same, ensembles currently. A knowledge of these communities not only builds rapport with participants, but also aligns my embodied knowledge of ensemble singing with that of participants, in order to further reflect upon these experiences.

Along with this choral background, I have experience performing in opera choruses and have also taken roles in productions both in a conservatoire and professionally. Similar to many participants in

this study, much of my solo experience lies in oratorio, working with choral societies throughout the UK. These solo opportunities, both curricular and professional, are common to early career singers in the UK with many choral societies favouring students in performances to help develop understanding of professional environments, as well as providing an economical solution to stretched choral society budgets.

#### ***1.4 Professional Experience in Conducting***

As discussed above, a background to the lived experience of the researcher allows the reader to not only read the subsequent analysis with reference to the hermeneutical framework of the researcher, but also to ensure the 'bracketing' [\[3.2.3\]](#) of particular aspects of this experience. As the conductor of the research intervention, this biographical data contextualises the decision to move from a conducting centric to singing centric model, as well as justifying my decision to conduct the participants myself.

While there are arguments for using various conductors and allowing participants to use this change in context as a variable in the research, allowing participants to compare particular conductor interventions and how they then embody this in their singing, this approach may have moved the focus away from the perceptions of singers, and towards that of conductor intervention. In this researcher-practitioner role, I was able to ensure that there was effective bracketing of the conductors' perceptions in the analysis phase, as well as providing as 'real world' a scenario as possible through working with singers that I have conducted before. While this researcher-practitioner role could have encouraged an action research methodology, in focussing on the experience and perceptions of the singers, it was hoped that keeping the conductor consistent would eliminate a potential variable in experience for participants.

Whilst developing ensemble skills through rehearsals and performing at the secondary education level, I was also establishing an identity for leadership within an ensemble situation. This came down to two things; social validation having found a group of like-minded individuals, but also through

musical validation by above average sight-reading skills. Another form of validation was successfully moving up the hierarchy of ensembles, belonging to a county level ensemble allowed me to have friendship groups that were separate from my school groups, and then a national ensemble allowed me the same distance again. This social capital and perceived expertise through membership of ensemble developed my identity as an ensemble leader to the point where I started directing my own ensembles.

Throughout my graduate and undergraduate studies, I successfully auditioned for several paid conducting positions with local choirs, ranging in size and experience from advanced chamber choirs and large-scale symphony choruses through to community groups and workplace choirs. The range of experience of directing different groups of people gives me a wide understanding of the different communities and philosophies inherent in different groups that come together to sing.

As well as amateur choirs, I was also the Alexander Gibson Fellow with the Royal Scottish National Orchestra, assisting in the chorus preparation for major symphonic concerts with international conductors. I have subsequently chorus mastered for the Alexander Gibson Opera School, as well as assistant conducting their UK staged premiere of Heggie's *Dead Man Walking*. Experience of operatic and symphonic chorus mastering has enabled me to work with many conductors, and to adapt and understand the artistic wishes of different musicians and attempt to translate these to various groups of singers.

Liturgical music is a large part of the UK choral scene, and as Director of Music at the Robin Chapel in Edinburgh since 2018, I direct a group of professional singers to assist the worship. Time pressures of rehearsal here require singers with high standards of musicianship and give me an understanding of the challenges of limited rehearsal before performance. Accuracy of realisation of a score is a running theme throughout participant data, and as such ensuring that there was sufficient time in the research intervention to mitigate this is an example of how my expertise in this area has relevance to this thesis.

Participants in this research project have all been in ensembles which I have directed, and many of them have been employed as soloists for oratorio performances through choral societies I have been involved with. Other participants regularly deputise my conducting duties if I am unavailable, particularly S3 and T1.

These skills and experiences as a conductor illustrate an understanding of the conducting-centric view of much of the literature, as well as highlighting the duality of career that many choral directors in the UK possess. Through my ensemble singing, I have developed skills as a conductor which in turn then assist me in directing groups through a knowledge of the singing voice. Working regularly with conservatoire students, and particularly participants in this study, I am part of the community of practice developed in an ensemble and can translate the experience from inside the choir through the role of a director to the audience.

### **1.5 The Thesis**

This thesis is an Interpretative Phenomenological Analysis (IPA) project investigating proto-professional singers' experiences of choral blend. The choice of IPA as a method allows me to concentrate on the lived experience and meaning making of participants in order to better understand the experience of choral singing, and particularly their interpretation of 'blend'. As an investigation aiming to explore tacit knowledge among a specific group of participants, this thesis uses a novel interview stimulus in the form of 'spotlighted' recordings of participants' individual contributions to the overall choral sound. The use of this data as interview stimulus is a valuable contribution to the IPA method in its own right, however the subsequent analysis of participant interview data and its interpretation is where the unique contribution to knowledge of this thesis lies.

Through answering the research question '*how do proto-professional singers experience the sensation of choral blend?*' this thesis comments on and contributes to discussions relevant to ensemble singers, ensemble directors, and those interested in how ensembles behave in performance.

Situating the thesis within a conservatoire environment is part of the unique contribution to knowledge that the research offers. This context is more thoroughly discussed in the body of the text [3.4.5], however given the unique nature of a conservatoire education it is important to define the use of the term 'proto-professional' throughout the thesis. A conservatoire environment is primarily aimed at producing singers with great technical mastery who may go on to careers as soloists, with a heavy emphasis on vocational training. Conservatoire students are encouraged to treat themselves as 'emerging' professionals, who take on work in a professional context whilst still studying. At the Royal Conservatoire of Scotland, this is framed in the curriculum as a 'proto-professional environment'. This term is designed to capture the shifting identities and contexts of participants as both learners and professionals, but also to emphasise the expertise that is already demonstrated by participants in their singing.

Many parts of the thesis refer back to other points of the thesis. For ease, these have been cross referenced throughout using square brackets and section header numbers.

This thesis is in three broad parts. Chapters one to three contextualise the data, four to six present and analyse data gathered from participants, and chapter seven offers a discussion and new perspective based on original research through the analysis of participant data.

## **1.6 *The chapters***

Following this introduction, chapter two contextualises the thesis in existing academic literature. This provides a general background to choral research and offers some previously presented definitions of blend. It then discusses literature relevant to other ensemble experiences that aren't specifically singing, as well as introducing some key concepts highlighted in the analysis of participant data.

Due to the inductive nature of IPA methodology, a review of the literature must be situated within the context of the analysis of participant data. Given this, a brief overview pertinent to each of the themes is given in the relevant 'background' section within chapters four to six.

Chapter three grounds this thesis in an ontological framework, as well as justifying the choice of IPA as the methodology most suited to this research. It then goes on and describes the method of data collection and subsequent analysis. Chapters four through six (analysis chapters) present analysis of participant data gathered through the methods described in chapter three.

Each analysis chapter (four, five, and six) was developed from the organisation of themes described in [3.6.7](#). These were then ordered to provide a narrative thread of the choral process and the observations regarding blend that the participants drew to my attention. While effort has been taken to provide a cohesive narrative flow that develops through the chapters, the participant examples that are analysed are not in any order, nor were they ranked against other participant responses. Each quote was taken out of the data through the theme organisation. Those quotes that were most expressive or provided most data to cross reference within the thesis were then used in the main body of the text.

While care was given to ensure that there was a wide cross section of participant data presented throughout the thesis, some participants had more to say about particular topics than others due to the idiographic nature of the analysis. This may provide the perception that some participant information is being privileged over others and presented more readily. While there was no active hierarchy of information or participants, as the discussion of the analysis must come from the data, it must be the data that is the final arbiter of inclusion. Themes were not chosen based on number of instances, nor through how many participants discussed similar topics, as this would negate the double hermeneutic circle that is a staple of IPA research. Themes were chosen for inclusion after organisation based on the interpretation of the meaning making of participants through the lens of the research question, looking at how singers experience choral blend.

Finally, chapter seven provides a discussion of the data as well as presenting my conclusions. This conclusion chapter builds on the analysis of data in chapters four to seven, bringing together the summaries of this analysis and presenting my own definition of 'choral blend', as well as some next steps for research.

## **2. Literature Review**

### **2.1 Introduction**

Singing collaboratively is a uniquely human experience. Group music making involves the synchronisation of vocalisation and oftentimes movement. While group flashing of male fireflies are rhythmically synchronous (Copeland & Moiseff, 1995), and other male primates call together in collaboration as part of their collective sexual advances, human chorusing stands apart as unique in nature as an advanced act of social communication, as well as aesthetic phenomenon (Merker, 2000; Mithen, 2006). This complicated social, aesthetic, and acoustic phenomenon is one of the most enduring artifacts of a shared humanity and has been the subject of a great deal of scholarship throughout the ages. This chapter seeks to contextualise the term ‘choral blend’ while also challenging the accepted understandings of a complicated and sometimes nebulous concept.

As a field, choral music is furnished with three main journals that are dedicated to the field of choral music. The oldest and perhaps most well-known is *Choral Journal*, a publication of the American Choral Directors Association (ACDA), a subscription-based organisation that brings together choral practitioners in North America (particularly the United States). Since 1955 to 2022, *Choral Journal* yielded 159 scientifically informed, voice-related papers, many of which were published early in the journals history (Schmidt, 2022). Given some of this research is now 50 years old, there has been a recent push by ACDA to ensure high quality research in the choral field is given an appropriate outlet. Given this, in 2003 ACDA launched the peer-reviewed, open access journal *International Journal of Research in Choral Singing*. In the UK, the Association of British Choral Directors launched a similar project in May 2020 in the form of the **abcd** Choral Research Journal.

As these journals are relatively new, the field of ensemble singing has been somewhat under-researched. Other journals such as the *Journal of Voice*, or the *Journal of Research in Music Education* both provide some outlet for ensemble focussed literature. Given this, however, the *Journal of Voice* shares its pages not only with research on the singing voice, but also on pathological voice use and

medical procedures that concern the voice. Much of the early reading for this thesis focussed on the *Journal of Voice* when there was a wish to attempt to quantify blend, however as the singer-centric research methodology took shape, other contextual literature was sought. The *Journal of Research in Music Education* provides some context to the ensemble classroom in the school system in the United States, as well as some discussion surrounding the conductor as educator figure more frequently found in the UK.

After these general searches, more literature was reviewed in the context of the inductive nature of Interpretative Phenomenological Analysis [3.3] in order to better contextualise participant findings within the psychosocial frameworks of ensemble singing. Given that this literature directly contextualises the analysis of participant data, much of this is situated as ‘background’ to themes in the analysis chapters (for example, [4.2.1](#), [4.3.1](#), etc).

Given the renewed scope for peer reviewed literature in the field of ensemble singing, this thesis contributed to the renewed interest in ensemble singing in two unique ways, firstly through a singer-centric interrogation of choral blend, and secondly through the use of proto-professional singers as research participants.

## **2.2 Choral Blend**

### **2.2.1 Definitions**

The Oxford English Dictionary defines blend as: *to mix (sort of spirits, tea, wines etc.), so as to produce a certain quality* (‘Blend, v.2’, n.d.). It is this ‘certain quality’, a type of aesthetic judgement, that has become the accepted definition of choral blend.

Although many authors in the field of choral music give a great deal of time and energy to defining the physiological or acoustic properties of a sound they consider ‘blended’, very little time is given to the definition of this concept itself, or indeed how those involved in the profession interact with it.

Common examples include singing so that one voice is 'not separately discernible to the listener' or a 'matching of tone across the choir'. These definitions seem arbitrary, and an acquired knowledge of what each choral director believes good choral singing should sound like appears to be the ultimate arbiter of any definition of 'blend'. Further research is needed on how this word is used and understood by singing and conducting practitioners across rehearsal environments to investigate the shared understanding of this word as it is used in ensemble rehearsal.

While there are myriad descriptions used by many different conductors to describe what happens when a group of people sing together, there does, however, seem to be an uneasiness in the academic literature regarding the use of the term 'blend' as ubiquitously as it is used in every day choral rehearsals. For example, in his paper, Ternström examines what he terms '*chorus effect*':

*The sound waves [of individual singers] are linearly superimposed on each other, without interacting at all. In this sense, nothing happens. But while the original wave is still there, the sum of waves usually becomes so intricate that we would not even want to account for it in detail. Our sense of hearing has a remarkable capacity for resolving one source out of a sum of many. The underlying mechanism appears to rely on the detection and perceptual fusion of covering acoustic features, such as a set of partial tones that appear to be locked to a common fundamental. Still, this resolving power of the ear has limits. We are unable to hear the individual singers in a choir, and that is precisely the point. The sonic character of a sum of sounds that are similar, yet not phase coherent, is quite different from the sound of a single source... The sensation of this extraordinary phenomenon, strongly perceived inside the choir, is one of the attractions of choir singing. (1991:140)*

The above paragraph sums up 60 years of discussion of choral tone by looking at choristers as individual sonic components that make up the choir (Beachy, 1969; Davis, 1979; Draper, 1972; Wyatt, 1968). Similarly, Ternström admits that the capacity of human hearing to resolve the extremely complex acoustic environment of the choir is not the only definition of choral blend, but that there is also an experiential aspect to this term. This experience cannot be investigated by looking from outside the choir, as is the case for much of the work pioneered by him, but as a phenomenon which can be strongly perceived inside the choir. One definition of blend according to Ternström is '*the sonic*

*character of a sum of sounds that are similar, yet not phase coherent*'. While this may provide a good basis for investigating the whole choir aesthetic (which I will term 'whole choir sound') Ternström admits the ability to analyse in detail the whole choir sound *'isn't the point*'. Therefore, we must search for meanings of blend that go beyond simply *'an ensemble sound in which individual voices are not separately discernible to a listener'* (Goodwin, 1980:119) as an accepted definition.

Jordan (1984) makes an interesting point about the use of the word blend in that *'it appears that blend in choral music has made a strange transition from noun to verb. In that transition, the individual vocal health of our singers has been affected'* (p.26). Scholarly literature uses the term 'choral blend' for two distinct purposes: to study the perceived phenomenon of the produced choral sound (noun), and to describe a technique of singing that is used by singers and choral directors in order to create that sound (verb). It is apparent that 'blend' can be experienced by the singer, and that an inherent or embodied knowledge of what 'blend' means to an individual's vocal production is a requisite of good choral singing. Goodwin regards a singer as a servo-mechanism and states that *'The singer evaluates the blend of [their] own voice with the ensemble. The incoming aural sensations are compared point by point with a reference- a set of aural sensations stored in the auditory memory and associated with the concept of vocal blend'* (1982:34). A servo-mechanism is any system that changes its output based on stimuli from around its surroundings, such as a choral singer taking in the acoustic information from the building in which they perform, comparing that with the sounds from those in close proximity to them and then changing their vocal output to compliment that sound which they perceive [2.2.2]. This is the process involved in the verb, to 'blend'.

Ternström argues that his 'chorus effect' is a sensation that is strongly perceived inside a choir, this effect guides singers through their active listening to colleagues to alter their singing to match the environment in which they find themselves. This perception of blending, along with the constant listening and reacting to your surroundings, gives a strong case to 'blend' being, as Jordan (1984)

asserts, a verb. There is precious little literature concentrating on how trained singers can use their soloistic technique for effective ensemble singing, with a concentration on how techniques differ between ensemble and solo singing. Most literature discusses the noun 'blend' by examining the perceived chorus effect, but for practitioners it is this technique, the verb 'blend', that is of critical importance to produce the effect desired by directors.

### **2.2.2 Solo vs Choral Singing**

*The Choral Journal* is the official publication of the American Choral Directors Association, an organisation which is affiliated with the National Association of Teachers of Singing and serves as the principal journal for scholarly work on ensemble singing. As the journal is affiliated with a national organisation, unsurprisingly much of the literature in its pages has a North American focus. As this thesis is written from a European perspective, with a focus on a conservatoire (rather than high school or university) context, this positionality differentiates this research from much of the available literature on choral singing.

From the very start of *Choral Journal* in 1959, there have been articles discussing a perceived tension between choral directors and teachers of singing (Beachy, 1969; Draper, 1972; Ferrell, 2015; A. Goodwin, 1980; Hampson & Von Ellefson, 1996; Hansen et al., 2012; Mann, 2014; Miller, 1995; K. L. P. Reid et al., 2007) and this debate is still topical. Mann wrote '*The goals of singers in choral ensembles and as soloists are relatively disparate. In the solo mode, singers are expected and taught to cultivate their individuality – to set themselves apart from the crowd. In the choral mode, the goal becomes ensemble unanimity, often described by those in the choral field as blend or balance*' (2014, p.34). This unanimity of tone is often seen as subjugation of an individual's own vocal prowess, which in voices that have been trained with either operatic, or at least soloistic, ambitions can lead to not only vocal tension but also reticence to sing in ensembles. With so many issues surrounding vocal production, these factors become compounded further when talking about 'choral blend'. Ferrell describes this as:

*Choral singing is often unified and sung at the centre of the pitch but asking singers to “blend” may not achieve one’s desired sound; there are many components that go into a “blended” sound. Much of the frustration from professional singers and teachers of singing seems to arise from loss of “vocal identity” in a choral ensemble; specifically, a trained singer trying to match the sound of an untrained singer. There are many other effective methods in achieving a unified sound. Some of these methods include addressing vowel shape (bright, forward, back, dark), intonation, pitch/rhythmic accuracy, seating formation, voice placement, dynamic, tempo, balance, vibrato, vocal technique, and the conductor’s gesture. (2015, p.37)*

Ferrell identifies an issue where the agency of choral blend resides firmly with the conductor in a didactic manner, asking a group of singers to ‘blend’ that sound. This instruction will be familiar to many choral practitioners and is universally unhelpful, with specificity of conductor feedback increasing the confidence levels of amateur signers. If blend is to be a noun, some form of aesthetic aspiration for group singing, then there are many other aspects (identified by Ferrell) that need to be discussed first. While Ferrell investigates untrained singers performing with trained professionals, a common practice in the UK scene known as ‘bumping’ or ‘augmenting’, this particular combination of professional and amateur singers provides its own challenges in relation to social dynamic amongst the group and technical singing interventions on both parties.

In attempting to define choral blend, we have established that the term is nebulous, and oftentimes unhelpful in the achievement of a ‘unified sound’. The agency for this sound may rest with the singer or with the conductor, with no paper actively interrogating the term blend directly. Therefore, in attempting to contextualise this thesis’ contribution to that investigation, other aspects of ensemble singing that contribute to this term need to be explored, many of which follow from Ferrell’s (ibid.) provocation, above.

## **2.3 Synchronicity and Ensemble Performance**

Ensemble accuracy and synchronicity are primary concerns of performers and conductors alike. Literature surrounding synchronicity in ensemble performance has generally concentrated on non-verbal communication, be this conductor gesture or between performer led ensembles.

### **2.3.1 Synchronicity**

In ensemble settings, the use of body language and gesture within ensembles can aid the synchronicity of multiple performers in ensemble settings. When measuring the difference between solo and ensemble scenarios, Glowinski et al. (2013) found that there was a marked difference in head movement in the violinists of a professional string quartet in solo and ensemble modes. This gestural difference was not then perceived as a change in the expressive quality of either music or gesture by listener observation. The lack of perceptual variance in expression then leads to the possibility of gesture as a tool for ensemble performance.

Temporal accuracy in non-directed piano duets was investigated by Gobel and Palmer (2009). In their study, Gobel and Palmer provided a 'leadership' role (the *primo* (higher) piano part) and different complexities of 'follower' role (varying difficulties of accompaniments for the *secondo*). They then altered the amount of auditory feedback that players received and investigated the temporal synchronicity of performance in these scenarios. They found that leadership roles tend to precede follower roles, particularly when auditory stimuli are lacking, but also that pianists head movements became more synchronized in scenarios with a lack of auditory feedback. This could suggest that a lack of auditory stimuli leads to a reliance upon visual stimulus of the 'leader' for ensemble synchronicity.

In a study using similar data gathering techniques to this in the form of head mounted microphones, Zadig et al. (2017) found that informal leadership roles were linked to when a performer sang. Two of the sub-studies used school students as singers and focussed on accuracy as a function of leadership, the authors found that a singer who was able to accurately realise the score started

singing fractionally before other singers. In the other two studies, singers were members of a semi-professional church choir, where a soprano took the informal leadership role by singing slightly earlier than other choristers. In this instance, the leader sang with flat intonation, with other singers then matching this mistake. This informal leadership through singing slightly ahead of the rest of the choir concurs with Gobel & Palmer (2009), as well as demonstrating that artistic (in this case intonation) issues can be influenced by the leader, as well as timing and pitch accuracies.

While temporal accuracy can be displayed and measured independently of music through finger tapping exercises (Large et al., 2002) it has shown that musicians possess a *'dynamic and flexible internal representation of a sequence's metrical structure'* (p.3), the more complex task of singing ensemble synchronicity is yet to be examined in detail. The role of the auditory, motor, and analytical systems of each performer in ensemble settings is of primary importance to musical synchronicity. In her comprehensive review of literature, Palmer (2013) notes the dual theories of gesture as an expressive tool brought through realisation of the score, and also as a manifestation of feedback from others. This idea of auditory stimuli combining with individual musicality strengthens the Embodied Music Cognition (EMC) paradigm [2.2.2], which states that *'bodily involvement is crucial in human interaction with music'* (Leman et al., 2018:3).

In the examples above, particularly regarding finger tapping exercises, synchronicity can be seen to be evident, however this is but one factor of a broader concept of entrainment. Entrainment is *'the process by which independent rhythmical systems interact with each other'* (Clayton, 2012 p.49). Importantly, the interaction between the systems is key to entrainment with *'some form of coupling [existing] between the two systems'* (ibid.). While this may seem somewhat abstract, communal singing can be seen as a bone fide example of entrainment because *'each person can sustain their periodic actions even if everyone else in the group stops singing, and they are coupled with other singers through a number of sensory channels of communication (e.g. sound, vision, and sometimes touch)'* (Hayward, 2014 pp.11-12).

Entrainment is not simply 'doing the same thing at the same time', it is keeping a similar relationship locked whilst performing a task. This can happen at many different levels as described by Clayton (2012 p.51)

1. Intra-individual entrainment. For example the coordination of limbs, or of air pressure and vocal tract changes to make vowels [see [2.4.1](#)]
2. Inter-individual entrainment. Coordination of actions between the group based on attention to the auditory (and other) clues of rhythms of the group.
3. Inter-group entrainment. Coordination of actions across groups, this could be seen in an antiphonal piece where two choirs are performing independently, but also connected together.

In his 2014 thesis, Haywood suggests that the experience of being in synchronicity is a scope for further research. This thesis contributes to that challenge by investigating the perceptions of singers in blend, and therefore in entrainment.

### **2.3.2 Embodied Music Cognition**

Embodied Music Cognition is a paradigm which states that assumptions are made about the musical world in which you are surrounded based on proprioceptive observations of environments. These learned environments can then lead to predictions regarding how that world will react to different stimuli, all of which will be perceived as an embodied experience. In other words *'the human brain doesn't perceive the state of the world directly, but it constructs models of the state of the world using proprioceptive and exteroceptive corporeal mediators that provide the information for the models on the basis of interactions with that world'* (Leman et al., 2018, p.5).

In ensemble music, EMC focusses on predicting future patterns through learning of specific scenarios (gestalt formation). These patterns are built of a network of independent sensory, motor, and affective processes (Leman & Maes, 2014), with predictive processing playing a strong role in the control of these processes. Perception of the environment in which you are performing, and the action

of your own performance are therefore not separate processes, but mutually reinforcing processes that embed predictive processing as part of the action of music making.

Auditory images are created in the 'minds ear' and are considered to be part of the phonological loop of working memory (Buchsbaum, 2013). These images generally preserve the structural and temporal properties of the stimuli, activate the same brain areas as auditory perception, and involves semantically interpreted information among other qualities (Hubbard, 2010). Keller and Appel (2010) investigated the strength of this imagery and compared this to a function of body movement in pianists. It was found that large scale movements (body sway) were directly related to smaller movements (keystrokes) and acted as an indicator of ensemble synchronicity. Similarly, while the designated ensemble leader was found to move ahead of the follower player, body sway between players was synchronised. Keller and Appel suggest that a strong auditory image of both parts aids in basic ensemble coordination. This is supported by Jones & Boltz' (1989) theory that in rhythmic synchronicity, there must be an element of constant attending, and then expectancies are created in order to keep the rhythical pattern synchronous across participants.

These auditory images are associated with musical training (Boltz & Jones, 1989) with those having a background in music being more able to predict and anticipate stimuli than non-musicians. These expectancies are also demonstrated in the visual stimuli of musical scores, in which musical dissonance and consonance was predicted through visual stimuli alone (D. Schön & Besson, 2005).

EMC suggests that auditory feedback creates an expectation of musical interventions, with sensory-motor skills working in tandem. Ensemble musicians can use the expectancies of auditory imagery to then create appropriate artistic and physiological responses to auditory stimuli that has not yet been given to the participant. Literature surrounding how singers change their singing in relation to others is discussed below.

## **2.4 Vowel and Vocal Issues**

When *homo sapiens* first stood on two legs, causing the angle of the spine entering the skull to change, this forced the larynx down in the throat, giving modern humans a unique ability to control the vocal tract (Mithen, 2006). This longer vocal tract, and more ability for change within it, gives humans a wider range of vowel sounds than other primates. The ability to manipulate the tract in this way has led to the development of language and music, with this extended palate of available sounds an important part of human communication and the artistry involved in singing.

### **2.4.1 Formants and Vowel Acoustics**

The shape of the vocal tract, and the natural frequencies that are inherent in the properties of that shape, produce harmonic resonances which, when air of a particular frequency is driven through it, we perceive as vowels; these natural frequencies are called formants. The first two formants, and their manipulation through movement of the larynx, pharynx, tongue, and articulators give rise to vowel identity. However, careful manipulation of the vocal tract can then alter formants three to five, changing the quality of the perceived vowel (Story, 2004).

Each note that we hear in singing consists of the movement of air away from its natural resting place, with the number of times that air is disturbed per second known as the frequency of a note. We perceive these disturbances as pitch, with notes having a particular frequency, with an orchestral tuning 'A' being 440 cycles per second (Hertz). The frequency of the note itself is known as the fundamental frequency. In order to give a particular instrument its timbre, each note consists of the fundamental frequency as well as other, higher, frequencies that follow a particular pattern, these other higher frequencies are called harmonics. The distribution of these harmonics is consistent across pitches, with this known as the harmonic series. When the frequency of a harmonic matches that of a formant (the natural frequency of the vocal tract), resonance occurs resulting in a more energetic sound in that frequency band. Certain frequencies of formants are associated perceptually with different vowels, with formants one and two varying vowel identity, and formants three through five

impacting on vowel quality. Changing vowel quality (and therefore formant frequency) is part of singing training in the *Bel Canto* or 'western' tradition.

In singing, the manipulation of these formant frequencies through careful physical intervention in vowel quality give rise to the phenomenon of the 'singers' formant'. This is a powerful 'spike' in acoustic energy around the 3-5kHz range which provides the carrying power to the operatic singing voice (Sundberg, 2001). In Western singing cultures, the use of the singers' formant is usually the result of technical training, with manipulation and use of this tool in either speaking or singing greater in those with singing training (Barrichelo et al., 2001).

Communal singing, however, has a distinct set of challenges in that individual projection is not the aim of ensemble activity. How singers alter their vocal strategies in singing and solo modes has been the subject of much investigation. Taken from his 1999 PhD thesis, Ford (2003) investigated auditor preferences for use of the singers' formant in ensemble music. He found that listeners overwhelmingly prefer ensemble music with 'less resonant' tone quality; a preference that was greatly influenced by training, with choral students being most likely to reject 'resonant' tones in ensemble singing. In their landmark paper, Rossing, Sundberg, and Ternström (1984) investigated bass singers performing in solo and choral mode and found that these professional choral singers produce less energy in the 'singers formant' range, whilst increasing the energy in lower formants and the fundamental frequency. They also found that when in solo mode, singers were more likely to match the volume of the rest of the choir (their feedback source), but when this choir was substituted for piano accompaniment, they were more likely to sing louder.

When singers are asked to perform in solo or 'blended' mode in ensembles, expert listeners much prefer that of the 'blended' sound. However, Ekholm (2000) found that there was no significant difference in chorister preference to using each of these singing modes. This result seems to stand at odds with the often heated narrative in the literature that ensemble singing is by necessity a subjugation of individuality in the voice (Ferrell, 2015), perhaps suggesting that some singers prefer

using their voice in ensemble mode, rather than as a soloist, particularly those with an interest in this specialism.

In Bunch and Chapman's taxonomy of singers used as participants in scientific research (2000), a distinction is drawn not only between genres of singing, but also between categories of singers based on proven performance achievement, ranging from '*Superstar: a singer of worldwide fame and recognition that demands the highest fees*' (p.364) to '*Amateur: sings for pleasure, unpaid but not unrewarded*' (ibid.). Most professional ensemble singing in the UK can be classified either as National/ Big City > Church / Cathedral > Professional Chorister > Adult (3.15b1 in Bunch and Chapman) or National / Big City > Opera > Chorus (3.1c ibid.), with a distinction being drawn between operatic chorus work and liturgical / choral work. This distinction plays a particularly strong role in the tuition of undergraduate singers, with many collegiate chapel choirs supplying professional choristers and conservatoire graduates forming the majority of operatic choruses.

When looking at differences in vocal techniques, Reid et al. (2007) investigated members of the chorus of Opera Australia singing in 'solo' and 'chorus' mode. They found that while participants sang on average 2.7 decibels louder in 'solo mode', there was a substantial increase in volume in upper frequencies of the spectral envelope which was generally associated with the singers' formant. This finding contrasts with other studies of Rossing, Sundburg, and Ternström (T. Rossing et al., 1984; T. D. Rossing et al., 1987) that found in both soprano and bass singing, energy distribution tends to be closer to  $F_0$  (fundamental frequency), and formants one and two, than in the range of the singers' formant. Łętowski et al. (1988) also found substantial differences between solo and ensemble modes, with training acting as a factor of this difference. While the authors don't indicate what training is in the study, the impact of training on some perceptual aspects of the voice such as vibrato [2.3.2] have been discussed elsewhere.

### **2.4.2 Vibrato**

Vibrato was first defined by Seashore as: *'A good vibrato is a pulsation of pitch, usually accompanied with synchronous pulsations of loudness and timbre, of such extent and rate as to give a pleasing flexibility, tenderness, and richness of the tone'* (Seashore, 1937 p.30)

Following from this definition, vibrato rate and extent, as well as the physical and perceptual qualities of each of these domains has become the focus of much investigation. Particularly relevant to participants are the seemingly narrow bands of tolerance between 'good' (steady rate and extent) and 'bad' (a wide extent or slow rate) vibrato, as well as the perception of a stable periodic vibrato as a measure of vocal quality (Diaz & Rothman, 2003). Similarly, Mitchell & Kenny (2010) found that principal study conservatoire students habitual vibrato changed over the course of their study. While there was little change to vibrato extent, vibrato rate increased significantly throughout training, alongside an increase in periodicity of vibrato tone. This supports Mürbe et al. in their 2007 longitudinal study showed that singing training can have an impact on both perceptual and acoustic properties of vibrato.

While it can be acknowledged that singers have a 'natural' vibrato, particularly around frequency modulation (vibrato extent), studies have shown that singers are able to modify their vibrato rate in order to match an auditory stimulus (Dromey et al., 2003). It has also been shown that a major identifying factor of trained singing voices is the presence of both a 'good' vibrato and the effective use of the 'singers' formant' for resonance (Brown, Jr. et al., 2000).

Mann (2014), in an acoustic study of vibrato rate among sopranos in both solo and choral mode, found that singers significantly altered their vibrato between the two techniques. Most participants acknowledged that this was a conscious effort to improve blend (although 14% of respondents did not believe they changed their techniques between modes). In solo mode, vibrato rates were faster, employed wider extent, and were present for a greater duration of the excerpt than in choral mode. Mann also found that in chorus mode, vibrato generally started later in the phrase; a phenomenon

she relates to a desire to tune the pitch before 'warming up' the sound. This finding mirrors that of Daffern (2017) who found that vibrato is used as an artistic effect by an ensemble after the start of a pitch. Daffern also shows that there is some synchronicity of vibrato between singers (particularly within the Alto and Tenor sections) and confirms anecdotal experience that soprano voices tend to reduce their vibrato during choral singing more extremely than other voice types. The synchronisation of vibrato on sustained tones is hypothesized as a reaction to the instruction to 'blend' as a group, and as such may be part of a feedback loop instigated by testing vibrato against this feedback after the initial onset of the note.

As stated in the EMC paradigm (Leman et al., 2018), performance cannot be separated from the constant feedback that performers are subjected to. The Lombard Effect occurs when humans increase their volume in the presence of other sounds in order to better hear themselves (Zollinger & Brumm, 2011). This effect is present in ensemble singing, with singers increasing their own volume to match that of their reflective source, however this effect is able to be consciously counteracted with instruction (Tonkinson, 1994). Having the ability to change your volume enables singers to take active control over their self-other ratio according to their preference in ensemble situations.

Of greater importance to ensemble singing, however, is Self-to-Other Ratio (SOR) (Ternström, 1994), a factor that plays a significant part in the preference of choral formation by singers. SOR determines the level of your own voice (feedback) and that of the rest of the choir (reference) (ibid.). By labelling one's own voice as feedback, to be judged in reference to the rest of the choir, Ternström both acknowledges the phenomenon of bone conduction as part of the sensation of singing (Won & Berger, 2005), and also aligns with the EMC paradigm above.

Perceptions of a singers' own voice in relation to others' can vary greatly depending on the acoustic environment in which a singer finds themselves. To this end, *'in a very real sense, the choral rehearsal room is as much a part of the 'instrument''* (Kramme, 1978, p.5) with the confidence of

amateur ensemble singers being impacted by changes to room acoustic between performance and rehearsal venues (M. Bonshor, 2017b).

Singers tend to have a narrow band of personal preference for SOR, but these preferences vary greatly between singers (Ternström, 1999). Singers prefer to hear their own voice as the greater part of the feedback, with at least a 6dB difference recorded as a preference. While there is an individual preference, in real world singing this factor depends on proximity to those singing around you, and the individual singer has little agency over this decision. This becomes especially true in operatic chorus singing, where staging is dictated by a theatrical director. In this scenario, SOR depended heavily on choir formation, but also favoured the self, with the orchestra and other ensemble members sounding distant (Ternström et al., 2005).

In choral ensemble, formation is generally determined by the conductor, again with singers having little agency over their preference for singing partner or self-to-other ratio. Many conducting pedagogy texts speak of 'voice matching', with seating plans in ensembles designed specifically to place voices with similar timbres in an optimal position in order to provide as sympathetic a reference as possible for each individual singer. This technique is not new, and is prevalent in the United States as a major conductor intervention (Lambson, 1961).

Chorister preferences for singing partners and formations have been the subject of much research. In his 2003 study, Daugherty studied a university chamber choir, and investigated both singer and auditor preferences for spaces. He found that upper voices (Soprano and Alto) prefer a larger degree of spacing than their lower voiced colleagues, and that all participants preferred a greater distance from other singers than a 'close' formation. Also, auditor preferences showed that random sectional positioning with a spread spacing posed no significant difference from positioning that had been determined by conductor-centric didactic models of acoustic placement. Daugherty argues that by treating each voice as an equal 'unit' within a section, the idiographic nature of the voice, and the unique acoustic make up of each group is negated in favour of a 'schema' for ensemble

placement. While this is the case for proto-professional singers (albeit outwith a conservatoire environment), amateur ensemble singers prefer a larger reference from those singers around them, facilitated through a closer spacing between singers (M. Bonshor, 2017b). This difference may be due to the fact that amateur singers feel more secure with a 'leadership' role [2.2.1] more prominently than professionals who it could be assumed have more advanced musicianship skills.

## ***2.5 Community in the Choral Rehearsal***

Recent research in community singing has focused on the health benefits of singing together; increased respiratory function (Ksinopoulou et al., 2016), cardio-vascular function (Vickhoff et al., 2013), lowered blood pressure (Valentine & Evans, 2001), and the release of hormones such as oxytocin (Grape et al., 2003). These physical benefits of singing are part of the attraction to amateur music making, along with the social bonds created through ensemble singing.

While these physical benefits relate to individual singers, singing collectively can also impact positively on psychological well-being (Clift et al., 2010). While many studies concentrate on singing as the primary function of this activity, Lonsdale and Day (2021) investigated both musical and community benefits of six different activities using a Self Determination Framework (Deci & Ryan, 2008). This framework poses three basic psychological needs; autonomy, competence, and relatedness. Lonsdale and Day found that choral singing was no more likely to accomplish basic needs satisfaction of the three domains, but that the level to which each need is met is different between groups. While perceptions of competence remained the same across singing, instrumental music, and both solo and team sport, levels of relatedness and autonomy fluctuated. In ensemble music, levels of relatedness increased with a decline in autonomy, perhaps unsurprisingly as the aspiration of group singing may involve some loss of your autonomy over the direction of the group (Stewart & Lonsdale, 2016). The increase in relatedness could suggest that the group activity, and community within a choral ensemble is one of the major benefits of ensemble singing.

### **2.5.1 Familiarity**

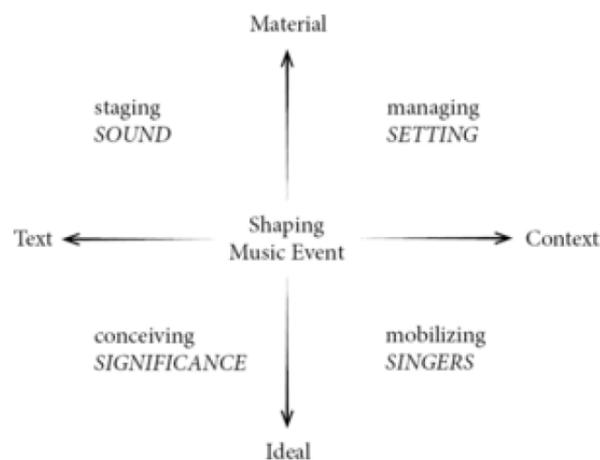
In their 2018 study, Bullack et al. (Bullack et al., 2018) investigated perceived social connectedness in two groups of amateur choristers. In group one, half were asked to sing together for thirty minutes, and the other half did not sing. In group two, half were asked to sing for sixty minutes, and the other half did not sing. While biomarker indicators showed no significant change between groups, perceptions of social connectedness were far higher in the groups that were singing for 60 minutes. This suggests that length of singing activity has an impact upon the perceptions of social connectedness within choirs.

Most musical activity in professional ensembles can be classed as 'rehearsal' rather than 'performance', even in contexts with high repertoire turnover such as cathedral choirs. The extended rehearsal periods associated with professional performance could therefore be indicative of higher perceptions of social connectedness with performers in the group. Ensemble performance requires precise coordination of the production of sound, and familiarity with co-performers can greatly impact this coordination. Ragert et al. (2013) investigated familiarity of co-performers part and playing style in professional piano duos. They found that while larger time scale gestures (such as phrases) had greater synchronicity with foreknowledge of the individual's part, there was no additional improvement in this synchronicity over rehearsal time. However, short term keystroke coordination was greatly improved through knowledge of the co-performers playing style. The authors suggest that without foreknowledge of a co-performers playing style, a performer is likely to predict expressive timing based on their own performance styles. With the added layer of complexity of vowel and consonant articulation, it can be expected that this familiarity will become an even greater factor in vocal ensemble synchronicity.

While familiarity can be seen to affect performance synchronicity, it can also impact on the social dynamics of the rehearsal room. Ginsborg and King (2012) investigated amateur and professional singer-pianist duos in both familiar and unfamiliar pairings. They found that there was a perceived

hierarchy in musical expertise, with the professionals more likely to give spoken direction to amateurs. This contrasts to their observations that professional duos spent more time singing and playing than talking regardless of familiarity. This could suggest that much of the information needed for successful performance can be elicited through expert listening to musical performance, rather than through spoken instruction.

In professional ensembles, there are often clear leadership structures in place, with the conductor or director of the group having ultimate responsibility over the artistic choices and rehearsal pacing. Jansson (2015), in a similar vein to this thesis, discusses choral leadership with a particular emphasis on the phenomenology of this as it relates to the singers themselves. In interrogating choral conducting by investigating perceptions of professional and semi-professional ensemble singers in



**Figure 1 – The legitimacy model of the five dimensions of sense-making. Reprinted from *Choral Singers’ perceptions of musical leadership* by D. Jansson, in *The Oxford Handbook of Singing*, 2015, Oxford University Press.**

Norway, three conceptualisations of leadership are proposed. The conductor shapes musical events through five dimensions of sense-making (figure 1, above), these dimensions deal with the tasks of the choral leader, including providing the rehearsal and musical space for the effective facilitation of music making. This facilitation is then enacted through a mastery of the score, the conductor is perceived to be the most expert musician, with expertise in repertoire knowledge, score analysis, language, error detection and more that separate them from the body of the group. However, this

separation is mitigated by the coherence of the conductor as part of the musical performance, with the availability and integrity of the leader figure seen as deeply important to ensemble musicians. Finally, there is the balance of singer needs to conductor wants, termed 'elusive perfection'. This is a constant rebalancing of rehearsal intervention, gestural style, and personal manner based on the needs of the singers in that moment. 'Elusive perfection' as ascribed to conductors, therefore, bears a great deal of resemblance to the constant balancing of individual vocal technique to the collective in ensemble performance.

Dobson & Gaunt (2015) conducted semi structured interviews with professional orchestral players in the UK in order to better understand social dynamics as relates to musical performance. They highlight a '*unidirectional flow of communication from director to orchestra*' (p.38), with an emphasis placed on diplomacy and adaptability within sections, as well as an interdependence of self, balanced against a musical awareness and sensitivity to those around you. This emphasis by professional orchestral musicians on the social and musical interplay within the orchestra (rather than from conductor to orchestra in a didactic manner) is mirrored in this study of proto-professional singers.

Some vocal ensembles do not subscribe to a conductor model. In ensembles such as these, the tasks associated with shaping the musical event are democratically shared between the singers. Lim (2014), in a study of the *Swingle Singers*, suggests that these tasks are divided based on personality traits that exist within the collaborative group dynamic. These traits, such as self-awareness, restraint, interpersonal awareness, and mutual sensitivity not only lend themselves to the leadership and organisation of the group, but are also important traits in the success of the musical experience for the members.

### **2.5.2 Communities of Practice**

Bringing together a group of people through *mutual engagement* in a *joint enterprise* with a *shared repertoire* can give rise to a Community of Practice (Wenger, 1998). Each of these three aspects of the community will be discussed below. A Community of Practice is a shared experience in which a

group *'sustains enough mutual engagement in pursuing an enterprise together to share some significant learning'* (p.86). In the case of ensemble singers, this mutual engagement is in the realisation (and often performance of) notated works with others. Each of the three dimensions of communities of practice will be discussed below.

*Mutual engagement* suggests that the community only exists through the concrete example of *doing* the thing, that a community of practice does not exist in the abstract. Through the experience of the practice with others, each participant is able to *'find a unique place and gain a unique identity, which is both further integrated and further defined in the course of engagement in practice'* (p.76). Crucially in the case of ensemble singing, however, *'homogeneity is neither a requirement for, nor the result of, the development of a community of practice'* (p.76). With many definitions of blend being the homogenisation of individual sound, through interrogating each individual's contribution to a greater practice, a more nuanced view of the phenomenon of choral blend can be established.

*Joint Enterprise* is the *'doing'* of ensemble performance. Those engaged in that practice are negotiating their individual response in real time, and thus creating the collective response whose agency resides in those that create the practice. The mutual accountability as described by Wenger is a hugely important part of ensemble singing, particularly in the context of the identified trait of self-awareness and restraint in professional ensemble settings (Lim, 2014). This community of practice can only be shaped by those within it and never by *'an outside mandate, by a prescription, or by any individual participant'* (p.80) which, again, offers an insight into the role of the conductor within this community. Familiarity is also important in the development of a community of practice in that *'becoming good at something involves developing specialized sensitivities, an aesthetic sense, and refined perceptions that are brought to bear on making judgements about the qualities of a product or an action.'* (p.81). Through a familiarity with the acceptable aesthetic sense of varying different ensembles, a community of practice could be said to exist throughout the UK that is a *'community of*

ensemble practice'. This shared aesthetic idea becomes part of the third component of a community of practice; a shared repertoire.

Wenger coined the term *shared repertoire* to '*emphasize both its rehearsed character and its availability for further engagement in practice*' (p.83). The rehearsed character suggests a familiarity and acceptance of particular frameworks and rules that govern how the individual task will be performed in real time. A development of these repertoires can therefore prove difficult as the mutual acceptance of the rules becomes one of the pre-requisites to accessing this community. However, through mismatched interpretations or interventions, these negotiations must happen 'on the fly'. Through these mismatched ideals and their communal negotiations, the result of these negotiations become the repertoire of a community of practice, which can then be positively affirmed by others.

Other authors have used a Community of Practice Framework in their discussion of particular communities of musical practice. Musical learning communities in Ireland are investigated by Kenny (2014), with each of the three parameters above interrogated in a case study of instrumental tuition, and finding that due to the community of practice evidenced, some of the hierarchical models of master/apprentice tuition were usurped. This could explain Lim's (2014) view of the development of a community of practice within the democratically organised Swingle Singers.

In his 2014 PhD thesis, Bonshor (M. J. Bonshor, 2014) investigated the factors leading to the perception of confidence in amateur choral singers. One of the themes emerging from the interviews and focus groups was codified as 'collaboration within the choral community of practice' (p.264); acknowledging that a community of practice is formed in vocal ensembles as well as highlighting the need for collaboration *among singers* for a successful performance. Bonshor goes on to interrogate the role of the conductor as 'team manager', facilitating the performance of the singers without actively engaging within it. Peer learning, and a sense of cohesion and community among the singing members of the choir are factors in the development of confidence in the amateur choral singer.

The literature reviewed above highlights the need for a singer-centric view of ensembles, as distinct communities of practice that exist not only as ensembles, but also as institutional aesthetic memory. The singing centric view takes in to account the role of conductor as facilitator, but not active participant in the sound world. The inclusion of a conductor as part of a community of practice of ensemble singing, but not as an active agent in the creation of the choral sound raises questions as to where the limits of the community, and indeed, the choral instrument arise. While this raises questions regarding the conductor's role in the creation of a community of practice, and particularly the conductor's responsibility for learning and performance quality, the conductor role of the conductor is not in the purview of this thesis. Utilising a singer-centric method [3.4.5], the community of practice of ensemble singing as experienced by the singers is focus of this thesis, and the co-creation of the choir as part of the joint action of choral singing will be called the Emergent Choral Instrument, which will be discussed in the following section [2.5.2].

## **2.6 Flow State**

Music and musical performance has the ability to affect the emotional state of audiences, particularly live music among groups accustomed to classical music (Theorell & Bojner Horwitz, 2019). This power to move an audience is not limited to the traditional concert hall audience, but also applies to the audience of active participants within the group. The affective properties of flow state, particularly the merging of action and awareness and the transformation of time are discussed below.

### **2.6.1 Flow**

Ensemble singing, particularly in a professional context, can elicit peak experience (intense joy), peak performance (superior functioning) and flow (an intrinsically rewarding experience) (Privette, 1983). Of these three, the state of flow is the manifestation of the experience of the previous two experiences, this can be said to be *optimal experience* (Csikszentmihalyi, 1988). This optimal experience, or flow becomes '*the state in which people are so involved in an activity that nothing else seems to matter; the experience itself is so enjoyable that people will do it even at great cost, for the*

*sake of doing it'* (ibid., p.4). This optimal experience is generated through careful manipulation of an individual's conscious environment, moment by moment, when engaged in a task in which a person's skill is matched to the challenge of the activity. Flow is an inherently enjoyable experience, and the elements that make up the conditions for this state are discussed below.

#### *A Challenging Activity That Requires Skills*

Optimal experiences only appear when certain prerequisites have been fulfilled, when these are met, flow may be achieved. The 'flow channel' is a model that describes optimal experiences as a balance of skill and challenge in a task. Too much skill and too little challenge and the task becomes boring, too much challenge and too little skill and the task seems insurmountable and leads to anxiety. It is important to note, however, that it is the matching of these two domains that helps to elicit flow (Cowley et al., 2019), rather than a very high level of expertise in a task. For example, singers in a choir may be expert singers, but if they struggle in realizing complex scores at sight flow is unlikely to be achieved as the application of skill to task is unbalanced. However, an easy piece of music in which they can concentrate in great depth on the production of tone and ensemble skill may elicit a flow state. In ensemble singing, this setting of goals could be seen to be part of the negotiation in rehearsal that helps to build a community of practice (Wenger, 1998).

#### *The Merging of Action and Awareness*

Rather than a prerequisite of peak performance, this element of enjoyment is a consequence of flow state. This almost universal experience of flow happens when '*people become so involved in what they are doing that the activity becomes spontaneous, almost automatic; they stop being aware of themselves as separate from the actions they are performing*' (Csikszentmihalyi, 1988:53). This absorption in music is a common experience in singing, however a great deal of skill is needed to create autonomous conditions for flow in a singing ensemble – many of which will be discussed in this thesis.

### Clear Goals and Feedback

This feedback must be immediate and constantly evolving for flow state to occur. The constant evaluation of a singer's own sound against the dual benchmarks of the sound of the other choir members, and also the singer and/or conductor's aesthetic evaluation of this sound against the repertoire of aesthetic judgements that belong to that community of practice, provide this feedback to ensemble singers. Goals are set through a silent negotiation of expectations and boundaries, as per the creation of a community of practice.

### Concentration on the Task at Hand

Along with the transformation of time, the ability to forget all other concerns during a flow state is one of the most oft cited examples of this state. The concentration that is required for flow, along with the autonomous nature of decision making processes, lead to the enjoyable condition of '*psychic negentropy*' or moving consciousness in to a position away from normality. Psychic negentropy refers to mental states of positive emotion, such as joy, happiness and occurs when your state of mind doesn't change as the task upon which you are concentrating is congruous with goals that you have previously set yourself (Csikszentmihalyi, 1992).

### The Paradox of Control

Flow is a heightened state which is associated with situations that are distinct from ordinary life. Flow can be described as '*involving a sense of control- or, more precisely, as lacking the sense of worry about losing control that is typical in many situations of normal life*' (p.60). Flow is therefore describing the possibility rather than the actuality of control, in that through the merging of action and awareness control over the task is essentially autonomous from consciousness. However, in this freedom of *psychic negentropy*, control over the task is still achieved.

### *The Loss of Self-Consciousness*

Becoming so engrossed in an activity that there is an all-consuming concentration on the task at hand, with everyday concerns not impacting upon the task can lead to the loss of our conscious thoughts regarding our sense of self. *'The loss of the sense of a self separate from the world around it is sometimes accompanied by a feeling of union with the environment'* (p.63). In an ensemble context, this union with the environment, and loss of ego and self-consciousness, can be both a pre-requisite of optimal experience and also a manifestation of this. The feeling of union with the environment leads to an emergent choral instrument and is discussed below [2.5.2]. It is important to note that this is not a passive 'going with the flow', optimal experience has an active role for the self, managing the clear goals and feedback that are important to elicit this state. Flow is not a loss of self, or a loss of consciousness, but a loss of consciousness *of* the self, which was coded in the analysis sections of this thesis as 'subjugation of ego'.

### *The Transformation of Time*

This is the most self-evident of the elements of enjoyment, and both the most easily recognised and hardest to describe. The phenomenological perception of time passing is altered when in flow state, minutes can seem both like seconds and like hours. A particularly pleasing performance of a phrase of a piece can elongate in the memory. And rehearsals in which flow is achieved can seemingly be over all too soon.

Music Performance Anxiety (MPA) can be seen as antithetical to flow state (Kirchner et al., 2008). As flow state relies on a matching of challenge and skill, skill can be seen as an arbiter of the balance between MPA and flow state. In a study of music students in a university in the American Midwest, Fullagar et al. (2013) tracked the relationship between challenge and skill as students prepared repertoire for a recital exam. Here they found evidence that flow and performance anxiety are mutually exclusive phenomena, but also that when the perceived skill of a performer was high, but

the challenge low, MPA could still manifest itself. This task-specific anxiety could be related to a need to always be 'looking deeper' into a piece of music in order to create a more artistically fulfilling performance.

In an investigation of 202 professional orchestral musicians in Israel, Cohen and Bodner (2019) also found these professional musicians regularly experience flow, and that MPA is an inhibitor to this state. When looking further in to the contextual and background variables of this study (Cohen & Bodner, 2021), they found that MPA was less prevalent amongst older members of the orchestra, and flow was more likely to occur in section principals rather than tutti players. In an environment of proto-professional singers, as in this study, how leadership roles and anxiety are discussed in terms of peak ensemble experience is a relevant continuation of this research.

### **2.6.2 Group Flow**

Flow as described above is an individual autotelic experience, it is a self-contained activity that expects no future reward, but is achieved for the sake of itself. It is also an inherently individual process. However, ensemble singing is by necessity a collaborative process, and requires the participation of others to achieve any experience, optimal or not. It may be assumed, therefore, that it is not possible to achieve flow through these conditions. However, we know this is untrue from experiences of ensemble singing, and from participants responses to this thesis. The terms 'group flow' and 'Emergent Choral Instrument' are therefore used to describe how the individual perceives and experiences this collective phenomenon (K. Sawyer, 2007).

In two experiments designed to look at individual flow and group flow, Walker (2010) determined that not only is social flow more enjoyable, but the more interconnected the activity, the more joy was associated with flow state. This could go some way to explain Ternström's chorus effect (Ternström, 1991) and its enjoyable perception from within the choir.

Bringing individuals to a particular community of practice leads to the development of a sense of group efficacy. Efficacy can be described as a belief in one's ability to cope with a particular situation, with belief in ability being a better predictor of behaviour toward unfamiliar environments than previous performance (Bandura, 1977 p.211). Bandura states that there are four sources of information regarding self-efficacy [Fig.2], with experiences of each of these sources more likely to

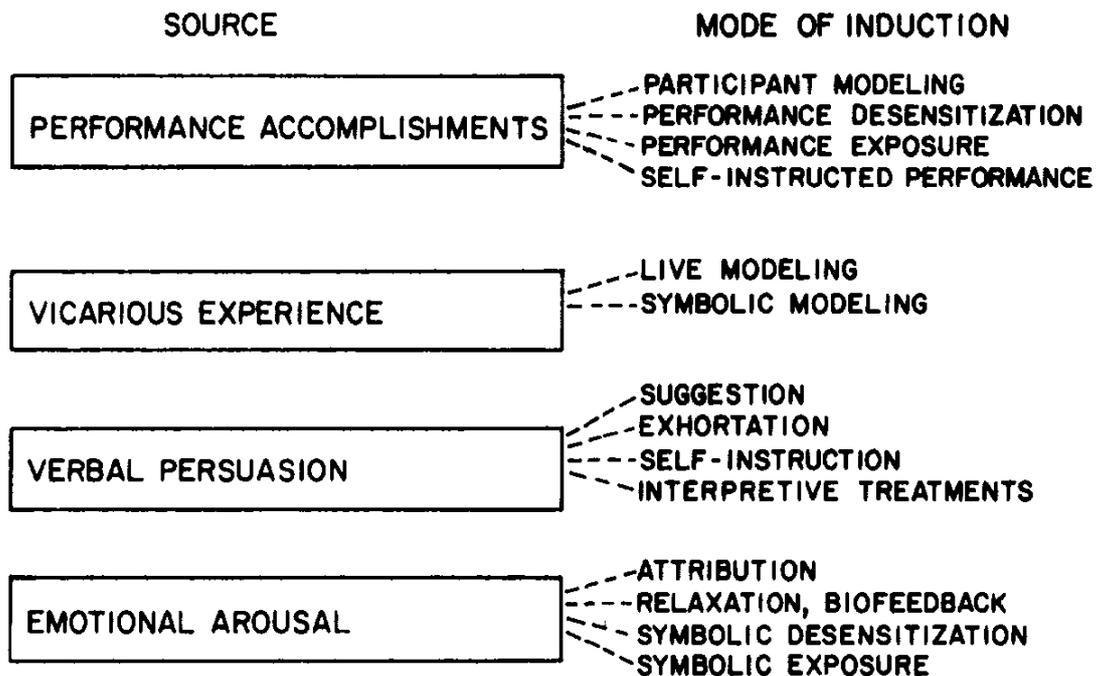


Figure 2: Major sources of efficacy information and the principal sources through which different modes of treatment operate (Bandura, 1977 p.195).

increase a sense of self-efficacy and therefore lead to more successful outcome expectations. Performance accomplishments are of particular relevance to this thesis, given that Bandura discusses these in terms of '*personal mastery experiences*' (ibid.). Proto-professional singers will display high self-efficacy, having auditioned successfully to be part of a conservatoire, and with a mastery of the voice. However, in particular situations, such as using the voice in ensemble singing with a new ensemble, there has yet to be any experience, (vicarious or otherwise) for performers to model their behaviour on, which could lead to a loss of self-efficacy until behaviour by other participants has been modelled sufficiently for singers to then feel they have a mastery of the situation. This chimes with

community of practice frameworks in which a shared repertoire and joint action must be established before a community can form [[see 2.4.2](#)]

Similarly, group efficacy rests on a belief that the group as a whole are able to complete a task, group efficacy relies on whole group collaboration (not unlike the development of a community of practice [[2.4.2](#)]) and is not simply a 'sum of its parts' in the addition of individual beliefs as to success. Given that the locus of this perceived collective agency resides with the individual ([Bandura, 2000 p.76](#)), there is an emergent nature to group belief which, in turn, ties to a discussion of flow state [[2.5.1](#)] and peak group performance which will be discussed below.

While an individual may only experience flow when their challenge meets their skills, group flow can be achieved in groups that believe the *whole group* will do well (Salanova & Rodríguez-Sánchez, 2014). This can therefore mean that while an individual may not be experiencing individual flow, they may still be experiencing optimal group performance. Groups with a high degree of efficacy beliefs will be more likely to achieve this state, leading again to question the role of the conductor in facilitating these efficacy beliefs in groups of any level to help them achieve optimal performance.

Individual flow has individual conditions that are antecedent to optimal experience, and the same can be said of group flow. Sawyer (2007) worked with over 300 jazz musicians in improvisation based ensembles investigating group flow, and the causes and experiences of this phenomenon. He suggests ten conditions for group flow:

- The group's goal
  - This is to ensure that goals are process rather than performance orientated. Also that the natural progress of the work of the group becomes the goal, and not any external objective.

- Close Listening
  - Where your response is an unplanned reaction to that feedback which you hear from others.
- Complete Concentration
  - Being able to draw a boundary between the activity and 'real life', such as the inherent boundary created by the performance of a piece of music.
- Being in Control
  - Having the agency over your own actions, and not having your autonomy removed is a prerequisite for group flow. Again, this has particular significance for the role of the conductor within ensemble works.
- Blending Egos
  - Particularly in music making, participants cannot be concerned with receiving accolades for their own work over the achievements of the collective.
- Equal Participation
  - Linked to the point above, group flow is more likely to happen when everyone pulls an equal weight, but also when no individual dominates the group effort.
- Familiarity
  - Familiarity is an important part of the group dynamic, not only in building a community of practice, but also in developing a knowledge of the likely behaviour and responses of other musicians.
- Communication
  - This needn't be spoken conversation but can be gestural communication or artistic communication of intention within a phrase. Ensuring that the individual is cognisant of others, and willing to share their intentions lead to both familiarity and a merging of egos.
- Keeping It Moving Forward

- This component is a somewhat inherent component of musical performance. Not dwelling or becoming stuck on mistakes within the music can help to build a community and achieve group flow.
- The Potential for Failure
  - This goes some way to explain why flow is more likely to occur in performance than rehearsal, having one opportunity to give a rendering of the music in the manner that was rehearsed gives this potential for failure.

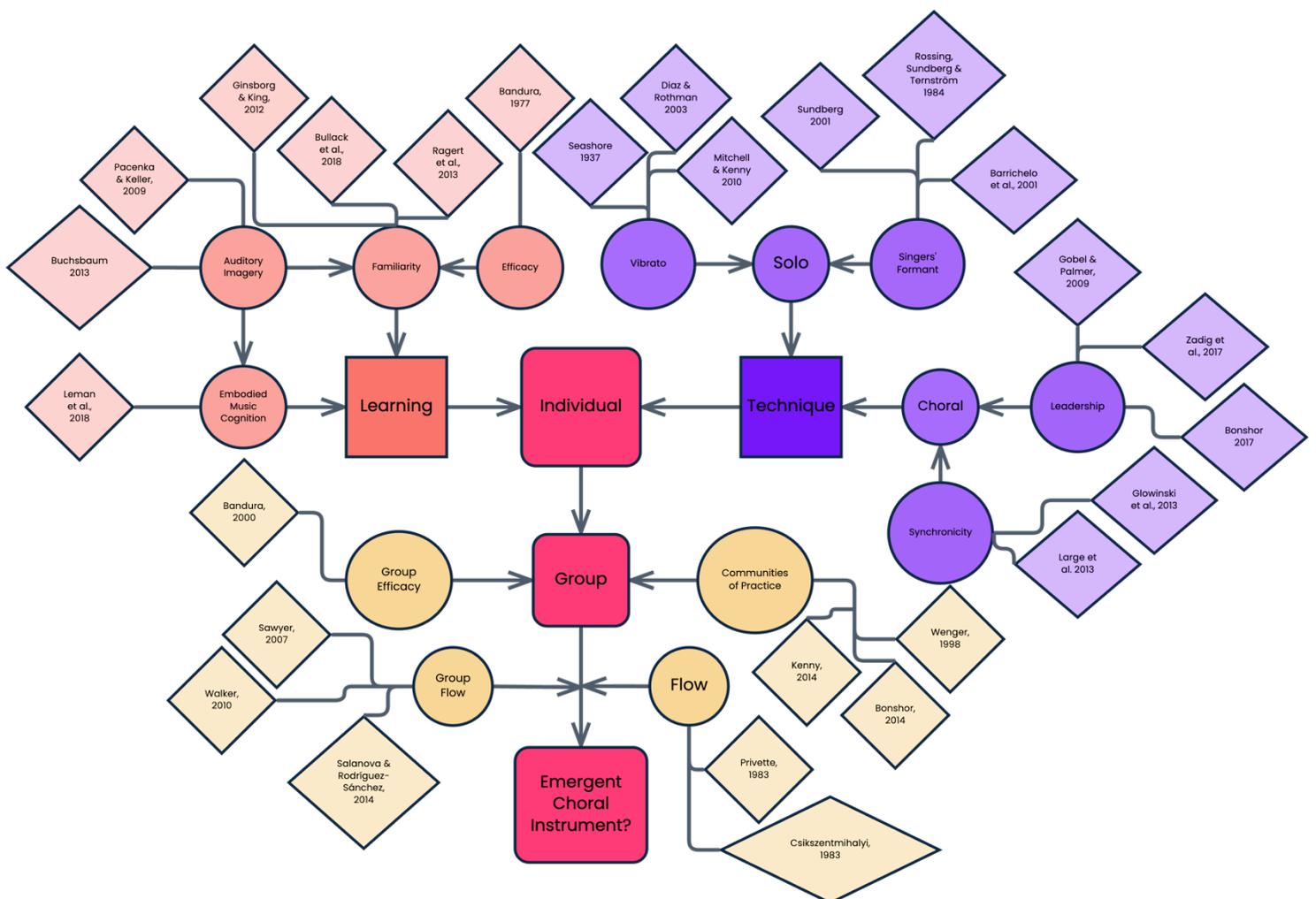
Sawyer also argues that group flow is an inherently creative and improvisational process. That as part of the feedback inherent in a group process, an individual's response to these stimuli is an improvised, creative reaction to the situation. This may lead to group flow as an emergent property of the group (Sawyer, 2006). Emergent social phenomena are complex and difficult to predict. However, they are also now seen as constructed by the individual agents involved in their maintenance (Berry et al., 2002). This concept of an Emergent Choral Instrument, an emergent property of group flow, is used throughout this thesis to describe the theme 'new choral instrument' and will be discussed in detail in [Chapter 6](#).

## **2.7 Summary**

In situating this paper within literature surrounding ensemble singing, many related threads have been explored, with theories contextualising the central research question drawn from fields as diverse as acoustics, education, psychology, and sociology. In investigating the question '*how do proto-professional singers experience the sensation of choral blend?*', two broad themes emerged. Firstly, the idea of 'choral blend'; including definitions of this sensation, how other musical ensembles create synchronicity and collective musical ideas within both rehearsal and performance. This concentrated on research concerned with 'doing' singing, or as was discussed blend the verb [[p.16](#)]. Secondly, the contextualisation of a proto-professional singers *experience*, which highlighted group dynamics and social cohesion required in the complex environment of live music making. It is clear

from the literature above that blend as a noun is much more than the ‘sum of the parts’ of signers performing together and thus will form the focus of the investigation.

Throughout this chapter, there has been a shift from the individual responsibilities surrounding blend in discussions of synchronicity and the embodiment of interventions [2.3] in singers’ own improvement (the increase of self-efficacy through performance accomplishments [fig.2]) through to working with others, how vibrato and vowels work with others, particularly regarding how and where choral formation impacts on perceptions of a singers expertise [2.4]. This then moves on from a group of people working together, to the choir as a whole and the theories such as group flow that suggest some form of emergent property of this experience [2.6], this journey is illustrated in the diagram below [Fig iii].



**Figure 3: An illustration of themes of literature surrounding choral research, and how these themes then led to an investigation into a choral instrument.**

In order to interrogate *'how do proto-professional singers experience the sensation of choral blend?'* by situating this question within the literature, certain overlaps in theories became apparent. Particularly in understanding the psychological frameworks at play in communities of people who share a goal, many theories seemed to overlap in a choral context, with an investigation into ensemble singers' experience as a nexus of these theories suitable for investigation. This is illustrated through Figure iv, below.

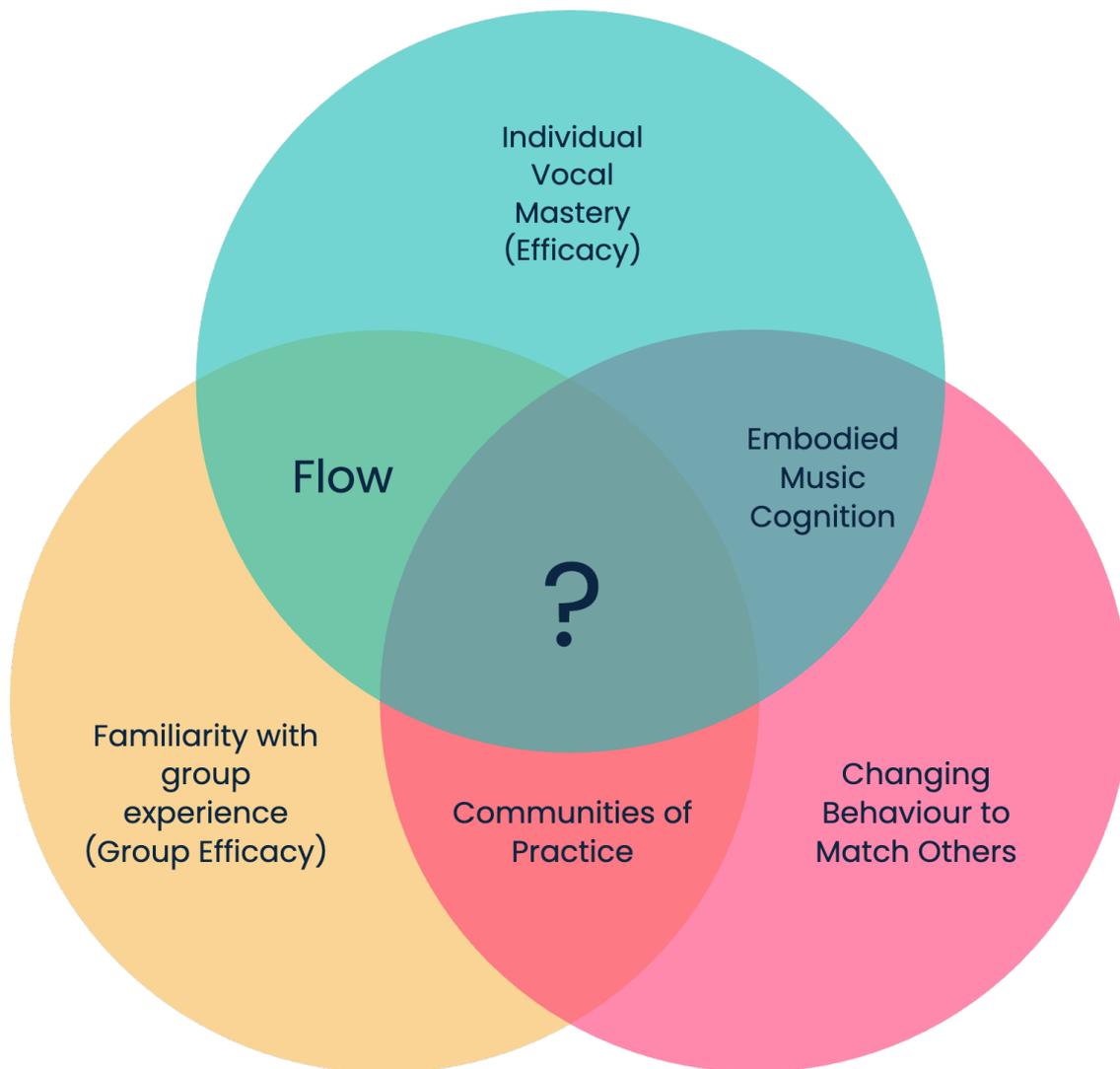


Figure 4: A Venn diagram showing the overlapping theories covered in Chapter 2, with this thesis lying at the nexus of these theories.

Flow requires a balancing of challenge and skill, and a degree of self-efficacy. As was discussed by Sawyer (2007), group flow requires a state of group-efficacy. Familiarity with group experience was shown to be an important factor in the success of musical phrases [see 2.5.1].

Individual vocal mastery was discussed in terms of the presence of vibrato and the singers' formant in section 2.4, in which the presence of these vocal qualities were seen as a mark of expert vocal performance. Changing behaviour to match others, such as through a change of Self-Other Ratio, as well as vibrato rate / extent, and use of the singers' formant was also discussed in this section. In learning how these interventions work in both solo and choral techniques, the Embodied Music Cognition [see 2.3.2] paradigm postulates the use of auditory imagery and expectancies in particular scenarios. Both group and individual efficacy in these images and expectancies also form part of the skill required for ensemble singing.

It is not just vocal behaviours that change in group scenarios, but also behavioural changes in order to create a joint repertoire of interactions that can then form a community of practice. In changing these behaviours, and believing that others in the group will follow these social and musical norms, then a community of practice can be formed in order to engage in the joint action of ensemble music making [see 2.5.2].

The intersection of each of these theories lead to the idea of some emergent property of the singing group during performance. In an investigation into the phenomenon of choral blend, and the sensations that are associated with this feeling, drawing on these theories could bring us closer to an understanding of the phenomenon of blend. The following chapters detail how this thesis investigated the phenomenon of blend, in order to better understand '*how proto-professional singers experience the sensation of choral blend*'.

## **3. Methodology**

### **3.1 Background**

The following chapter seeks to explore the ontological and methodological framework underpinning this investigation through a discussion of philosophical constructs, and a description of the processes used in this thesis. It will provide an understanding of the processes through which the themes in the subsequent discussion chapters were elicited.

This thesis is firmly and unequivocally an investigation into the phenomenon of choral blend in an attempt to move towards a more thorough understanding of this term for all users. The degree to which a performance can be deemed to be 'well blended' is not only a subjective aesthetic opinion of audience members and conductors, but also a technique of singing associated with ensemble contexts. Blend can also be reported as a physical feeling of the ensemble sound, the feeling that a singer experiences inside this emergent choral instrument.

While the phenomenon of choral blend has been investigated in qualitative terms, authors of papers dealing with the acoustics and perceptual qualities of blend admit an experiential element to the phenomenon (Ternström, 1991). In an attempt to qualify blend as an acoustic phenomenon, the task has fallen to researchers to attempt to control for the myriad variables involved in a complex sonic landscape. These attempts often then remove the investigation from a naturalistic setting, with data gathering occurring in laboratories or anechoic chambers (Ford, 2003; Freiheit, 2010; Kato & Ando, 2002). These unnatural singing environments, meant to control variables, impact upon the major variable of ensemble singing, the singers themselves.

This thesis challenges these variables by not attempting to control them, but uses a qualitative methodology to investigate this felt phenomenon of singing within a group of singers. This singing-centric view of choral blend, particularly among elite singers in training, offers a unique contribution to the literature surrounding blend.

In wishing to qualitatively explore the phenomenon of choral blend, a range of approaches could be taken. Many choral directors write of their 'methods' of achieving choral blend (Johnson, 1978), which could suggest an attempt to develop a schema of blend. While there may be scope for an investigation that seeks to develop a theory or schema of blend, this misses the fundamental purpose of this investigation into the felt phenomenon of blend.

Inductive methodologies such as Grounded Theory (Bryant & Charmaz, 2007) and Thematic Analysis (Braun & Clarke, 2006) could be used as methods to develop a framework of blend. Data gathering methods such as questionnaires and larger data sets than employed in this study would be appropriate with either of these methods. Grounded Theory aims to build theory from carefully collected data acknowledging that *'theory based on data can usually not be completely refuted by more data or replaced by another theory'* (Glaser and Strauss, 1967 p.4). The primary tool of building this theory is through comparative analysis of data sets, in order to inductively determine evidence of a theory from primary data. As described above, there are so many human factors that interact with an ensemble singer in order to create the felt phenomenon of blend, that accounting for the individual nature of this sensation and phenomenon in the rehearsal room would prove challenging. Added to these challenges the past experiences and tuition of each singer, their own understanding of their voice, and their individual vocal techniques in ensemble singing, a directly comparative method may lose the idiographic qualities of this shared experience. As each singer has an individual approach to their singing of ensemble music, a theory of blend (no matter how specific) based on a comparison of inductive data was ruled out as suitable for this study.

By investigating how this ubiquitous sensation manifests in singers, other phenomenological methodologies that require less prescriptive conclusions are better suited to this thesis. Interpretative Phenomenological Analysis and Thematic Analysis share many steps in method after data has been gathered. A close reading of the text, followed by gradual organising of this interview data into themes is common between IPA and Thematic Analysis (Braun and Clarke, 2006 p.87).

However, Thematic Analysis is versatile in its approach and can be used in both Inductive and Deductive analysis and is also not concerned with how interview data is gathered. To this end Thematic Analysis, in asking questions during the coding of the data, does not concentrate upon the phenomenon of choral experience and the idiographic, singer-centric investigation required by this thesis. In following an IPA methodology, the techniques of interview and data analysis can robustly be shown to be an investigation into the sensation of choral blend. This phenomenological view of the important term 'blend' for choral practitioners is yet to be explored in the field of choral music, particularly in a UK (and specifically Conservatoire) context.

Interpretative Phenomenological Analysis (IPA) has been chosen as the methodology for this study due to its highly reflexive and idiographic approach. The philosophical underpinnings of IPA and specific reasons for choice in this investigation are discussed in the following sections.

### ***3.2 Interpretative Phenomenological Analysis***

Having first appeared in a publication by Jonathan Smith in *Psychology and Health* (1996), IPA is now a well-established method of psychological analysis rooted in the meaning making of participants' lived experiences, without assuming the nature of the phenomenon. The method is phenomenological in that it deals with how participants make sense of their experiences in and of the world, concentrating on the experience as defined by participants. It is interpretive as it "*recognises that access to experience is always dependent on what participants tell us about that experience, and that the researcher then needs to interpret that account from the participant in order to understand their experience*" (Smith et al., 2009 p.3). IPA is further analytical by the iterative process of the method.

The suitability of phenomenological approaches in the discussion of a singing-centric investigation of choral blend is supported by the work of Holmes and Holmes (2012). The use of quantitative measures through both acoustic and psychological methodologies in previous literature (Aspaas et al., 2004, 2004; Atkinson, 2006; Basinger, 2006; Bele, 2005) privileges the idea of 'truth' as a purely quantitative phenomenon. Phenomenology recognises however, that '*natural knowledge begins with*

*experience (Erfahrung) and remains within experience'* (Husserl, 1931). The use of Experiential Realism, and similar phenomenological philosophies, allows us to redefine this truth *'in other words, the world cannot be fully understood without considering the role of perception within it'* (Holmes & Holmes, 2012).

This thesis investigates how singers perceive and discuss that most temporal of experiences, the act of group singing, and its impact on the life-world of each participant.

*Sciences of experience are sciences of "fact". The acts of cognition which underlie our experiencing posit the Real in individual form, posit it as having spatio-temporal existence, as something existing in this time-spot, having this particular duration of its own and a real content which in its essence could just as well have been present in any other time spot... (Husserl, 1931, p.10)*

Each ontological component of IPA; phenomenology, hermeneutics, and ideography are discussed below.

### **3.2.1 Phenomenology**

Phenomenology is a philosophical approach to the study of experience. Evolving from Kant's critical philosophy, phenomenology begins with Husserl's systematic study of the 'essential' content of our experiences. Husserl's seminal work *Ideas* (1931) is a systematic exploration of his thoughts on phenomenology, as well as the introduction of a phenomenological method of reductions. These two reductions, eidetic reduction and transcendental reduction are part of his phenomenological method which aims to study on the *'non-arbitrary contributions that we, the experiencers, make in constituting our experience'* (Käufer & Chemero, 2015 p.32).

In the transcendental reduction, Husserl asks the researcher to 'bracket' the natural world, allowing physical objects to be suspended from the perception of the individual. This is in order to then allow the experience of interacting with these objects to become the subject of investigation. Objects (or experiences) have no consequence without the act of experiencing these objects.

Bracketing is the process of the researcher being aware of their own perspectives, pre-existing thoughts and beliefs, and any developing hypotheses (Starks & Trinidad, 2007). This self-reflective process is used by researchers during data gathering and analysis as a way to ensure that data gathered is analysed with as open a mind as possible. In this thesis, this process was achieved by keeping a separate journal of thoughts that linked to my own practice during the analysis phase [see [3.6](#) for more details].

While the experience of the everyday world is at the heart of Husserl's phenomenology, the contexts in which we experience objects change, thereby giving rise to the eidetic reduction. The general features of an object are labelled 'essences' or *eidōs* by Husserl, these general constituting features of an object then form the basis of phenomenological investigation.

Through these two reductions, we can explore the interaction of particular qualities of an object or experience and focus on the creation of meaning of this event in the life of the individual being investigated. The experiences of ensemble singing are complicated and context specific. By applying these methods through the use of IPA, we are able to investigate the experience of this phenomenon as it is understood in the consciousness of participants.

In the context of this thesis, the experience being investigated extends to every occurrence of ensemble singing that the participants have engaged in up to the time of the study.

*Instead of philosophizing and psychologizing about geometrical thought and intuition from an outside standpoint, we should enter vitally into these activities, and though direct analyses determine their immanent meaning. (Husserl, 1931 p.45)*

In order to understand an experience, we need to develop reflective skills in order to effectively study the human element of that event acting upon the individual. The major difference between phenomenological approaches and those of other psychological methods is the framing of investigation as specific to the individual(s) and experience(s) being studied, rather than looking at the experience and then applying this to the individual.

Research inherently looks to establish knowledge, or truth. Phenomenological approaches believe that there is no empirical truth, or fact, separate from the human experiencing that fact. Therefore, it is impossible to establish 'facts' for an individual without looking at the experience itself. In aiming to create a phenomenological method which is rigorous, Husserl argues that *'to the empiricist genuine science and the science of experience mean just the same thing'* (1931 p.35).

It is acknowledged by Husserl that we, as investigators of experience, are intrinsically part of that experience. However, we must *'lay aside all prejudices alien to their [the facts] nature'* (Husserl, 1931 p.35). When a researcher is immersed in a culture that is similar to those being researched, these preconceptions and opinions must be 'bracketed out' of the analysis of this world in order to concentrate more acutely on the world as perceived by the participant.

*At the phenomenological standpoint, acting on lines of general principle, we tie up the performance of all such cogitative theses, i.e., we "place in brackets" what has been carried out, "we do not associate these theses" with our new inquiries; instead of living in them and carrying them out, we carry out acts of reflexion directed towards them, and these we apprehend as the absolute Being which they are. We now live entirely in such acts of the second level, whose datum is the infinite field of absolute experiences- the basic field of Phenomenology (Husserl, 1931 p.97).*

This 'bracketing' of experience and preconception is a methodological point which relies upon the acts of reflexion (the analysis of the experience according to another participant).

The meaning making of participants through semi-structured or free interview techniques allows the elicitation of this evidence of the phenomenon through the stream of experience of a participant and is the core data gathering method of IPA. The gathering of evidence, however, is not the only part of the reflective process associated with phenomenology.

*Reflexion is also the title for types of experience which belong essentially together, and therefore the theme of a leading chapter of phenomenology, whose function it is to distinguish the different "reflexions" and to analyse them completely in systematic order. (ibid., p.152)*

The systematic and iterative process of IPA bases the analysis of reflection upon the evidence gathered from individuals. Having bracketed out the preconceptions of the researcher in this initial phase of reflection on experience, it is then up to the researcher to reflect upon this reflection, creating the double hermeneutic circle upon which IPA is based (Smith et al., 2009 p.27).

Heidegger's Existential Phenomenology is also a key ontological component of IPA. In *Being and Time* (Heidegger, 1927), Heidegger sets out his theory of *Dasein*, or being-in-the-world-ness, perhaps more easily understood as person-in-context. While in Husserl's transcendental reduction we firstly bracket the objects, Heidegger states that humans are thrown in to a world of objects, and that our experiencing of them is an inextricable part of our relatedness to the world (Smith et al., 2009). Heidegger's *dasein* is used in IPA to acknowledge that participants' life worlds are part of their experience and cannot be meaningfully detached from it. Through this acknowledgement and investigating an individual's reflexive meaning making of an experience, this *dasein* can be investigated as part of intersubjectivity, the shared relational understanding of an event from different perspectives.

It is not the aim of this study to focus specifically on one single aspect of blend, but rather upon the lived understanding of that term to participants. Merleau-Ponty (1945) argues that the quality of a sensation is part of a larger picture, which must include the bringing into consciousness of the sensation. Therefore, by allowing participants to experience this phenomenon through the research intervention, they are bringing the 'object' to mind through experience as part of this study.

*Red and green are not sensations, they are the sensibles, and quality is not an element of consciousness, but a property of the object. Rather than providing a simple means of delimiting sensations, the quality, if we consider it in the very experience in which it is revealed, is just as rich and obscure as the object or as the entire perceptual spectacle (Merleau-Ponty, 1945 p.5).*

IPA's data gathering method consists of semi-structured interviews in which the participant is guided through a flexible interview schedule by the interviewer as '*the participant is the experiential*

*expert on the topic in hand'* (Smith et al., 2009 p.58). The use of interviews in which '*both interviewer and interviewee are active participants within the research process'* (ibid., p.58) allows for a rich, if one sided, interview transcript.

The use of language, and its analysis, is a major cornerstone of the IPA methodology. Language as a means of describing a phenomenon is not only a major part of vocal training (Cornelius, 1982), but also an aspect of the elucidation of experience through phenomenological methods.

Merleau-Ponty (1945) argues that language cannot be understood as between individuals, as the meaning making of the somatic knowledge of language is an individual occurrence. Therefore, in the investigation of an individual's language, and the way in which they use this tool to describe their understanding of a sensation, language itself can be part of the experience for participants. Through using particular language, this is able to evoke a memory from the participants' particular life world. In the analysis of this language, a new interpretative meaning can be found in the experience, with the researcher bringing their own understanding to this analysis and forming the hermeneutic circle described below.

### **3.2.2 Hermeneutics**

Hermeneutics is the theory of interpretation. Originally concerned with the interpretation of biblical and other written texts, the work of Heidegger (1927) and his Hermeneutical Phenomenology provide an ontological framework upon which IPA bases the interpretation and analysis of participant experience gathered through interview data.

In order to provide data in which the interpretation can focus on the 'thing itself', IPA interviews are collaborative events, in which the participant is the experiential expert on the topic that is being investigated. Due to this, the interpretation of the individual being interviewed becomes a first order interpretation, with the researcher then interpreting this, creating a second order interpretation.

Ricoeur (1974) describes two ways to look at hermeneutics, that of a *Hermeneutics of Empathy*, and that of *Suspicion*. A *Hermeneutics of Empathy* attempts to recreate an experience in its own terms, to be examined as though new. Whereas a *Hermeneutics of Suspicion* looks from the 'outside – in' in approaching an experience with a preconceived philosophical schema. In IPA, Smith, Flowers, and Larkin (2009) propose a middle course in which a hermeneutical 'questioning' allows for a researcher to stand in the shoes of someone who has a particular experience. This is accomplished through an empathetic interview technique, in which participants are in charge of their narrative journey, followed by a questioning of this interpretation.

In looking at the interpretation of data, IPA uses some key methodological principles; going back to the thing itself, bracketing, and fore-structure. One of the major concerns of IPA researchers is in ensuring that the preconceptions which we hold for a particular phenomenon do not influence our interpretation of the participant data. In order to ensure this, we bracket out our own preconceptions and life world.

*It shows that an enigma lies a priori in every relation and being toward beings as beings. The fact that we live already in an understanding of Being and that the meaning of Being is at the same time shrouded in darkness proves the fundamental necessity of recovering the question of the meaning of 'Being'. (Heidegger, 1927)*

To be able to interpret interview data gathered through IPA, we have certain assumptions (we live in an understanding of Being (dasein)) such as through a shared language, culture, or in certain cases experience. However, the darkness that we are looking to illuminate through an IPA study is predicated on the lack of awareness of the researcher, whereas this information will be manifest and plain to the participant. Therefore, we need to allow the individual participant the opportunity to shine a light (through their own understanding) on their phenomenological experience through their own language and experience.

*Every questioning is a seeking. Every seeking takes its direction beforehand from what is sought. Questioning is a knowing search for beings in their thatness and whatness. (ibid., p.10)*

A question of Hermeneutic Phenomenology is interlinked with the identity and oneness of the individual being investigated. Asking the individual to interpret their meanings, and not therefore leading questioning through an interview schedule is a primary methodological standpoint for IPA.

If we are to bracket our own phenomenological existence, then the researcher's task is to make their own meaning of *a priori* knowledge given by the participant. As such '*as a seeking, questioning needs previous guidance from what it seeks. The meaning of Being must therefore already be available to us in a certain way*' (ibid.). This is inherently phenomenological. In other words '*Beings are, so to speak, interrogated with regard to their Being.*' (Heidegger, 1927, p11.)

Having established that the researcher is concerned with the interpretation of the participants' lived experience, the task then moves away from the participants' own interpretation of their events to the second order researcher interpretation, and the avoidance of preconceptions 'tainting' this participant centric view of a phenomenon. The value of bracketing is to create a richer significance to the data through the bringing forth of that experience anew.

*To perceive is not to experience a multitude of impressions that bring along with them some memories capable of completing them, it is to see an immanent sense bursting forth from a constellation of givens without which no call to memory is possible. (Merleau-Ponty, 1945, p23)*

As Merleau-Ponty states above, the ability to reflect on a particular experience is where the new knowledge of the quality of a particular experience exists. Given that we have established the 'bringing it back to the thing itself' and phenomenological significance of this, the bracketing of *a priori* knowledge is appropriate. The memories of the participant are of huge importance in an IPA study, in that this is the medium through which their interpretation of their experience occurs. However, as researchers, it is our job to be impartial observers of this recall, acting as a 'control' during interviews and first order interpretation. It is only once this data has been collected that a researchers' memories and experiences can then interrogate and question this data.

*At the phenomenological standpoint, acting on lines of general principle, we tie up the performance of all such cogitative theses, i.e., we “place in brackets” what has been carried out “we do not associate these theses” with our new inquiries; instead of living in them and carrying them out, we carry out acts of reflexion directed towards them, and these we apprehend as the absolute Being which they are. (Husserl, 1931, p.97)*

While the interpretation of an individual participant’s experience of choral blend may seem disconnected from the study of the absolute Being, the experience of this phenomenon must be tied up with the lifeworld of the lived experience of participants. The phenomenological reduction involved in analysis of this text, carefully bracketed by the researcher, and with reflexion on the description of the action itself allows an iterative process of analysis (a hermeneutic circle) to form.

### **3.2.3 Hermeneutic circle**

During IPA analysis, there is a movement from *The Part* to *The Whole* and back again in an iterative cycle. Smith et al. (2009) show an interesting comparison between *The Part* and *The Whole*.

**Table 1: Smith et al. comparison between The Part and The Whole**

<b><i>The Part</i></b>	<b><i>The Whole</i></b>
The single word	The sentence in which the word is embedded
The single extract	The complete text
The particular text	The complete oeuvre
The interview	The research project
The single episode	The complete life

This reflection is not unusual for participants, unknowingly moving from part to whole and back again allows us to draw conclusions from these particular participants and their reflection on their own singing practice as part of their identity. The connectedness of each individual part of the interview process to the whole person can offer ‘*different perspectives on the part-whole coherence of the text*’ (Smith et al., 2009, p.28).

### **3.2.4 Idiography**

Thomae (1999) wrote a comprehensive review of the history of nomothetic and idiographic methodologies in experimental psychology and identifies a problem in that '*uniqueness of the individual is less important than that of an adequate approach to the study of human behaviour in an 'unmutilated' form*' (p25).

Nomothetic methodologies attempt to apply solutions to groups of people, generally whole populations. Studies dealing with nomothetics attempt to apply generalisations or laws to these groups. Idiography, conversely, is concerned with the particular. In abstracting experiential data in order to work on the large scales required for nomothetic analysis removes the human element from psychological research. IPA, however, embraces this individuality in seeking to explore the understandings of people within their *dasein*.

The level of detail that is available in the analysis of individual data adds another element of rigour to the IPA methodology. A particular suitability of IPA to this thesis is this idiography. As each individual's Dasein creates their relationship to the phenomena being studied, through carefully selecting a group of individuals who share these experiences, the experience is not the property of the individual, but the study looks at the phenomenon in context, through various participants. It is this focus on the phenomenon, and through it, the individual's experience of it, that lends IPA to the study of the phenomenon of choral blend as this experience is individual and subjective.

This individuality provides details of the experience in relation to the experiences of an individual but does not necessarily elicit details that can be applied to that experience in other contexts. Whilst this can be seen as a limitation of IPA, the rich data that is provided by looking at the individual's interaction with a phenomenon can then illuminate more targeted areas for further research of the phenomenon. It could also prompt reflection on practice by singers and singing leaders through their own interpretation of the results, perhaps leading to a development of practice.

### **3.3 IPA as a research method**

IPA is a flexible methodology allowing scope for innovation and creativity in its application in practice (Smith et al., 2009). When looking at the double hermeneutic cycle of IPA, from the empathetic creation of meaning of the participant to the critical evaluation of this meaning making by the researcher, there is an obvious gap between co-construction of an event, and the interpretation thereof.

This gap between *'simply describing a phenomena and entering in to the symbolic, metaphorical interpretive world of meaning making which pushes IPA research from mediocrity to excellence'* (Larkin et al., 2006) has been filled through the use of photographic stimuli in semi-structured interviews, with 14 papers using this method between 2010 – 2018, as well as the use of mixed methods approaches (K. Reid et al., 2018). These mixed method approaches to IPA investigations, as well as the challenge for innovation and creativity by Smith et al. (2009), support the use of an innovative interview stimuli in this study.

In the design of the research intervention, there was a wish to embrace not only the co-creation of a research space through the inclusion of the researcher as part of the intervention, but also to provide new contexts of listening to participants. The choice to provide each participant with both a whole choir recording, as well as a spotlighted individual track, allows an idiographic reflection in both states of the double hermeneutic cycle. When analysing this data, it is important to remember that the focus is upon *'person-in-context (a particular person in a particular context), and that persons' relatedness to "the phenomena at hand"'* (Larkin et al., 2006 p.109).

The use of auditory stimuli in IPA research follows from Taylor (2015) in which the following was asserted: *'Using electronic recordings as artefacts to trigger memory of events can make it relatively easy to obtain the fine-grained phenomenological detail needed for high-quality interpretative analysis of learning music'* (p.443). Not only is the use of auditory stimuli still a relatively innovative way to respond to the assertion by Smith et al. (2009) that IPA is to be adapted and developed, but this

method also provided participants with a rarely sampled viewpoint of their own singing. Moving on from Cabrera's (2002) techniques for recording the operatic voice in real world situations, the research intervention and subsequent stimuli was a unique opportunity for these participants to reflect and develop their own meaning making regarding how they use their voices in an ensemble situation. This positive methodological step is not only a valuable contribution to knowledge in its own right but elicited high-quality *post hoc* reflection by participants.

It is acknowledged that IPA has critics (Giorgi, 2010), with common concerns being a lack of standardization of method, as well as a lack of rigor. Other criticisms include an overemphasis on description, including a lack of interpretation of data (Brocki & Wearden, 2006). Along with other phenomenological methodologies, the integral role of language in the analysis of any experience has been critiqued in IPA (Willig, 2008).

The concerns of these critics have been addressed through many papers highlighting the philosophical underpinning of IPA, as well as rebutting some of the criticism levelled at the method (Smith, 1996; Tuffour, 2017). Given that many of the criticisms levelled at the method focus on a lack of detail, particularly surrounding rigor and objectivity, through carefully and systematically approaching the data collected in participant interviews, as well as transparency of detailed analysis, it is possible to mitigate these issues. With a wide body of literature now supporting detailed IPA, this study acknowledges the criticism of the method through ensuring a detailed analysis process. Ensuring that as a researcher I remain cognisant of these criticisms and address them through a detailed, language based and methodical interrogation of participant data, this thesis will provide a robust contribution to knowledge.

### **3.4 Research Method**

This thesis aims to investigate ensemble singing, and particularly the phenomenon of choral blend. Acknowledging the different definitions and context of choral blend evidenced in the literature, this investigation examines a group of expert singers performing together in an ensemble. Using close

microphone techniques, as well as whole choir recordings, two different auditory stimuli were generated in advance of semi-structured interviews, designed to gather data that was subsequently analysed using IPA.

The following section describes in detail the processes involved in collecting this data, as well as how the analysis has been carried out. Each of these sections is contextualised through participant-centric investigation into the experience and sensations of choral blend.

### **3.4.1 Research Aims / Questions**

The sensation of blend is something that is familiar to those that sing in choirs, and this *a priori* lived experience of blend has proved nebulous in conductor or listener focused literature. Therefore, the aim of this study was to allow this *a priori* experience to be investigated using the inductive reasoning inherent in IPA. This allows for an exploration of the experiences of expert singers in training to elicit deeper reflection on the mechanics of high-level vocal ensembles.

Conservatoire training involves a great deal of critical reflection by singers, both formally through reflective essays, but also through private practise and the embedding of tuition from other sources. By investigating a group of singers who are extremely comfortable critically evaluating their own singing against a set of their own aesthetic criteria, and then articulating this through their own technical language, participants were able to effectively reflect on their own vocalism in ensembles.

IPA as a method is not one that seeks to prove hypothesis, but rather to draw together participant meaning making and then make comparison of the interpretation of experience, rather than attempt to quantitatively prove or define the technical aspects of blend.

As introduced in chapter one, this study seeks to answer the question '*how do proto-professional singers describe the sensation of choral blend*'? There are some inherent assumptions in this question, namely that participants have their own understanding of choral blend, and that this is some form of sensation. Through my experience as an ensemble director and singer, these are terms with which I

am familiar, and of which I have a lived understanding. The aim of this inductive methodology is to attempt to understand others' experiences of this same described phenomenon, without assuming the form in which it takes.

The *a priori* experience of ensemble singing, made manifest through a research intervention and subsequent reflection is the scope of this enquiry. Acknowledging that participants critically listen to their own singing as students in a conservatoire environment, it is understandable that they will reflect on their own technical vocal production. Whilst this could help to contextualise and frame the other data that has been presented, judgements regarding what is 'good singing' are outwith the scope of this investigation.

By framing the research question as an experiential investigation, the writing must reflect the bracketed aspects of 'success', how well or frequently a singer achieved blend in the research intervention is not important, but this simply serves to help articulate a more general understanding of blend. This is particularly important given the tensions between the researcher as conductor, with personal aesthetic judgements and preferences that will have directly impacted on the rehearsal in the research intervention. These must be acknowledged and then bracketed out of the analysis of interview transcripts.

As a research practitioner with social relationships with participants, great care had to be taken to ensure that not only ethical considerations around confidentiality and the safety of participants were met, but also that the data was not 'contaminated' through these relationships. Participants were used to seeing me in many different guises, as singer and conductor, so we well used to me in a leadership role. However, as part of the preamble for interviews, I reminded participants that they should answer from their own experience and not tell me '*what you think I want to hear*'. An example of this preamble is given as [appendix F](#). My interview schedule [[p.73](#)] also made sure to focus on the experience of the singers, removing my conducting from the main narrative.

### **3.4.3 Pilot Study**

A pilot study was undertaken to determine the suitability of personalised *post hoc* reflection on choral interventions. This longitudinal study ran for six weeks using the researcher as sole participant. To maintain the integrity of the naturalistic performance environment, the study took place at my regular place of work. The ensemble used in this study is a professional cathedral choir performing standard liturgical music in the Anglican tradition. The participant wore a microphone<sup>1</sup> affixed to the lapel of their uniform robe and recorded using a standard application on their smartphone.

The use of a liturgical group aimed to keep the following parameters similar between reflections.

- Time of recording.
- Other participants in the choir.
- Style of repertoire.
- Acoustic of venue.

Two rehearsals and two performances were recorded each week, one in the morning and one in the evening.

Regular rehearsals were recorded and then reflection on these recordings was documented in a journal whilst listening to the individual track through the lapel microphone. The weekly evening performance is broadcast by a professional production company, giving the opportunity to listen back to the whole choir sound in as professional a context as possible.

There were some issues with microphone placement. Due to the need to be discreet as to the placement of the microphone, it was not possible to have the microphone in the same place week to week. The changing film crews involved in the production of the evening broadcast meant that there was no consistency in microphone placement for the evening broadcast. As I was not gathering quantitative acoustic data but using this data as stimulus for reflection of my singing, the altering positions of the microphones did not pose a problem in this pilot stage. This did inform the design of

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<sup>1</sup> Rode SmartLav Plus Clip-On Lavalier Microphone for Smartphones

the research intervention, however, having identified that microphone placement needed to remain consistent across participants, despite natural movement throughout the rehearsal.

When analysing the reflective journals of this study, it became clear that the reflective nature of the ensemble experience yielded rich data. This idiographic view of the ensemble experience, through an intervention such as listening to one's own singing then directly informed the design of the research intervention used in the rest of this thesis.

A major finding of the pilot study was the realisation that how I remembered a particular sensation often was different when hearing it from other perspectives. Remembering a particular sound as 'cool' or 'blady' in my journal oftentimes didn't then marry with how I would describe the sound hearing it on either the clip-on microphone recording, or as part of the broadcast. This difference between reflecting in action and reflecting on action is something that was also highlighted by participants in the main data gathering portion of this thesis [see [4.4.2](#)].

Another finding of the pilot study was the importance of those singers that are in your section to the experience of ensemble singing. When trying to 'blend' a sound, my reflections in the journals from the pilot study highlighted how much of an impact my section mates had on my own singing, and particularly the quality of my experience. One excerpt from a reflective journal is given below as an example of this

But there were moments that were forte above the stave, and I felt that I was having to try and reign these moments in. I was also stood between DH and KR, which provided a much different experience for me from last week. DH has a tendency to push sharp when singing high, due to the use of brighter (but still closed) vowels. KR is a lighter and brighter instrument, so I didn't feel that I could use a vowel strategy for any of the G's in the canticles that I would in a solo context. This was not the case in the anthem, when I was able to sing in a more 'blended' way. I could feel that this was more manipulated in the sound, but it was also much more ensemble focused. It was a'capella, and quieter on the whole. Perhaps this impacts on how I perceive blend? I was certainly 'blending' in the Dyson, but it felt more acutely blended in the Reinberger.

In my reflections, given that I was used to describing my singing in technical language to my singing teacher at the time, I was very much concerned with the acoustics of the voice, working with the expectancies [see [2.3.2](#)] of the other tenors to then match my own signing. Repertoire was also a major factor in how I perceived blend, noting that in a piece of a'capella music I felt the sensation of being blended more acutely. This served to inform my choice of repertoire for the main study [[3.5.1](#)].

This excerpt from the pilot study is a typical example of the questioning I gave of my own singing in an ensemble context. A further observation was the lack of concentration on the conductor and conductor gesture. While this may be to do with the short rehearsal time allocated to these cathedral services, the concern primarily on how my voice worked with those in the choir led to the adoption of a singer-centric viewpoint in for the main data gathering.

The pilot reflections also served to clarify the knowledge that the singer-centric viewpoint, which is contextualised in this thesis as a strong area of investigation. On reading the reflective diaries, it became clear that how an individual voice interacts with those in close proximity was a major concern of the ensemble experience. This acknowledgement, and subsequent literature review, helped to then focus this thesis on a singing-centric perception of blend.

#### **3.4.4 Recruitment**

A purposive sampling method was employed in this study, with participants drawn from an auditioned ensemble within a UK conservatoire. The ensemble was an auditioned extra-curricular component of vocal studies students that met on a project-by-project basis. These projects were often professional engagements as professional choristers, for example working as an operatic chorus for *The Rakes Progress* at the Edinburgh International Festival, conducted by Sir Andrew Davis, or in the chorus of Beethoven's 9<sup>th</sup> Symphony with the BBC Scottish Symphony Orchestra. Other projects that the group has been involved in include recordings of new music for choir, flute, and bass trombone; male voice choral concerts as part of the Cottier Chamber Festival; and tours to Aberdeen and the St

Magnus International Festival on Orkney. This type of activity is an example of the proto-professional environment in which conservatoire singers belong.

Successful audition into the ensemble meant being placed in a 'pool' of singers that were then engaged for projects based on the forces required, availability, and voice type. Every participant had been used in multiple projects, and were therefore used to working in different environments, with different conductors, and being in unusual rehearsal situations. The data gathering took place in February 2018, after a relatively quiet period for this ensemble with few projects scheduled in order to avoid mid-term exams. Some participants mention a 'gap' in rehearsals within their interview [4.3.4 for example]. This gap was only of a few months, as the ensemble had been on a performing schedule over the summer break, and again had some projects in the preceding winter term.

Auditions for entry to the ensemble consisted of a quick study, sight reading, some technical exercises, and a prepared piece. Successful candidates needed either a high level of sight-reading ability, or the ability to learn repertoire quickly given the volume of repertoire that the ensemble is expected to learn. Similarly, the panel (consisting of the researcher and a senior member of conservatoire staff) also judged candidates on their vocal tone, with an ear to ensuring that voices were similar enough to provide a balanced group timbre. Also, a brief conversation regarding experience and enthusiasm for ensemble singing was included as part of the audition process. Successful candidates were then added to a 'pool' of singers that were selected based on forces for particular repertoire. Membership of this pool was a prerequisite to being included as a participant in this research study.

It is acknowledged that through this primary selection process, singers with experience of ensemble singing were more likely to become participants. Similarly, some aesthetic decisions were made through the audition process in selecting candidates with similar timbre to current members of the pool. This may have an impact upon the experience of participants given the desire of the panel to ensure a balanced and timbrally similar choir. However, as this process is standard practice for

auditions to singing ensembles, these aesthetic decisions will not impact on the experience of ensemble blend more generally, but perhaps on the specific blend techniques used in this group of ensemble singers.

By selecting members of a pre-existing ensemble as participants for this research study, a natural rehearsal environment could be assumed. Given the addition of close microphones, and the unusual nature of rehearsing for research rather than for performance, ensuring that participants were familiar with ensemble rehearsals, particularly in a proto-professional environment, was important. Similarly, IPA is a methodology concerned with the lived experience of participants, by selecting from a pre-existing group of experienced ensemble musicians, it could be fairly assumed that they would have an understanding of 'choral blend'.

Through limiting participant recruitment to proto-professional singers, and thereby contextualising the research as an investigation into singers in training, this study fills a gap in the literature surrounding ensemble singing. In a UK context, professional choirs are limited to either liturgical cathedral choirs, or a small number of ensembles made up of freelance musicians. By using proto-professional singers there is a focus on individual technical mastery, and an aspiration for a career in singing. This proto-professional environment is different from much of the literature emanating from the United States in which participants were education or choral directing specialists. Similarly, through selecting from a pool of singers, a wide range of experiences and educational levels was represented in this study.

Participants were self-selected following an invitation to participate sent to a master mailing list for the pool of singers involved in the ensemble. Details of the session and what it would entail, as well as a link to a scheduling tool were included. Having filled in their availability, participants were then selected based on studio and researcher availability, as well as ensuring a full group of participants were available. Due to the difficulties in timetabling an extra-curricular ensemble

rehearsal, one participant was a recent alumnus, who had performed extensively with the group before graduation and remained in the 'pool'.

As singers in a vocal studies department at a major UK conservatoire, participants were used to a curriculum that focuses on skill development in the solo vocal field. A majority of their assessment burden throughout their course lies in the 'Performance Studies' module, with solo recitals being the main assessment points for students on the BMus and MMus courses. Those engaged in the MMus (Opera) course are assessed through main stage productions of operatic works. Other curricular classes include a suite of 'Supporting Studies' specifically for singers to develop skills in performance that aren't necessarily covered through one-to-one lessons. These include language classes (French, German, Italian, and Russian), acting, performance and audition preparation classes, and classes dedicated to specific repertoire such as Lied or English Song. There are also Critical and Contextual Studies in which students learn musical analysis and harmony, as well as music in history and style in performance and career and enterprise skills. This conservatoire education develops proto-professional singers with a high level of soloistic skill, as well as students with developed critical skills who make them ideal participants in this study.

While lots of the literature uses university or college students, the heightened and specialist training afforded by a conservatoire, as well as the proto-professional environment which they promote, provide a unique look into ensemble singing. Utilising UK conservatoire students is an effective stop gap between both professional and amateur groups, while concentrating on repertoire that is outwith the sphere of liturgical choirs.

Singers were familiar with each other, as well as with the rehearsal environment during the research intervention. As mentioned in Elliot et al. (1995) the voice warms up throughout the day, and as such an afternoon session was selected to ensure that participants would have had chance to come to the session vocally prepared. They were also given the opportunity to warm up individually in the recording studio, in order to get used to the acoustic and microphone placement. This also served as

an opportunity to set levels for the recording to ensure that a clean capture was achieved throughout the dynamic range.

### **3.4.5 Participants**

Participants were all known to each other and to the researcher, having been members of the ensemble within the last 12 months. As discussed in [3.5.1](#) the repertoire chosen was a mixture of 4-part SATB and 8-part SSAATTBB repertoire. In order to give some participants the opportunity to sing a part without a sectional colleague, and to keep the interview analysis and transcription to a manageable size, twelve participants were selected based on the most suitable availability for the research intervention. The twelve participants were equally divided between voice parts, with three singers on each SATB part.

A wide variety of year groups and courses were represented in the study. The distribution of courses and year groups is shown below.

**Table 2: A table showing the number of participants on each vocal studies course**

<b>BMus I</b>	-	<b>MMus Perf 1</b>	1
<b>BMus II</b>	1	<b>MMus Perf 2</b>	1
<b>BMus III</b>	2	<b>MMus Opera 1</b>	-
<b>BMus IV</b>	4	<b>MMus Opera 2</b>	1
<b>Continuing Education</b>	1	<b>Alumnus</b>	1

Whilst students on the MMus Perf. and MMus Opera programmes are awarded degrees at SCQF level 11, the highly specialized training that is provided on the MMus Opera course differentiates these two degrees. Students on the two-year (second cycle) MMus Perf course undertake similar classes as four-year BMus (first cycle) students (performance class, languages, acting) with most of the assessment being solo recital work. A point of difference between this and the two-year (second

cycle) MMus Opera degree is that the latter is assessed purely through operatic stage work and is designed primarily for students with an interest in a career in opera. Continuing Education is a non-credit bearing course that allows students to continue singing lessons and retain use of the resources of the conservatoire. Both the Continuing Education student and alumnus had finished their first cycle programmes and were taking time out before commencing second cycle study.

### **3.4.6 Ethical Considerations**

While working with human participants, it is incumbent upon the researcher to pay heed to any ethical issues that may arise. As such, each stage of the project (from pilot study to completion) has been scrutinized and approved by the Royal Conservatoire of Scotland Ethics Committee. At the start of the research intervention, each participant was asked to read and sign an information sheet / consent form, detailing the process they were about to undertake and making clear that they were free to withdraw at any time and their data would not be used. There was also an additional aural consent at the start of the research intervention, this script can be seen in [appendix D](#). This continued in the semi-structured interviews, where in the interview preamble I would explain the interview technique, remind the participants their responses would be treated confidentially, and encouraging them to be as open as possible about their experiences of ensemble singing. A copy of the consent form participants signed is included as part of the participant pack attached as [appendix C](#).

As part of the ethical approval process administered by the Royal Conservatoire of Scotland, a risk assessment was undertaken by the researcher [[appendix E](#)], with risk mitigated through anonymisation of data and the rehearsal environment remaining within recommended time limits for singing and hearing. Data in this study was classified as both the recordings and interview transcripts, and it was incumbent upon me to ensure that this data was stored appropriately, with particular attention paid to GDPR and the Data Protection Act. All data was stored on a password protected laptop with file names saved as anonymised participant identifiers, a key to participant names and participant identifiers was saved in a separate password protected document.

Participants were given the option to withdraw at any time up to publication and were given a final draft of the thesis to read. No participants had a wish to withdraw their data. Given that audio files were generated with the aim of using these in further research, participants waived their intellectual property rights over these performances. They also agreed to these recordings being used in future research as long as the data was anonymised. This data will be kept securely in line with relevant legislation, and samples of singing will be small and anonymised as was referenced in the consent sheet. Signed consent sheets and participant packs are stored in a locked secure storage unit.

Participants were very familiar with each other, both socially and musically. The ensemble that is the focus of this investigation had been on concert tours, building a strong sense of group identity as well as familiarity between participants. In the writing up phase, it was important to ensure anonymity and that the language used in any participant quotes was devoid of identifiable information. I have elected to use the 'they' pronoun throughout this thesis in order to attempt to both maintain the anonymisation of the write up, as well as respect the gender identity of the participants.

### ***3.5 Research Intervention and Data Collection***

As discussed in Cabrera et al. (2002), there are multiple challenges that face recording the operatic voice for acoustic analysis. Not least of these is trying to achieve an acceptable amount of masking from the other sound sources in the room. Choral recordings generally do not take place with close microphone techniques in studios, but in classical or liturgical performance venues, in which the acoustic plays a large part of the artistry of the recording. Microphones are generally placed in the diffuse field, with the acoustic playing a major part in the overall experience of the choral sound. The layering of individually recorded voices, although commonplace in popular music recordings, and growing in popularity since the COVID-19 pandemic, is less common in the classical ensemble field.

Many of the interview participants are used to recording their one-to-one singing lessons on personal recording devices to aid their development through practice. These devices also sit in the diffuse field, with the acoustic of the room playing a substantial role in the perception of the quality of the vocalist. Close microphone techniques have become more prevalent with the rise of cross over pop/classical groups working on close harmony repertoire (Swingle Singers, Voces 8, Roomful of Teeth), however, artificial reverb and in ear monitoring still provides a different experience to that of spotlighting an individual in an ensemble situation.

The research intervention was designed to allow participants to rehearse together in as familiar and comfortable an environment as possible on repertoire that was both familiar and new to them. The individual tracks would be used as the stimulus for a semi structured interview around their singing in general with specific reference to their ensemble activity. This intervention took place on the 2<sup>nd</sup> of February 2018, with the interviews occurring within two weeks of this date.

### **3.5.1 Repertoire Choice**

Repertoire is a vital component of choral singing; pieces which fall into the canon of vocal ensemble music generally are western art music from the Renaissance through to the present day, with a concentration on liturgical music. Two pieces were selected for the hour-long research intervention, which would mirror the pace of a rehearsal for this group. *If Ye Love Me* by Thomas Tallis (1505 – 1585) is a piece familiar to participants; it is simple, diatonic and in four parts (Tallis, 1565/2017). Containing a mixture of homophony and polyphony, the ranges of each voice part lie within normal limits for English writing of this period. There is some challenging tessitura for the tenor section, with the lines moving above the stave in a piano dynamic.

*Os Justi* by Anton Bruckner (1824 – 1896) is an eight-part gradual setting of text from Psalms 37 and 89 (Bruckner, 1879/2011). This was less familiar to the group, with many people sight reading during their first run through. Again, the piece features polyphony, homophony, and unison plainchant. This gives the singers the greatest range of harmonic experiences, and with a fugal section,

it provides each voice part with highlighted melodic singing. It also has extremes of range in both directions for all voice parts, and extremes of dynamics. Singing in Latin is familiar to participants, and as such they will be fluent in the pronunciation of this language; however, no participant was fluent in understanding the language. All participants were fluent in English, and as such this difference between pieces allowed for a point of discussion in interviews. *Os Justi* is scored for SATB (divisi), giving eight vocal lines. With twelve participants, this therefore required some singers to be performing a vocal line by themselves. Again, this deliberate decision was to allow for a point of comparison in the interview data, which many participants chose to explore. An example of the participant pack, including scores that were used in the data gathering session are provided in [appendix C](#).

### **3.5.2 Studio Considerations**

Head mounted omnidirectional microphones<sup>2</sup> running in to a wireless transmitter were worn by each participant. This follows on from the work of (Cabrera et al., 2002) with the Chorus of Australian National Opera. Allowing participants freedom of movement whilst keeping the microphone a fixed distance from their mouth was important for any possible post-hoc spectral analysis with this data in further research.

The venue for the research intervention was a large recording studio, with a relatively reverberant acoustic. While it is unusual for group singing to occur in this space, participants were familiar with the studio and as the most reverberant of the three studios available, was deemed most suitable for this data gathering.

On the day of the recording session, each participant was invited to warm up in the recording studio for 10 minutes before the session started. They were fitted with their microphone by the researcher, instructed that they could warm up in any way that they wished, but that they sang forte

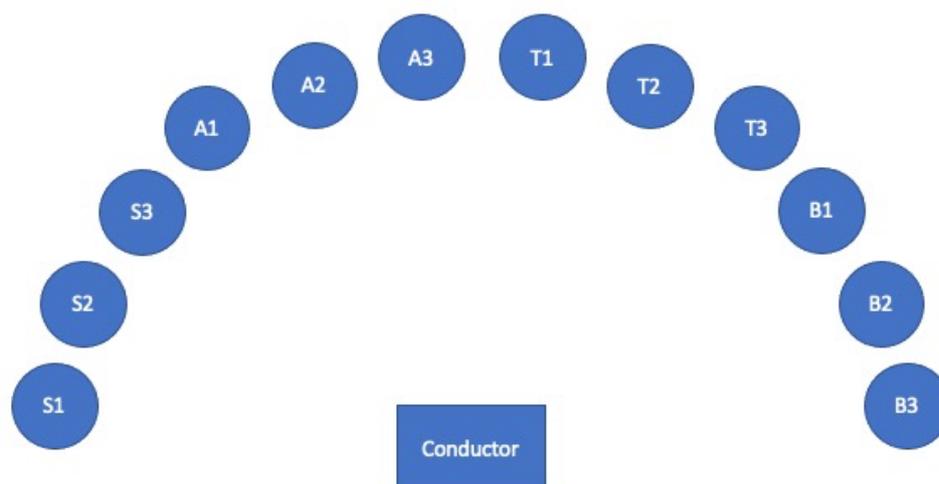
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<sup>2</sup> Dpa4060

at least once in order to set levels. Participants were then left to warm up in whatever way they saw fit. While having participants warm up individually introduces a variable that could influence their vocal production in the recording session, this procedure is standard for the ensemble of which participants were members. This represents a difference between this proto-professional environment and that of amateur music making, in that it is expected that participants will arrive ready to sing at the designated call time and there isn't a conductor led warm up. In many other singing ensembles, particularly involving hobbyist singers, a conductor led warm-up will begin every session. In this instance, it was decided that a conductor led warm-up would be out of the normal routine of a rehearsal for these participants and also, being conductor led, could inadvertently influence singers with a conductor's preferences for singing before the session starts.

### **3.5.3 Research Intervention**

The rehearsal was recorded both with individual head-mounted microphones, and with a stereo microphone covering the whole choir positioned just behind and slightly above the conductor. Participants were spread out in a semi-circle, each with a music stand and score (Figure 2).



**Figure 5 – A visual representation of the layout of participants in the research intervention.**

The stands were pre-set as the singers entered the space, but they were free to move them to suit each individual. The extension of the stands proved inadequate for some of the taller members of the choir, who chose to hold their scores at a height that was suitable for them for comfort. All of the tracks were recorded without artificial reverb, EQ or dynamic processing.

After the recording session, participants were asked to complete a short reflection, writing about their experiences of the session. This included thoughts on the recording process itself, and how wearing the microphones had affected participants, as well as self-evaluation of their contribution in the session, as well as any other factors participants deemed relevant to the session. This booklet (along with their scores containing their own markings) was brought to their interviews for reference.

Participants were given a copy of their own track in .MP4 format, as well as a copy of the whole choir recording. They were given no specific instructions as to when or how to listen to the tracks, and both were provided by email the following day. Interviews were scheduled at this point, and every interview was concluded within two weeks of the data gathering session. Giving participants no instructions regarding listening to their tracks led to variables in how much, and in which order, participants engaged with their interview stimuli. This was to ensure the idiographic fidelity of the interviews in that I did not wish to interfere with how participants were to engage with their own interpretation of the entire scenario of the data gathering. However, in not controlling for this, it is possible that some participants did not listen to both recordings in their entirety, or that they favoured one or other of the recordings. Similarly, as the two recordings were different perspectives of the same session, having listened to one recording, participants may have been inclined to listen to less of the second recording as they were hearing something that they had 'already heard'.

In the subsequent interviews, many participants favoured speaking of their 'individual track' [discussed further in [4.4.2](#)] rather than that of the 'whole choir'. This may be because this is a novel perspective for participants to hear their voices, particularly given that participants were aware they would be talking about their own singing in their interview. It is possible that they ascribed more

importance to this track. Similarly, the order in which they listened to the tracks could have implications regarding how they then interacted with the other as serial order effects can impact perceptions of stimuli (Brooks, 2012). While this could be seen as a limitation to the study as no counterbalancing was enacted to account for this potential, allowing participants the agency over how they interacted with the recordings follows in the spirit of the idiographic nature of this method.

### **3.5.4 Interviews**

Semi structured interviews were conducted with each participant as soon as reasonably practical after the recording session. This format of interview allows for participants to take charge of their narrative, whilst maintaining a direction to questions should participants struggle to articulate their thoughts. Although this could be seen to limit the individual response, through improvised follow up questions based on participants' responses, this allowed suitable flexibility in interviewing to ensure a truly idiographic interview.

All interviews were completed within two weeks of the research intervention, according to participant availability. Limiting the time between the session and interview ensured that the experience was fresh in their minds, but also allowed time for reflection upon their stimuli tracks. Interviews were conducted in practice rooms at the conservatoire, a familiar and quiet environment for the participants. It also gave them the option of using a piano and demonstrating vocal techniques should they wish.

As I have a social relationship with all participants, the interviews were informal and familiar experiences. As part of the consent process at the start of each interview, I stressed to participants that answers would be confidential in order to attempt to mitigate any concerns participants may have regarding any bias. Similarly, as an introduction to the interview technique that was consistent across participants, I made it clear that *'you are the expert on your experiences, so don't feel you have to answer questions I want to hear'* [\[appendix D\]](#).

Prior to interviews with these participants, I tested both the interview schedule and preparatory remarks with other vocal students at the conservatoire with some knowledge of the study, but not direct participants. This allowed me to refine both my script in introducing the interview technique, as well as practising non-leading follow up questions. After each test interview, I listened to a recording and identified areas of poor practice in my interview technique. This reflection enabled me to feel confident in my interview technique before the data gathering session with participants that had been involved in the research intervention.

Interviews were recorded by a self-contained handheld recorder directly to an SD card. A second record was kept on the interviewer's mobile phone in case of failure of the primary recording device. Participants were consented before the recording started, with participants aware of the start of the recording. Any interruptions to the recording were recorded in the transcript.

Rooms were booked for 90 minutes to ensure participants didn't feel time pressure during their interview. Due to some logistical issues with the room booking system, the interview with B1 was interrupted by another room booking and had to be terminated early. There is still a large amount of excellent data from B1 which is included in this study.

Interviews followed a 'funnelling' approach (Oppenheim, 1992 p.111), beginning with broad, general questions becoming more focussed as the interview progressed. As participants started to discuss their experiences of ensemble singing, the order of interview questions (below) was adapted, and the participants were able to freely direct conversation, with the words of participants used to direct deeper reflection during the interviews. The final question of the schedule was always explicitly asked as the final question, however.

#### Interview schedule

1. Tell me about your singing up until now.
2. Having listened back to your session, tell me about your singing in this session.
3. What are your thoughts about the other sections in the choir?

4. How did you feel listening back to yourself as an individual in a choir?
5. What did you think of the sound that everyone produced together?

*Prompts: Were you able to hear yourself? Do you think you stuck out at any points? Is there a difference in this recording to the close recording?*

6. What sort of singing technique were you using in this session?
7. What does 'choral blend' mean to you?

These questions were designed to draw participants to respond regarding their interview stimulus, taking in to account the individual and whole choir tracks. It also acknowledges the two techniques of solo and ensemble singing that are prevalent in the literature, allowing participants to draw their own comparisons between these techniques. Similarly, by encouraging participants to think about the whole sound of the choir, and not only their contribution it was ensured that both recorded audio perspectives were covered in the interview schedule. Discussion was also elicited regarding ensemble singing from an audience perspective to further enhance the novel artifact elicitation that is a major facet of this thesis. By explicitly asking about blend, particularly as the final question, participants were able to then refer to their previous answers over the course of the interview when discussing the central theme to the investigation.

### **3.6 Analysis**

#### **3.6.1 Transcribing**

Following the semi structured interviews, each interview was transcribed by the researcher, allowing for a further familiarity with the interview data. Given the close line by line reading that is an inherent component of IPA, it was important that transcriptions were as true to the language use of the participants as possible.

Many participants use pauses in their speech, often leading to either recapping of previously stated ideas, or tangential narratives that then lead back to a deeper reflection on the topic that is in focus. These pauses are therefore a vital part of the structure of the interview, and it was important

to differentiate between the length of pause in the transcriptions. While much of determining a length of pause is down to the judgement of the researcher, the use of ellipsis, double ellipsis, and square brackets to denote a long pause has been a useful way to differentiate the gaps in spoken text.

<b>Transcript</b>	<b>Symbolises</b>
...	Short pause
.....	Longer pause (or drop off of thought)
[long pause]	A pause long enough to require researcher intervention to keep the interview moving.

**Table 3: A table indicating how pauses were transcribed from the interviews.**

Participants often demonstrated particular vowel or pronunciations in exaggerated speech throughout their interviews. In transcription, I have chosen to use the International Phonetic Alphabet (*IPA*) to transcribe this. As the standard for *IPA* transcription is to use square brackets, for clarity throughout the thesis, the serif font `courier` has been used to differentiate these symbols from normal text. Similarly, for clarity, when the abbreviation *IPA* is used to discuss Interpretative Phenomenological Analysis, this will be in standard text. *IPA* as *International Phonetic Alphabet* will be italicised.

### ***3.6.2 Working with the interviews***

Interviews were imported into a spreadsheet with five columns: Interview, Description and Content, Language Use, Interrogative and Conceptual Coding, and Emerging Themes.

Reading and re-reading the interviews in this analysis phase formed part of the reflective cycle for the researcher. This part of the analysis is time consuming and very labour intensive, and therefore efficiencies were found in modes and styles of working. A key example of this was changing from making analytical notes on the transcription with pen and paper to working entirely online. While working entirely online sped up the process, this method of working loses a final close reading of text and written analysis in the type up phase as there is no longer any need to transcribe the handwritten analysis.

The first cycle of analysis is working line by line with the interview text, highlighting phrases that warrant further consideration. These initial findings were differentiated by colour to either Description and Content or Language Use, when a particular section merited further consideration for both content analysis and the use of language, this would be highlighted in a third colour. This process was iterative with the following processes below, working one section of interview at a time in order to ensure that the analysis was constantly referring back to the specific situational context of the participant's thoughts in that moment of the interview.

The first two columns, *Description and Content* and *Language Use* were then populated on a section-by-section basis, with analysis drawn from the interview text. Once the first two columns were complete, there would follow another close reading not only of the interview, but also of the previously written analysis. Allowing time and the whole context of the analysis to be made manifest before then embarking on a coding exercise allowed the Interrogative and Conceptual Coding and Emerging Themes columns to be completed with a deeper understanding of the context of the first analysis.

An example of a worked interview transcript is provided as [Appendix A](#).

### **3.6.3 Description and Content**

When looking line by line at transcripts, it was important to capture not only the premise of the reflection of each participant, but also to make a meta-analysis of the possible hermeneutical significance of each section. Therefore, the written analysis comprised of a mixture of these first impressions of the overall significance of the participants' biographical context, as well as a first look at the deeper hermeneutical and reflective significance of these individual sentences in an idiographic context.

### **3.6.4 Language Use**

The use of participant language is an inescapable part of their meaning making of their experiences of 'choral blend'. It was therefore appropriate to pay heed to both the cadence of the spoken language, but also at the use and duplication of particular words and metaphor.

An analysis of the language used, and interrogation of any metaphor or conjecture was populated in the Language Use column. This included challenging assumptions of particular phraseology common across singers, and the bracketing of my own understanding of these terms.

### **3.6.5 Interrogative and conceptual coding**

Having worked through the entire transcription once, the second part of the iterative analytical process required a second close reading of this material, including the notes from the first line by line analysis.

As the interview analysis progressed, these columns became less populated as much of the interrogative nature of the IPA process became automatic in the first line by line iteration. However, the merit of a further close reading was to allow time for reflection, as well as in some cases a close reading of my own interpretation of the text to elicit new thoughts and further reflection on the raw interview data.

### **3.6.6 Emerging Themes**

At the second read through of the text, following the Interrogative and Conceptual Coding iteration, themes were identified from both the interview text itself, as well as the developing analysis. These themes were notated as bullet points in the furthestmost column from the interview text.

Themes were identified with organisation in mind. It was important to ensure that any theme mentioned would then lead back to the interview material later in the analysis process. As such, some themes (choral blend, support, connection, vibrato, etc) were verbatim quotes from the interview itself. This would allow a simple search of the themes to show instances where these generic terms

were used throughout an interview transcription. Other themes were based more firmly on the meta-analysis of the text in the previous two iterative cycles of close reading (Habitual Vocalism, Self-Other Ratio, Insecurity, Agency of Score).

For ease of grouping, the language used to describe various techniques and therefore the language of the relevant themes was designed to be consistent throughout each interview transcription. If one participant mentions support, where another mentions connection, the use of these words would be consistent throughout an interview to retain the idiographic integrity of each individual analysis. Following on from this, during the organisation of themes, these themes can be grouped together for ease of writing.

### 3.6.7 Organising Themes

The organisation of emerging themes into larger groups required an effective way to ensure that the source material and participant data could still be quickly and reliably correlated between themes and the interview text. Each theme was copied into a master spreadsheet and given a reference that relates to the typed themes in the format of Participant Identifier/Page Number (S2/1, S3/7 etc. in the

C	D	E	F
S2	Ref	S3	Ref
Insecurity	S2/1	Usefulness	S3/3
Individual contribution	S2/2	Power Balance	S3/3
Insecurity	S2/3	Insecurity	S3/3
Age as arbiter of experience	S2/4	Apprehension	S3/3
Age as arbiter of quality	S2/4	Auditioned Groups	S3/4
Age as arbiter of expertise	S2/4	National Groups	S3/4
Proto-Professional	S2/4	Proto-Professional	S3/5
Lack of experience	S2/4	Hierarchy	S3/5
Ensemble Size	S2/4	Self Evaluated Arrogance	S3/5
Aspiring professional	S2/5	Experience vs Perception	S3/5
Age as arbiter of experience	S2/5	Ensemble as Entity	S3/5
Competition (Vocal)	S2/5	Ownership of Group	S3/5
Competition (Professional)	S2/5	Imposed singing?	S3/5
Changing expectations depending on experience	S2/5	Loss of Agency	S3/5
Changing aspirations.	S2/5	Aspiration for Improvement	S3/6
Acceptable Aspiration	S2/6	Developing Identity	S3/6
Changing Expectations	S2/6	Conducting vs Singer Identity	S3/6
Industry Competition	S2/6	Leadership	S3/6
Agency of teacher over technique	S2/7	Ownership of Ensembles	S3/6
Consistency	S2/7	Subjugation of Ego	S3/7
Age as arbiter of experience	S2/7	Imposed Scenario	S3/7
Habitual Singing	S2/7	Loss of Agency	S3/7
Ensemble size	S2/8	Subversion of given / delegated authority.	S3/7
Close harmony	S2/8	Turning Point	S3/8
Agency of interpretation	S2/8	Building Identity	S3/8
Accuracy of pitch	S2/8	Preparedness	S3/8
Aspiration for improvement	S2/8	Nurturing nature of 1-2-1	S3/8
Habitual singing	S2/8	Fear of Judgement	S3/8
Agency of composer	S2/8	Fear of letting others down	S3/8
Agency of interpretation	S2/8	Accuracy of Pitch as Priority	S3/8

Figure 6- An example of participant identifiers and unorganized themes.

example below). The use of this reference was to ensure that themes can be traced back to the source material with ease.

For the organisation of themes an iterative process was used. To start, four general headings were created which outlined themes that seemed to be the most numerous during the analysis phase of this investigation. While these headings were somewhat arbitrary, they reflect a first response to the data and were a convenient way to start organising a large data set. An overview of this whole data set is provided in [Appendix B](#), where the organised themes are laid out as will be seen in the chapter headings of this thesis.

Each participant's themes were listed along with their reference in a separate tab on a Microsoft Excel spreadsheet, and were then colour coded in to four separate colours depending on a broad theme identified from the analysis.

S1	Ref
Transient nature of vocal forces	S1/3
Changing agency of instrument vs performer	S1/4
'The Body' as other	S1/4
Performance Pressure	S1/5
Performance Pressure	S1/6
Recording Pressure	S1/6
Agency of instrument vs Performer	S1/9
Agency of voice / performer (onset)	S1/11
Internal thought process	S1/12
Perception of sound vs Memory of feeling	S1/13
Creation of New Choral Sound	S1/17
Agency of artistic decisions	S1/17
Recording as accurate representation of rehearsal	S1/18
Agency of group sound / artistry	S1/19
Transient nature of performance	S1/19
Use of harmonic cues as artistry	S1/20
Loss of agency through imitation	S1/21
Physical blend	S1/21

Figure 7- An example of colour coordinated themes, with red indicating Flow. (See Table 4)

The four general, colour-coded headings were Flow, Technique, Social Factors, and Society / Preconceptions. As the organisation of themes progressed, these descriptions were expanded to

include some of the other themes that were developing in the second iteration of analysis. These became:

<u>Flow</u>	<u>Technique</u>	<u>Social Factors</u>	<u>Society / Preconceptions</u>
Score / Agency / Blend/ Aesthetic/ Whole Choir /Ego/ Performance/ Reflection/ Conductor/ Recording	Sight Reading / Listening/ Dynamics / Volume/ 1-2-1 Lessons	Identity/ Voice Type/ Repertoire / SOR	Training/ Period / Style / Musicianship

**Table 4: A first list of themes in four headings.**

At this point, a switch was made from organising by participant, to integrating across transcripts and organising by theme. Each of the four theme groups above was collated on a separate tab.

These themes, having been grouped then underwent an iterative analytical process. Further groupings of themes were made in consultation with the interview data to ensure that the categories chosen accurately reflected the analysis. These groups are categorised below.

**Table 5 – A more developed group of themes.**

<b>Flow</b>	<b>Technique</b>	<b>Social Factors</b>	<b>Society / Preconceptions</b>
<ul style="list-style-type: none"> <li>• Agency</li> <li>• Score Concerns</li> <li>• Blend</li> <li>• Ephemerality / New Choral Instrument</li> <li>• Reflection</li> <li>• Performance</li> <li>• Characterisation / Emotion/ Intention/ Artistry/ Authenticity/ Enjoyment</li> </ul>	<ul style="list-style-type: none"> <li>• Habitual Solo Technique</li> <li>• Vibrato</li> <li>• Sight Reading</li> <li>• Habitual Choral Technique</li> <li>• Training</li> <li>• 1-2-1 Teacher</li> </ul>	<ul style="list-style-type: none"> <li>• Personal Reflection</li> <li>• Interaction with Others</li> <li>• Interaction with Group</li> <li>• Social Situation</li> <li>• Repertoire</li> </ul>	<ul style="list-style-type: none"> <li>• Development of Vocal Skills</li> <li>• Development of Choral Skills</li> <li>• Preconceptions</li> <li>• Contextual Info</li> <li>• Training</li> </ul>

These thematic groups were then organised again through a further refinement and grouping and can be seen in the writing up of the thesis as emergent themes. These emergent themes were then grouped into superordinate themes, and finally organised according to a narrative into chapter headings. Throughout the whole process, the individual identified themes from the interview analysis were retained. Through an interrogation of the themes, and through thoughtful grouping, it was therefore possible to follow the journey of any particular participant quote from interview to final use in the thesis.

Some emergent and superordinate themes were identified that were not subsequently used in this thesis. The volume of excellent interview data that participants provided required decisions to be made regarding the focus of the investigation. The remaining themes will provide excellent data for subsequent research papers.

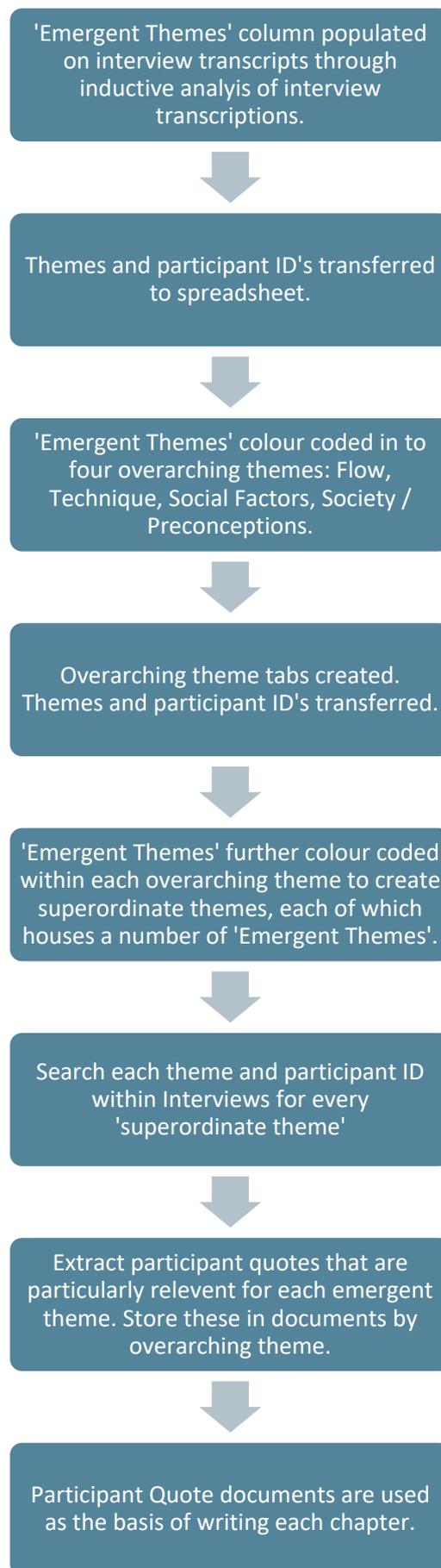


Figure 8 – A flow diagram describing the process used to organize themes.

### **3.7 Summary**

Following on from the description of both the ontological and epistemological background to this IPA methodology, as well as a detailed look at the processes involved in the iterative nature of interpretation, the results of this analysis are presented in chapters four through seven. While every care has been taken throughout the process to effectively 'bracket' my own experiences from the analysis of participant interview data, given the inherent 'being-in-the-world-ness' of my position as both co-creator of research intervention and semi-structured interviews, there may be times where I cannot avoid my subjective response and understanding. This is not a weakness of methodology or process, but an inevitable part of the journey to an effective interpretation of multiple participant data as part of a complicated phenomenological experience of expert singing with others.

Whilst reading the following analysis, it is important to note that *'our success as phenomenologists will not ultimately be dependent upon our revealing the 'pure' experience of a participant; it will be dependent upon our being prepared to do the most sensitive and responsive job we can, given our inherent epistemological and methodological limitations'* (Larkin et al., 2006, p.108) and it is in this spirit of care and responsiveness that the following chapters are presented.

## **4. The Person as Instrument**

### **4.1 Introduction**

In exploring the phenomenon of ensemble singing, it is important to note that the primary agents in the creation of the choral sound are the singers themselves. The inescapable truth that the voice is an instrument of the body, and therefore an inherently phenomenological experience, leads to discussion around how participants interact with their voice as an individual. In this first of three analysis chapters, data from participant interviews is presented by theme. Each of these themes has been generated through an inductive close reading and analysis of the interview transcript, before then being sorted and grouped as described in [chapter 3.6.7](#). Further analysis of these themes relating directly to participant data is presented in the following three chapters. A diagram of how each of these themes has then been organised and grouped is presented in Figure 9.

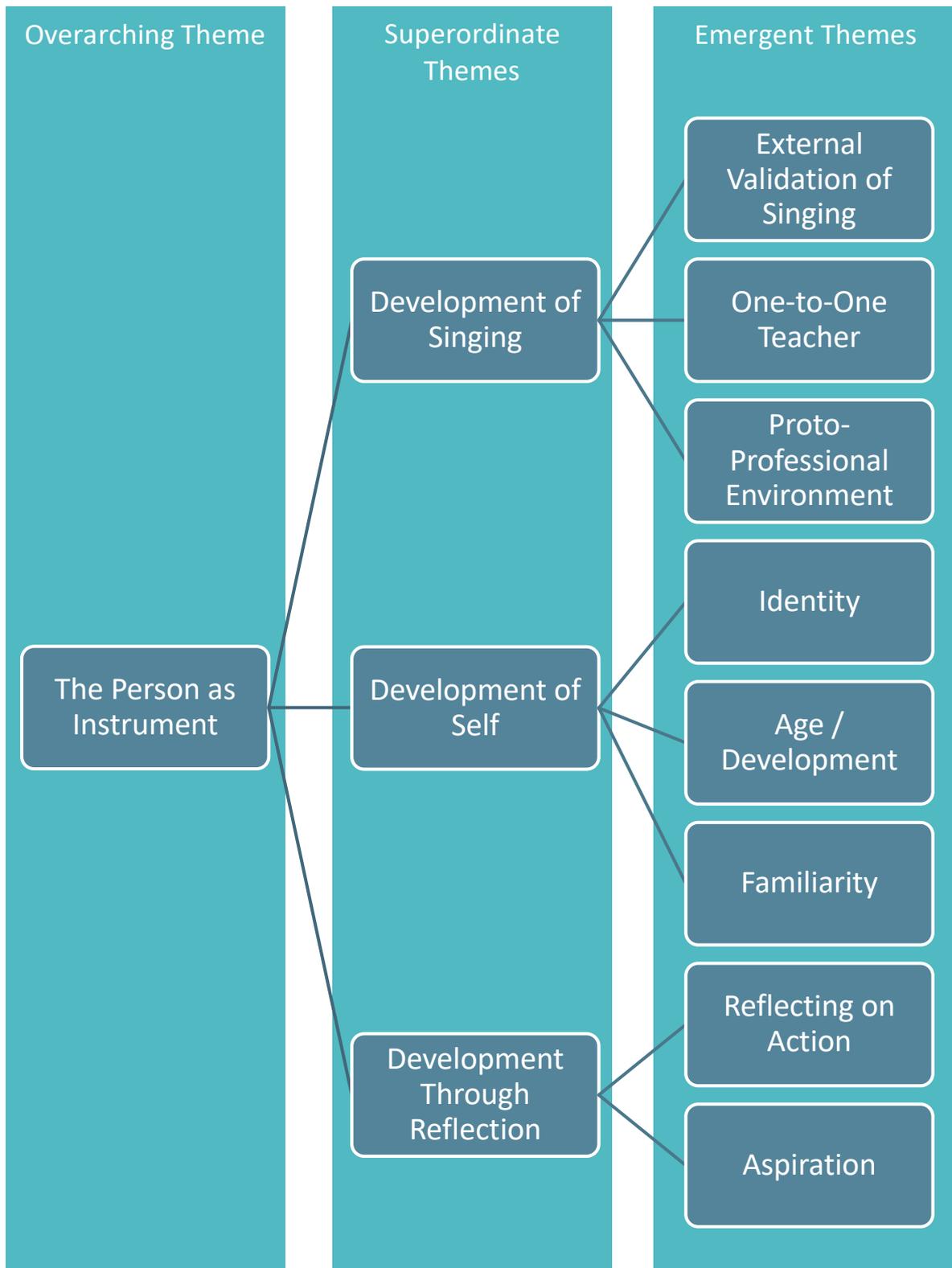


Figure 9 – A diagram of theme hierarchy for the Overarching Theme: *The Person as Instrument*

**Development of Singing** as a superordinate theme explores the emergent themes of *External Validation of Singing*, *One-To-One Teacher*, and *Conservatoire Context*. The primary context of the singers' current training is their enrolment in a Vocal Studies course at a national conservatoire. Therefore, their focus is on the development of solo singing technique in the traditional master/apprentice model. Unsurprisingly, this context dominates participant's responses to their acknowledged developing technique. This section is not attempting to form a biographical picture of the participants, but rather highlights how participants interact with those contexts as part of a conversation surrounding ensemble singing.

**Development of Self** is analogous to the development of singing and is the second superordinate theme discussed here. Due to the symbiotic relationship of person and instrument, there is importance in investigating personal development. Participants gave a snapshot of their perceived identities and personality at the moment of interview but were also aware of their own journeys through training up to that point. Participants also demonstrate a self-awareness of their development in comparison to others, particularly in how previous experiences and familiarity with the community of practice (Wenger, 1998) in which they find themselves impacts that development. All of these facets of the individual make up a developing sense of self and acknowledgement of their individual *dasein* [p.41].

Another advantage of this group of participants are their **Development Through Reflection** skills. When participants were discussing their performance directly related to the research intervention, it became apparent in the first order analysis that there were two very different narratives taking place. Borrowed from Schön (1991) the terms *Reflecting on Action* and *Reflecting in Action* have been used as terms to describe these narratives. Reflecting on Action concerns a distanced reflection upon the whole experience in the interview, adding in the contextual information of the recorded tracks as interview stimulus. Reflecting in Action is a direct relaying of remembered thought processes during

the research intervention. These reflective exercises then inform aspiration for participants moving forward.

## **4.2 Development of Singing**

### **4.2.1 Background**

The 21<sup>st</sup> Century conservatoire, which can be seen as the ‘master teacher’ of music for aspiring musicians, still places a great emphasis on individual one-to-one singing lessons with an individual teacher (O’Bryan & Harrison, 2014). The relationship between student and teacher is one of the most critical relationships in Higher Music Education, with the individuality afforded through this medium valued by students (Gaunt, 2009). While this relationship can be pastoral as well as vocal (Edwin, 1997), the division of time in tertiary instrumental lessons is dominant in teacher talk and technical command (Young et al., 2003).

Singing tuition still places a great deal of importance on the experiences of the teacher and metaphor for physical action (Cornelius, 1982). When discussing relationships with singing teachers, and development of vocal skills in the context of this thesis, this pattern of teacher instruction / student attempt could go some way to explain technical descriptions that are prefaced by the pervasive phrase ‘*my teacher says*’. Singing teachers draw ‘*on their personal experiences within an essentially hegemonic oral culture*’ (Welch et al., 2005, p.226). This culture, while encouraging teacher *reflecting-in-action* can inhibit pupil self-responsibility or development of their own reflective practice, and also inhibit a development of vocabulary associated with their singing sensations (Gaunt, 2008).

### **4.2.2 External Validation of Singing**

Throughout the interview process, participants compared their own singing not only to other participants, but also to their own singing in other contexts. Response to other’s opinions seems to be a far more effective tool for opinion building than internal validation. Evaluating one’s voice against

an external stimulus is the defining characteristic of the participant reflections that are analysed below.

**A1/47** *I think it just makes me uncomfortable listening to my own voice... erm. It's kind of like hearing everything that you... erm. I don't know. I just. You're never, you're never going to hear what other people hear. So, someone might quite, like, might think it's quite good, but I don't know, I'm never going to. I'm never going to think it sounds quite good.*

A1 finds the variation of perception between the internal auditory image of their singing voice and the external perception of that voice uncomfortable. A1 does not differentiate between voice use in this quote, listening to their own 'voice' rather than singing could suggest this discomfort pertains to the speaking voice as well as singing. The speaking voice carries with it much contextual information to third party listeners, for example, mood, intent, age, and social class (Schweinberger et al., 2014).

Anxiety surrounding self-concept based on listening to their own voice is a common complaint among participants. Studies have shown that those with social anxiety often rate their perceptions of their own speaking voice quality as worse than that of expert listeners (Lundh et al., 2002). While participants mentioned their anxieties of listening to their own voices, this was not a social anxiety as their listening was a private matter.

This poor perception of self is not supported by studies in to the general public, showing that in this case they are more likely to rate their own voice as 'attractive' (Hughes & Harrison, 2013). While this could be explained by a familiarity bias (Peng et al., 2019), further research could be undertaken regarding self-enhancement effect with the added layer of aesthetic judgement associated with singing.

It is notable that A1 chooses to qualify even hypothetical praise '*someone might quite, like, might think it's quite good*', and then immediately dismisses this praise '*but I don't know, I'm never going to*'. A1 holds the views of the external auditor more highly than their personal opinion of their singing. The modesty in this phrase suggests a wish to appear humble in the face of positive comments.

**A3/87** *...thinking oh my god, then I'll actually hear what I sound like from the outside. But then, also realising like a mirror, how you hear yourself is not how everyone else hears you. Kinda relax, let go, just do what you do. Then if people like what they hear, then they'll ask for more of it, if they don't, they'll ask you to change it.*

Here we can see that A3, similarly to A1 above, is concerned about their perception of singing from an external vantage point. A3 encourages a 'relaxation' and to 'just do what you do'. The authenticity of character described here still relies on the external validation of peers and their judgement, however there is a lack of ego in this presentation of the voice. The willingness of A3 to change their singing to attempt to match what others ask of them is taken as read in this phrase, suggesting a malleability to the voice and lack of strong artistic or vocal conviction. Some form of power dynamic, with A3 subservient to another master is implicit in this. However, A3 is the original and final arbiter of the sound they produce. By 'just doing what you do' it is possible that A3 is still able to, through experience of other's wants for their singing, create a suitable sound.

**B1/32** *As a soloist it's a different level of accountability in that it's just you, and so whatever choice you make, whatever you do, that's it. You only have yourself to answer to. Erm, in terms of what you produce.*

Here, the difference between agency over the voice and accountability to a different aesthetic is raised in stark contrast. While B1 is making active vocal choices in a solo setting and is the sole arbiter of their success, the antithetical sentiment is that, in ensemble settings, this accountability is to others.

While it is not unusual for singers to judge their singing by standards other than their own (as in A3's comments), accountability implies a different relationship, and more agency over one's own actions.

**T1/50** *Well I think it's so hard because we're all sort of like in the singing department. It's like, and we're all going for the same kind of thing, we're all trying to get really good at singing and really musical, and when you put yourself in a situation where you have to listen, where you're listening to other singers, and I find it as well, you just can't help but, but like notice what they do vocally, and kind of judge it. Erm. And just being, like even*

*being aware of that has an impact on the way that you... sing. Erm. And again, it's something, it's something that a lot of the time with VOICES, last year with VOICES I feel like I got away from, I was like this is what I've got, so just put up with it and let's not, and let's all endeavour not to judge it, and I'll do the same. And maybe it's because, because we haven't sang as a group of, 16 or whatever we were in so long that it kind of feels like, oh, we're all back together now, have people's voices changed, or? Which is stupid. But you kind of feel it a bit weighing on you. I don't know why.*

Anxiety of performing and being judged externally to the rehearsal is something that T1 takes seriously. T1 contextualises their response by centring their experience within a proto-professional context. They also highlight the developing nature of their training, by *'trying to get really good at singing'* perhaps suggesting a lack of experience, or a wish to justify their perceived lack of expertise in the eyes of colleagues through inexperience.

Whilst the agency for this critical listening lies firmly with T1 *'when you put yourself in a situation where you have to listen'*, they are using the analytical skills developed for their own singing to judge colleagues. Though not actively wishing to judge others singing, (*'you just can't help but, like, notice what they do vocally'*) T1 does judge other singers by their own aesthetic standards, even though this is identified as a negative personal trait. They are then able to acknowledge that this is an inherent part of the ensemble experience, and that the critical judgement of others' singing facilitates the ensemble technique that is required to create a cohesive choral sound.

There is an implicit group identity that T1 alludes to in their discussion of judgement. Given the highly personal nature of singing, as well as T1's defensiveness throughout this passage, this could indicate a judgement of the individual associated with the singing, not just of the singing itself. Similarly, there is an understanding that T1 is attempting to *'get away from'* this type of judgement by allowing their habitual singing in an ensemble situation to be sufficient. The hyper critical conservatoire environment, in which singing is there to be critiqued as a reflective process for the development of one's own technique, is part of the context for this. Each singer is used to judging

singing, yet T1 states their camaraderie to those that they sing with regularly. T1 is able to disassociate the vocalism from the personal and concentrate solely on the work.

While familiarity is an important component of ensemble singing [4.3.4], it is also important to note that changes in this familiarity are a source of anxiety to T1. Given the linear progression of conservatoire education, it can be expected that individual voices will change throughout their conservatoire career. Perhaps this anxiety regarding the reacquaintance of T1 with the voices of colleagues (and they of T1's) surrounds their perceived place in a conservatoire hierarchy. They may fear they have not progressed as quickly as either they hoped, or others expected. This judgement 'weighs' on T1, which could contribute to an observer effect throughout the session. It could also impact their singing as they attempt to project an idea of their voice that is different to that which they would naturally produce. T1's wish to 'move away from' this indicates a desire for other participants to accept their base vocalism as stimulus. T1 may then use the ensemble as a vehicle for their own vocal prowess, rather than for the communication of a choral aesthetic.

**B2/83** *...and for example if B1 was to say something and suggest it to me, because B1 and I get on and I know him very well and I trust him, I know that when he makes that, I know if he makes a comment saying, you know, maybe that was wrong, or something like that. I know that he's doing it not in a malicious way.*

As we can see here, B2 is comfortable with B1 making a direct critique of their singing. This level of trust comes from B2 assuming the positive intention of B1's interventions through familiarity, both professional and social.

Participants perform within the boundaries of a strong social structure in which particular behaviours are either accepted or deemed inappropriate. The 'success' of a participant within the wider conservatoire environment plays a part in how this social structure is constructed. In using an ensemble situation to judge the 'success' of a particular singers' solo singing, this could be seen as an unfair representation of an individual in terms of this hierarchy. Participants described a desire to

suspend the critical nature of technical listening against a solo aesthetic filter for the duration of the rehearsal. While this was possible in some circumstances according to participants, creating an environment in which this suspension can happen readily may pose challenges in the rehearsal room.

### **4.2.3 One-to-One Teacher**

As part of the biographical information participants provided at the start of their interviews, it was clear that all participants had engaged in some form of formalised tuition before embarking on Higher Music Education. This therefore makes the relationship that students have with their one-to-one teacher not only one of the most time intensive, but also important in their vocal and personal development as they navigate the transition between secondary and tertiary education.

**T2/9** *When I studied with [my pre conservatoire teacher], she was very much... that kind of style, like she would, I don't know, I think she tensed quite a lot. And I think I got that, er, from her.*

Within the context of the quote above, T2 discusses the 'bad habits' that they are currently attempting to eradicate with their current one-to-one teacher. The tension that T2 identifies as an issue is taken from their evaluation of the vocal quality of their pre-conservatoire singing teacher. This tension is seen as 'my biggest, one of my biggest [bad habits]'. It can be assumed the vocal tone of the teacher is directly impacting the technique of a singer several years later, with a difference of opinion in singing teachers.

**A2/75** *It's really, really, hard to explain. It's just kind of a word that my teacher uses, that like I've discovered what it means to me over the years, and I know what sound she's after, and I know that she knows that. I know what she wants me to do to create it, but it's really, really, difficult to explain. This is why I don't think I'd be a very good singing teacher.*

As A2 mentions above, creating a shared understanding of 'technical language' takes place through teacher supervised trial and error. Development of reflection for the singer, and the judging of technique against their own aesthetic filter is a more advanced stage of training.

The difficulty of explaining vocal interventions in a qualitative way, or at least without some form of imagery or metaphor that then becomes embodied, is made plain by A2. When participants discuss technical language or ‘technique’, they are speaking of this embodied knowledge through guided reflection, but generally in relation to the aesthetic filter of their one-to-one teacher, and not necessarily against their own standards or values. Development of reflection for the singer, and the judging of technique against their own aesthetic filter is a more advanced stage of training, as A2 states that they wouldn’t be a particularly good singing teacher. This is supported by Gaunt’s (2009) investigations regarding a lack of focussed strategic effort to develop practice, and a lack of autonomy of the student learning process (Gaunt, 2008).

The importance of a successful relationship between singer and one-to-one tutor is highlighted by S3’s description of their first tutor at a conservatoire.

**S3/11** *She was shit. Was absolutely shit. Awful. She wanted me to sing Ach Ich Füss in my first year. I. And I was still pretending to be a mezzo, I just don’t understand. And I did [iaiaia] for two years and I got nowhere, except down there’s maybe a bit more focused now. Like, that’s it. But maybe that’s what I needed at the time, but maybe not for every single pupil that she had. She’s a great singer, don’t get me wrong, but she can’t teach for shit.*

The level of investment that participants place in their vocal development is huge, and when this doesn’t then meet their own expectations they become disenfranchised and hurt. S3 identifies a particular vocal exercise [iaia] as symptomatic of the issues in this relationship, and in particular with the length of time this intervention was deemed relevant. Remaining with one exercise is still frustrating for S3 in retrospect, suggesting that a perceived lack of progress in relation to peers is a driving force for S3’s self-efficacy in their singing ability. Also, a non-idiographic approach by this teacher forms part of S3’s hostility towards their teacher. Expecting that a singing teacher will pursue different interventions with different pupils may highlight the individuality of the voice as an instrument, but also the need for S3 to feel their relationship with their one-to-one teacher is special. The indignation that S3 ascribes to a particular repertoire choice on behalf of the teacher also suggests

that repertoire selection is the purview of the instrumental teacher in some cases, and that the suitability of this repertoire is something that is to be validated against external benchmarks.

Having a positive relationship with a principal study tutor forms a substantial part of the developmental journey of a singer. Therefore, it is important that the opinions of the tutor are valued and trusted (Gaunt, 2009). As S3 shows above, if the opinion (or the perceived effectiveness) of the principal study tutor is deemed negative, the consequent loss of respect and agency can prove devastating to the relationship to the point where the principal study tutor needs to be changed (ibid.).

**S3/29** *It's very interesting because that's what she's been grinding in to me at the minute.... Erm.... Technically, the thing, erm, I'm finding it very hard to know when, and when I'm doing it right.*

The development of reflective skills is also part of the remit of the one to one teacher (Creech & Gaunt, 2012). Many participants mentioned particular technical interventions that form part of their current educational context. This may lead to some bias in the reflection on choices made in the research intervention, given which aspects of their technique participants were currently working on. Therefore, the technical elements of participant engagement have been omitted and await further study. The emotive phrase '*grinding in to me*' again highlights the balance of student / teacher intervention in singing lessons as described by Young et al. (2003).

#### **4.2.4 Proto-Professional Environment**

The vocational nature of training in a proto-professional environment means that most of a student's time is spent honing their solo singing through repertoire classes, one-to-one lessons, languages, and productions (both operatic and ensemble). Similar to the university sector, the start of undergraduate study is seen by participants as a turning point in their personal development (Chow & Healey, 2008). When asked to describe their singing up to the point of the interview, many participants made an unconscious differentiation between their pre-professional and proto-

professional singing, with that transition happening at the start of their Higher Education experience. This perceived difference may stem from the expectations incumbent on them as students of a conservatoire, partly tied to the reputational and societal privileging of this type of education for musicians.

**S3/8** *Erm. Like. Erm... [sighs]. Like, From the very beginning, or just from like uni? Where do I start?*

**B3/4** *So when I came to [the conservatoire], well, before I came to [the conservatoire]...*

These two quotes, prompted by the first biographical question of the interview schedule (*'can you tell me a little about your singing?'*) demonstrate this turning point in the minds of participants without solicitation of this distinction by the interviewer.

**T2/24** *So trying to replicate it, is just trying to make it more of a unified sound, rather than three completely individual voices singing the same notes. I think when you get to a conservatoire level, everyone's going to have different voices, so it's very hard to make it a complete united sound.*

T2 is speaking about their attempt to create a cohesive ensemble unit to facilitate a blended sound. However, the suggested acknowledgement of development as a progressive series of stages in the phrase *'conservatoire level'* shows that this is a particularly important part of the musical identity of T2. Similarly, while this individuality provides challenges in the aim of blend, it is also an inherent part of the nature of their training. The voices aren't attempting to become similar; they are aiming for individuality and nuance in their singing which can provide opportunities that may not be available to untrained voices.

**T2/29** *I think that competition is a huge part of being in the [conservatoire], though.*

Competition can affect the perceived place in a hierarchy of students in terms of achievement in a proto-professional environment. While T2 doesn't provide a value judgement for this competitive element, other participants have felt anxious of others judging their voices. Competition, and a desire

to be perceived as 'different' as a way of appearing successful could negatively impact how they perform in ensemble settings.

#### **4.2.4 Discussion**

Participants have made it clear that there was a turning point as they entered the conservatoire for their study. While this particular milestone is not unusual in the development of a person (Chow & Healey, 2008), the change in attitude regarding those experiences 'before' and those that happened whilst a student of a conservatoire, make a relevant point regarding how participants perceive their vocal and musical identities. Many participants defined their studies through periods of singing tuition, again highlighting the importance of the relationship between student and singing teacher, with a significant impression made upon the habitual singing technique of participants by tutors, which in some cases can last years later.

One-to-one tutors are charged with developing the solo singing of a participant. There is also an inevitable preference for particular aesthetics that become ingrained in students through positive reinforcement of what the teacher deems to be 'good' singing. This development of an aesthetic palette and template then impacts singers' perceptions of their output in various vocal contexts, not limited to solo singing practice. The agency of the one-to-one tutor in the development of not only the technical and physiological mechanisms to create a desired vocal quality, but also in the auditory image of the singer's own voice cannot be underestimated. While there is literature dedicated to the perceived animosity between ensemble directors and voice teachers (Ferrell, 2015; A. Goodwin, 1980; Hansen et al., 2012) [see also [2.4](#)], there is scope for further research in the relationship between singing tutor and conservatoire pupil in the development of an auditory image of the voice.

Singers don't have an accurate impression of their voice while they are singing (Won & Berger, 2005), and are reliant on external feedback in order to evaluate their singing. This could be in reflected sound from the room, or indeed from the reaction of colleagues or an instructor. In this manner, singers are engaged in a process in which their constant adjustment impacts on their singing in real

time. Goodwin highlights this phenomenon in an ensemble context in that *'The singer evaluates the blend of his own voice with the ensemble. The incoming aural sensations are compared point by point with a reference- a set of aural sensations stored in the auditory memory and associated with the concept of vocal blend'* (Goodwin, 1982 p.34).

### **4.3 Development of Self**

This super-ordinate theme deals with three emergent themes:

**Identity** deals with participant perceptions of their voice as a musical instrument in a wider context of singing in the UK. This begins to deal with the solo and choral dichotomy, and places some of this argument into a participant created context of ensemble singing practices.

**Age / Development** focuses on participant recollection and self-evaluation of their own development as a singer. This also speaks to the physical development of the voice, and how the bodily instrument impacts and forms their identities as singers.

**Familiarity** discusses how participants build their auditory image of other singers, as well as some of the social interactions between participants in the research intervention.

#### **4.3.1 Background**

Vocal identity as a musician has close links with a sense of self (Monks, 2003), with teenage participants being aware of their vocal development as congruous with their personal development. In the literature, vocal identity can be termed as how a particular voice sounds, and how other people identify that voice as their own. It concentrates on the quality of a voice as well as the expectancies inherent in knowing that an individual's voice will sound like; for example, recognising somebody from how their voice sounds on a phone (Scott & McGettigan, 2016). Musical identity is a related, but distinct concept and concerns how an individual defines themselves in relation to musical taste.

Musical self-identity is an inherently social phenomenon, with musicians identifying given their ability to play an instrument, as well their preference for music genres that are similar to their friendship and peer groups (O'Neil, 2002). Given that playing an instrument is part of a musical identity, the voice as an instrument [see [4.1](#) for more literature] leads to some overlap between vocal and musical identities as the voice is an inherently musical experience for participants.

Enculturation is the process by which ones own culture '*including its values, behaviours, beliefs, understandings, social norms, customs, rituals and languages*' (Tan, 2014 p.393) is acquired. In music, this often happens at an early age in family settings. The complexity of this culture increases with a growing web of musical influences, assimilating the behavioural, aesthetic, and expressive norms of the environments in which you are surrounded (ibid.). 'Cultural distance' as described by Demorest et al. (2016) is the feeling of connectedness with a piece of music based on the cultural coding of a piece of music, and your encultured values. This can also be said to be how self-related a piece of music is to you, and how this relation sits outwith the time of either piece (Northoff, 2021). For example, you may feel very little cultural distance to a piece of Tallis, as your relatedness to that piece has particular cultural codes (diatonic harmony, rhythmic structures and texts) that are familiar, even though the culture at the time of the 16<sup>th</sup> Century would feel vastly different to a 21<sup>st</sup> Century audience. This process informed the repertoire choice for this thesis, as discussed in [\[3.5.1\]](#)

Much of the research on the development of musical self-identity concentrates on adolescents and children (MacDonald et al., 2002) given this is the most formative stage of human development. When discussing tertiary level students, a great deal of self-exploration has already been undertaken in order to decide that their vocational aspiration, and therefore vocational identity is that of a music student. This journey towards vocational identity and career aspiration is a large factor in the transition between adolescence and adulthood, with the solidifying of this identity building from adolescent experiences of that vocation (Gagnon et al., 2019; Gushue et al., 2006; Robitschek & Cook, 1999; Stumpf & Colarelli, 1980). The years of individual training and ensemble activity that participants

have engaged in before they arrive in a conservatoire could count for a strong sense of vocational identity in participants. However, how this is then shaped through their higher education experience will be explored by participants below.

### **4.3.2 Identity**

**S3/16** *But I think that's just being a choir person...*

**S1/15** *Yeah, I was speaking to another choral singer about this once.*

As part of a proto-professional context, singing for participants is vocational in nature, with the voice becoming an integrated part of a singer's *dasein*. Operatic and choral singers, while similar in many respects, are different entities each with their own community of practice. As S3 notes above, being a 'choir person' is part of their whole identity, the object of choir is something that permeates every other aspect of their personality as a macro lens through which their singing can be viewed. While the focus of this study is on choral singing, and therefore may lead S3 to discuss this facet of their singing more fully, the idea of personhood and the vocational nature of singing is strong in this phrase.

**A1/6** *when someone says they're a choral singer I kind of think church music, erm renaissance polyphony, the sort of chamber choir stuff, the smaller, the smaller choral kind of group of people that all sort of sound... very, very similar.*

Being a choral singer is, according to A1 above, an issue of personal identity, and not that of either experience or training. This evokes an image of both a particular aesthetic of singing '*renaissance polyphony*', but also of the forces used as a '*chamber choir*'. 'Choral singer' is therefore differentiated from larger symphonic or operatic chorus work with larger forces, but also emphasizes the word *choral* rather than the word *singer*. There is no emphasis on training, but rather on performances. While the similarity of which A3 speaks may be due to the wish for homogenisation of sound in ensemble music, A3 alludes to an auditory image and community of practice to which singers who identify as 'choral singers' adhere. This auditory image may then permeate the canonical repertoire that they describe

and influence how participants hear and sing this type of music, therefore building an aesthetic or community of practice.

**S2/55** *And you know, people who are making such a point of like look at my big opera voice, and it was just really sort of annoying, and that makes me think, like I don't want to be that person that everyone will be like...*

S2 highlights the differences between singing for the benefit of a collective and singing for the advancement of one's own ego. As other singers '*make such a point*' and encourage colleagues to '*look*' at the technical expertise of their own singing, this wish for individual attention in an ensemble environment is seen in a highly negative light by S2. The pejorative language could suggest that in an ensemble context it is not merely the development of vocal skill that is desirable, but also of a personality that fits in to the community of practice of ensemble singing. This is something that S2 aspires towards, they '*don't want to be that person*' indicating that the social development and knowledge of appropriate behaviour in singing situations is more important than the development of the instrument, or technical expertise itself. Similarly, a wish for validation from peers is evident, S2 doesn't want '*everyone [to] be like... look at my big opera voice*'. This behaviour has been deemed inappropriate, and they are therefore wishing to conform to the community of practice in the building of their social identity. Given that musical identities are built in social contexts (MacDonald et al., 2002), this is unsurprising.

**S3/83** *Erm. Yes, I was excited by it [the session]. [whispers] because I love choir singing.*

It is telling that S3 feels the need to conceal their love of ensemble singing by whispering conspiratorially when professing their '*love [for] choir singing*'. Given the focus within a conservatoire placed on solo development, ensemble singing may not be seen as 'valid' because of the different techniques required for ensemble singing. S3's reticence to fully embrace their enjoyment of choir singing is in concurrence with S2, whose community of practice very much derided attention seeking behaviour of the '*big opera voice*'. Here, S3 could feel that any attention seeking behaviour at all, in

terms of their enjoyment of the art form, goes against the norms of a conservatoire environment in which it is 'uncool' to love choir singing.

It is telling that there are 39 separate instances of the theme insecurity. This occurred across all participants and was not limited to a single context.

**S1/6** *Er. Well, insecurity, a lot of insecurity. There's loads of mental pressure in my mind when I was in that rehearsal. Erm, yeah. The pressure of being recorded, that definitely affected the way I was singing, I think. Erm, and you know, just what other people, yeah, what other people are thinking about singing as well. We're all listening to each other, erm, that affects it too.*

S1 describes the research intervention as a stressful experience for them, with the '*pressure of being recorded*' adding to their level of anxiety. Similarly, wondering '*what other people are thinking about [their] singing*' and how other participants were judging their contribution has an adverse effect on how validated S1 feels in the rehearsal room. This pressure, particularly surrounding the recording '*affected the way I was singing*'. It is unclear what this change was, but this could be impacted by the singing happening around S1 in that '*we're all listening to each other*'. Anxiety surrounding how participants feel judged by their colleagues is not limited to S1.

**B3/37** *In a choir setting, I, I. As a bass 2. As probably the weaker bass 2 in the section. Erm. As is how I'd identify myself, I think.*

As B3 is identifying as their voice part first, the most obvious way for them to differentiate from other singers in an ensemble situation is by the line that they sing. Among that further team, B3 ranks themselves as 'the weaker' bass two. In their description, B3 avoids the use of the superlative 'weakest', however in a section of two being '*the weaker*' implies the same thing. This linguistic sidestep could be B3's way of admitting their own insecurity in ensemble settings while also saving face in a competitive proto-professional environment. The self-confessed identity here is limited to a '*choir setting*', however. This indicates that there are many different identities that participants are able to hold in varying singing contexts.

**T1/17** *for that first time, I just felt like constantly kind of on edge about whether I was sticking out*

**S2/33** *I don't like standing out. And I don't like being noticed much, so when I'm singing high notes, I feel like people are going to pay more attention to me, and that makes me uncomfortable.*

Both T1 and S2 report that they felt anxiety surrounding breaking the expectations of an ensemble community of practice in the room by 'sticking out'. As was discussed by S2 earlier [S2/55], the wish to not appear to be 'showing off' or to be using an inappropriate vocal timbre for the ensemble situation is something that can then lead to anxiety. In S2's case, the anxiety lies around a particular technical issue, 'singing high notes'. Taken in the context of S1's desire to not be derided by colleagues for attention seeking behaviour, it could be suggested that the social anxiety of 'constantly [feeling] kind of on edge' is a symptom of not wanting 'people [to] pay more attention to me'. Feeling *uncomfortable* about this, as S2 does, may suggest a social conditioning for a particular type of behaviour in ensemble contexts.

**A3/61** *That means that you may get a few why? From the rest of the section. You may get a couple of, but why are you doing it this way? Like, I do it this way, so why are you doing it this way because it sounds so different, sort of thing, which has happened before. Erm... but, I feel like it's just kind of. It's being, it's being brave with.. interpretation. And being willing to stick to that. 'Cos then if you have enough conviction in that, then it's infectious to others, and I feel like then that becomes the new thing...*

Taking initiative for group artistry is the defining factor of choral leadership according to A3's analysis. A3 actively seeks out their own artistry at the expense of group cohesion, but not with the wish of furthering their own singing. However, whereas S2 uses their vocal interventions to ensure that they are acquiescing to the group will, A3 states that they will assert their own ideas as to the interpretation of a piece until the other singers assimilate this interpretation as part of their singing. 'Bravery' of interpretation suggests the knowledge that A3 is actively resisting the sectional sound is a conscious decision which may place A3 in some form of adverse situation, perhaps through the social pressure to conform and the judgement of peers that is associated with this.

**B1/19** *Not, not to say that I am the most experienced of the three guys, so I was more likely to take the responsibility on. There's no de facto assignment of the, the leader of the section. But, as the most experienced guy, I find I'm looking across the line more and trying to, you know, police certain things that'll come up. You know, in terms of intonation, erm, even down to correctness, for example.*

As with A3 above, there is vocal leadership which is sectional focussed rather than ensemble leadership in a wider context. With B1 'policing' the line, including ensuring that there is pitch accuracy, it is possible that this form of leadership will cause anxiety in some of the other members of his section, as mentioned by B2 later in this chapter [B2/78]. Experience seems to be B1's arbiter of the assignment of leadership within the section, with this role being assigned not through a 'de facto' conversation, but through the actions of B1 in the rehearsal. In amateur ensembles, experience is not seen as the arbiter for leadership, but rather perceived skill (M. J. Bonshor, 2014), here B1 sees his experience as the most important factor in his leadership, whereas B2 [B2/78] sees his ability to accurately realise a score (i.e. skill) as the more important factor.

Experience could lead to the confidence to take on this role, as discussed by B3 below.

**B3/40** *I know [B1] and I've sung with him a lot and he's a very confident musician and I know that he'll feel the text more than other people that I've sung with, certainly. And I know that there'll be no problem, there'll be no pressure with me to take the lead so much with that. But I also know that he's a very good sight reader, so I would, I'll take the back seat in leading the sort of music if it's a piece that like we've not done before.*

We can see from B3's account above, that the knowledge B1 has taken a leadership role has allowed B3 to not feel any form of anxiety surrounding the accuracy of pitch, particularly due to sight reading. 'Correctness' and accuracy of pitch is a major concern for participants in this study with significant energy expended discussing the various ways in which sight reading impacts their perceptions of choral singing. B3 compares the experience of working with B1 to others in similar situations and appreciates the working methods of B1 in comparison to others. It appears that the preference for experiences, and singing partners, is not limited to how individuals provide their

contribution, but also to their rehearsal interventions. The focus of conversation on rehearsal, while perhaps a consequence of the rehearsal-based research intervention, nevertheless encourages a view of the social and personal relationships of participants as part of the overall process which can therefore directly impact on the sound of the ensemble, and the blend experiences of the individual singers.

### **4.3.3 Age / Development**

**A1/57** *I think..... what I, what I mean by that particularly is that in, in younger singers they want, they want to make their voice larger, or fuller, or erm, more than what is there currently. Erm.... Because they're either not happy with what they've, what they've currently got, or they... they have, you know, erm..... erm... or they want to change, you know, they want to change what's there. Erm. And I think that's more about what, what they hear in their own head rather than what's, what's actually coming out of their mouth and being heard by everyone else.*

While many singers may 'not be happy with what they've currently got' for various reasons, the desire to improve this is an aim in conservatoire education. Younger singers may wish to project an auditory image that is associated with more advanced singing; be that older singers, those with more training, or a 'larger' instrument. This can lead to a disjunct in vocal identity between the ideal that is being projected by the singer (how what is heard in the head is then interpreted) and what others hear and judge externally.

Wishing for a voice to be 'larger' alludes to the Fach taxonomy of vocal weight (McGinnis, 2010), with the aspiration for a larger instrument implying a 'heavier' voice, associating their singing with roles requiring larger vocal forces. This could be seen as antithetical to the desires of ensemble singing, given that the desire is homogeneity, rather than individual virtuosity. As participants are all at different stages of their vocal development, it follows that singers may attempt to appear more 'advanced' than they are in a close listening rehearsal environment than they may in soloistic singing.

**B3/36** *I'm the bass. Maybe there's a tendency there to go more dark, just I don't know. Unconsciously because you're thinking that*

*you should be low, I don't know. Because when I was younger, I used to listen to older people, and now I still, even now listening to older people, but I know now not to copy them. But I wonder, unconsciously whether that affects you, I don't know.*

Rather than comparing the peer's singing, B3 suggests that listening to older singers can impact your own habitual processes through imitation. B3 acknowledges that '*when I was younger*', they would assimilate the vocal techniques of older singers, perhaps then attempting particular timbres that were out of reach for their physiological development at the time. B3, differentiating between '*younger*' and their present opinion has led them to '*know now not to copy them*' which could perhaps suggest that B3 now is more secure in their own timbre, which is appropriate for their development.

Similarly, there is a sectional stereotype for particular timbres. B3 here states that a designation of '*the bass*' could encourage a darker habitual timbre. Interestingly, B3 designates himself as the single bass rather than one of a section. This could indicate that having the lowest comfortable register of colleagues in the research intervention gives them this designation, or that issues of personal timbre are an individual, rather than a sectional concern.

**S1/38** *Well I've listened to this a lot. I grew up listening to this kind of music, so it's in my head. And a lot of the recordings I've listened to, they do it like that. King's Singers and yeah. Those kind of groups.*

Imitation of more advanced singers is not limited to solo singing within the conservatoire environment, but also to professional groups. Here, S1's listening habits as a child directly inform how they then sing in choir, and what they will determine to be a successful ensemble performance. The King's Singers use boy trebles for their soprano line, and not sopranos, which could lead to a particular soprano timbre that is not necessarily that of a fully developed instrument. While B3 talks of '*darkening*' their vocal timbre to become more advanced, this may conversely lead S1 to attempt to make their voice sound *less* developed in ensemble situations to imitate the sound of an unchanged prepubescent voice more accurately. Similarly, the grouping of the King's Singers with '*those kind of groups*' here suggests that there is a particular choral timbre that S1 associates with ensemble

listening. While this taxonomy isn't elucidated further by S1, it does indicate their subscription to a particular 'school' of ensemble timbre that is learned through listening from childhood.

**B3/16** *So that's like a skill I learned as a, [expels air], a ten year old, eleven year old sitting next to other sopranos, not really knowing what the hell was going on, or knowing what these dots on a page were. Seeing the text and sort of thinking, that must be what I'm doing now. Being thrown in the deep end a little bit. Because my parents weren't musicians at all. Like my dad sometimes played keyboard, he used to be in a band, so he played keyboard and stuff, so I really was the odd one out, erm, and had to sort of forge it on my own terms. There's no guidelines or anything, so. Erm. Er, that's, that was the kind of instinctual way that I got through stuff. Just kind of repeating, copying, like a baby learns language. Just kind of, instinctual thing I think.*

Many of the insecurities described throughout B3's interview concerning a perceived lack of skill in sight reading and musicianship are manifested in this quote. B3 was relatively young when they first began organised singing, presumably with an unchanged voice. Also, given they didn't know '*what these dots on a page were*' it can be assumed there was no formal theoretical training. However, the fact that B3 equates success in singing with accuracy of pitch is telling- their inability to read notated score is a point of difference for B3 which then differentiates them from other singers. B3 is the '*odd one out*' not only in terms of their perceived musical ability, but also familial background. Even though B3's father '*sometimes played keyboard... in a band*' this is not seen as a musical family but is an assimilated part of their musical identity. A lack of early training in formalised music education, seems to have impacted the confidence of B3, they feel '*thrown in the deep end*' in ensemble situations. The techniques B3 used in early childhood such as '*repeating, copying, like a baby learning language*' could be those skills that are still used in tandem with more developed music literacy skills now. Acknowledging that singers can imitate those sound sources available around them in terms of timbre could also indicate that accuracy of pitch could be a highly developed skill of imitation, as B3 describes above.

**S2/4** *Erm, I started singing in a choir when I was... erm 10, I think. Erm. Sang in adult choirs since I was 14, 13.*

**S2/5** *Yeah, I've been doing solo singing since I was 10, as well. In competitions, and stuff. I've been performing regularly since that age.*

S2 differentiates between their ensemble and solo singing even at a very elementary stage of their vocal career. Whereas success in ensemble singing is determined through the maturity of the ensembles in which they are singing, solo singing is measured through direct competition with others. Having competition equate to performance in this manner could impact on the way in which S2 works in a competitive proto-professional environment. Also, given that competition is the anathema of ensemble singing, the differentiation between the two types of singing, one competitive and one collaborative, could be a valuable differentiation between two singing styles. When these styles therefore merge in a proto-professional ensemble environment, this could create an interesting paradox for S2 and their vocalism.

#### **4.3.4 Familiarity**

**T2/33** *I think it's [choral singing technique] quite a subconscious thing, especially if you do a lot of choirs, you'll be used to it.*

**A2/41** *It's very clear throughout this group that everyone knows how choral singing is done.*

There is a ubiquitous choral experience that transcends any particular group, as stated above by both T2 and A2. This behaviour, be it vocal or interpersonal, creates an experience that maintains characteristics across rehearsal scenarios. As suggested by both participants, this is not something that needs to be concentrated on directly to still have an impact upon how they experience ensemble music. The difference between the two phrases above is the assertion that this particular group of singers are subscribing to a similar ideal of choral music as stated by A2 in order to accept this community of practice. T2, however, does not indicate such a concentrated effort, in that ensemble singing is a '*subconscious thing*' which is habitualised through repetition of this experience.

**A2/31** *And we know what we can do with our voices to fit with the other voices better. Erm. So it's, it's, I guess it's another. We're all, all experienced choral singers, but we're all just experienced singing with each other, so that obviously adds to it as well.*

Particular ensemble singing experiences in which an individual must listen to those around them in order to then '*fit with the other voices better*' suggests that ideally there must be a certain level of familiarity with the voices with which a singer is interacting. This then allows that singer the ability to predict the singing interventions of an individual in order that their own interventions may fit with the as yet unsung phrase. Given this, familiarity with those around you can make a significant difference to the experience of singing choral music successfully, and some of these factors of familiarity are discussed below.

**A2/30** *I think we, we, we've all three sung together so much that we kind of know each other's voices and each other's style of singing in a choir so well that we kind of can have that wordless discussion in, in a... in a rehearsal of like you breathe here, I breathe here and how much we need to step back, and how much we need to do.*

A '*wordless discussion*', as described by A2, forms part of the rehearsal process within a section of a choir. A2 is able to convey both logistical and artistic information to colleagues through their singing, and understand this from others in turn. Through experience of other singers, A2 builds an idea not only of '*each other's voices*', but also '*style of singing in a choir*'. These two separate auditory images, one of individuals, and one of the group, which have been created then inform A2's singing in this ensemble. This does not necessarily mean that A2 is familiar with every intervention that their colleagues make, but that there is a pattern of expected behaviour that the whole section can be expected to follow. Knowing this pattern of behaviour can allow an individual, in this case A2, to predict and fit in with this template.

**T1/51** *And maybe it's because, because we haven't sang as a group of, 16 or whatever we were in so long that it kind of feels like, oh, we're all back together now, have people's voices changed, or? Which is stupid. But you kind of feel it a bit weighing on you. I don't know why.*

If one aspect of familiarity is the build-up of an auditory image, this image may change after a long absence. The close listening involved in building auditory familiarity can cause anxiety among singers. This could be because their contribution is being judged against an unrealistic set of soloistic criteria within an ensemble context. The 'gap' described was due to scheduling projects around exam diets [see [3.4.4](#)].

**S2/37** *I think it sounded good, in general. I think I could tell that we hadn't sang together in a little while and we were getting used to each other again.*

**B3/18** *Erm, even though each of us had probably been singing that day, there's still like a period of warming up that you have to do as a group.*

The independence between vocal warm up and group re-familiarisation as described by B3 and S2 could indicate that these are separate processes. Re-familiarisation with the group could involve the construction of a new auditory image, whereas a physiological vocal 'warm up' is an individual, rather than collective, experience.

**B3/93** *And if you're stood across from someone that you've never met before, and you don't know how they work. It's, it can be a bit more awkward to work with people, and to preconceive how they're going to sing something for example, and sort of thing they can do with their voices and stuff, you know.*

'Awkwardness' implies a social, as well as professional, hesitance in the rehearsal room. This could indicate that familiarity with the social as well as vocal style form part of a cohesive community of practice. Development of an auditory image of the voice is made plain by B3, in that there are *preconceptions* of individual's singing. Without this knowledge, interactions are more 'awkward'. Whilst the vocal elements of unfamiliarity have been discussed, there are also interpersonal relationships at play in the changing group dynamics of ensemble singing.

**B3/93** *Because you've got, you know, definite, you know, bonds and stuff like that between people. I think that probably contributes to the overall sound. And how well people work together. Because it's an interpersonal thing, choirs, erm.*

Interpersonal bonds can help to facilitate the ‘wordless discussion’ that A2 cites above [\[A2/30\]](#). These bonds, and the social nature of the ensemble, contribute to the overall musical sound. It could be suggested, therefore, that given ‘bonds’ between people suggest familiarity, that a group that are familiar and comfortable around each other will create a more cohesive ensemble sound.

**B2/78** *An element of trust, as well. You now, I trust, erm... I particularly, I trust [B1] and [B3]. I feel comfortable that I can make a mistake, erm... and you know it, it it's something that I won't, you know, kind of freak out about... I'll just... try it again, and you know, I'm confident that I can do it correctly.*

Familiarity moves beyond simply the knowledge of an auditory image of voices for B2, and also encompasses the interpersonal relationships that govern the social dynamics of a rehearsal. It is clear that B2 is concerned with the reaction of colleagues to mistakes, which suggests insecurity. However, knowledge that these mistakes will not then incur any form of negative social interaction from section colleagues leads to trust, confidence, and the ability to try again. There is no indication that the gap in previous rehearsals has impacted on B2's feelings of trust towards their colleagues, which could suggest that a particular level of familiarity with the rehearsal dynamics of singers can withstand a period of absence, perhaps unlike that of the vocal and auditory domains.

**A1/53** *We all like each other, and we all, kind of... enjoy each other's company as a group of people. I think we're a group of friends and we have a good rapport as a team, and I think that's probably why communicating with each other through singing is not as difficult as it could be.*

As A1 states above, the interpersonal relationships cannot be separated out from the professional, and enjoyment of one another's colleagues' company is an important factor in being open and receptive to the subtle responses of colleagues during singing. A1 is interested in *communicating through singing*. Rather than a conversation, the trust that B2 discusses earlier [\[B2/78\]](#), shows there is another layer of communication that occurs during the active singing phase. This communication is eased by familiarity with other singers' mannerisms that are not merely vocal. Familiarity with the

body language of other singers may aid in coordination across the group and the development of anticipatory imagery as discussed by Keller (2012).

#### **4.3.5 Discussion**

Ensemble singing can be seen as a joint action, an activity that requires '*predicting what others are going to do next, adjusting ones behaviour to complement another's task, and achieving precise temporal coordination*' (Vesper et al., 2010, p.1). Similarly, this joint action takes place through monitoring behaviour of other participants in the action and then *representing* both their own action and the action of others in the wish to accomplish a goal. Those things that make this easier are known as *coordination soothers* (ibid., p.2). In the examples given above, it could be said that participants are monitoring other singers' behaviour in particular vocal ranges, and then representing this action before adjusting their own behaviour to complement this task. The coordination soother in this example is the auditory image of the other participants' singing, formed through familiarity as well as the temporal cues of 'communication' (Volpe et al., 2016) throughout the ensemble.

Similar to the musical advantages of familiarity, participants felt that they were more able to provide a valuable contribution in an environment in which they felt safe, and able to make mistakes and rectify these themselves. Participants social and interpersonal actions in their non-singing moments have a positive effect on their work in the rehearsal room. The interpersonal bonds that exist within a group appear to be part of a wider effort of group cohesion that negates the role of director. There is a lack of a discussion of formal leadership, particularly surrounding the non-musical rehearsal interventions, or gestural coordination inherent in conducting. This study was designed as purposefully singer centric in order to contextualise the conversation surrounding ensemble music away from a director led approach, and as such participants were directed to concentrate on their own singing throughout the interview. It appears that in terms of the auditory quality of how one is singing, the joint action of ensemble singing requires far more interaction with singers, rather than conductor.

It is clear from the discussion above that participants benefit greatly from a familiarity with the singers that they are working with. It is notable that in this discussion there was no mention of familiarity with a conductor or ensemble director. While this may be taken as *a priori* knowledge of the researcher's dual identities as director and researcher, given the comparison to other ensemble contexts, this could be a valuable insight into the concerns of singers in ensemble situations.

Familiarity with colleagues in an ensemble is of positive musical, interpersonal, and social benefit, each of which leads to a more positive experience for participants. The term auditory image has been used throughout this thesis to describe the imagined voice of a singer or group that is anticipated by a performer. This allows them to then match their own singing to this anticipated sound. While this definition strays from early research (Intons-Peterson, 1992), there are similarities in the use of auditory imagery in other literature. Auditory imagery has been seen to lead to activation of the laryngeal muscles (Pruitt et al., 2019), as well as suggestions that auditory imagery involves expectancies (Hubbard, 2010). This suggests that the auditory image singers build through familiarity can then be used to develop a schema for individual's contribution to a particular musical phrase. This expected sound is then able to inform individual vocal intervention through their own physiological vocal processes.

Whilst there is still much to be learned regarding both the phonological loop of working memory and the use of auditory imagery in the short term, what can be assumed from the expanded use of this definition in this thesis is that singers build an image of a particular singer and are then able to use this in their own artistic interpretations of their singing throughout rehearsal. This '*warming up as a group*' that was described is a re-familiarisation of this auditory image in the rehearsal space, which could suggest that the auditory imagery associated with an individual must be contextualised within the group environment for each new experience.

In the conversation above we have seen participants discuss their early musical experiences and the building of an identity as a '*choir person*'. Musical identity is an inherently social construct, and

musical tastes play a large role in social distinction among adolescents (MacDonald et al., 2002). Forming an identity that is inherently tied with the activity of ensemble singing could be seen as a fixed identity (or 'entity theory of self'), where the understanding of the actions within this identity are fixed. This is opposed to the 'incremental theory of self' that has been evidenced in this thesis to describe the more fluid development of the vocal instrument through teaching (Dweck et al., 1995).

Learning how to sing through an ensemble situation helps to build a Community of Musical Practice [see [2.5.2](#)] as described by Kenny (2014). Building from the work of Bourdieu (2002) and Elliott (2005), a Community of Musical Practice (CoMP) is established through 'musical worlds' which are a *'conceptual and practical organisation of sound, movement, meaning, values, and rules'* (Mans, 2009, p.5). Developing this CoMP, and the habitus of the choral identity described by participants above, has impacted on their identities as ensemble singers at a proto-professional level. The insecurities regarding the values that were inherent in this CoMP, particularly around musical literacy and sight reading, still permeate the ensemble experience over a decade later for some participants. The musical nature of CoMP does not take away from the community of practice that is created among the ensemble singers and discussed at length in this thesis (Wenger, 1998).

Self-efficacy regarding the singing voice was also of particular concern to participants. Wishing that their voice was 'bigger' or 'heavier', coupled with the desire external validation was highlighted by participants. This lack of authenticity regarding the voice could be seen as the 'incremental theory of self' working in tandem with detailed practise and tuition in solo singing. This aspiration is then seen as in opposition to the values of the community of practice inherent in the joint action of ensemble singing. Justifying these two separate communities of practice as both an ensemble and solo singer could be one of the reasons friction sometimes exists when an individual uses ensemble singing as a show of their own virtuosity.

Further research should be carried out in to how best to teach ensemble singing in tandem with solo singing, acknowledging the 'incremental theory of self' with a view to creating a more holistic

identity of the versatile singer. Other work identifying the values of both communities of practice in a proto-professional environment, and mitigations to bring these closer together would also be welcomed by this author.

## **4.4 Development Through Reflection**

### **4.4.1 Background**

As discussed in the introduction to this chapter [4.1], the term reflecting on action is used to discuss the specific reflections of the participants based on their participation in singing during the data gathering session. This section investigates how participants reflected on their singing given the stimulus of individually recorded tracks of their singing in an ensemble rehearsal.

Many participants used the interview as an opportunity to critically reflect on their ensemble singing as a whole. They also used the auditory stimuli as a reflective teaching tool, acknowledging what they would then do differently given the new and unique information that they now had. This section is split into two emergent themes, one retrospective and focused on the research intervention, the other prospective in the way in which participants feel their singing could change in the future.

### **4.4.2 Reflecting on Action**

**T2/13** *Er, it [listening to the solo track] terrified me at the start. Er, I think a lot of what I was listening to, if I was listening to myself in a practice room doing that, I would say like, no, turn on the support, don't just sing from your throat. And, I guess just use technical things that we've done in lessons.*

One of the major issues in using auditory stimuli as part of the research intervention was anxiety among all participants regarding listening back to their voices. T2 associates the practice room with a more technical view of their singing, reflecting on instructions given by their one-to-one teacher. Therefore, the aesthetic qualities that determine perceived success are, in this environment, purely soloistic in their nature. When listening back to their solo stimulus track, T2 felt a substantial amount of anxiety around this style of capturing their singing. Using a soloistic aesthetic filter for this type of

ensemble vocalism has led not only to anxiety, but also to disappointment in their output through this reflection. As T2 indicates, support and vocal production (in terms of vowels) are aspects of personal practice that they would have altered in a practice room. A major difference between private practise and rehearsal is the temporality of the rehearsal environment. T2 is not able to stop and work on their singing, as the agency for rehearsal pacing lies with the conductor. This therefore limits the amount of time that can be spent on an individual reflective process to correct the perceived issue, a limitation which is further compounded by the changing variables of how other singers react to the new vocalism and attempt to intervene themselves.

**T2/13** *When I was listening back to it, I was hearing a lot of things that I haven't done. I could hear my jaw, well not hear it, but I could hear the sound that it makes when I kick it in to make it easier for myself. Er, but then listening to the full track, I thought it sounded fine. I thought, er, it worked. Which was very interesting.*

T2 is able to acknowledge that their individual singing is an acceptable contribution to the overall sound of the choir, whilst also acknowledging their own technical flaws. This juxtaposition between the two aesthetic filters, and criterion for success, are made apparent in the intervention that T2 ascribes to their jaw. 'Using the jaw' as a technique in the context of other singers could be due to T2's desire to fit in to an auditory image. This vocal output could match ensemble ideals that are in aid of T2's subscription to a particular vocal style when singing in this ensemble context.

**B1/20** *So, yeah, it was all conscious decisions based on the practicality of the situations, but you only hear the result of that when you're listening to the solo recording. Erm, because.... You listen to the section in the context of the full recording and it's... it sounds fine, sounds great. But it was only when I heard myself that I was thinking, that sounds questionable, you know, I wouldn't choose to do that on my own.*

In common with other participants, B1 made comparisons between both solo and group recordings. Comparing the two stimuli was a common occurrence across participants, and in every case, participants were harsher in their critique of their solo recording track. B1 acknowledges that their singing is a 'conscious decision' in the research intervention, but also that they 'wouldn't choose

*to do that on their own*'. The apparent juxtaposition of these two statements could be explained through B1's emphasis on the '*practicality*' of ensemble singing. In order to create an ensemble sound and engage in joint action, B1 needs to acknowledge and change their behaviours to fit within the acceptable norms set by other singers. It is also telling that B1 describes their listening as a sectional concern, and not that of the ensemble as a whole. Their tempered language of '*fine*' to initially describe the sectional sound could be a disappointment at their lack of soloistic choices being available to them, which they then recontextualize through an ensemble aesthetic filter to '*sounds great*'.

#### **4.4.3 Aspiration**

**A2/10** *It's interesting to know what I sound like as a single individual as I'm trying to, kind of, fit in with the group. Interesting discoveries there, and something to work on as well, probably. Yeah.*

A2 immediately acknowledges the joint action of ensemble singing, particularly regarding monitoring and predicting the behaviours of the whole group sound. They are also accepting the individual auditory stimulus as a new reflective tool in critiquing their own technique. Use of the word '*discoveries*' indicates the new perspective that A2 can now bring to their singing, before accepting that there are also ways their singing can be improved through this perspective.

**S2/21** *Generally just encouraging warmer sounds, and actually listening to it, I thought I sounded really screechy, so it's like I should have just been doing that anyway, because it probably would have sounded better if I had just been using the warmer sounds that I had been working on at the moment. But for some reason in my head I was like no this is what I need to do, I need to use my little child voice.*

S2's desire for warmer sounds were not evident in the research intervention. Their reaction to these sounds is the use of pejorative language such as '*screechy*' and '*little child voice*'. Realising that the singing that was offered in the research intervention did not meet the standards that S2 sets for themselves in their current singing practice, S2 becomes frustrated and disappointed by it. This is particularly interesting in the context of S2's emphasis on age as an arbiter of vocal experience [\[S2/4](#)

& 5], given that they may believe that the singing they delivered in the research intervention may be infantile or demonstrate a lack of expertise and experience.

While S2 is then able to conjecture that their soloistically habitual '*warmer sounds*' may have actually been appropriate, there was an imperative or behavioural habit that stopped them from singing in this manner. Through the development of a particular set of behaviours in the joint action of ensemble singing, S2 forms a habit that is then difficult to break out of even with their new expertise in a particular timbre of sounds. This may be artistically appropriate for the auditory image of the ensemble, but there is still a behavioural hurdle to overcome in order to apply this reflected knowledge to ensemble situations.

#### **4.4.4 Discussion**

While many participants discussed and acknowledged their anxiety regarding listening to their close microphone recording, it is possible that this unique perspective of singing provided a valuable tool for reflection. As can be seen from the analysis above, participants were critically evaluating their own perceptions and memories of a particular event in the context of the empirical recording evidence that was presented to them.

It is clear that while participants were not always comfortable with their own contribution to the ensemble sound, they were happy that their contribution then went on to positively impact the group sound. This apparent dichotomy could be explained by participants judging their solo stimuli as a solo recording, without the context of joint action and the acknowledged behavioural modifications inherent within it. Another potential explanation could be the difference in close microphone techniques, and the perceptual differences of these as part of the method of the research intervention. Further research could be undertaken in this area to investigate if close microphone techniques could be used as an evaluative tool for singers in other contexts, such as solo performances and one-to-one lessons.

## 4.5 Conclusion

In summarising this chapter which explores the *Person as Instrument*, two key points arise which contribute to our current knowledge in this area; the development of an auditory image among singers, and the acknowledgement of joint action in ensemble singing that creates an ensemble specific community of practice.

Singers change their vocal output based on real time information they take in through listening to the choral sound, physical cues, and social hierarchies inherent in the rehearsal environment. Singers appear to develop 'expectancies' of the singing required of them in ensemble settings. Singers then use these expectancies in the context of their learned aesthetic parameters for ensemble singing, fitting in with the auditory image built of the whole group sound.

The dual auditory images: that of the created ensemble sound, as well as those of their fellow singers, are developed through a familiarity with the context in which they are singing. While participants confirmed that familiarity with individuals can speed up the re-familiarisation process, each singing context should be treated as unique, and time should be built into rehearsals to allow singers to form these images.

Equally, in re-familiarising, or in the primary formation of an auditory image, participants discussed the differences between private practice and ensemble rehearsal. Allowing singers greater autonomy regarding rehearsal pacing and time management could afford a greater degree of accuracy in expectancies. This would allow singers to experiment with their own interventions to assure themselves that the two auditory images developed in a rehearsal are working effectively to achieve the intended effect. Singers appeared to emphasise the importance of their relationships with sectional colleagues above all other artistic relationships in ensemble music, suggesting that these auditory images are the most crucial for the creation of ensemble sound.

While this thesis has contributed to the use of auditory imagery in ensemble rehearsal, further research is needed to investigate how these images are built in different choral contexts. Particular attention could be paid to how these auditory images are developed in youth ensembles, given participants' acknowledgment of their early experiences influencing their aesthetic values in ensemble singing now. Further research could also investigate the level of familiarity at which these images become embodied as a 'group identity' rather than as individuals.

Appreciation of familiarity was not limited to musical and vocal interventions; participants also described the social interactions among their section positively benefiting their singing. Knowing how other singers are going to react in various scenarios allowed participants to feel more comfortable in making mistakes, correcting these, and continuing on the rehearsal without anxiety. This social familiarity was also highlighted as a way to ensure that group behaviours were adhered to. Participants were strong in their assertions that ensemble music cannot be used as a test of one's own virtuosity, and that singers who do not fully subscribe to the group aims are subject to derision. While this does not negate the role of a musical leader within the section, which may mimic some of the behaviours of an assertive singer, the main critique of participants was the intention behind voice use.

In building these acceptable behaviours, this chapter has contextualised ensemble singing as a particular community of practice, thereby contributing a theoretical framework in the exploration of ensemble singing for further investigation.

This chapter has investigated the relationship between voice and singer for participants. These reflections and analysis have generally been personal and focused on the development of the participant's expertise through their proto-professional context. Building on this individual background, the following chapter will contextualise this personal experience within the research intervention and ensemble practice more broadly.

## ***5. Collaborative Vocalism***

### ***5.1 Introduction***

In the previous chapter analysis focused on individual singers, their performing history, and how individuals contribute to the ensemble sound. Building on this, Chapter 5 will investigate how these contributions work in collaboration with one another. From initial analysis of participant data, seven emerging themes were identified through an inductive analysis of their interview responses. These were then grouped according to figure 10 below.

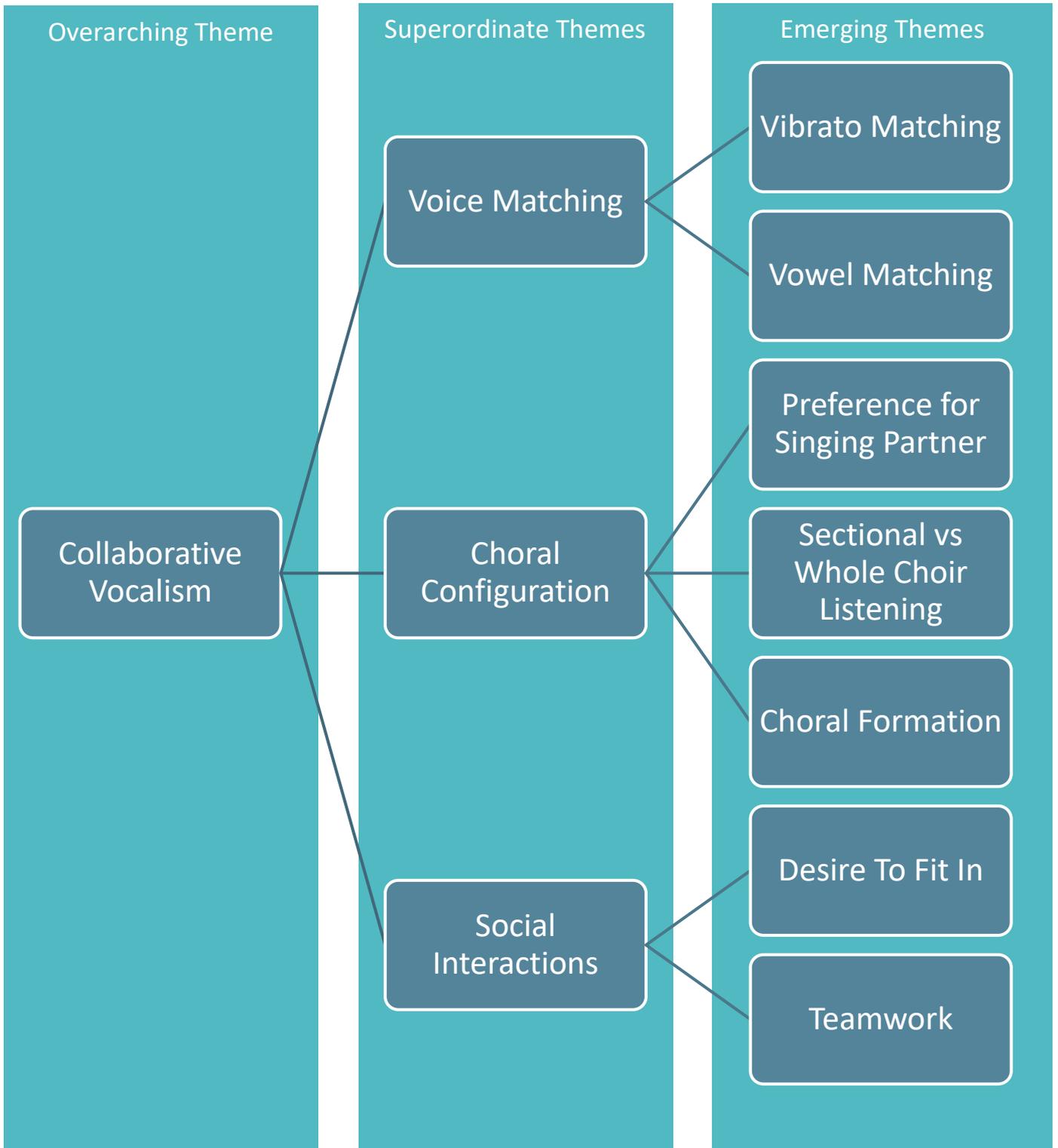


Figure 10- A diagram of theme hierarchy for the overarching theme *Collaborative Vocalism*.

**Voice Matching**, or how individual vocal processes fit with others formed a large part of participants' thinking in terms of their technical singing reflection. Two acoustic factors of the voice are discussed, vowels and vibrato.

**Choral Configuration** deals with participants' experiences of their physical location in relation to each other. This includes how they interact with their neighbours, and how their position within a group affects their experience of their contribution.

**Social Interactions** builds on the work of the previous chapter and helps to codify the community of practice that is evident in ensemble situations. Particular expectations of behaviour are discussed, as well as how participants then alter their behaviour to fit with these expectations.

## ***5.2 Voice Matching***

All participants are quick to acknowledge that their primary concern in ensemble settings was matching their voice to that of other performers. This necessitated different strategies than would be employed in their solo singing, particularly around the acoustic properties of the voice.

**Vibrato Matching** discusses participants' attitudes to, and perceptions of, their vibrato in relation to others. This theme primarily focusses on how participants approach this from a technical perspective, working with their solo singing technique.

**Vowel Matching** explores the experiences of participants in relation to their habitual vowel choice, and the importance of matching this with sectional colleagues.

### ***5.2.1 Background***

The carrying power of the voice is associated with careful manipulation of the vocal tract in order to match the harmonic makeup of the sound source to the resonance frequencies (formants) inherent in this vocal tract. These manipulations of the mechanisms that make up the vocal instrument are perceived as vowels (Sundberg, 2017). The use of different vowel modification strategies in solo and

ensemble singing is well documented (K. L. P. Reid et al., 2007; T. Rossing et al., 1984), and readily discussed by participants. Vowel identity is determined by the adjustment of the vocal tract to change the frequencies of formants one and two, vowel quality is determined by formants three through five. The exceptionally small tolerance of these adjustments (particularly in terms of vowel quality) is part of the virtuosity of solo singing, and participants are skilled not only in the manipulation of their own instruments, but also in identifying strategies in others.

Part of the perceived quality of the voice is made up not only of vowel, but also of vibrato. Particularly relevant to participants are the seemingly narrow bands of tolerance between 'good' and 'bad' vibrato, as well as the perception of a stable periodic vibrato as a measure of vocal quality (Diaz & Rothman, 2003). Similarly, Mitchell & Kenny (2010) found that principal study conservatoire students' habitual vibrato changed over the course of their study. This supports the longitudinal study by Mürbe et al (2007) that singing training can have an impact on both perceptual and acoustic properties of vibrato.

Studies have shown that singers are able to modify their vibrato rate in order to match a selection of previously recorded vibrato rates (Dromey et al., 2003). This ability to match vibrato rates forms a significant part of how participants perceive the matching of timbres in ensemble settings. Nix (2013) found instruction in vibrato singing was primarily found to be from one to one singing tutors, whilst instruction in non-vibrato singing was found to come from choral directors. Singing teachers are also concerned with the development of appropriate vowel modifications to enhance the carrying power of the voice, particularly in the 'singers' formant' range of the acoustic spectrum (Chapman, 2017; Mendes et al., 2003). Acknowledging that both singing teacher and choral director may have an impact on the quality of the voice informs the dual identities of participants as proto-professional soloists, as well as ensemble musicians.

### **5.2.2 *Vibrato Matching***

**A2/70** *It is a tricky one because everyone has a natural vibrato in their voice but then sometimes you've got to... alter it a little bit when you're singing in a choral setting because it doesn't match with other people. And that's fine because you, er, that's totally doable.*

The use of the word 'natural', above, echoes the sentiments of Guzman et al. that 'professional singers appear to "acquire" vibrato without actively striving to obtain vibrato' (2012, 675.e6). This natural occurrence is also 'in their voice', rather than with the singer. Here we see the voice being treated as an instrument, with its own inherent properties that belong to an individual. The implied tension of this ownership of a fixed instrument, and the need to alter the properties of this instrument to fit with an ensemble is 'a tricky one'. A2's hesitation and use of careful wording suggests some insecurity of thought, or an attempt to reconcile their natural vibrato, and that which they use in ensemble situations.

**T3/114** *I think it [choral blend] might be something to do with the speed of vibrato, cos for me, people singing, singing straight tone doesn't sound blended, for me. Because of the demands you have to place on the vocal mechanism in order to sing straight tone, I don't think it's possible for two straight tone sounds to fully blend in a way that's pleasing to my ear, anyway.*

T3 believes the demands placed on the vocal mechanism during straight tone singing supersede any aesthetic gain from this type of singing. This could align with the narrative of 'compromising' [S3, below] the voice through the use of straight tone singing, as this can exert an amount of pressure upon the mechanism.

Through the repetition of 'for me' and 'to my ear' T3 indicates that blend is a subjective experience. Perhaps a complete straight tone negates the aim of matching vibrato with those around you, with this matching and active collaboration being part of the blend experience. The ability to manipulate the speed of vibrato could therefore have a demonstratable impact on the overall quality of the choral sound.

**S3/74** *But I love doing that [singing straight tone], so I don't see it as a problem. Whereas other people would be like you're*

*compromising my voice. Whereas I think you can totally do that with a great technique because I myself put that style of singing into my own solo singing. If it's high and meant to be lovely and, erm, poised, then I will do the way I sing soft, high notes in choral singing the way I sing in my solo singing.*

In contrast to other participants who think straight tone is bad for the voice, S3 uses straight tone singing as an artistic tool and enjoys not only the effect of this singing, but the production of the sound as well. There is an acknowledgement of two different styles of singing, solo and choral, but in this context, the use of ensemble techniques is legitimised through their use in solo experiences. Throughout the quote, S3 does not explicitly mention straight tone. Describing this technique as 'floaty', could suggest that S3 thinks of singing in aesthetic rather than technical terms. Whereas the mechanics of singing are obviously important to them, they demonstrate an aesthetic and artistic output that can be used in either solo or ensemble singing. Aligning the aesthetic outcome for the sound allows the participant to bridge some of the friction described between solo and ensemble singing by using similar techniques in both situations.

While the ultimate decision to sing in any particular way rests with the singer, below we can see B3 acknowledges the influence of conductor.

**B3/82** *You know, hence why you get people like [professional conductor name] who don't like vibrato at all because they just want a unified sound and stuff like that. Because if someone's going [demonstrates a large wobble] woo woo, or wowowowo. You've got different colours already. You know, it's erm. It's erm, like a field of, just, different vibrations and stuff like that that don't correlate in a way.*

From the quote above, we can see B3 links vibrato to timbre, and that a unified timbre is the aim of both singer and conductor. In describing a 'field of, just, different vibrations' B3 paints a metaphorical image of the ensemble sound, with individual contributions within this boundary of the choir. A wish to correlate the vibrations (vibrato) in the field could indicate the belief that each singer's vibrato needs to correlate regardless of section, or role within the field of the group. The wish to match

the intention of a sound to that of another singer implies part of the ‘mutual tuning in relationship’ discussed [5.4.3].

Vibrato rate and extent as described for good singing falls into narrow bands, with the perceptual qualities of poor vibrato being labelled as a ‘wobble’, ‘flutter’, ‘bleat’ (Rothman et al., 1990). Here, B3 caricatures a wide vibrato extent and a slow vibrato rate (a wobble). This is often linked to ‘opera’ singing and the stereotypical ‘diva’. Here, B3 is disparaging of this type of vibrato, perhaps in the same manner as A3’s discussion of singers using their ‘*big opera voice*’ [S2/55] to further their own virtuosity through the group.

**S1/25** *Yeah, I could hear S2’s voice and my voice very cleary kinda uhhh, wobbling against each other’s almost. They weren’t really, yeah, in sync.*

**S3/38** *it would just sound like at the end of phrases wowowo [caricature of a wide wobble] instead of like waaa [less wobble]*

‘Operatic wobble’, as frequently caricatured, is something that participants wished to distance themselves from. This singing can be associated with the stereotypical ‘diva’ character using the ensemble as a platform for their own virtuosity, a clear violation of the socially accepted practice in ensemble settings [as discussed in 5.4.3]. Further to the social disadvantages of a wobble, this has also been shown to be poor vocal quality (Howes et al., 2004). It could be that the vibrato debate between singing teachers and ensemble directors is simply a matter of a good vibrato that is able to be matched as part of a listening relationship between singers during the rehearsal.

### 5.2.3 Vowel Matching

**T2/31** *Yeah, vowels, there are so many different vowels. Shapes of vowels, [aɑɔʊ] so there's tonnes for every vowel. So it's trying to make it as close as possible to that, IPA<sup>3</sup> symbol or whatever. You're trying to make it so similar so it sounds like one singer. Just because, if I was to say said [sɛd], and I had somebody next to me saying [sa'ɪd]. Like, it would sound like two different words. So I guess, that's why in a choral context, people do try the vowels. And why choral directors will say, let's make it more of an [a] than an [ɑ], it's to get unity in the sound.*

T2 acknowledges that vowels have both identity and quality, and that these factors are within the control of the singer. The wide range of vowel qualities and sub identities are all part of T2's vocabulary and available to them in their singing. Intelligibility of language is used as an example by T2, with matching pronunciation of words, particularly through vowel quality, of importance. The conscious nature of this matching may not, therefore, be purely artistic or aesthetic, but also a way to homogenize the different spoken accents of a diverse group of singers. Singers such as S3 (below) were self-conscious of their habitual vowels, perhaps due to their strong regional accent.

Using the *International Phonetic Alphabet* as a tool to aid the identity and selection of a particular vowel choice during singing enables T2 to quantify this experience. This ability can then translate the vowel quality of another singer to a particular intervention within T2's singing. While the aim for a similar enunciation of text is evident, there is then an artistic level to find '*unity in the sound*'. Being within a choral context, T2 apportions the responsibility of this artistry to the conductor of a group. In this example, the conductor is responsible for fine tuning the quality of a particular vowel between singers, whereas the identity of the vowel that is presented as part of the auditory image of the choir is the responsibility of the singer. This bipartite process; unity of vowel identity as singer, and then unity of vowel quality by external judgment, informs a wish for unity of vocal production amongst singers.

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<sup>3</sup> International Phonetic Alphabet

**S3/46** *But I'm also listening to, erm. I'm going to dig myself a hole here, their vowel sound, and if mine matches theirs. Because I have weird vowels, and mine have to be the same as theirs or else it's going to sound like three soloists and not three sopranos, if you know what I mean?*

As mentioned above S3 exhibits some anxiety regarding their habitual vowel choice. S3 has a broad regional accent in their speech, which could go some way to explain this perceived point of difference from the other participants. Whilst rooted in this anxiety, the use of 'weird' to describe habitual vowel choice could indicate that there is a norm expected of singers in their use of vowels. However, through intervention in this habitual process, and ensuring that their output matches colleagues', this then helps to achieve a better ensemble sound.

Matching a vowel sound implies that S3 is matching their vowels to the auditory image of other singers in the group. Part of familiarity in an ensemble [\[4.3.4\]](#) may be a concentrated effort to understand how particular singers interpret the text of the libretto in terms of vowel identity. This must take account of not only accent, but also how singers treat the acoustic properties of the voices and the decisions that they make regarding vowel modification.

Soloists use vowel modification as an acoustic strategy to better access higher registers of the voice (Chapman, 2017). These vowel modifications were discussed at length by participants, and they were all aware of their own strategy for this aspect of their singing technique. Given that these are technical interventions unique to each singer and not thoughts on the phenomenon of ensemble singing, discussion of these has not been included. This data could valuably be used in further studies to understand this technical aspect of singing, and singers' perceptions of it.

S3 acknowledges that individual vowels would lead to a section sounding as three soloists, rather than as part of the soprano section. It can therefore be inferred that homogenisation of vowel is one of the key factors of creating a blended ensemble section for S3.

**T1/76** *No, I think it does. It's like a, a sound, like a matching of sound. There's a certain way that, erm... that like Tenebrae like match their sounds to each other... and it just sounds... [exhales] I don't know if it's in the vowel, in the way that they produce their vowels the same, or if it's in the vibrato rate works the same, if they use any. Maybe. Or maybe it's the change in vowels, erm..... ugh.*

Once this sectional sound has been created through a matching of vowel identity, there is then a layer of conductor intervention in matching vowel quality. T1 discusses how matching of vowels can create an auditory image or auditory identity to a group (as in the reference to the well-known choir, Tenebrae) that lasts between sessions. By identifying a group sound through vowel and vibrato matching, T1 could be seen to support blend and group sound as an acoustic phenomenon.

There is hesitance in their response however, perhaps suggesting that blend as an acoustic phenomenon is one accepted view of ensemble singing that T1 is interrogating through reflection in their interview. The evident dissatisfaction with their response may suggest a more nuanced understanding of blend in their experience. This could mean that creating an ensemble sound is not the same thing as blend to T1.

#### **5.2.4 Discussion**

With all participants discussing their vowel strategies in relation to their singing technique, these interventions form a basis for participants' understanding of blend. It would appear that matching timbres between voices, be that vowel or vibrato rate, is seen as a prerequisite of good ensemble sound. While individual singers begin this process, it was acknowledged that the conductor plays some part in shaping these interventions.

Use of vibrato as ornamentation both in solo singing and ensemble singing was discussed by S3. Their justification of the use of techniques they associate with ensemble singing as valid artistic choices in solo singing could go some way to bridging the gap between their two perceived communities of practice.

The technique of matching vibrato rates and extents to those around you was described by participants. While singers have been shown to be able to match a target stimuli for vibrato (Dromey et al., 2003), it is important that a matching of the perceived feeling of vibrato was paramount to the singers. This feeling of matching gives rise to the possibility of a repertoire of sensations that participants associate with this type of singing. The repertoire of learned vocal gestures are employed once a particular auditory image / expectancy has been developed through familiarity.

Matching vocal timbre could be a component of some of the peak ensemble experiences discussed in [Chapter 6](#). These technical aspects, although contributing to the overall quality of the group, were not described in experiential terms by participants. This could indicate that matching timbre of voices, while a primary component of blend, is not the experiential quality of this phenomenon.

### **5.3 Choral Configuration**

Participants often speak of particular preferences for choral configuration:

**A3/29** *I really enjoyed being towards the middle in choral settings.*

**B3/38** *It depends on who I'm next to. It definitely depends on who I'm next to.*

**S2/23** *I definitely prefer to stand in between them than on the end, because I like having the sound coming from both sides*

These preferences, and the justifications for them, form the basis of the analysis in this section.

**Preference for singing partner** investigates participants' stated preferences for standing next to other individuals, and the desirable qualities in those singers closest to them. It also discusses perceived individual strengths and weaknesses across their sections.

**Sectional vs Whole Choir Listening** draws together participant experiences of interaction intra- and inter-sectionally. Participants explore how they relate to both units.

**Choral Formation** is a theme concerned with where, in physical space, singers are placed. This is discussed in terms of preference for particular formations, and also investigates the challenges of some formations.

### **5.3.1 Background**

As stated in Adams (2019b), choral configuration is an umbrella term taking account of three components: acoustical placement, formation, and spacing between singers. Participant placement, where they stand in relation to others, emerges in many interviews. This placement influences Self-to-Other Ratio (Ternström, 1994), as well as voice matching and preference for singing partner. Self-to-Other Ratio (SOR) is described by Ternström as the ratio between the sound of a singer's own voice (the *feedback*) and the sound of the rest of the choir (the *reference*) (ibid.).

Other studies have shown that spacing (the distance between singers) has an impact on chorister perceptions of the choir's sound, individual tone (Killian, 2007), ability to hear the ensemble (Ekholm, 2000), and how much tension they experience (Adams, 2019a). Lambson (1961) investigated preference for seating formations as a function of musical context and found that audiences prefer block sectional formations in polyphonic writing, but mixed quartets of singers for homophonic music.

In Adams' study of university choir singers, participants prefer spread spacing (24 inches) to closer spacing. Adams' and other studies help to contextualize participants' discussion around proximity and formation, given that their reference was fixed by the conductor.

Moving from the personal through to sectional and whole choir sounds, this superordinate theme will also discuss sectional vs choir listening and choral formation, as well as a preference for singing partner. While a preference for singing partner is expressed and discussed by participants below, the formation of the choir in the research intervention was dictated by the conductor (fig. 2).

Each participant was allocated a music stand that they were free to move during the session. The spacing between singers was therefore not consistent as participants were free to move position

whilst maintaining the formation as determined by the conductor. Given the size of the room used for the research intervention, the spacing was what Adams described as *moderate* (12 inches) (Adams, 2019b). As the conductor decided which voice part each participant was to be singing, they were also able to make a decision regarding how the reference would impact on the whole choral sound, this process is known as voice matching.

Voice matching is the process of placing singers with similar voices together in a choir ensemble in order to have a positive impact on the ensemble sound. The responsibility for this process generally lies with the conductor, and there are many conductor-specific processes in place regarding the perceived optimisation of singer placement given their habitual vocal timbres. Some examples of these processes are described by Knutson (Knutson, 1987) through interviews with some still influential choral trainers in the United States. The prevalence of these conversations in US choral education is evidenced through the I'm a Choir Director (n.d) Facebook group, with frequent references to particular 'methods' of voice leading in high school and collegiate groups.

Documenting the process of voice matching, and the adaptation of this as a 'method' was pioneered by F. Melius Christiansen (see Babb, 2010, p.5) who through an extensive audition process and detailed seating chart was able to optimise both placement and formation for his idea of blend. Voice matching is described by Daugherty (2003) as part of either 'synergistic' formation (as would be known a 'scrambled' in the UK), or block sectional formation. The research intervention's formation could be described as 'block sectional (horseshoe)', given that no singer had another performer behind them, and the sections were in a block (see [fig.2](#)).

### 5.3.2 Preference for Singing Partner

**T3/60** *It is easier for me to sing next to somebody who is, B1's voice is closer in colour to mine than T2's voice.*

Many participants expressed a preference for a particular singing partner, or for a particular place situation within the choir. For example, A3 enjoys *'being towards the middle in choral settings'*, similarly S2 *'prefer[s] to stand between them than on the end'*. In the quote above, T3 also shows a preference for a specific singing partner, in this instance B1, as they find it easier to *'sing next to somebody'*. This proximity, as well as a preference for both position and singing partner suggests a familiarity not only with the experience, but also with the other voice in order to form these opinions [4.3.4].

T3's stated preference for B1 as singing partner is independent of vocal section. As T3 refers to the closeness of *'colour'* between their own voice and that of B1, this suggests that the timbre of a singing partners' voice is an important factor in developing a preference.

**S2/70** *more with S1 than with S3, erm, I think we use quite different vowel sounds...*

This suggests that the preference for singing partner discussed above is predicated on an auditory image of both one's own voice, as well as on that of your partners'. Participants state that voices with similar timbres are easier to sing with than those that are different. The use of similar vowel sounds, and therefore timbres, is also explored by S2. By *'using'* different vowel sounds, this could imply that this is a conscious choice indicating that not only is the timbre of the voice important in developing a preference, but also the habitual technique of another singer.

Whilst similarity in colour is seen as a positive thing, as highlighted earlier by T3's preference for B1 over T2 as a singing partner, below we can see that difference can also provide a positive experience.

**T3/102** *In an environment where I feel completely comfortable that I can do what needs to be done in a choir, particularly a positive*

*aspect of singing with T1 and T2 is that I know the things that I find difficult, T2 can do.*

Comfort in an ensemble environment could arise from a familiarity with the situation and fellow singers, and therefore the interventions that come as part of that context. T3 is ‘*completely comfortable*’ in this ensemble situation, leaving no room for doubt in their own personal abilities. While it is ‘*easier*’ for T3 to sing with those of similar vocal timbre to them, in moments that T3 finds difficult, there is a delegation to the rest of the team. The delegation of T3’s perceived weaknesses to T2 implies that through the addition of other singers, the section can become something greater than the individual [6.2.4]. This implies that T3 has is aware of a high group efficacy, believing in the abilities of the group, even if their own skills may not align with the group aspiration at that point. High group efficacy can lead to group flow, as discussed in 7.2.4.

**T3/25** *Which means that when singing with people like T2 whose voice is extremely light, and T1 whose voice is extremely bright. As sort of the person whose voice sits on the opposite end of both of those spectrums, it’s quite difficult to reconcile what precisely to do with the tone colour.*

Here, T3 describes in more detail some of the differences in timbre between them and the rest of their section. Having voices of different weights suggests that the quality of their habitual timbres are quite different. T3 reflects on how they receive the reference from the rest of the choir, and then how that tone colour informs their own interventions in the context of their auditory image of the group. This difficulty in ‘*light*’ and ‘*bright*’ singing is then seen as an advantage of the sectional team, in that T3 can delegate these moments to T2. Below, we see T2 acknowledge the same type of interventions, as well as lighter singing being more comfortable for them.

**T2/22** *I think it’s always going to be a challenge I think because of the difference of voices, it was what, me, T1, and T3. Er, so I’ve sung with them both multiple times, like quite a lot, so I know their voices, and all three of us are incredibly different. So I think it’s nice to sing with each other, because there’s no real overlap. Then I think in a blend kind of way, I’ll always want to try and sound like them. So when we do the light stuff, I think it’s easy.*

In comparing the two quotes above, we can see this argument of delegation of responsibility of certain timbres across a section can allow the section to achieve more than the individuals would be able to through singing with only those of similar timbres. While there is a preference for singing partners with similar timbres, participants also acknowledge the strength of difference in order to create a sectional performance that is greater than the sum of its parts.

### **5.3.3 Sectional vs Whole Choir Listening**

Given that we have established participants work closely with those singers in direct proximity to them, and that working 'as a team' as part of a section is preferable, this emergent theme focusses on how the individual sectional concerns then interact with other sections. This is described as intra-sectional (working within the section), and inter-sectional (working across sections). When thinking about these two different concerns, familiarity with a particular sectional formation may inform a preference for this formation (Aspaas et al., 2004). Similarly, experienced singers are more likely to adapt to different placements (Atkinson, 2006). While in the research intervention, the formation was fixed by the conductor, how participants interacted with other sections was raised spontaneously by many participants.

**S2/47** *I couldn't hear that I was out of tune so much when I was listening to the whole choir, so maybe again, it wasn't actually as bad as I thought it was...*

It has been postulated that hearing more of the whole choir than your own voice can be the cause of intonation issues in ensemble singing (Ternström, 1991). Therefore, a comparison between the close microphone and whole choir microphone recordings offers an idea as to the difference between sectional interventions and whole choir intervention. S2 has identified that their intonation was an issue in the individual track, but that this wasn't as obvious an issue in the context of the whole choir. T2 also experienced this phenomenon:

**T2/37** *I felt that I was going in and out of tune all the time, which was strange. But I was always, in the real recording, I was always in tune.*

Individual intonation and group intonation are perceived as different things for T2 and S2, above. In listening back to their tracks and reflecting on action, they have evaluated their own singing in a manner that is different to how they have evaluated their whole sectional sound. This individual contribution as part of a team has been discussed by other participants in the context of being able to hear the whole team and working '*along the line*' (B1). We have also established that individual strengths and weaknesses allow the team to become greater than the sum of its parts. It could be suggested that these individual intonation 'issues' combine together as interventions in order to make the whole choir sound.

T2 labels the whole choir recording (in contrast to their own solo microphone recording) as '*real*'. Labelling the audience /conductor perspective as '*real*' implies that their individual contribution to the whole choir sound is somehow less artistically valid than the result of its interactions with other voices. T2 is acknowledging that the individual track is not a singing context that is usually explored, which is one of the benefits of this type of interview stimuli.

Knowing that the focus of the research intervention was ensemble singing, this framework for T2's listening suggests that they are aware of limitations of listening to their own track as an artistic entity in itself.

**S3/51** *So in the soprano team, our one intention is to sound like one soprano, so we all have the same ideas, we all sort of sing with the same sort of vowels. But it doesn't matter if we don't have the same voice, because I don't have the same voice as S1. But we can still mould to make one colour together. Not one colour, because that's bad because you're meant to have loads of colours. I'm just going to stick with idea.*

These individual interventions can come together to '*sound like one soprano*', regardless of whether the vocal quality is similar or not. The use of the word '*mould*' to create a '*colour*' suggests that there is an intervention from each participant in order to create a sectional quality. However, this quality is not something that is fixed according to S3. This sectional quality is an auditory image of the

sound that the soprano section will make together. S3 acknowledges that individuality is part of their auditory image of the soprano section and is able to develop expectancies of the sectional image based on the individual interventions by their sectional colleagues.

S3's unease at their colour analogy, and subsequent settling on '*idea*' could indicate that there are differences between expected output (or idea) and performed output. The aspiration inherent in '*idea*' may support an interpretation that in the moment of singing, these auditory images are constantly changing based on feedback. S3's constant reflection in action of the auditory image available to them, and how to most effectively meet their expectancies through their own singing shows the individual and intra-sectional struggle during singing.

**S2/39** *there's certain people that I can look at and that they're likely to be making connection back with me. So, as well, when you're getting used to each other, it's also establishing where is everyone in the room, who am I listening to at this point? What am I listening out for at this point in the song, who can I make a connection with at this point, and stuff like that.*

Familiarity has been a major factor in the interaction between participants throughout the investigation, and here S2 acknowledges this further as they are '*getting used to each other*'. Looking at individuals, and eye contact through the choir is seen by S2 as '*connection*'. The wording suggests that this is a two-way relationship. Connection seems to be something that S2 values and is established at the start of the rehearsal as part of the re-familiarisation with the group [4.3.5].

S2 acknowledges their active listening as part of their reflection in action process. These active moments of listening are describing either section colleagues or singers adjacent to the participant. This could indicate that voice matching is primarily concerned with those in immediate proximity to the singer. This is supported by B3 below.

**B3/76** *You're not really so innately involved with other sections in a weird way. You're just like coordinators with making this sound.*

Here, B3 differentiates between the purpose of interactions inter-sectionally (*coordinators with making this sound*) and intra-sectionally (*innate involvement*). Coordinating the sound between sections could suggest that the sound is pre-created as a sectional entity and therefore it is artistic and musical, rather than vocal, concerns for other sections. B2 states something similar:

**B2/67** *Blending or balancing to my own section, I suppose it is different to how I think about.... How I think about blending or balancing to another section. Because when I'm blending or balancing to my own voice type, you know.... You know, I feel like I have an idea what the other singers are going to be doing, and I'd imagine it's going to be similar to how I'm feeling about it. Whereas, when I'm trying to blend to another section, I'm trying to blend purely to a sound as opposed, you know, to something that I know, if that makes sense.*

B2 is 'trying to blend purely to a sound' that has been created by other sections. The idea of being 'innately involved' (B3) in your own section is the idea of being able to know how a sound 'feels to you'. With singing being such a sensation-based activity, having an idea of what this sound will feel like is an important part of the vocal process for B2. This could suggest the development not only of an auditory image in others, but the association of expectancies based on this to particular sensations that B2 assumes are also shared by the section.

Intra-sectional blending, of creating a sound through sensation that conforms to the developed auditory image of the participants engaged in singing the same notes, appears different to inter-sectional blending for B2. In '*blend[ing] purely to a sound*' in inter-sectional work, B2 is removing the sensation from this task.

While there is a diversity of voices as acknowledged by T3, S1, and S2; B2 suggests that sectional singing (while diverse in its own right) is still closer than the singing between other sections. B2 goes on to say:

**B2/70** *Trying to imitate the sound of a soprano quite high up in the register, it's, it's.... you know, it's a.... it's kinda my interpretation on how I think that voice kinda works if that sort of makes sense.*

In acknowledging imitation of other singers as part of their response to ensemble singing, B2 then associates their own physical sensations with that of others singing their own part. Here, the auditory image of a soprano in the extremes of their register cannot be associated with a memory of physical sensation for B2. This may suggest that some of the timbral characteristics of the sopranos sound can then be associated with sensations and interventions for B2.

### **5.3.4 Choral Formation**

We have seen from participant's interactions that singers have a strong preference for singing partners. This preference appears to be for a voice that is deemed to be similar to the participant, regardless of the line that they are singing. This suggests that timbre and vocal intervention is more important than logistical ensemble techniques such as stagger breathing (continuation of a line beyond the breath capacity of an individual singer). Similarly, a familiarity with the auditory image of others can aid singers in their own interventions to create a more cohesive sectional sound [4.3.5].

Connection across sections, as well as formation of the choir is a conductor defined parameter in this research intervention. While participants are used to being told where to stand, there is also a degree of autonomy given in discussion with the conductor as to preference for sectional formation. The formation chosen in this research intervention was familiar to participants (Fig. 2). Music stands were placed for the singers as they entered the rehearsal space, but participants were free to move these as they saw fit, giving some autonomy over proximity, if not formation.

**S3/83** *I think it would be really interesting if you scrambled the choir and you see if they. I've always wanted to do that with voices, scrambled. Because I think it's so interesting seeing how other people work, and if then I will change the way I sound compared to if I was in between a tenor and a bass.*

S3 reflects on their perception of different formations and acknowledges that those in close proximity directly impact the way that they sing. There is also an element of wishing to build familiarity, and auditory image, of other singers in the ensemble. Through acknowledging that those

closest to you (particularly singing very different parts to S3) impact on their vocalism, S3 is affirming the importance of formation in the ensemble.

**A3/29** *I really enjoyed being towards the middle in choral settings. I've found, especially since doing VOICES that it helps me, it helps me kind of see the entire colour palette of the choir.*

No singer expressed a preference for singing 'on the end' of a line. This may suggest the experience of being a 'part of the instrument' is stronger when a singer is more immersed in the physical space occupied by that choir. Here, A3 acknowledges that the development of auditory image (characterised by the colour palette of the choir) is proximity dependent. A colour palette could indicate that there are various timbres produced throughout the group, and an ability to hear these is of benefit to A3's ensemble singing.

**S3/41** *I couldn't, I couldn't hear S1 to save my life. So, I was just trying to hear to S2, because she'll be bouncing off S1 and then I'll get some idea of what they're working on over there. But the space, it felt like you were singing as a soloist because I couldn't really hear them... I couldn't really hear us as a team. I could only hear the other people opposite me. Or no, beside me.*

S3 provides an opinion on the issues of working 'along the line' (B1) and offers insight into how individuals become part of a sectional team. S3 suggests that as each singer interacts and adjusts to the other in an ever evolving 'bouncing off', there could be a greater emphasis on this element of sectional cohesiveness on the participant in the middle of a three person section.

When viewing S3 as part of a sectional team, the language used could suggest that there isn't a strong connection between all three sopranos. S3 can't hear S1 'to save my life', and they 'couldn't really hear us [sopranos] as a team', this further goes to support the view that the 'reference' in SOR is impacted by those in closest proximity. The strong language in relation to not being able to hear S1 could suggest that S3 is trying to work 'as a team' with the other sopranos, recognising the importance of sectional cohesiveness.

### **5.3.5 Discussion**

Choral formation in the research intervention was conductor prescribed - singers were told where to stand and therefore they didn't have a choice of singing partner. Due to the familiarity of the performers and developed auditory images of particular singers' voices, participants were able to anticipate issues in their habitual timbres and employ strategies that would allow these timbres to match well [\[4.3.4\]](#).

Direct intervention in a vocal sound has been seen to be concentrated on those singers that are in closest proximity. Matching vibrato rates, vowels, timbres, and other interventions are the vocal concerns with those directly adjacent, regardless of if they are singing the same part. Participants then acknowledge that larger, more logistical and artistic choices are referenced in terms of the whole choir, rather than just their immediate neighbours. These different layers of interaction between participants; starting with vocal interventions as most proximate, through to artistic and stylistic interventions across the choir, especially in terms of coordination, provides an interesting insight into rehearsal dynamics. This could have implications for both rehearsal technique as well as conductor training.

Similarly, given that sectional sound is the primary concern of vocal interventions, as well as the projected auditory image of the section, this could have ramifications for the tuition of ensemble voice in proto-professional contexts. As voices develop through training, their placement in voice matched ensembles will change. Singers could then be given more responsibility over their preferences for positioning, decentring the conductor from some of these conversations, and allowing the singers to take ownership of this.

## **5.4 Social Interactions**

While it has been acknowledged that participants were familiar with each other [4.3.4], and that this creates the ability for participants to accurately predict a colleague's vocal output, there are also interpersonal aspects to ensemble singing, and it is these which will be explored in depth here.

**Desire to fit in** further examines the development of a community of practice among singers, both musically and socially. Participant experiences surrounding expected behaviour and group aspiration are discussed.

**Teamwork** in the social sense is inspected through this theme. Friendship and interpersonal relationships are explored.

### **5.4.1 Background**

Participatory music making can provide a medium for positive life transformations, citing social interactions, flow state, and mental stimulation as elements of ensemble music making that positively impact on individuals (Bailey & Davidson, 2002). However, much professional music making is still scrutinized in the literature through the lens of serving the music as an aesthetic object. This literature focuses on technical aspects of expert performance such as; synchronicity and gesture (E. King & Ginsborg, 2011), intonation (Bohrer, 2002), vowel modification (Chernin, 1993; Gregg & Scherer, 2006; Wyatt, 1967), and language (Emmons & Chase, 2006).

Guise (1999) argues that the social interaction and experience of performers must be taken in to account in both choral training, as well as in the literature, and argues for an *art-as-subject* model of choral teaching by acknowledging '*group dynamics and interpersonal relations can have an enormous impact on the way individuals view their experience in a choir and can also affect their opinions on the music itself*' (pp. 108-109).

Ensemble singing is an interpersonal activity, with participants collaborating towards a joint action within an artistic environment. These qualities have led some authors seeing ensemble singing as a

specific subset of group work (Emmons & Chase, 2006), with members adopting *'a clear group identity'*, undertaking *'clear differentiated tasks'*, sharing *'overall goals'*, and are *'mutually dependent for the completion of their tasks'* (Lim, 2014 p.308).

Lim goes on to discuss the importance of positive social interactions in professional groups. Their participants recognised that *'chemistry'* between members facilitates high level music making; and that bonds of friendship, as well as the ability to manage and mitigate conflict, are important aspects of the success of a professional touring vocal ensemble. Participants in Lim's study believe that *'ultimately, it is the chemistry among performers that distinguishes a 'magical' performance from a 'technically perfect' performance. Members were therefore 'really committed to making the relationship work''* (ibid., p.317).

Varying social roles were codified in three instrumental groups by King (2006) with eight defined roles identified through both rehearsal observation and semi-structured interviews. These roles (*leader, deputy-leader, contributor, inquirer, fidget, distractor, joker, the quiet one*) were seen to alternate between participants not only between rehearsals, but also within rehearsals depending on the changing demands of the music, or the general mood of the particular participants. These roles are social in their nature, and the change in participants' role was ascribed to a social compensation for the mood swings of the individual throughout the rehearsal process. This supports West's view of both *team reflexivity* and *social reflexivity*, constantly reviewing how the ensemble (team) is working to *'inform the next steps by changing as appropriate the team's objectives, ways of working or social functioning in order to promote effectiveness'* (West, 2012 p.7).

As proto-professionals, the relationships that are formed in this educational conservatoire environment, while social, also have a professional element. These relationships can be crucial in being recommended for employment. Dobson (2010) investigated early career professionals and conservatoire students regarding their perceptions of the industry. She found that *'the participants' uncertainty about the nature of their reputations exacerbated their propensity for making self-*

*comparisons with peers, increasing their likelihood of engaging in self-doubt'* (p.247). Dobson also acknowledges that this reputation is a far from transparent ideal that is built through social and professional relationships. Therefore, a rehearsal of peers in this context can be seen as both socially and professionally significant, with the need to prove one's usefulness to the group and preserve one's reputation is a priority.

#### **5.4.2 Desire To Fit In**

Having acknowledged participants are part of a community of practice of ensemble singing [4.3.5] with shared values and expected behaviours, this emergent theme investigates how participants feel about some expectations and pressures to conform within the research intervention.

**T1/52** *The pressure of like, not making a sound that I know people will... be like urgh, that they won't like. Not that they won't like, it's not so much about them not liking it, it's just about, I don't know, you don't want. You just don't... urgh, it's so weird that I'm saying this, because I really did think that, I really did think that like, I didn't, there was a point even a few months ago that I was singing with people in VOICES<sup>4</sup> and it was like, and like I was fine with the fact that I was going to make a bad sound sometimes, and I feel like everyone else was, but then in that setting, it was kind of like I was back again, I don't know why.*

T1 struggles to articulate what pressure they feel when judging their own singing against others' aesthetic standards. Familiarity with other singers, and their social interactions, can lead to the ability to feel more comfortable in a rehearsal according to T1. This comfort in the familiarity of participants was lacking in the research intervention, perhaps due to time having passed since the group last performed together, and therefore the need to re-familiarise. Similarly, this pressure could indicate self-doubt related to their ability to fit in with a group whose expectations may have changed, therefore creating anxiety.

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<sup>4</sup> The auditioned group that was a prerequisite for participation in this study.

**B1/33** *The least, yeah, we'll go with satisfying, erm, performance experiences I've had in an ensemble context have been where it's been a disparate group of kind of vaguely disinterested people. Erm, who are just, kind of standing there getting the notes right. I feel ensemble music is only... created in any satisfactory way when there is the idea and the kind of practical application of a team going forward.*

According to B1, if there isn't an active interest from other singers, this creates a scenario in which the performance is not satisfying to the performer. B1's deliberate use of the word *satisfying* could indicate that these performances can still be successful by metrics other than the personal standard of B1, but that there is a layer to performance that goes beyond simply accuracy of pitches. In order to achieve the 'magic' performance, rather than 'technically perfect' as described by Lim (2014) above, the other participants must not be *disparate, vague, or disinterested*.

A *disparate group* of performers could be seen to not share the same goals for performance as B1, in that they are not working towards the same performance goals, or not engaging in a mutual tuning in relationship, or sharing overall goals. Cohesiveness as a group, and a dedication to the performance over and above a perfunctory recreation of pitches is something that B1 deems is important for performance. Similarly, this must be an active and specific commitment to these goals rather than *vague and disinterested*

**T3/102** *But with the close microphone, I couldn't stop it playing on my mind that you were going to listen to it, and that I was going to have to listen to it, erm, because it felt very much like something that I knew I didn't want to do, I knew I did not want to hear what was going in to that microphone. Which was quite an unusual thing for me, in my solo repertoire, I don't find recording stressful or difficult, and I quite like the way my voice sounds when the recording comes back.*

While the microphone provided a different type of pressure, it is interesting to note that T3 wasn't only anxious about the researcher listening to the recording, but their own listening to it. This, for T3, is something that permeated the recording session, they '*couldn't stop it playing on [their] mind*'. It is also telling that this is something T3 didn't want to do given that the researcher was '*going to listen to it*' whereas T3 '*was going to have to listen to it*'. While others have expressed anxiety as to how

others will judge their singing, T3 is worried about judging their singing against their own idea of their habitual solo singing. T3 acknowledges that the recording itself isn't the issue, as this anxiety was '*quite an unusual thing*', however the manner of recording the qualification of '*close microphone*' and not finding '*recording stressful or difficult*' in their solo repertoire suggests that the research method is in part the cause of this anxiety.

**T1/17** *I just felt like constantly kind of on edge about whether I was sticking out. I mean, I didn't think about the... ensemble like, as a musical ensemble, I just thought about my kind of role within a random section. It could have been anything, it didn't have to be music, it was just me trying to fit in to something. And then in the Os Justi when I kind of sang a bit more, you feel like, you feel like you're, er, actually giving something. Like, through music. With a group of people.*

**B1/55** *Yeah, I guess appropriateness is something I worry about more in my personal life than perhaps I should, really. You know, er, it's an everyday concern, you know. Is, is, is er, am I walking down the street in an appropriate way, haha. Am I making too much noise at this table, is that appropriate? So I guess that, that's a personal thing as much as an artistic thing.*

In the context of this section regarding social interactions, it is suggested by both T1 and B1 that there is an anxiety regarding '*sticking out*' or the '*appropriateness*' of a particular situation. T1 makes this plain in their discussion of extra musical, but still social, interactions. Reading this in the context of B1's desire for their behaviour to be seen as socially appropriate, we can suggest that there are a set of social behaviours that singers adhere to in the social setting of the ensemble rehearsal. Having your behaviour, and not only your singing, fit in to the group mindset is therefore an important part of how an individual presents themselves in a choral rehearsal.

Although the ensemble is a social unit, and there are interpersonal relationships developed across the whole group, T1 discusses the relative hierarchies in that unit. The anxiety that T1 feels regarding their desire to fit in is something that is constantly checked. Being '*on edge*' suggests that there is a continuous appraisal as to T1's interactions in the context of the group, and while it is unclear if these contexts change throughout a rehearsal, the fact that it is a *constant* issue for T1 could suggest that

this 'sticking out' is not merely social or musical, but an amalgamation of the whole experience. Similarly, the qualification of 'ensemble like, as a musical ensemble' is pertinent, as the addition of the musical ensemble before then stating 'my kind of role within a section' could show that there is an extra musical element to the sectional unit that is more acute than that throughout the whole ensemble.

**A2/37** *Especially with those really, kind of, exposed bits where you're like oh yeah alto solo! But you still need to sing as an ensemble even though it's an alto solo. Erm, which is always hard for an alto because we get so few solos.*

While soloistic vocalism has throughout this investigation been associated with the idea of an individual singer, there is also a matter of sectional soli, as illustrated by A2 above. It is clear that A2 is excited by this prospect, and that being given the opportunity draw focus as a section is something that they value, particularly given that 'they get so few solos'. This moment in which the alto section provides the subject of a fugue, with no other parts singing, is seen as a sectional opportunity and could therefore suggest that A2 still does not consider this an appropriate showcasing their own virtuosity, but rather for the whole section to become the focus of the attention within the ensemble. However, this is mitigated by the 'need to sing as an ensemble even though it's an alto solo'. This could suggest that there is a layer of focus, first on the section, and then between the whole choir.

**B2/42** *And I had a, in my head, I felt I had a good idea how that would sound as part of the section. I didn't feel at any point I had to push at all, erm. You know, neither of them, you know pushed, so it wasn't like some sections where it does feel like a bit of a shouting match.*

This sectional layer, and the expectations of how an individual will fit in to this ideal, is described here by B2 who has an auditory image of the sectional sound and is able to project how their own contribution will then enhance the section. Extra (and therefore non-efficient) vocal force was not required in order to fit in to the auditory image that B2 had projected. This is a positive outcome for B2, given the negative connotations of 'push', and the acknowledgement that there is a similarity in how the other members of the sectional team approach the singing. Comparing the feeling of singing

could show that as part of a desire to fit in *'pushing'*, as well as more positive behaviours, could be imitated as part of a desire to fit in. This is supported by *'sections where it does feel like a bit of a shouting match'*. A desire to not engage in a *'shouting match'* echoes Murnighan and Conlon (1991) that individual virtuosity is not well served in ensemble situations.

We have discussed how there are social, musical, and vocal expectations upon the interpersonal interactions between singers within this creative environment. These expectations manifest as a set of behaviours and a wish that the individual contributions of the singers are in harmony with the expectations of others. The desire to fit in to this social and musical expectation has different levels, from the whole ensemble, to sectional, to individual responsibility in different aesthetic contexts. This desire to fit in does not necessarily mean one type of interaction for the whole experience, but that an individual may take more ownership of a particular aspect dependent on their skills, as long as this still moves towards the aim of ensemble performance. The teamwork involved in these differing interactions, with an assumption that each participant has a desire to fit in to the ensemble's aims of performance, are discussed below.

### **5.4.3 Teamwork**

This theme will explore how participants experience teamwork both as a sectional unit, and how this interacts with the whole group aims. These elements of teamwork will also move towards an evaluation of success in ensemble singing, and some of the personal, social, and musical experiences that are associated with a good ensemble experience.

**A1/52** *Erm. Well, I think it's all of that, everything I just said, but also, kind of. I think as a group of people... we get on relatively well. We all like each other, and we all, kind of... enjoy each other's company as a group of people. I think we're a group of friends and we have a good rapport as a team, and I think that's probably why communicating with each other through singing is not as difficult as it could be.*

A1 acknowledges, as have others in this chapter, that the interpersonal relationships in this particular group of singers directly impact on the overall performance. The positive nature of these

relationships develops a perceived level of comfort between participants. This trust and familiarity is then able to positively impact on communication, which in turn is seen as effective teamwork by A1.

A1 highlights personal social relationships between participants, equating friendship with effectiveness as a team. Interestingly, as this concept is introduced, A1 says *'we get on relatively well'*. This qualified language then stands at odds with *'we're a group of friends'*, with the language becoming more emphatic further through the thought. This could echo Lim's (2014) observations regarding conflict resolution and friendship among elite groups. While groups spend a lot of time together, there are times of conflict and the ability to resolve this become part of the effectiveness of the team. A1's hesitance when first introducing friendship could be a way of acknowledging these ups and downs and different contexts and dynamics within the group.

Friendship as a means of communication influences perceptions of rapport as a team. A1's use of the word *'rapport'* when discussing teamwork, rather than *'enjoy'* when speaking about friendship and socializing could indicate that there is a difference in the interactions that are team orientated, rather than socially orientated. Rapport is equated to *'communicating with each other through singing'*. It is not clear if A1 is discussing technical interventions specifically about the singing in order to achieve a musical result, or if there is an additional layer of communication that is more artistic and less technical.

**A1/51** *Erm. It wasn't. I think we were just. We were looking at each other, we were looking at what we were all doing, we were communicating with each other by listening and by looking, and not just kind of by what you were doing. It was a kind of group effort between everyone, I think.*

A1's use of the word *'just'* to minimise the perceived difficulty of the concept of communication could indicate how ingrained this is in expert performers. When looking at improving the effectiveness of teamwork, there are times when communication is deemed a separate entity from that teamwork itself, with good communication being seen to be *'easy to talk about but hard to put in to practice'*

(Seago, 2008 p.247). It appears from A1's perspective that this is reversed given the non-verbal nature of this communication.

A1's description of the nature of this communication '*we were looking at what we were all doing*' may imply that all participants were engaged in visual communication simultaneously during performance. This implies that there is some form of action or visual cue that is significant in the communication between ensembles. However, the addition of '*we were all doing*' could suggest that there is a collective form of communication, that the group as a whole has some form of visual element to performance that is able to be used by individuals. Eye contact has been shown to coordinate performance and communicate musical ideas at important points in the music (Williamon & Davidson, 2002). These visual types of communication could be seen to coordinate and communicate musical ideas throughout the whole choir, rather than the intra-sectional reaction of vocalism. These inter-sectional points of communication could be once the sectional sound is established, and therefore moved beyond the concerns of creating an appropriate sectional sound.

**A2/43** *But yeah, I think it's very obvious that all the sections, the guys are listening to each other. The guys, I mean sopranos as well, that everyone is listening to each other and kind of, er, working. Working together.*

The qualification of sections as individual units that listen to each other, and then these units working together supports the argument above that communication and teamwork are inter- rather than intra- sectional concerns. This differentiation in communication could suggest that real time auditory feedback is primarily involved in the development of auditory image, and subsequent singing to satisfy this. Whereas communication with other created sectional sounds begins to incorporate other elements of feedback, such as visual. This may support a build-up of behaviours associated with temporal cues, as discussed by Volpe et al. (2016).

**T1/65** *Erm... Erm... And I think..... Yeah, I think, I think in that room, like, because I knew the music as well, it becomes kind of second nature to, like you kind of expect it like, I was expecting the soprano, to hear more soprano there, and then that's nice, and then you do it, then you hear the basses do it and, erm... Yeah. And that helps. When everything's going well, that helps. Erm. You being aware of all that sound kind of helps you to fit in to that sort of colour, the colour you're trying to, or the part of the texture you're trying to fit in to. It helps you know how much to crescendo, or how much to come away from a note, or... erm, yeah.*

As well as looking and listening, T1 is able to predict where the attention should be drawn through both experience of the repertoire and experience of the situation. There is a passing of focus between sections, each of which build to a *part of the texture you're trying to fit in to*. This contextual information is then used by T1 as a direct stimulus for their own singing interventions. It is interesting to note that these interventions are described as expressive (*how much to crescendo, or how much to come away from a note*) and not in the actual production of the singing. These procedures are applicable *when everything's going well*, which suggests that this communication is part of an effective teamwork. This teamwork may include prerequisites in order to ensure everything is '*going well*'.

#### **5.4.4 Discussion**

Ensemble singing involves a group of complex interpersonal relationships whose goal is a successful ensemble performance. Communication through eye contact and body language has been shown to be useful in temporal coordination between ensembles (Volpe et al., 2016; Williamon & Davidson, 2002). Participants described communication as an inter-sectional activity, emphasising visual as well as auditory cues. When discussing intra-sectional communication, the onus was on auditory cues, generally with those in closest proximity to the singer [5.3.4]. This could suggest that while intra-sectional feedback is primarily auditory, inter-sectional feedback begins to include elements of visual feedback. This may have implications for the role of conductor and gestural feedback, which is in the purely visual domain. Vocal ensemble specific research into the use of different stimuli in participant communication at individual, sectional, and ensemble level could usefully add to the literature.

The 'mutual tuning in relationship' is described by Schütz as *'members of a performing group producing chamber music embark on a voyage of self-discovery which depends on auto communication and leads to a qualitative change in both the individual and the group'* (Sicca, 2000, p.153). Participants felt a desire to ensure that they didn't 'stick out' of the group, being particularly aware of how appropriate their behaviour is to accepted norms. This coincides with the ideas of a community of practice set out in the previous chapter [4.5], it becomes clearer here that this is not a purely musical and vocal concern. Singers want to fit in socially, and their ability to do this, and perceived success, directly impacts on their singing. The desire to fit in, both socially and musically, within the accepted limits of singing as part of an ensemble, in this regard, requires participants to have *'a soloist's skills but not a soloist's temperament'* (Murnighan & Conlon, 1991 p.167). This supports previous assertions that ensemble music cannot be used as a platform for individual virtuosity.

Familiarity has been shown to be important to participants [4.3.4]. In engaging in building familiarity that is social, as well as musical, participants could be seen to be engaging in a *'voyage of self-discovery... that enables performers to identify each other as social actors as well as musicians in the organisational context. This identification leads to interaction with the aim of sharing in an artistic experience'* (Sicca, 2000, pp.153-154). Social bonds were identified by participants as generally intersectional and whole ensemble events. This artistic experience may therefore link to feelings of satisfaction and flow, which are investigated in the following chapter.

## **5.5 Conclusion**

It is clear that participants in this study perceive their ensemble singing on three distinct levels: individual, sectional, and whole group. Each of these three levels contain different concerns, challenges, and requisite vocal interventions. Importantly, each level of this ensemble experience must be tackled with a desire to fit in, not only to the auditory image of the created choir sound, but also to acceptable social standards of behaviour. Working together to create an ensemble sound is a component of good ensemble singing, the outcome of which will be discussed in further detail in the next chapter.

When matching timbre within a section, and therefore altering individual habitual vocalism to match the expectancies of others' auditory image, those singers in closest proximity are the most important stimuli. In this case, the sectional sound is created through alteration of particular vowels and vibrato rates to create a cohesive auditory image of a section. Ensuring that vowel identity is homogenous, and that vibrato rate and extent are similar, greatly impacted the whole choir sound, according to participants. Ensuring that the auditory image of the section is achieved then allows for further work to happen inter-sectionally. These adjustments appear to be less concerned with the production of a sound quality, and more logistical and artistic. How participants come together in collaborative creativity is discussed further in [6.2.4](#).

In line with Schön's (1991) theory of reflective practice [[see 4.1](#)], many participants believed that they were singing straight tone due to their 'reflection in action', whilst their 'reflection on action' oftentimes contradicted this. A level of vibrato existed individually and formed part of a collective sectional sound that participants believed then became greater than the sum of its parts. These intra-sectional interventions concern the creation of the sound, and less aesthetic and artistic connotations.

While many participants, and much of the tacit knowledge of ensemble singing, would have singers believe that choral blend was either the action or result of this matching, participants did not

associate this with peak ensemble performance. While voice matching is an important component of peak ensemble experience, it is not the only part of the experience itself.

Moving from the intra-sectional creation of a sound, to inter-sectional aesthetic and artistic decisions, participants were aware of not only their own interventions, but those of other individuals and other sections. Participants discussed conductor interventions regarding vowel quality, as well as coordination issues across the sections. Allowing singers to have agency over their sectional sound, and then providing a more generalised view of how these units then fit together could be a valuable area of research for conducting pedagogy. Thinking about the sectional sound as a 'pre-packaged' unit does not negate the ability to adapt given the context of the other sections.

The following chapter will look in detail at how these prerequisites then come together in peak ensemble performance, including the sensation of blend and the emergence of a new choral instrument.

## **6. Flow in Blend**

### **6.1 Introduction**

This chapter aims to explore the holistic experience of singing in ensembles, with a particular focus on the heightened nature of this phenomenon. Through analysis of participant interview data, seven emergent themes were identified and then grouped to form the two super-ordinate themes that are discussed below. Figure 11 shows how these themes relate to each other in the ordering of this chapter.

As this chapter develops, the concept of flow will be evidenced through participant interviews, for an explanation of the concept of flow, see [2.6.1](#). Ensemble music is a temporal phenomenon, in that the sensation of blend exists as part of the performance of music in the context of this thesis [\[6.3.3\]](#). Peak ensemble experience is often synonymous with a well-blended sound, with the state of flow also being described as peak performance (Csikszentmihalyi, 1988). This chapter describes peak performance, which I will demonstrate aligns with the elements of enjoyment of flow theory, and as such can be described as how flow state can be manifested from that *'intangible'* experience participants describe as blend.

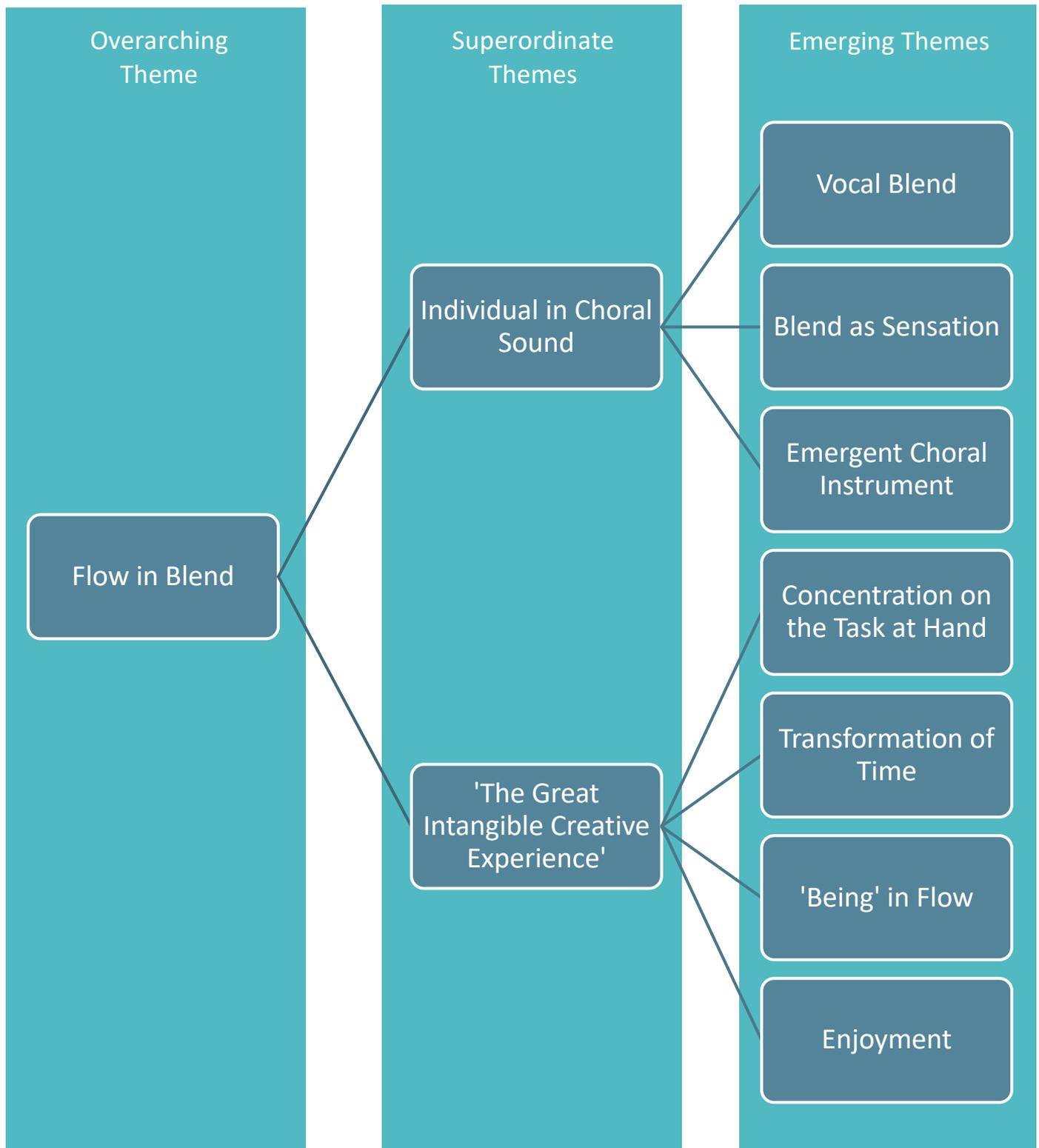


Figure 11- A diagram of theme hierarchy for the overarching theme *Flow in Blend*.

**Individual in Choral Sound** emerged as a superordinate theme dealing specifically with the artistic and aesthetic, rather than logistical and social, elements of ensemble singing. This superordinate theme deals with how participants analyse their own blend technique against the aesthetic ideals and community of practice that they have built through experience.

It is clear that all participants deeply enjoy and find fulfilment through participating in ensemble music, with B1 describing this as '**The Great Intangible Creative Experience**'. Many participants described the temporality of choral singing along with a transformation of time of being 'in the moment' when singing well. Similarly, participants described an entirely concentrated view of their ensemble work, as though nothing could possibly go wrong in their moments of effortful concentration on the task at hand. Moving through the analysis, it became clear that many of these elements of enjoyment were analogous with Csikszentmihalyi's (1988) *Flow*. Flow describes a heightened emotional state in which a person becomes fully immersed in an activity. As such, a final theme was then added, bringing together some of the elements of enjoyment as brought out through an iterative look at the themes.

## **6.2 Individual in Choral Sound**

While [chapter four](#) deals with the holistic experience of the individual in terms of their experiences leading up to, and their reactions after the research intervention, this superordinate theme specifically considers how participants engage with those around them whilst singing in an ensemble setting.

**Vocal Blend** concentrates on participants' experiences of how their habitual singing is impacted by singing with others. Many of these answers were elicited through asking the question 'what does choral blend mean to you?', and as such this section will include descriptions of their understanding of 'choral blend'.

**Blend as sensation** uses participant information to explore how the physical sensation of singing in a choir, and particularly their idea of 'choral blend', manifests itself. This theme concentrates on the physical sensation, rather than the mental or reflective experience of blend.

**Emergent Choral Instrument** deals with participants' experiences and interactions with the ensemble sound that they co-create with their singing partners. Concentrating on how participants describe the creation of the ensemble instrument, this theme investigates the point that participants change from their own concerns to those of the ensemble.

### **6.2.1 Background**

Literature surrounding ensemble singing tends to either investigate the whole choir sound in a conducting-centric manner or focus on a specific aspect of the individual contribution to that sound. One of the defining features of the method employed in this investigation is the holistic, idiographic investigation of the singer's perspective of ensemble singing through the recorded stimulus of their own voice highlighted as part of the context of ensemble singing. Both the singer-centric methodological approach, as well as the novel stimulus of highlighted individual tracks as part of a choral rehearsal, separates this investigation from the rest of the literature and advances this thesis' unique contribution to knowledge.

Sawyer (2006) describes the collaborative creation of an artistic work as an inherently improvisatory process. This collaborative creativity can lead to the emergence of a new experience, described by Sawyer as the '*collective phenomena in which, as it is said, 'the whole is greater than the sum of its parts''*' (p.148). In realising an ensemble score, the emphasis on the artistic interpretation is a real time collaboration based on the reactions of those singers in close proximity, rather than a division of labour across the choir. While group flow is an "emergent property of ensemble performance" according to Sawyer, this is different to the psychological state of flow described by participants in [6.3.4](#). A group may be in flow even when individual members are not (p.159) with group flow emerging from a process of conscious listening to each other. This emergent property of the

group becomes the 'choral instrument' that is co-created by participants through an ever-changing quasi-improvisatory acknowledgement of other participants.

As has been mentioned elsewhere in this thesis, participants are particularly concerned with the group aspirations in ensemble music, both in terms of teamwork [4.3.4] and a joint aesthetic goal [4.4.2]. This teamwork allows for the development of musical interpretations that cannot be attributed to an individual. Despite these ideas perhaps being instigated by an individual, having then been diluted through the interpretation and in the context of other participants, the ownership of musical and interpretive ideas therefore lies with the group, rather than the individual. The lack of a particular point of ownership for the group's artistry gives rise to the phenomenon of an emergent choral instrument (Bishop, 2018).

Glaveanu (2013) postulates a schema for creativity that encompasses the 5 A's: *actor, action, artifact, audience, and affordances*. These five A's can also be applied to the collaborative creativity of the ensemble, with *singer, singing together, created choral sound, the rest of the choir / conductor, and surroundings and acoustic* mapping to Glaveanu's schema. Of particular importance is the 'artifact' of creativity being the created choral sound, which emerges through the collaboration of participants in singing. Through initial coding, a theme was identified as 'new choral instrument', in researching literature surrounding this, the concept of emergence began to materialise as a suitable schema for these participant experiences. This 'artifact' is identified throughout this chapter as the instrument which participants co-create as part of the collaborative creative effort of ensemble singing.

The role of the individual vicariously becoming the audience in order to evaluate the created 'artifact' in the context of the material surroundings (affordance), provides an interesting dichotomy for singers. Their dual role as arbiter of their own singing, as well as audience to the created sound of their co-creators can situate participants in alignment with the Embodied Music Cognition (EMC) paradigm (Leman & Maes, 2014). This paradigm states that perceptual motor coupling can function

at multiple levels simultaneously (MacRitchie et al., 2017), the more autonomous level being sensory input and motor activity being in continuous interaction, while a higher level reflection of learned gestures to control one's own performance is employed to achieve more deliberate control on the parameters of singing to fulfil an anticipatory image of the new choral instrument.

### **6.2.2 Vocal Blend**

**S3/80** *If you put a definition on it, I think it means that people have to search for that complete thing every single time they go about ensemble singing. Whereas I think if everyone has their own idea as to what blend it, I don't think it'll be too drastic from the person beside them. I think that if you all have the same idea and the same intention, then I think you're going to get the same result as you would if everyone was to have the same understanding of blend. No? So, I don't think there should be a real definition of it, but I think everyone does have the same idea, the same idea of the result that they're looking for. But I don't know if that's because of society, or because that's the way we've been taught how to choral sing.*

Searching for a particular meaning in the word 'choral blend' as dictated by a third party is less successful than a lived experience of that technique by each of the singers. S3's point is that a dogmatic approach to blend, and each singer either having to either sing with the same intervention away from their habitual singing, or singing to fit a particular sound without any reference to the context of the voices providing this sound won't be as effective as the individual understanding of this term as applied to their own vocal technique.

The desire for a particular sound, an aesthetic to which this understanding of blend leads, is acknowledged by S3 to be part of the development of choral skills through tuition and experience. The individuality of the voice, and their own experiences and understandings of the context in which they find themselves will more effectively generate a sound that is received as good ensemble singing than having this idea enforced externally.

This singer-centric view of blend is supported by T3, below:

**T3/111** *To an extent there's nothing you can do about tone colour; you get what you're given. But the idea of blend as some people treat it, is in order to homogenize the sound of however many individual voices that can't possibly be homogenous. So, I often think of it as something that is impossible, or unattainable, something that we're sort of trying to get as close to as possible, the idea of a single singer singing however many notes*

Wyatt (1967) proposes two schools of thought in achieving blend; the first being that the natural timbre of singers chosen to perform in an ensemble is naturally similar, the second that individual singers change their sound to match each other. T3 is arguing that individual tone quality cannot be changed in order to fit a particular aesthetic wish. Acknowledging that *'you get what you're given'* in terms of the physiology of the vocal instrument suggests that some form of tone colour is inherent as part of the vocal instrument. This is a fixed entity that is not able to be changed through practise or tuition.

In T3's opinion, the unique timbre of each singing voice implies that there can't possibly be a genuine homogenisation of sound. This is regardless of how many voices are coming together, or of which section they are a member of. T3's use of *'individual voices'* emphasises the individuality and independence of each voice regardless of any other categorisation in the ensemble room.

T3 distances themselves from the view of homogenisation through the use of *'as some people treat it'*, yet they then go on to use this definition as impetus for their own understanding of blend. Not unlike S3's wish to not define blend outwith individual experience, T3 believes that this is *'impossible'*. Changing *'impossible'* to *'unattainable'* reframes this argument from a dogmatic approach that is demanded by *'some people'* to an aspirational view of the choral experience as an aesthetic concept. The desire to get *'as close to [homogenisation] as possible'* then becomes the aspiration and aim of T3's singing, rather than an imperative for all successful ensemble singing.

**T2/73** *I don't think 100% blend is an ideal sound, for me. But I think, but I also don't think that no blend at all is ideal. I think it has to be somewhere, there has to be a balance. I think as a solo singer, you'll always have to slightly alter your way of singing in a choir context. I guess it's the same, an opera singer. A Wagnerian tenor wouldn't sing comfort ye in the same way as he would a Wagner aria. Because it's just different music.*

In concurrence with T3 above, T2 acknowledges not only that the aspiration for a perfect blend between singers is unachievable, but also that there are particular qualities of the voice that are inherent. T2 invokes the Fach system to justify a different approach to repertoire that acknowledges the inherent difference in some vocal timbres. The use of diametrically opposed types of singing both allies choral singing with lighter voices, but also reinforces the idea that not only is singing context specific, but that singers of all specialisms change their singing to match the context in which they find themselves.

The requirement to change from solo to choral singing, with a requisite change of technique, in order to move closer to '100% blend' is shared by both S3 and T2. 'No blend at all' could be seen as a fully soloistic performance of ensemble music, with no acknowledgement of the context of other voices with which T2 performing. The balance that T2 mentions between these two contexts could again imply a singer-centric view of blend, in that the individual wish to keep their singing as habitual as possible is balanced against the aesthetic wish of the conductor and a societal norm of what 'ensemble singing' is expected to be. This balance could also be viewed in the context of the developing solo voice and contention between one-to-one teachers and ensemble directors [4.2.3].

**T2/60** *I'd say blend is one colour. Whereas a choir of various different colours creates something magical. Whereas the white, or any colour that blend is, it's just that colour. And you're trying to make it, or blend could be four different colours for each section.*

If the aim of ensemble singing is to create homogeneity of tone quality, this could be seen as creating one 'colour' of sound. However, this form of blend is not the ultimate aim of ensemble singing for T2. Mixing individual colours together becomes 'something magical', perhaps acknowledging that for T2 the homogeneity of tone is associated with sectional singing, and individuality is afforded inter-

sectionally. Attempting to ‘make’ a particular colour that is associated with blend could suggest a particular aspiration for this colour as it represents an auditory image that T2 deems appropriate in this context. The individuality of each tone colour working together to eventually mix (or blend together to borrow this word from its context in visual art) in a way that creates the same aesthetic then elevates this to the level of ‘magical’ for T2.

**A3/110** *It’s thinking in terms of the whole, instead of looking from the outside in. One can’t do that if one is going to blend, you have to be willing to be in it. In all of the muck of figuring out articulations, and where people are going to breathe, but you really just have to let yourself be in it. Instead of looking at it from the outside.*

Building an aural image of the whole choir sound, and A3’s individual contribution to this is articulated here. When discussing blend, A3 frames the discussion in its widest sense not only regarding the logistical and technical interventions, but ‘*thinking in terms of the whole*’. Thinking about the ensemble in a singing-centric way, rather than ‘*looking from the outside in*’ supports the analysis that the community of practice is built through being within the ensemble, and not from a conductor or audience stand point. In order to impact upon the ensemble sound, and to blend, A3 is suggesting the importance of being a part of the ensemble. A willingness to be ‘*in it*’ not only suggests the physical immersion in choral sound that is discussed later in this section [6.2.3], but also that there is an acceptance that each singer is going to work in a way that is for the benefit of the ensemble. It is possible, according to A3, to be singing ensemble music but not blend with it. This fits with the idea of emergence as described by Sawyer (2006) in that group flow is an emergent property of the choral instrument, rather than the individual psychological states of the individual participants. A3’s argument is that if you are ‘listening from the outside’ or singing to a predetermined idea of ‘choral singing’ rather than actively engaging with the live creative collaboration with participants, you will not achieve a satisfactory blend across the whole group.

Some of the logistical concerns of ensemble singing that have been discussed elsewhere in this thesis are also brought to bear through the ‘*muck of figuring out*’ your place in a rehearsal. While

blend may be a concern of A3 in relation to their colleagues, these logistical concerns form part of the context of singing-centric views of the ensemble experience. Having the ‘muck’ of ‘figuring out’ suggests that there cannot possibly be a particular intervention that will work in each situation and must happen through the trial and error of becoming familiar with a particular ensemble context.

### **6.2.3 Blend as Sensation**

**A2/58** *Erm. Well actually, yeah, I think dissonance and suspension are the most... I've been all up in that since I was like four years old. Haha. And you just feel like. But you know there're, you know there're the way something is phrased is built for example, and er, like certain changed in harmony. Like you, you feel like you can hear. You feel that something really important is happening here. Like something that's interesting, and different, and relevant. Then you learn what it's called, or you learn to recognise it and name it, but the thing is like, I can tell.*

Pinning down language to describe a physical sensation has been difficult for participants, particularly when discussing choral blend. Here, A2's ‘just feel like’ could indicate that this is an emotional response to the music being acted upon them as with T1's ‘cohesive emotional experience’. By highlighting the words ‘suspension’, ‘dissonance’, and ‘harmony’ it is clear that A2 sees these experiences through the context of others’ singing. These three concepts are implicitly tied to the temporality of performed ensemble music, and as such the collaborative act of ensemble music making is the object of these emotional feelings by A2.

The association of listening with feeling is described twice by A2. While it is ambiguous whether this is a physical sensation and the sound of others is acting upon A2 in some way, or if this is an emotional response to the music, it is clear that what is happening around A2 is having an impact upon their understanding of this situation. A2 describes the harmonic context observed through listening as ‘interesting’, ‘different’, ‘and relevant’, as well as ‘important’. These descriptors serve to highlight that peak ensemble performance, as described here, happens in moments where there is difference. This difference could be in the harmony, as described through dissonance and suspension. The difference also has to be relevant, indicating that A2 must understand the relative interest and

importance of each of these interactions. This requires reflection built up through a familiarity with these sensations that is then described by A2. Here A2 stops short of describing this as blend and ascribes the technical musicological terms of suspension and dissonance as the identified cause of the feelings. The emotional or physical response to this, however, has been themed as blend, given its obvious impact on A2, as well as its positive language suggesting that this is some form of peak performance state.

**B2/56** *When I was singing, it felt, I thought it felt very good. I... you know, just to be quite basic about, you know, it felt nice to sing like that. It felt pleasant to sing like that. Because you know, I'd imagine it was just going to be this, er, this nice sound that, you know, it was just going to, you know, be very smooth, very relaxing, erm.... And as I say I didn't expect it to have, you know, intonation, vowel problems, you know, things like that. But you know, when I was singing, it felt nice just to, you know, making that music with the other people in the room. You know, I, I felt that from where I was standing it felt like we were making a very nice sound, er, as a choir. Erm....*

B2 describes 'it felt nice to sing like that' as a basic reflection on singing. Yet there is still a struggle to articulate what that feeling is like. A 'pleasant' experience that just 'felt nice' to make music (rather than sing) with the 'other people in the room' could suggest that peak ensemble performance goes beyond simply singing that feels pleasant as a physical act, to a socio-emotional response to an artistic stimulus.

Reading B2's analysis in the context of a 'cohesive emotional experience' (T1) that is 'interesting, different, and relevant' it could be speculated that peak choral performance is an emotional response to the sound that is being co-created by all participants in that particular environment. However, this act of co-creation then leads to the question, is this emotion a response to a sound, or does this emotion trigger the sound?

**B1/53** *But if I'm feeling an emotion, then it will colour the voice. It will change the quality of, of what the singing is. Yeah. And I... erm. I find, I find colour makes more sense through that, through the lens of that second. Second interpretation rather than just...*

B1 almost employs their own double hermeneutic circle in their approach to ensemble singing. Feeling an emotion then colours the voice, which happens through a second interpretation of the singing in the moment. It could be argued that through the close listening to vowels, intonation and the singing of those around you there is a first cycle of reflection on behalf of the singers. This then leads to an emotional response when these conditions are satisfactorily met, which in turn creates the emotional colour of the voice that can lead to a '*cohesive emotional experience*'. This can only happen through the reflection of the individual singer in relation to the live performance of their colleagues in the act of co-creating an ensemble experience. As we have seen from other participants, a subjective view of blend that is singing-centric is preferred, and it is perhaps this subjective view that is on display here.

#### **6.2.4 Emergent Choral Instrument**

**B1/15** *Obviously... as the full ensemble creating something, but you work practically with however many people are beside you on your line, in this case two other baritones.*

The obvious nature of creation as a '*full ensemble*' implies that there needs to be a collective responsibility of the individuals in the ensemble to the construction of the ensemble sound. By invoking the whole choir in this act this could be seen as the creation of a new choral instrument made from the building blocks of the individual singers. B1 is incorrect in their assertion that those singers '*beside*' them are baritones, as B1 was placed between the tenor section and B2. This assumption that those beside B1 are also baritones could suggest that in this instance B1 is speaking of the sectional unit as those that they are working practically with, whereas the '*full ensemble*' is the drawing together of these sectional groups in order to concentrate on the '*something*' that becomes the ensemble performance. While the section is not able to create its own artistic or holistic ensemble experience, their participation in the co-creation of this instrument is imperative in the emergence of the choral instrument.

The fact that creation through an ensemble is obvious to B1 suggests that there is some form of expectation of the ensemble experience. This may be that the whole choir will experience the emergent property of the phenomenon of the creation of an 'emergent choral instrument' with higher order artistic concerns. The clarification by B1 that the practical processes lie within the section, which may then lead to this creative experience, could indicate sectional concerns fall below whole choir processes in a hierarchy of co-creation.

**S1/17** *That made me more aware of it, and I could hear where we would go, and when we would come out from that and if ye love me that made sense. It felt like we were all building something together, which was nice.*

In concurrence with B1 above, S1 speaks of a building of some form of collective practice which fits in to a particular anticipatory image of the whole choral sound [4.3.4]. S1 is able to 'hear where we would go'. Not only does this mean that they are able to anticipate the image of the entire group creation, but also that there is a co-creation inherent in this direction. This is not about S1, it's about the 'we' of the ensemble, as with B1's 'full ensemble'. There is also a concentration on listening, given that S1 'hears' where the direction of the ensemble will go. A focussed attention or being 'made more aware of' the ensemble sound is a pre-requisite of the anticipatory image of the whole choir. Focussed listening, and therefore an engagement with the whole group sound could be part of the co-creation process for S1.

There is an element of teamwork and investment in the wish to build an artistic entity that is collaborative in that 'we were all' engaging in a process 'together'. The word 'building' suggests, in support of the analysis above, that there is some form of hierarchy in this process. Although this is not explicitly stated by S1 in this quote, this does allow for an analysis that encompasses many 'building blocks' of the artistic output of the collective. One of these may be the sectional unit, as described by B1. Given S1's reference to the score, repertoire and stylistic concerns cannot be eliminated as part of the practical concerns introduced by B1.

Much of the ensemble experience is a visceral, felt phenomenon as part of the co-creation of an instrument in which you are a physical component. As such, the phrase '*it felt like*', can be associated with an emotional reaction to the experience, could also refer in this instance to the physical sensation of being part of a co-created, emergent instrument. This was a positive experience for S1. Even if the achievement of building the finished product is not fully realised, there is some positive output of the process of co-creation.

**B1/26** *So what you hear, if it's ever recorded is the amalgamation of the three voices. So, me going slightly sharp, the other two guys going slightly flat, and us kind of, you know, finding a centre of that note between the three people. Creates something. Creates the note. Creates what we're looking for.*

B1 elaborates on the practicalities of ensemble singing with those voices in the section here. While not explicit, the use of '*the other two guys*' strongly suggests that B1 is speaking of their sectional colleagues throughout this quote. In an acknowledgement of the temporality of ensemble music, B1 states that the artifact of ensemble singing is only able to be heard in its entirety either through an external audience or recorded medium. This quote highlights the duality of audience in the act of collaborative creativity. B1 acts as the 'audience' as part of a collaborative creative effort in order to create the 'artifact' of a sectional (and then whole choir) sound. Once this 'artifact' has emerged through collaborative creativity, the audience is simultaneously transferred to something outwith those creating the music. This emerged 'artifact' is what B1 is '*looking for*'.

In the emergence of the sectional sound as an entity, B1 highlights intonation as an area where each individual singer's contribution can impact upon the whole. This is a case in which a real time adjustment can be made to the individual sound in order to alter the sectional sound. There is an element of individuality here, supporting the idea that the sectional sound emerges as an intra-sectional artifact, which then interacts again inter-sectionally to form the whole choir sound.

Through adjustment of individual intonation, usually affected through fine adjustment of vowel quality (Dromey et al., 2011; Gregg & Scherer, 2006; Oldham, Jr, 1994), a '*centre*' of the note is '*found*'

by creative collaboration among sectional colleagues. The note is created by the sectional unit, which is the aspiration of collaborative creativity in this instance. Reading this creative moment in the context of B1's comments above regarding the practical considerations of working with sectional colleagues, it could be suggested that there are context (sectional) and domain (inter-sectional) realms of collaborative creativity. B1 goes on to discuss this third level of ephemeral, temporal, and artistic creation.

**B1/38** *It goes beyond correctness into creation. You know, creating something. And it's only at that level that... I find it a satisfactory medium to work in because you can come out of a performance having created something that never existed before or after.*

Simply realising a score is not enough to satisfy B1's desire for a truly creative experience. While 'correctness' can be seen as a prerequisite, moving 'beyond' an impression of the score in real time is where creation lies. Accompanying each of these moments is the sense of satisfaction and enjoyment that comes with the creative act of moving beyond a realisation of the score, to something that provides some semblance of self-actualisation for B1.

In the context of performance, as described here, the creative act happens as a temporary process. It is unique in each iteration of this process through the collaboration of the co-creators of this newly created choral instrument. While much of B1's context regarding the emergence of a new choral instrument has been in collaboration with the rest of the group, it is significant that in this quote B1 concentrates on their own satisfaction and personal feelings regarding the creation of an artistic entity. In the context of collaboration that has been associated with creation throughout this analysis, it could be suggested that the individual self-actualisation and personal satisfaction gained in this medium is dependent on others. Projecting this further, this could be one of the differences for B1 between satisfaction in solo / operatic repertoire rather than in ensemble settings. Co-creation of a musical artifact that involves some form of individual investment of creativity, rather than a purely logistical (or practical in B1's own words) exercise of a group of people singing the same piece simultaneously. The spontaneity of collaborative creativity provides the sensation of a phenomenon

of an 'emergent choral instrument', which exists over and above the individual flow states of choristers.

### **6.2.5 Discussion**

Where the responsibility for blend lies is at the heart of this thesis, either as an objective (conductor, or a culturally expected set of rules that must be followed), or a subjective (context specific and singing-centric) set of aspirations. The development of familiarity, both with ensemble singing itself and with other singers is discussed in [4.3.4](#). The expectation that singers should create a sound that fits a culturally accepted aesthetic, generally delivered through instruction of the conductor is still a strongly held belief. Participants in this study have discussed blend in a much more personal and singing-centric way calling for a subjective view of blend, one that works within the context of a socially prescribed community of practice.

Participants on the whole have an understanding of blend that is personal, but firmly situated in a desire for the collective effort of the group to become a peak choral performance. Choral blend encompasses the individuality of each voice within a wider sectional context of a desired sectional sound. Individuality is accompanied by a subjugation of ego, as participants are aware of a desire to sing as one voice with matched vowels and other technical processes that influence the whole sectional sound. While the aspiration is to sing as one sectional instrument, participants acknowledge and revel in the diversity of their own instrumental timbre which brings an excitement and uniqueness to each ensemble experience. This subjective experience of your own 'live' singing in a group of peers can elicit a heartfelt emotional experience in participants.

As co-creators of the ensemble instrument, the sound that is enacted and created by participants by necessity ties into their reflection in action. This first order reflection is that of the technical vocal processes: vowel alignment, consonant synchronisation, and the artistic responsibilities for the sectional line. These logistical and vocal elements of the ensemble experience are prerequisites for

the higher order blend experience, that of an emotional connection to the audience, and a feeling of collaborative creativity with colleagues.

Co-creativity of the choral sound can lead to the emergent phenomenon of the creation of a new instrument, the choir (Sawyer, 2006). This concept is deeply rooted in collaborative creativity, rather than the accurate realisation of a score. When looking to describe the phenomenon of being both part of an instrument, and an audience of that instrument, emergence works well in describing the created choral sound as 'artifact' whilst also acknowledging the inherent ephemerality of this moment. Participants have described throughout this thesis the importance of listening, and particularly the ability to listen in an informed manner to those singing around you. Importance is also given to the ability to project your own creativity into the melting pot of the choir and being able to project the consequence of this creativity into a satisfying ensemble experience.

When describing blend, participants have concentrated on the aspirations and technical processes that they go through to fulfil the prerequisites required for the emergence of this new choral instrument. However, the satisfying experience of ensemble singing has been seen to be when this instrument emerges. The following section will investigate how participants enjoy their ensemble singing, as well as their reflections on peak ensemble singing.

### ***6.3 The Great Intangible Creative Experience***

This superordinate theme is taken from a B1 quote in which they were attempting to describe choral blend. Throughout the analysis of interviews, strong parallels were drawn in participant discussion to flow state (Csikszentmihalyi, 1988), particularly around peak ensemble experience and descriptions of blend. These heightened states are discrete from some of the other technical and logistical discussions investigated elsewhere in this thesis. As part of flow, Csikszentmihalyi identified elements of enjoyment, some of which are highlighted by participants in their experience of peak choral performance. These are given as emergent themes in their own right, and are discussed below.

**Concentration on the Task at Hand** explores how participants describe their focus during ensemble singing. The experience of the paradox of control is also discussed.

**Transformation of Time** discusses participants' perceptions of time during their ensemble singing. The transformation of time and participants' perceptions of this, such as 'being in the moment' are described.

**'Being' in Flow** takes into account some of the above, but investigates peak choral performance, and how participants describe their experiences of this.

**Enjoyment** builds on participants' descriptions of what good ensemble singing feels like, and how this impacts on their perceptions of the whole experience.

### **6.3.1 Background**

Flow (or optimal experience) is *'the state in which people are so involved in an activity that nothing else seems to matter; the experience itself is so enjoyable that people will do it even at great cost, for the sheer sake of doing it'* (Csikszentmihalyi, 1988 p.4). There are eight identified elements to this enjoyment:

- A challenging activity that requires skills.
- The merging of action and awareness
- Clear goals
- Feedback
- Concentration on the task at hand
- The paradox of control
- The loss of self-consciousness
- The transformation of time

All of these components were frequent themes in discussions surrounding participants' ideal ensemble experience. Perhaps the most prevalent and most noticeable way flow is described is being 'in the zone', or 'in the moment'. Using flow as a schema for this chapter came out of the inductive analytical process of the IPA method. While studies have shown that flow states are common in ensemble rehearsals (Jaros, 2008), this thesis is not an *a priori* investigation searching deductively for

flow. The use of flow provides some useful context as to how participants discussed their sensations of blend [6.3.4].

### **6.3.2 Concentration on the task at hand**

**T1/77** *It's like everything in your, like, because obviously all the time in the back of your mind when you're just everyday, living. There's always things, like things that are going on in your head, like lots of things. And I don't know if it's a, maybe it's just a really intense focus, where suddenly it's just one thing, and it's just music. You've got this sound in your head, and erm, just everything else isn't there. It's just literally you and, and this kind of world of sound. I think it's like a sss, I don't know, maybe it's just like a focus?*

Encompassing the merging of action and awareness, concentration on the task at hand, and the loss of self-consciousness, T1 begins to describe a flow state in their quote above. Moving away from 'everyday living' which is then placed in the 'back of your mind', T1 differentiates this type of ensemble experience from the mundane or perfunctory. Affording particular ensemble experiences a status that is differentiated from 'everyday living' could suggest that the motivation for these experiences is not purely economic or curricular, but provides some form of self-actualisation for the participant (Maslow, 1943).

Similarly, T1 speaks of 'things that are going on in your head', which can be taken to mean the 'everyday' thoughts that are not concentrated merely upon singing. However, with a concentration and focus upon 'just one thing', it could be suggested that some of the technical and musical concerns that form the prerequisites of optimal ensemble performance are also merged with the awareness of the emerging creative experience. T1's use of the word 'music' could suggest that the artistry of the moment, rather than any particular technical or vocal intervention is the focus of attention

As part of the merging of action and awareness and loss of self-consciousness associated with a flow state, T1 speaks of the all-encompassing 'sound in your head'. The experience of 'you and, and this kind of world of sound' also strengthens the argument for the emergence of a new instrument of which T1 is a part. In optimal ensemble singing, it appears that the emerged ensemble instrument

forms part of T1's entire consciousness, but also that there is still a differentiation between the individual and the whole. T1 isn't an individual part of the instrument, but the whole instrument becomes the context in which T1 exists in that moment, as the merged action and awareness becomes a symbiosis between choral and individual vocal instruments.

**A3/74** *That is what I find truly relaxing into music means. Erm. Cos that means that you're not focussed on yourself and what you're doing in the next bar, you are there. You are present. Erm. And being present in the moment, especially in making music is where the magic happens when you're not thinking of anything else.*

Loss of self-consciousness is another prerequisite for flow state as described above. Here, A3 is 'relaxing into music' and can therefore assumed to be free of anxiety. The use of 'truly' could suggest that while A3 may wish and aspire to this state, there are times where it is not possible to relax into the music. Similarly, the enveloping, holistic quality of 'into' music could correspond to T1's 'world of sound' [T1/77], showing that the whole choir sound is something in which A3 exists.

A3 places an emphasis on 'especially in making music' rather than the logistical or technical concerns of 'what you're doing in the next bar'. The ability to concentrate on artistry, and the emergence of the new choral instrument comes from the ability of A3 to 'not think of anything else'. It could be suggested that this concentration is a consequence of the challenge of the piece (and the collective creativity inherent in this) being equal to the skill of both the individual and the group. The resultant 'magic' could be seen as the emergent choral instrument, flow, or the physical sensation of blend.

### **6.3.3 Transformation of Time**

Above, we see A3 speak about being 'present' or 'in the moment'. This leads to possibly the most obvious manifestation of a flow state, the transformation of time. The individual experience of the passage of time in ensemble singing is similar across participants, but there is also an expectation on the whole group to be working together in a synchronous creative collaborative effort. This whole

group experience is dependent upon the skill of each individual, and therefore the collective will of the group to work towards a similar aesthetic goal as a community of practice.

**A3/95** *So, it means that then you can be in the moment, and be there with everyone, and express all you need to express and express all that's expressed in the music. But then not have a feeling of there's a consequence, even. Because there is a consequence, there's an outcome, but it's different than so I had a really bad practise session so now I, because it's done. It's over.*

Acknowledging that there is a collective responsibility, and an optimal group experience, A3 speaks of being '*in the moment... with everyone*'. This recognition of the collective nature of a flow state augments the arguments postulated elsewhere in this thesis for creative collaboration and the emergence of a new instrument. Similarly, A3 discusses how the score has a potential for inherent artistry that cannot be expressed without the live performance of this by a group of singers creating the choral instrument. Having three different arbiters of creativity; the composition, the individual, and the collective, creates a complex set of interactions each of which work together to create the artistic experience that becomes apparent to the individual performer.

A3 uses the word '*express*' four times in this passage, indicating a strong emotional imperative in the realisation of a composition. Flow is a heightened experience, and therefore the emotional connection that A3 feels to the creativity must move beyond a realisation of the score, and in to an artistic endeavour. Peak choral experience, therefore, may rely not on an accurate realisation of the score, but in ensuring that there is an artistic and emotional connection to '*express all that's expressed in the music*'.

Seeing the choir as an emergent artifact that exists only in performance, as well as the interdependence of piece, individual, and group neglects the role of the traditional audience in the choral performance. While it is acknowledged that performers can be both audience and actors in the creation of the artifact, the finite nature of the choir as part of the emergent choral instrument existing only in performance provides the actors with a sense of consequence for the creative process. There

is no arbitrary recreation of the notes, the collaborative creativity creates a sense of responsibility not only to the piece itself and the performance (artifact) that has been created, but also to those involved in that co-creation. A3 expresses a consequence to the action of this creation, which in turn helps to create the environment for an optimal performance of the piece.

**T1/37** *Now you feel like you've gone through something, over the past two minutes, and you just need to. You couldn't finish it in any other way because you don't have anything left. You've given everything emotionally.*

The issue of time outwith the heightened state of flow is discussed by T1 above. T1 acknowledges that the performance is defined by the length of time singing during which the act of performing is clearly an all-consuming experience. They have '*gone through something*' that is emotionally taxing, but also has a progression and aesthetic meaning to T1. The emphatic language used, as well as invoking an emotional response to the '*something*' in the performance, indicates the importance of optimal performance to the whole life of T1. This is not an inconsequential, perfunctory, or '*ordinary*' experience for T1. Having '*given everything emotionally*' suggests a deep personal investment in the success of the performance that is given by the group.

There is an imperative in T1's description of how the emotional and aesthetic arc of the piece sits with them. The symbiotic relationship between the co-creators of the emergent new choral instrument and the unrealised score is clear to see here. The experience of singing for two minutes has emotionally taken T1 to a place where the resolution of the piece must be not emotionally taxing to provide the relief that is needed to recuperate from the journey that has got them there. This could indicate a high aesthetic value of the realised score, but also an emotional investment in the creation of this new choral instrument as a living and temporal experience for both audience and creators (actors).

### 6.3.4 'Being' in Flow

The emergent themes above describe particular elements of optimal ensemble performance and give insight to a flow state (Csikszentmihalyi, 1988) in participants. This section will explore participant experiences of flow, and the related experiences that they associate with '*being in the moment*' or '*being in the music*'. Flow describes a heightened emotional state, and as such this section deals with peak ensemble performance in the individual. This can then come together through collaborative creativity to generate group flow and an emergent choral instrument as discussed in [6.2.4]. Many of the descriptions given below were a response to the final question of the interview schedule '*what does choral blend mean to you?*', as such, these heightened experiences may form part of the experience of blend for participants.

**A2/18** *Erm. I, I, I think that's one of the things that I love most, I think it's. It feels like you're in the music. It feels like you're kind of, [sighs] this could sound really cheesy or really nonsensical, probably both knowing me. Ha. Erm. You kind of forget that you're working, and you just kind of listen. It's, it's that feeling when everything clicks to place with the group, and you can hear the overtones, and you can hear the way the harmony's supposed to feel, and you can feel it. And it's all kind of breathing as one instrument, rather than individual singers, and that's when you're listening more than singing, I guess is what I mean.*

Optimal ensemble experience, flow, and enjoyment come hand in hand for A2 in the quote above. While it could be a physical sensation of being surrounded by the created ensemble sound that is attractive, the use of music rather than sound to describe the sensation of being '*in the music*' suggests that this is a more aesthetic, rather than sonic experience. Similarly, the difficulty in explaining the sensation suggests that the language associated with the production of singing, language that participants have been comfortable in using throughout their interviews, is not appropriate here. The self-deprecation and worry about '*sounding really cheesy*' or '*nonsensical*' again indicates a deeper emotional experience, particularly the worry of how this articulated feeling will sound to an external listener.

Optimal ensemble experience as described here is a group experience and can therefore only happen when *'everything clicks in to place as a group'*. The onset of this experience is stark, but also differentiated in time. There is a moment when enough prerequisites have been fulfilled for the group to *'click'* into place, using their expectancies towards the auditory image of the group sound. Some of these prerequisites are acoustic, as described by A2 as *'overtones'* suggesting well aligned vowels, and acoustic tracking throughout the four sections.

*'You can hear the way the harmony is supposed to feel'* suggests not only that the harmony (which in this instance is analogous with the performance of that harmony) has a *'correct'* way to be realised, but also that this realisation acts upon the way A2 perceives this sound. This is not unlike the auditory images and expectancies described in [Chapter 4.5](#) in that there is an anticipated experience of the sound, and A2 uses a memory of previous experience to judge their current situation against. Using both *'hear'* and *'feel'* in this manner could suggest a merging of action and awareness, but also of a (meta)physical property of being part of the ensemble instrument in which through the act of existing as part of the instrument, there is also a merging of audience and artifact that then creates a unique physical experience.

*'Listening more than singing'* is the self-professed state that then elicits the feelings which have been discussed above. The emergent new choral instrument is part of this state for A2, with the individual actors *'breathing as one instrument'*. The ability of the group to become one instrument allows for the loss of self-consciousness and matching of skill level to activity associated with a flow state. A2 *'forgets you're working'*, suggesting not only a transformation of time, but also exhibiting the paradox of control. The listening and reflective process that brings A2 to the point of being able to experience flow, could indicate that the technical vocal issues which have been discussed (such as breathing and vowel alignment) then become subsumed within the flow experience.

The paradox of control, that the more a participant attempts to manage and control every situation, the less likely they are to achieve a flow state is also evident in the quote from B1, below.

**B1/72** *Equilibrium, I guess. There's just the feeling that there's no resistance at any point of anything, really. You know just that everything's correct and you're just in the eye of that particular storm. Yeah, it's for me. When everything is just right, you can take that moment to, to kind of look around, look across the line, look around the hall and everything's just right. It's really hard to quantify. It's the knowledge that there's nothing going to go wrong. It's the knowledge that, that you know, something good, something creative is happening. Erm. And any one element of the thing, you know, one rogue guy next to you, or you know a bit that we haven't quite got right yet coming up all upsets that equilibrium feeling, you know of everything just being in its right place. Erm. So, that's what I would feel in the kind of quasi, quasi philosophical ideal of blend that I seem to be creating for myself, that's what that feels like on the grander scale.*

The knowledge that nothing is going to go wrong is not only a consequence of the paradox of control, but also a merging of action and awareness. This is not to say that there aren't collaborative moments still evident in the *'eye of that particular storm'*, B1 is able to communicate with the rest of the group, and *'look around, look across the line'*. The difference in this instance is that this is not in order to alter, or intervene in the creative process in some way, but to appreciate the emergent choral instrument as an act of simultaneous co-creativity.

B1 acknowledges that this *'quasi philosophical ideal of blend'*, is something that they only have a certain amount of agency over, in that in order for this new instrument to be created, there must be a collective responsibility for this. The equilibrium of challenge and skill that creates the likelihood of optimal performance must be measured against the whole group, and not any one individual. This can be from *'one rogue guy next to you'* and therefore an individual not subscribing to the same values as the rest of the group. Or it could be a musical challenge that applies to the whole group such as a *'bit that we haven't got quite right yet coming up'*. The reliance on the skill of others to achieve both emergence of the choral instrument as well as optimal ensemble experience could make these moments more rare.

The imagery B1 invokes regarding the *'eye of the storm'* suggests that flow state happens within an ensemble performance. The edges of this metaphorical storm could be construed as the limits of

the ensemble performance, where participants start and stop singing in time, with the eye of calmness being when the prerequisites of ensemble techniques are established and therefore flow can be achieved. Further limits on this eye could be during the collective phenomenon of the emergent choral instrument, with individual flow state not always correlating with the collective group efficacy. The fleeting nature of this suggests that this state cannot be achieved without some of the work associated with ensemble singing happening before optimal ensemble experience occurs.

Resistance and equilibrium as a concept in ensemble singing can be interpreted as part of the collective creative experience. As B1 discusses resistance in terms of '*everything being correct*', this could relate to the matching of skill and challenge, particularly around the accurate recreation of the score. Resistance in this context could be the intellectual struggle to recreate notated music, with equilibrium being reached when skill is equal to challenge. Similarly, resistance may be to a creative instinct by another member of the group, or two opposing interpretations that are then brought together through a process of familiarity and the building of an aural and situational awareness that leads to an auditory image of the corporate (and emerging) choral sound. These two concepts as described by B1 become the prerequisites of flow experience. Building an auditory image has been described as the logistical vocal interventions such as vowel and consonant alignment, as well as breathing patterns. This strengthens A2's comments regarding listening more than singing.

**B3/48** *erm, unified. Erm. I think it... er, it feels like a... a choir should feel like. It feels special, it feels like you're in the moment, erm. It feels like the intent of the music is coming across and you're painting the, the image of what this composer has put together. And it's not easy to get to that place, it doesn't always happen, regardless of how good the musicians are there's always times where it just doesn't happen, and the intent isn't quite there. Or the energy isn't there, or you know, not everybody is synching regardless of whether they want to or not. Just not fully in the moment, kind of thing. Because there's a lot to do with, er, sort of giving yourself over to the music in a way. Erm. Giving yourself over in a way that's like... you're allowing yourself to be, you're allowing yourself not to be humiliated, in a way, like. Erm. It's. It can be quite a, er, you're sort of giving yourself over, you're not. Erm, What's the word I'm looking for? You're not... erm. So guarded, or so passive about it, you're being very involved with*

*it in an emotional way. And it's not. It's not. Sometimes it's not an easy thing for some people to do, I don't think. Yeah.*

Articulating the experience of optimal performance is obviously difficult for B3, with sentences that are full of indecision and pauses. In testing their reflections against their experiences, B3 is able to discuss similar themes as other participants regarding optimal ensemble experience. This quote from B3 serves to not only articulate the difficulty that participants have in describing the phenomenon of optimal ensemble singing, but also that the language participants use to describe this is similar throughout participants.

Similarly to A2 [A2/18], familiarity with the experience of optimal ensemble singing allows B3 to know what *'a choir should feel like'*. This is the aspiration, the pinnacle of the experience that B3 is hoping to achieve in ensemble performance. This *'unification'* of sound is what sets apart some moments of ensemble performance into flow, with B3 describing it as *'special'* and *'being in the moment'*. However, there is also an acknowledgement of the role the written music plays within this experience in that the *'intent of the music is coming across'*. This could imply some form of artistic communication from internal actors to an external audience, with the ensemble acting as a conduit to this creativity. However, B3 then goes on to say that one must *'give yourself over to the music'*. This subjugation of ego, and desire for the communication and emergence of a new choral instrument sits well with other observations throughout this thesis. An emotional investment in the communication of the artistic intention of the piece to an audience (either real or imagined) is the final prerequisite of optimal ensemble experience.

An emotional investment in this manner then allows you to *'not be humiliated'* according to B3. This is a striking turn of phrase, and one that perhaps accompanies some of B3's other comments regarding not wishing to be a leader, and their insecurity regarding their musicianship. When contrasting this perceived humiliation to B1's discussion of *'one rogue guy'* then it could be suggested that B3 in this moment is not allowing the social pressures of the ensemble to become so overwhelming that they are not able to lose their self-consciousness and therefore experience flow.

Being *'guarded'* against the social pressures of the group, as well as reliant upon them for the emergence of the new ensemble, could create the situation in which without a full investment and understanding from all participants that the rehearsal room is one of collaborative creativity, there would not be an optimal ensemble performance. This could be due to lack of familiarity [4.3.4], a participant placing their own vocal skill ahead of the group instrument [5.4.2], or a lack of group efficacy [6.2.4].

It is also interesting to note that B3 acknowledges that even though all the elements for this experience may be there, sometimes the peak ensemble performance simply does not happen. B3 uses *'intent'* and *'energy'* as mitigating factors in this lack of a flow state and is clear that this is not a case of musicianship (and therefore skill). The skill, even in terms of ensemble skill and experience, still needs to be married to an *'intent'* to collaboratively create. The phenomenological nature of this study has highlighted the diverse range of scenarios in which participants have engaged with this concept of ensemble singing, and the human aspect of the created choral instrument cannot be underestimated.

There are times in which it is not possible for an individual to be fully engaged, many participants cited vocal problems during the recording session, illness and fatigue were common complaints among participants before describing something they had difficulty achieving in the sessions. This human factor is highlighted by B3 in the same way. Sometimes it just doesn't work, but the *'intent'* to create and authentically emotionally engage with the aesthetic wishes of the piece through that art of creation is one of the prerequisites of ensemble singing. This is not simply a technical matter to participants, and in teaching ensemble singing, there are aesthetic, artistic, and emotional imperatives, as well as vocal and musical.

### 6.3.5 Enjoyment

Flow and enjoyment are almost synonymous in flow theory (Csikszentmihalyi, 1985), with the elements of enjoyment laid out above [6.1] and manifest throughout participant data examined in the preceding section. In the inductive analysis of the raw interviews, enjoyment was a theme that was associated not only with participants' enjoyment of the act of ensemble singing, but also of specific moments in the research intervention that were particularly successful. The decision was taken that these specific moments of enjoyment as identified by participants are of interest to future work as designed into the research intervention. In order to examine the hermeneutical significance of choral blend, the analysis below will be of the more generic variety. This is in order to both strengthen the analysis relating to flow above, but also to highlight points of divergence that are enjoyable, but not necessarily part of a flow state.

**S1/22** *I think maybe in that one place that we were just talking about. It's so nice when you hear that lock and ring, you know. When you feel all the harmonics go [makes clicking noise] right in place. Erm, and it doesn't, sometimes that doesn't feel er, hard, it doesn't feel tense when you get that.*

Acoustic properties of the choral sound have been mentioned by A2 in the preceding section [A2/18]. In this quote, S1 also experiences some discrepancy between 'feel' and 'hear' the acoustic function of the choir. Again, a prerequisite for optimal ensemble singing is vowel alignment fitting to a projected auditory image of the whole group experience. S1's imagery of 'lock and ring' here suggests that there is a particular set of acoustic interventions that they make which then 'lock' in step with other performers causing the 'ring of harmonics' that then affect S1. This feeling of the harmonics working around them could lead to the sensation of the harmony acting upon S1, again strengthening the analysis above that vocal ensembles have actors, audience, and artifact as simultaneous creations.

S1 'gets that' in singing, which indicates that much like flow, this sensation is something that is not guaranteed in performance. This sensation of 'lock and ring' then allows S1 to not feel tense and elicits the use of language that could be associated with a flow state. Ensemble singing that does not

feel 'hard' or difficult as a consequence of this lock and ring gives rise to the relationship between individual acoustic production and the collective group sound. This relationship is 'so nice' to hear, and then to feel. It is telling that the language participants use in describing their experiences of this is all language of enjoyment. Be it 'so nice' or 'special' or indeed the 'great intangible creative experience' this language all comes together to show the importance and impact that optimal ensemble experience has on the individual, and that it is a state that S1 enjoys.

**A3/72** *Or it could even just be listening to it. Because I find that when I'm really relaxed, I'm not in my head at all. Erm. So that doesn't happen often, because I'm not very often relaxed, but [laughing] in music. No holes [sic] barred. In music in music I find it easier to relax because I'm already so involved in the sound world, erm, even as a part of it, even as an atom in that cell, you are. You are your own thing, but you're aware that you're in something bigger.*

The enjoyment of listening to music, and of being a part of this creative process is plain in A3's language. It is also worthy to note that there is a marked improvement in A3's sense of security and an indicated improvement in their mental health through becoming relaxed. Enabling relaxation through the creative process is a different experience from the everyday life that A3 experiences and is able to be not 'in my head at all'. This could be because of the collaborative nature of ensemble experiences, but also just from the selfless act of music making.

While not clear if in terms of 'music' A3 is referring to a holistic musical experience, it is clear that they believe that they are part of a larger entity, be that the choir or a tradition of a particular music. The accountability of A3 to this allows there to be 'no holes [sic] barred' giving A3 the ability to (in B3's words) 'give yourself over to the music' which then allows for a true loss of self-consciousness.

This isn't a solitary act as A3 is in symbiosis with the other 'atoms in the cell'. The biological analogy is pertinent in the individual components that create a living and existing thing, imaging yourself as a part of the creative process for the emerged choral instrument could follow this metaphor to the point

of creation and destruction of the temporal artifact of the performance of a particular score by a group of people.

**A2/77** *I don't know. Maybe it's just because, like, on recording, I guess. I'm there and I'm hearing and I'm feeling the kind of resonance between us, but the mics don't really pick it up in the same way. So, erm, yeah. I don't rem- Yeah, I quite enjoyed it, I think it's especially because we were just getting together and whacking something together, it was quite beautiful when we got to it. And er. Yeah, I liked it.*

The research intervention was recorded, and much of the stimulus for conversation came from these recordings, particularly reflection on those recordings by participants. However, the choral experience is a live one, and one that exists as a felt phenomenon created by the '*resonance between us*'. While this could be acoustical resonance in terms of the '*lock and ring*' of S1, it could also be the '*connection*' that has been mentioned throughout this thesis as a prerequisite for the emergence of a new choral instrument. The enjoyment for A2 came as a low stakes group coming together to make collaborative music. '*Getting together*' is the act of enjoyment. The beauty of the piece, while achieved through resonance strategies, is secondary in the reading of this quote to the act of creation. The human connection that comes from creating a new piece of art that exists in that one moment is the more enjoyable experience to A2, rather than any form of lasting artifact or praise.

**B1/59** *Sometimes that. What we do day in, day out, is quite special. Er. The main. So, listening to that, you know, you think that is a good sound. That's a quality sound. The time that it really hit home to me was we were in Orkney with a very similar group, most of the same people. Erm. And... in a cathedral. In the cathedral in Kirkwall someone, a member of staff, had taken a video of the group to share on social media. But we didn't know it was being taken. So, you know, ethical concerns aside. Listening to that, and we were, because I remember the situation. It was in the morning, we were all sitting there going oh my goodness, urgh, it's early, and we were, you know, just being people. But and I wouldn't like to say we were phoning it in or just going through the motions, but it was an early morning rehearsal and we were just doing it. suddenly to hear that, to hear how beautiful it was. Really, it really hit me to think sometimes. Sometimes we forget that.... What we're doing here is quite special.*

B1 speaks of a group of singers '*just being people*' and not realising that the performance they have created is one that is beautiful. However, in the anecdote above, B1 is still emphasising the personal nature of the collaborative creative process. While it is all the more remarkable that this occasion should be one that stands out in their mind due to all the personal physical limitations mentioned by B1, the group were still able to make a performance that was beautiful, and special. This realisation for B1, taking themselves out of the audience as both actor and audience in the creation of the ensemble sound, to a removed audience allowed for a reflection upon the act of creation, and the use of language more commonly associated with flow than with listening experiences.

### **6.3.6 Discussion**

Each participant acknowledges that the collaborative creation of the group, and the heightened state this brings about in the individual, as well as the emerged group phenomenon is special and enjoyable. It is also a deeply personal and significant experience in their interactions with choral singing, with emotive language highlighting the '*otherness*' of these experiences from everyday concerns as well as some of the detailed technical descriptions provided in earlier chapters. The ensemble experience for each of them is different, but the goals are common across participants. In allowing yourself to be given over to the music, group effort, or communication of an emotion, it is possible to become the audience for which you perform.

It is apparent that participants are describing a flow state in their conversations surrounding ensemble performances, and equally evident that they enjoy and strive towards this state when ensemble singing. Having discussed the elements of enjoyment, I restate them here with examples from the analysis above to illustrate the point.

- A challenging activity that requires skills
  - Knowing that nothing is going to go wrong and ensuring that the '*tricky bit coming up*' will be performed well. There is ample evidence above regarding the skills that are required for successful ensemble performance, particularly around the

accurate recreation of the score. However, this could equally be the formation of a particular vowel, the ability to breathe and listen, or to respond to direction.

- The merging of action and awareness
  - Participants have described feeling that they are in a state of *'equilibrium'* and other such language that indicates they are *'listening more than singing'*. Awareness of those around them, and the knowledge that their singing will absolutely fit in to the auditory image that has been created by the group allows participants to then feel that they become lost *'in the music'*.
- Clear goals
  - The accurate realisation of the score is the primary goal for participants. In order to make ensemble music a *'satisfying medium to work in'*, participants then aspire to musical, emotional, and communicative goals. They don't want *'one rogue guy next to you'* not contributing to these goals.
- Feedback
  - Throughout the ensemble experience, there must be feedback from colleagues, familiarity with their voices and intentions, and an ability to change your vocal output to manage this.
- Concentration on the task at hand
  - Participants have described a *'really intense focus where it's just one thing'*. There is also an othering of these types of experiences as *'special'* and *'not just phoning it in'*. The task is that of work, but also one where the motivation for this work is artistic and moves towards self- and group-actualization.
- The paradox of control
  - Allowing yourself to *'give yourself over to the music'* is a common phrase among participants. The symbiotic relationship between individual singer, artistic intention of the composer, and the emerged ensemble instrument demands that the singers allow the score and artifact of created music inform their decisions. Attempting to control this process then results in the individual singer gaining too much importance in this continuous cycle of collaborative creation.
- The loss of self-consciousness
  - Participants described being *'emotionally available'*, allowing you to not be *'humiliated'*, and *'getting out of my head'*. While there is an imperative to conform to group behaviours and an *'intent'* to be *'unified'*, this can only happen in the knowledge that everyone is working towards the same goal with the same intentions, simultaneously.
- The transformation of time
  - *'Being in the moment'* is a textbook definition of the transformation of time, and one that many participants have made in their discussion of optimal ensemble singing. While this is a symptom of the other steps above, rather than any set of processes that can be followed to get to this point, participants acknowledging that they have felt like this provides the impetus to strive towards this in the future.

The idea of choral blend is one that is still ill defined, but the definition of a set of techniques perhaps misses the point. The '*great intangible creative experience*' as described by B1 is blend, as is flow, as is the emergent choral instrument, and as are all of the individual steps that are required to facilitate these phenomena. The impetus to sing in ensembles doesn't come from the desire to blend, or from some form of aesthetic schema that fit nicely into a UK choral context, but from the human desire to connect and communicate with others. This is the perception '*strongly perceived inside the choir, which is one of the great attractions to choral singing*' (Ternstrom, 1991 p.140).

## **7. Discussion and Conclusion**

This chapter is a synthesis of the conclusions reached through participant analysis in chapters four through six. It offers an unbracketed interpretation of these findings by the researcher, through which blend is redefined as an active listening process, rather than a particular aesthetic. It also seeks to explicitly state this thesis' original contributions to knowledge and serves as an invitation to future scholars to fill in the identified gaps.

### **7.1 Evaluation of Methods**

This study utilised a novel research methodological approach to investigate a singer-centric approach to the phenomenon of 'choral blend', and in doing so has pioneered a method of artifact elicitation that can be applied to other studies in both ensemble singing, and IPA. In capturing an artifact that is external to the lived experience of participants, but also that is a focussed perspective of their contribution to a whole, a deep reflection-in- and reflection-on-action were possible. This is further strengthened by the participants' opportunity to form their own double hermeneutic circle, interpreting their own rendering (or interpretation) of a piece of music, before then presenting this to the researcher. This approach could go on to help inform future phenomenological studies, and is a valuable contribution to the field of both ensemble studies and phenomenology in its own right.

The use of close microphone techniques in capturing individual contributions to the choral 'whole' proved a successful interview stimulus for participants, eliciting deep reflection not only on their own contributions, but also on the whole choir sound. While many participants were anxious about hearing their singing voice in this context, this serves to highlight the unique perspective of hearing their own individual contributions with others.

Using auditory stimuli as well as an interview schedule for IPA analysis allowed the participants to compare and contrast their lived experience during the research intervention and their *post hoc* reflection on their singing. There were instances where their experience of the session differed from

their reflecting-on-action during the interview (such as 'straight tone' singing). These comparisons added value to the data set, and other analysis methods could be developed using 'spotlighted' voices within a choral context, particularly in the mixed methods of voice acoustics and phenomenology.

The study was designed around a group of participants already familiar with each other, all being members of an auditioned proto-professional vocal ensemble. While this limited the interpretation of results to the idiographic view of these participants, as is the case with all IPA, their familiarity proved to be a source of conversation throughout the interviews. Participants were able to compare their experiences in this research intervention to other times they had performed together, as well as discuss their own voices in relation to the experience of singing with others, leading to the theme *familiarity* [4.3.4].

Using proto-professional signers as participants encouraged an exploration between solo and ensemble singing techniques; participants did discuss this, however not to the extent that was anticipated by the researcher. They were able to concentrate on conversations around their experience of ensemble singing (particularly within the context of this established group). Their familiarity with describing their singing experiences to tutors provided a rich data set in the discussion of blend. If participants in IPA are 'experts on their own experiences', then the use of emerging experts in the field of singing provides a strong case for the success of the analysis in this thesis.

In order to keep the research intervention as realistic as possible, participants were placed in the rehearsal space by the conductor, with music stands set up for them as they arrived in the room. Participants discussed their physical proximity, and how this impacted on their experiences of singing. Given the importance of formation to participants [5.3], denying the singers agency over their own formation certainly altered their experience of the research intervention and subsequent analysis. Participants were able to compare this formation to that of other ensemble experiences, and conductor placement of singers is standard practice for this group. The real world rehearsal environment, and the discussion of participants in this formation outweighs any issues of the impact

of different formations on participants. Further research employing phenomenological methods to choral configuration would be welcome.

Repertoire provided in the research intervention was designed to give participants an experience of different musical periods, as well as a mixture of full sectional and one per part singing. Participants enjoyed the repertoire that was selected, and particularly appreciated the opportunity to sing *Os Justi*. Participants commented on how satisfying this piece was to sing, particularly those forte moments that contain many suspensions and thanked the researcher for introducing them to the piece. Conversation remained in more general terms, rather than an explicit discussion of the technical processes of particular repertoire, with singers sometimes referring to their scores, and only one participant demonstrating extensively in their interview. While repertoire provided a stimulus for the research intervention, participants were more concerned with how they interacted with other singers, regardless of what they were singing. Given this, we could assume any pieces within the expected repertoire of the group would have provided a similar experience.

A notable exception to this is the difference between SATB repertoire (*If Ye Love Me*) and SATB divisi (*Os Justi*). Participants felt that three to a section was an awkward number, with the addition of a third, but not a fourth member on the same part a difficult group to work within. Exploring the number of singers per part as a function of choral experience is therefore a valuable question posited by this thesis. While a choir of 16 may have improved the experience of the research intervention for participants, this would have created an unwieldy corpus of data in the analysis stage. A research design involving twelve participants has already rendered a dataset that is bordering on unmanageable for a time-constrained doctoral. Utilising a choir of twelve singers has elicited comparisons between singing with one other partner, or by oneself, yielding a substantial amount of valuable analysis.

With the researcher as conductor, a conflict could have arisen between these two identities in ensuring both a bracketed analysis, and an open and candid interview with participants. Through a

conscious effort during the first order analysis, the researcher was able to effectively bracket their preconceptions and ensure an inductive view of the data. This has been evidenced through themes that were unexpected, such as flow, choral configuration, and the importance of familiarity. Similarly, the familiarity and trust that participants already had in the researcher as conductor enabled a free and frank conversation within the interviews, reducing any anxiety that could be associated with the interview process.

In all, the novel research intervention and subsequent semi-structured interviews provided a rich and valuable data set for analysis. Using proto-professional singers that were familiar with each other is a strength of this thesis and has encouraged a singing-centric view of the felt phenomenon of blend. Another strength was the realistic environment for the research intervention, and the ability of participants to reflect both -in-action and -on-action. The use of IPA has also worked well in ensuring the focus of the investigation is that of the *phenomenon* of choral blend.

## **7.2 Key Findings**

This thesis set out to answer the question '*how do proto-professional singers experience the sensation of choral blend?*'. Through an inductive and idiographic approach using Interpretative Phenomenological Analysis, themes emerged from participant reflections both from the research intervention, as well as from *post hoc* reflections on their singing through the auditory stimulus provided. As themes emerged through an inductive analysis process of interview data, these were then organised into the overarching themes that can be found as chapter headings.

### **7.2.1 Familiarity and Auditory Images**

Chapter four discussed how the individual experiences of participants had led them to singing, the importance of training and their relationship with their one-to-one teacher. With so much literature discussing the perceived tensions between choral directors and singing teachers, particularly in the United States, participants highlighted the importance of the one-to-one teacher as the arbiter of

good singing, especially during training. This aesthetic judgement is significant in the context of an important finding; the use of auditory images and expectancies in ensemble singing.

Auditory images are the projected desire for an individual sound, and expectancies are how these sounds are then produced with reference to other singers and their projected vocal interventions. Participants described how they are able to project an idea of a colleague's voice in a particular context and then alter their own singing to ensure that this fits with a particular aesthetic (auditory) image of the voices together. In doing so, participants were comparing their own singing with two different auditory images; firstly, their own singing in particular contexts, and secondly judging this against their ideal ensemble sound. In each of these cases, the auditory image that is created is informed by the positive reinforcement of previous experiences. This aesthetic judgement of the voice is guided in part by one-to-one tutors and choir leaders from when participants were young.

Expectancies are built through previous experience, therefore a familiarity with participants' singing can help build these expectancies. Participants described how familiarity with each other made singing with them easier as they could more accurately predict how their voices would interact. In this process the acoustic and placement of the singers has some agency, and therefore singers described a 'warm up' period of reacquainting themselves with a group, no matter how familiar they may be with individual voices. This is concurrent with the physical and vocal warm up of the voice that happens through singing.

Singing as an ensemble has been described as joint action in this thesis and as the temporal coordination of individual singing voices towards the goal of ensemble performance. 'Coordination Soothers' (Volpe et al., 2016) in this context are any process by which this coordination becomes easier. Participants described familiarity with other singers as one way in which their ensemble experience was enhanced. This was in conjunction with their own experience of ensemble singing, and a comfort with the role in which each individual had been cast. Leadership, in terms of coordination of the voice, appears to rest within the sections, rather than with the conductor.

[Chapter 4](#) discusses how leadership and the interpersonal relationships of the group manifest in rehearsal. Ensuring that participants feel free to make a mistake, and well supported within their section is an important part of the development of the joint action of ensemble singing. While familiarity with the vocal qualities of group members is useful for developing an auditory image and expectancy of choral sound, familiarity with rehearsal dynamics proved important for the development of a community of practice.

Embodied Music Cognition is a paradigm that posits musical activity as a sensory-motor activity, with fine motor control, and the 'playing' of the instrument a concurrent activity to the emotional and artistic considerations of this practical musicking. Participants described their singing as an embodied activity, especially in regard to their physicality within the ensemble. Emotional and artistic considerations are seen as synonymous with vowel and vibrato choices, which are designed to fulfil the expectancies of acceptable ensemble singing.

Describing these processes through the lens of Embodied Music Cognition, and applying auditory imagery and expectancies is a significant finding of this thesis.

### ***7.2.2 Communities of Practice and the agency of choral tone***

Key findings of Chapter 5 include the identification of a community of practice that was built by participants through the research intervention, and the application of a communities of practice framework to other choral situations. It was evidenced that participants felt that they were engaging in a joint enterprise with a shared repertoire of gestures. This community of practice is unique to the choir that they are singing with in any given moment. Participants described a repertoire of vocal interventions that are specific to the singers they are working with at that particular time; and also, a larger community of practice that spans all choral singing contexts.

Through the joint action of ensemble singing, participants negotiate their individual contributions as part of a larger entity. These negotiations, and the meaning making of the ensemble experience,

was described as both a social and musical phenomenon by participants. Discussion regarding leadership, even if not explicit, can be seen as an example of negotiation between section colleagues. Similarly, when viewed within the context of conductor focussed literature, there is a complexity within the negotiation of interpretation between conductor and singer. The joint action of ensemble singing appears to be within the singing group, and participants in this study were less concerned with conductor interpretation in an explicit fashion as they were in presenting a sound to the conductor. The joint action and negotiation between section and choir colleagues that ensues can then lead to the phenomenon of an emergent new choral instrument [7.2.4].

Another aspect of the development of a Community of Practice in Ensemble Singing regarded collaboration between participants. These logistical exercises may be techniques such as stagger breathing, '*wordless conversations*' regarding interventions, and the other concerns of performing synchronously. This includes the use of auditory imagery developed through familiarity. The use of these could be seen as the reconciliation between *stated* (the singing of a section colleagues) and *negotiated* (the singer's intervention based on expectancies of the section) goals in real time. The joint action of ensemble singing also informs this strand.

As was noted in [Chapter 5](#), participants discussed their singing in three stages: individual, sectional, and whole choir, with different concerns for each of these stages. These stages mirror the short term and long term aspects of synchronisation as discussed in Ragert et al. (2013), with musical gestures and phrases impacted more noticeably by familiarity with performance style. In ensemble singing, therefore, this could suggest that the familiarity of others' singing style, and the interaction of stylistic features in the music are more inter-sectional concerns. The autonomous changing of the individual sound to an expected auditory image is intra-sectional. This intra-sectional sound can also be greater than the sum of the individual singers. Techniques such as stagger breathing, along with wordless discussions regarding the arc of a musical phrase can then create a sectional entity that is

capable of more than the individual. Of particular interest is the notion that in the constriction of having to fit in with other singers, there is a freedom to 'drop out' should that be required.

There were also shared values and frameworks that were evident through participant discussion. These frameworks include the learned choral aesthetic that participants use to inform their performances. Similarly, learned vocal interventions and previous experiences of ensemble music build this shared repertoire.

Participants were concerned with how their sectional auditory image (and associated expectancies) fit in to the shared repertoire of a general community of ensemble practice, particularly regarding the appropriateness of the created tone. This was judged against their shared repertoire of ensemble experience, and the expectation of a particular sound when singing in ensembles. Conductor intervention or gesture was very rarely discussed. The role of the ensemble director in this community of practice, therefore, could be as an extended member, not directly involved in the delivery of the sound, but guiding the building of a shared repertoire of auditory images through positive reinforcement. The image of a didactic maestro dictating sound to the singers does not lend itself to the collaborative and spontaneously creative manner in which these singers work. While the conductor can be a peripheral part of the community of singers, they are, after all, only able to react *post hoc* to the sound that has been produced, and not alter that creation in real time in the way that those involved in the creation of the choral sound are. In other words, conductors 'get what they are given' to a certain extent, and expert singers are mindful of this in their performance.

### **7.2.3 Blend as Optimal Choral Experience**

The sensation of singing within a choir, as well as choral blend, is described by participants in great detail. They have a deep emotional connection to the notion of choral singing, and associate blended singing with these heightened emotional moments. While the sensation of being 'in the moment' could be described as a flow state, blend is not simply synonymous with flow. Many different facets

of blend techniques must be in place in order to achieve flow, with each element of enjoyment having its own ensemble prerequisite as stated in [Chapter 6](#).

An accurate realisation of the choral score is imperative in the achievement of flow. Participants were extremely anxious about their sight-reading skills, and hierarchies formed within the ensemble based on perceived musicianship skills. These hierarchies, however, contributed to group efficacy due to some of the less confident members feeling supported by their peers. Individually, however, ensuring that there is sufficient rehearsal time to assuage any anxiety regarding notes will make a flow state more likely.

A continuous awareness of one's surroundings, particularly in terms of the expectancies of a sectional sound, and the ability and willingness to contribute appropriately to this auditory image is another prerequisite of blend. During flow state, the loss of self-consciousness, the merging of action and awareness, and paradox of control all rely on an ability and willingness to change your singing in relation to others. This facet of blend is most closely linked to use of blend as a verb in the choral literature, a technique of singing that is specific to a choral setting. However, given that this 'technique' is only possible in relation to others, ascribing a fixed technique of singing to ensemble singing is disingenuous. There is no schema for 'blended singing', be that reduced vibrato, brighter vowels, or less resonance, as each of these separate interventions must be used in relation to the context in which the singer is singing. Without this awareness, or willingness to listen and change, blending will not happen.

Given this interpretation, a major finding of this study is the rejection of blend as a fixed entity or particular aesthetic quality of a group. Blend as noun in the conducting centric model of much research to date fails to take in to account not only the phenomenological experience of the sensation of blend, but also the inherent ephemerality of the group. Blending is a process that requires constant attention by participants, within their community of practice, given the ever-changing environment of the emergent choral instrument.

Within this thesis, 'logistical concerns' have been coded as vocal interventions that have some form of impact on synchronization, be that synchronization of consonants, vowel quality, vibrato rate, or dynamic impetus. Therefore, acknowledging that synchronisation in many guises is a fundamental part of the action of blend, could lead to more accurate and collaborative ways of working. Didactic conductor led interventions such as 'sing that straight tone', fail to acknowledge synchronisation as part of a dynamic collaboration between singers. Similarly, participants in this study created an environment where failing to acknowledge a colleagues' work was socially unacceptable to the group.

#### ***7.2.4 Emergent Choral Instrument***

Ensemble singing is a creative and artistic medium. For hundreds of years, choral music has been used as a way to worship, with the affecting beauty of polyphony transporting audiences and singers beyond their individual consciousness. Participants described this phenomenon individually, which we have ascribed to a flow state, but also speak of the choral instrument as an entity in its own right. The limits of this entity, how it is achieved, and some of the prerequisites for this are discussed below.

Sawyer (2007) describes group flow as an emergent social property, created by a group of co-participants working towards a common goal. This definition has commonalities with a community of practice framework, given that there needs to be mutual engagement, a shared repertoire, and joint action (Wenger, 1998). Similarly, the Embodied Music Cognition paradigm states that the action of music making can become autonomous and synchronous with higher level artistic functions (Leman et al., 2018). These three concepts, explored throughout the thesis, lead to the acknowledgement of the emergent choral instrument.

This emergent choral instrument is a consequence of peak ensemble experience and group flow, framing the singing participants as active co-creators of this instrument for the duration of their performance. The recognition of this emergent choral instrument is a key finding of this thesis and a valuable contribution to knowledge surrounding the ensemble experience. Major properties of this emergent instrument are that it is greater than the sum of its individual parts, inherently part of the

embodied musical experience of ensemble singing, and facilitated through the joint action of a community of practice.

Blend is used in ensemble situations interchangeably as both verb and noun (Jordan, 1984). If, as described above [6.3.4], that verb is a collaborative synchronization of the voice that can lead to flow state, then the concept of emergence is the noun.

In a conductor centric view of blend, the aesthetic product of the choir's realisation of a score can be seen as the noun blend. This artifact, existing for as long as the ensemble are singing as a group, has aesthetic qualities, however participants in this study also felt a deep emotional and artistic connection to both each other and the music in this state.

Creating a blend (n) as a group is not simply an aesthetic consideration. As described elsewhere in this thesis [4.5], the development of auditory imagery through positive reinforcement by ensemble leaders provides an acceptable set of aesthetic standards for ensemble singing. This is then carried out by singers in their expectancies of realising their auditory images and real time alteration of tone in relation to others. This first step is traditionally seen as blend by audiences and conductor centric literature. Participants in this study go beyond the aesthetic and describe an experiential moment of group flow that has not only temporal, but physical limits. These limits suggest the creation of the instrument of a 'choir' in which singing participants are actors within that creation.

However, creation of an instrument is also a misnomer, as this noun suggests a static structure rather than a dynamic process. The verb of constant cooperation between singers in an effort to provide a mutually satisfactory performance is a prerequisite for this emergent instrument. Therefore, moving from group flow, this emergent choral instrument is not a property of any individual component of the ensemble sound, nor an abstract aesthetic ideal, but the sensation, strongly perceived inside the choir, of the living instrument that singers are part of creating.

The individual characteristics of this, and the sensations that can be ascribed to each individual has been seen in the literature as the technique of blending (v) that singers employ in ensemble situations. The use of the word technique, again, implies a rigid schema with particular interventions that will work every time in similar choral contexts. Participants discussed the importance of familiarity, and a key finding of this thesis is use of auditory imagery and expectancies of others' performances as a vital component of peak ensemble experience. This cannot happen in isolation. In order to sing in a 'blended' fashion, singers are constantly reacting to the sound that is being created around them, building expectancies of this, and then singing in their own way to fulfil an auditory image that is of a socially acceptable nature. When this happens as peak ensemble performance individually, flow state can be achieved.

If, as stated above, the choral aesthetic is not blend, then what is the sum of the individual flow states upon the choir? Participants described their contribution to the choral entity as part of their creative and artistic expression, but generally limited their vocal experiences to those within the section. Through an active engagement with others, and the prerequisites for a blended individual flow state, participants felt that they were able to move beyond realisation of a score to creation of an artistic entity. The emergent choral instrument, during the process of realising the score is a social, rather than musical phenomenon.

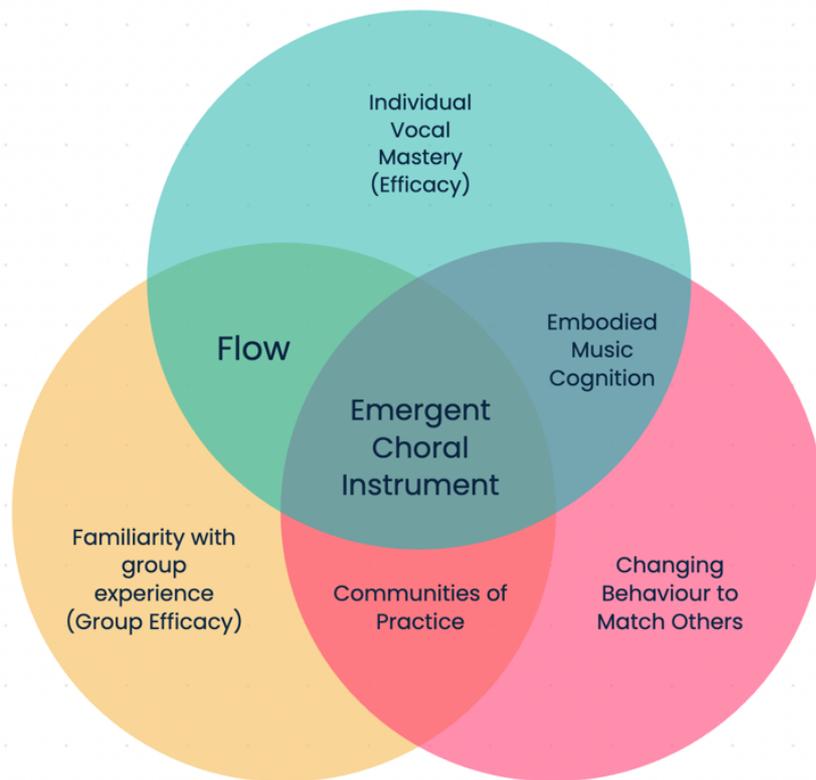
In order for the emergence of a choral instrument to take place, participants must already be engaged in the processes of blend intra-sectionally. This then becomes automated in the merging of action and awareness associated with flow and EMC paradigms. The *concentration on the task at hand* element of enjoyment then becomes how sectional units interact on a meta level to create the instrument of the choir. Many of these moments identified by participants require advanced reading and understanding of the harmonic context of the piece in real time, to allow an expectation of a particular harmonic event to manifest in a particular way. This interaction, and collaboration across parts, can then lead to high levels of group efficacy, with trust developing across the whole choir. This

trust and belief in their own performance, along with the associated ‘blending of egos’ (K. Sawyer, 2007) can lead to group flow.

In this instance, however, I argue that group flow actually becomes the flow of the choral instrument, co-created by participants that are actively engaged in their own balancing of individual flow, as part of a community of practice that has been developed across the rehearsal process. The difference here is that while Sawyer prescribes the possibility of failure (and generally, therefore, high stress performance situations), the emergent choral instrument can appear in any group singing situation, not just performance. This is a by-product of the group coming together in listening, with the emergent choral instrument being the outcome. The psychological state of flow is replaced by high group efficacy, following the goals of the community of practice. This emergent choral instrument with its own timbre is unique to each situation given the live and dynamic nature of blend as described above.

### ***7.3 Contribution to Knowledge***

Situating this thesis within the literature, the key findings above marry with the space at the intersection of many theories that were described in [Chapter 2.7](#). The Venn diagram ([fig iv](#)) from that chapter can now be filled in with an Emergent Choral Instrument at the point of intersection of each of these theories. This thesis therefore can contribute to each of the fields shown by investigating ensemble music, particularly with proto-professional singers working with artistic achievement as a primary aim.



From the key findings above, this thesis has actively contributed to the understanding of choral blend through a novel research intervention and subsequent singing-centric phenomenological analysis. In attempting to look at the choir from the ‘inside out’, rather than as an already created artifact, the process of the emergence of this choral instrument has been uncovered.

- Singers develop auditory images of other choir members’ voices and are able to anticipate and react to the sounds that are yet to be created in order to fulfil a culturally appropriate realisation of the score.
- These auditory images are built up through a familiarity with other voices, and there is a ‘warm up’ period with every ensemble in which these images are created both for individual voices, and the collective choral sound.
- Each ensemble creates a unique community of practice which lasts for as long as that group are working in the session. These communities of practice have similarities, but each is formed through the setting of expectations in each session. A communities of

practice framework can be applied to ensemble singing, with a shared repertoire of interventions identified by participants.

- Embodied Music Cognition framework applies to ensemble singing, with the sensory-motor process involving active listening to those around you in order to fulfil the expectancies associated with the community of practice that has been created.
- Flow State can be achieved when an individual is effectively listening to those around them, confident about their ability to realise the score, and has a well-formed auditory image and can fulfil the expectancies of those around them.
- In groups with high group efficacy, and singers that are able to create the correct environment through active and constant listening, group flow may be achieved. This can then cause the phenomenon of an emergent choral instrument, in which the individuals become co-creators of the choir.

The term 'choral blend' is currently used to describe many of the phenomena above interchangeably. Through labelling some of these phenomena with the frameworks suggested above, greater clarity can be sought in the use of the term 'blend' for all users.

When describing the phenomenon of 'choral blend', that which is '*strongly perceived inside the choir*' (Ternström, 1991) and which was the focus of this investigation, many singers wrongly describe this sensation as 'blended singing', where flow state is the more appropriate description. Similarly, describing the whole choir sound as a 'well blended' sound fails to take in to account the ephemerality of the created choral instrument. The artifact created through the collective co-creation of ensemble listening, and the successful rendering of the expectancies built up through a familiarity of participants' is this aesthetic object. While there are qualities associated with this sound, many of which have been studied in the literature, this thesis argues that the use of the word 'blend' is also unhelpful in this context as the affective properties of this experience are lost. Ensemble singers are in the unique position of *being* a component of the instrument they are creating, through high group

efficacy, and an expertise in vocal ensemble intervention, but most importantly a subjugation of ones' ego an emergent choral instrument is created. This instrument has no 'blend' per-se, as it is a unique instrument in each scenario in which it appears, and therefore this aesthetic quality will change depending on the context of the consumption of the instrument. Through thinking of the choral instrument and the aspiration of ensemble singers and directors not as a 'blended' aesthetic ideal, but as a liminal, ephemeral experience, this instrument can more readily be understood as part of the *dasein* of all stakeholders. Limiting the idea of peak ensemble experience to a set of aesthetic criteria that are culturally agreed limits and sells short the experience of peak ensemble performance.

#### **7.4 Limitations and Next Steps for Research**

This study is idiographic in nature, and therefore these results cannot be applied to singing groups outwith this proto-professional context. Further investigation could apply the concepts of emergence, flow, and communities of practice to other groups with the aim of improving performance quality. Of particular interest may be full time professional groups, and groups whose main aim is not singing for performance.

Two sets of data formed the corpus used in this investigation: interview data, and recordings of the singers designed with acoustic analysis in mind. A comparison of the acoustic data to some of the themes elicited in this thesis could provide interesting insights into some of the techniques described by participants. A particular area of study could be in the perception of vibrato rates, and the performed vibrato rates of individuals.

By not controlling the listening environment for the interview stimuli in the form of the two audio tracks, it is possible that participants engaged with this stimuli in vastly different manners, and that order effects could have impacted how participants perceived each of their performances. Future studies using two different auditory perspectives of the same event should control how participants engage with their audio stimuli, perhaps through guided listening in the presence of the researcher.

These live reactions could then be used as part of the interview transcripts and then analysed using the standard IPA method.

Having the researcher as conductor of this group provided consistency for participants, as well as ensuring what could be quite an unusual situation was normalised in some way. However, this therefore required careful bracketing during the analysis of interview transcriptions. While every effort was made to ensure this was the case, an interrogation of the role of the conductor in a similar intervention would be welcome, particularly given the recommendations for the evaluation of the term 'blend' in rehearsals, and issues surrounding the agency of choral sound.

The term 'choral blend' has been defined in this study by singers' use of the term. Valuable interrogation of this term for audiences, conductors, and particularly producers of choral recordings could provide further insights in to how, or indeed if, this felt phenomenon is captured. Particularly around the suitability of the word 'blend' when describing a choral aesthetic, this question is left as an invitation to continue from this study.

'Choral Blend' as a concept has been shown to be a mixture of many different facets of group interaction and individual responsibility. This thesis argues that by using the term as any form of prescriptive schema, we are not doing justice to the rich experience of this phenomenon to ensemble singers. While blended singing is often associated with flow states, both individually and in the emergence of a choral instrument, the use of the term by singers and conductors alike needs to acknowledge the live, rich nature of the experience of ensemble singing, and not act as an aesthetic, but rather a social aspiration.

## **7.5 Next Steps**

Participants were extremely positive in their descriptions of ensemble singing. They felt that they were able to actively contribute to something that brought them great personal satisfaction and a sense of collective achievement. In discussing some of the more challenging moments of their own

singing technique, participants found a freedom and creativity in this. Highlighting some of the positive benefits of ensemble singing, particularly around the creative ways vocal interventions can impact the whole choir sound, could go some way to ease the perceived tensions between solo and ensemble singing techniques.

Similarly, a shift in focus from blend as some form of aesthetic ideal (either individual or corporate) to be achieved, to a dynamic and inherently collaborative state of singing may lead to a greater chance of achieving optimal performance, and a more accepting view of choral singing by some singing teachers.

As a singing centric investigation of singing the role of the conductor has been interrogated, particularly in terms of the agency of the choral tone. This thesis leans in the direction that ensemble directors 'get what they're given', and that the agency of that choral tone resides with the singers. A similar phenomenological study with conductor participants, interrogating the concept of blend from a conducting standpoint could provide a balance in this view.

Research could be undertaken to examine the influence of different styles of repertoire, and their associated performance techniques in choral singing. This study was limited in its scope in repertoire and styles, with European art music in the English Cathedral tradition being used in the research intervention. An international perspective, as well as comparing the joint repertoire that creates the community of practice as a function of style, could be a valuable addition to this thesis.

Having identified that a Community of Practice exists in this investigation, this contribution to knowledge could readily inform future research in elaborating on this framework further. Developing this could have positive impacts on the design of conducting curricula, singing tuition, as well as practical benefit to ensemble directors and singers.

## 7.6 Conclusion

Part of the joint repertoire of an ensemble's community of practice are the aesthetic standards and expectations of choral sound that are placed on a group. These are specific to the particular choral culture in which participants were raised and is pervasive both within and outwith the rehearsal room. Many directors will hear a choir and say that they are 'well blended', particularly when listening to recordings. Given this investigation's stance that 'blend' is not an aesthetic phenomenon but a dynamic social process that creates certain phenomena in the room, interrogating the use of the word 'blend' is an important part of the context of this thesis.

This thesis set out to answer the question '*how do proto-professional singers experience the sensation of choral blend?*' The short answer to this is – not as one particular thing. 'Blend' is not an object, or a technique, but rather a marrying of many different social and musical processes in order to create an ensemble experience that is satisfactory for all audiences of it.

The physical sensation of choral blend could be ascribed to flow state, with individuals equating peak ensemble performance to this heightened psychological state, and the mapping of this concept to ensemble performance is a contribution to knowledge of this thesis. However, this physical sensation is more than just individual flow. Participants described the feeling of being within the instrument, and acted as a conduit of artistry from the score to the audience. This sensation of being 'within the instrument' is described as the emergent choral instrument. Being a part of something that has a boundary, both in time and in space, was described with great passion by participants. Limiting this experience to simply the sound of a choir does a disservice to those who have experienced this at any level. Many community choir groups love the feeling of singing in harmony and making music together. While the aesthetic output of this may not be called 'blend', the blending of participants (rather than voices) together into this new instrument is an attraction of ensemble singing.

Embodied Music Cognition states that music making is a sensory-motor experience, but highlights the embodied nature of musicking of all types. Through separating this and treating 'blend' as a purely

aesthetic ‘blending of voices’, choral directors can miss the point of the tools that they have at their disposal. In creating a rehearsal environment in which the choral director can blend the singers together to form an instrument, rather than the voices to form a sound, they stand a chance of being invited into the community of practice that forms part of the ensemble experience.

‘Blend’ is a complicated word in ensemble singing, with many schemas and techniques heralded as the way in which choirs should sound. These are informed by cultural and historical narratives, repertoire decisions, and training of the singers involved. This thesis argues that the word has become so diluted in meaning through its application to many facets of the choral experience that it has lost its focus.

When building the auditory images and acceptable joint repertoires that participants discussed in this thesis, it is incumbent on choral directors to ensure that the *individual* voice is recognised. Ensemble singing will not be successful if a director is asking for the individual to inhibit their own voice, as this changes their challenge and skill. Instead, this should be framed as an opportunity to work with others in the section to create an environment for peak choral experience. Working with others, and active listening, is imperative to achieving either individual or group flow.

Singers understand what it *feels* like to blend, they have an embodied knowledge of that experience, and therefore it is the experience that has been investigated here. The use of IPA proved an excellent choice of methodology in exploring this embodied understanding and has facilitated the ability to understand that ‘blend’ is not just a noun or a verb, but an experience.

This thesis recommends that ensemble leaders are specific about the interventions that are expected of participants, and not relying on singers embodied understanding of ‘blend’. It is also incumbent upon directors to facilitate the building of a community of practice and encouraging the group efficacy to be the best it can be. Directors should also not be afraid to embrace the individual

qualities of the singers they have in front of them. In doing this we may encourage the creation of that most elusive and fleeting of instruments: the choir.

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## ***Appendix A***

The following pages are an example of how interview transcripts were analysed. Text was highlighted in purple for points relating to Description and Content, and yellow for language use. References in the text were then added to each of these highlighted parts in superscript. A bracketed inductive analysis was then carried out, and the first two columns were populated as shown below.

Once this step was completed, a second reading of the transcript followed, taking in to account the first analysis. The 'Interrogative and Conceptual Coding' and 'Emergent Themes' columns were then populated.

Interviews were analysed in order of participant ID, starting at S1 and finishing with B3. Analysis of each interview followed the steps above.

Interview	Description and Content	Language Use	Interrogative and conceptual coding	Emerging Themes
<p>Which you're not so worried about as a solo singer.</p> <p><b>JS</b> What does a satisfactory ensemble performance feel like?</p> <p><b>B1</b> <sup>195</sup>It's a great feeling. It's, it's the. I can tell you what an <sup>196</sup>unsatisfactory performance feels like [laughing] much easier, much more easily. It's, it's <sup>197</sup>stressful if you don't know that, the, that the performance is going to be a <sup>198</sup>success. Literally in terms of whether <sup>199</sup>the piece will get from <sup>200</sup>beginning to end in a correct</p>	<p>therefore be happy with his vocalism from a soloistic perspective. <sup>195</sup>There is (in B1's words) satisfaction when a <i>performance</i> goes well. Does this also work in rehearsal, or is it about the audience? <sup>196</sup>Is this because these performances are more frequent, or because the characteristics of a bad experience are easier to codify than those of a good experience? <sup>197/200</sup>The aim of every performance has to be the successful translation of a composers notes from the page to the audience. If this base level of accuracy isn't achieved, the experience causes anxiety in B1.</p>	<p><sup>198</sup>There is a goal of the translation of the notes to sound, and that is the definition of success here.</p> <p><sup>199</sup>The piece has its own liminality within temporality. It has an agency of its own, that isn't necessarily just the score.</p>	<p>B1 admits to a feeling when he sings something that he deems to be successful at creating the group aesthetic that he was striving towards. This is difficult to define, and B1 is able to much more easily describe negative situations. Given the base level of accuracy being imperative for a successful performance, as described here by B1. There is then a certain disparaging tone when talking about accuracy being the end of the artistic journey. Given his experience with amateur performances, many of</p>	<ul style="list-style-type: none"> <li>• Sensation</li> <li>• Enjoyment</li> <li>• Success</li>   <li>• Stress</li> <li>• Anxiety</li> <li>• Accuracy</li> <li>• Accuracy as Base Level</li> </ul>

Interview	Description and Content	Language Use	Interrogative and conceptual coding	Emerging Themes
<p>way. And you don't want to be, I never want to be in a position where I'm looking at a bit of the music and going this <sup>201</sup>might not happen. Not necessarily personally, but in terms of the <sup>202</sup>group. You know we've all been in that situation. So you come off stage, and you <sup>203</sup>just feel a bit like it happened, but there was no... I, I guess a <sup>204</sup>satisfactory ensemble performance, for me, goes beyond getting it right. Goes beyond just <sup>205</sup>recreating what's on the page. It's,</p>	<p><sup>201/2</sup>The uncertainty is one of the reasons for anxiety in B1. It's not just about him, so he doesn't have the responsibility or the agency for this all the time. Sometimes it may be difficult for him to salvage a situation.</p> <p><sup>203/4/6</sup>B1 says that having the performance 'happen' is a good thing, yet here accuracy is described derogatively. There has to be a level above accuracy in order for B1 to find the ensemble experience successful.</p>	<p><sup>205</sup>Recreating isn't creation. Is replicating</p>	<p>which strive for accuracy as their ultimate goal, this deeper level of collective artistry is something that is more appealing to the professional in him.</p> <p>The expectation that B1 is going to be moved, or emotionally engaged in a performance in some way is only able to be explored when he's out of that liminal space, and if he's not felt an emotional response, this is deemed as less of a successful performance than one in which he did feel a an emotional response after his performance.</p>	<ul style="list-style-type: none"> <li>• Accuracy as Artistry</li> <li>• Amateur vs Professional</li>   <li>• Emotional Engagement</li> <li>• Liminality</li> <li>• Success</li> <li>• Satisfactory Performance</li>   <li>• Accuracy</li> <li>• Recreation of Score</li> </ul>

Interview	Description and Content	Language Use	Interrogative and conceptual coding	Emerging Themes
<p>it's, it goes  <sup>206</sup>beyond  correctness in to  creation. You know,  creating something.  And it's only <sup>207</sup>at  that level that... I  find it a  <sup>207.1</sup>satisfactory  medium to work in  because you can  <sup>208</sup>come out of a  performance having  created something  that never existed  before or after. You  can rehearse <sup>209</sup>a  thing for three  hours. But if you  <sup>210</sup>know it well,  you're <sup>211</sup>working  with a conductor,  and you're working  with each other,  when you come off  stage you might  well have created  something that just</p>	<p><sup>208</sup>Performance is  important here, as it  exists purely in that  temporal moment. The  inability to replicate it  also makes it more  creative than the  replication of notes from  the page.</p> <p><sup>211</sup>The concert platform,  and the interventions of  conductors and signers,  the context of the  acoustic environment all  create this one individual  performance.</p>	<p>perhaps a better word  here?</p> <p><sup>207</sup>There are levels of  artistry among ensemble  singing, with different  skills that are important  for different levels of  artistry.</p> <p><sup>207.1</sup>This language has  similarity to visual arts, in  which the creation of an  object is then taken out  of the temporality of  creation.</p> <p><sup>209</sup>The thing is the piece,  but also the context in  which you are singing it.  The score, and notes, and  interpretations of all the  musicians.</p> <p><sup>210</sup>This familiarity is with  matters of accuracy  which then impacts on  the ability to think about</p>	<p>The exit from  performance and B1's  reflection on how he did  is how he deems success.  This is because of the  performance having a  start and end point. What  is the difference in  rehearsal, and can these  meta ideas as to what  ensemble singing is be  drawn down to just the  rehearsal process, or is  the performative ritual  important for the  philosophical outlook of  B1?</p>	<ul style="list-style-type: none"> <li>• Creation of New Entity</li> <li>• Professional vs Amateur</li> <li>• Liminality</li> <li>• Performance vs Rehearsal</li> <li>• Post Hoc Analysis of Performance</li> <li>• Emotional engagement.</li> <li>• Conductor Intervention</li> </ul>

Interview	Description and Content	Language Use	Interrogative and conceptual coding	Emerging Themes
<p>wasn't <sup>212</sup>quite there before. Erm. Whether that <sup>213</sup>comes from the conductor if they suddenly have a, a spark of inspiration and suddenly <sup>214</sup>brings everything back. Or an extra pause, or <sup>215</sup>just something. That's creativity, for me. That's just, that's when this work comes alive and it's, it's <sup>216</sup>professionally and personally satisfying. But, yeah an unsuccessful ensemble performance comes with <sup>217</sup>trotting something out, getting something right, getting through something.</p>	<p><sup>213</sup>There is a certain agency upon the conductor to impact the vocalism of the individual singers. Yet this spark of inspiration can only happen as the singers are there, in a temporal live experience. <sup>214</sup>Dynamics are one of the areas the conductor has control over in an ensemble that are working well together. <sup>215</sup>Creating a new thing from out of the parts of singing that were there before. This is conductor creativity, which then impacts on the singers. <sup>216</sup>Why are these two things different, and what is the difference in them? The professional satisfaction comes from a job well done, but the personal satisfaction</p>	<p>these other, higher level, concerns.</p> <p><sup>212</sup>Is there always the potential for this creation in a group of people, the singing of ensemble music is something that brings you close to this level of satisfaction, but there is a slight jump that happens in particular moments of the singing that makes it extra special, which has to be about teamwork.</p> <p><sup>217</sup>This is bringing something worn out again and again, something that is familiar and comes out for show.</p>	<p>The examples of creativity that B1 provides always come from others. He has subjugated his ego for the betterment of the group, but what is his creativity in this scenario, is it how he uses his toolbox of interventions to react to what he is given in order to create a new experience for the choir, himself, and the audience?</p> <p>There is a mundanity In just performing in order to get the notes right, this opposes the views that B1 purports later as to the 'special' nature of this group and the choral phenomenon. The</p>	<ul style="list-style-type: none"> <li>• Conductor Intervention</li> <li>• Performance</li> <li>• Reaction to Interventions</li> <li>• Creativity</li> <li>• Creation of Experience</li>   <li>• Satisfaction</li>   <li>• Mundanity</li> <li>• Career</li> <li>• Every Day</li> </ul>

Interview	Description and Content	Language Use	Interrogative and conceptual coding	Emerging Themes
<p>It just feels <sup>218</sup>thankless, and it <sup>219</sup>just feels not artistic.</p> <p><b>JS</b> How are you individually creative in an ensemble setting? How do you go beyond?</p> <p><b>B1</b> It's a very good question. Erm. I guess, <sup>220</sup>in my own way, I just always try to be <sup>221</sup>available. You know, available... <sup>222</sup>to what could happen, erm. That usually means <sup>223</sup>being in a position where you can, where you're not worried about <sup>224</sup>mere correctness, where you're <sup>225</sup>in the</p>	<p>comes from the team effort paying off? <sup>219</sup>The point of ensemble singing is artistry, and this is a feeling. There is an energy or feeling in a room that provides that artistry.</p> <p><sup>220</sup>The experiences that B1 has had inform how he is able to interact with others, is it important that he's always been a senior member of the group, so perhaps these skills are something that he has then taught to others?</p> <p><sup>222</sup>There is a potential for a satisfying ensemble experience in everything that B1 does, this potential doesn't necessarily depend on him, but on others. <sup>223</sup>Having everything else sorted out in order to</p>	<p>Perhaps it was once impressive, but has become so familiar it is no longer as impressive. <sup>218</sup>Does B1 want thanks for his singing? This is more along the lines of not enjoying the experience of singing, he gives no thanks for being asked to do this, and would rather be doing it in another, more fulfilling way. <sup>221</sup>In case something happens upon someone, an idea or an impulse, being willing to take this on and work with it. The availability is open to all, and not to a preconceived idea as to what this performance situation should be. <sup>224</sup>Correctness is the base level of performance. Are the ideas of 'oxbridge accuracy' therefore</p>	<p>thankless and incessant nature of this type of task is something that B1 does not enjoy.</p> <p>B1 is available to others in order to then change his vocal output in order to better fulfill the whole choir sound. Yet as a leader, should there not be more onus on him to lead the actual vocalism? Is B1's subjugation of ego for the team so great that he only takes on information, and doesn't consciously intervene in a whole choir artistic sense, just the logistics of making sure that his section is singing in tune. The potential for a satisfactory performance comes from others, and not from B1. He assumes</p>	<ul style="list-style-type: none"> <li>• Available</li> <li>• Communication</li> <li>• Ideographic Experience</li> <li>• Leadership</li>   <li>• Potential for Blend</li> <li>• Vocal Interventions</li> <li>• Intonation</li> <li>• Accuracy</li> </ul>

Interview	Description and Content	Language Use	Interrogative and conceptual coding	Emerging Themes
<p><b>moment</b> and <sup>226</sup>you're looking and <b>communicating</b>. Looking at and communicating with <sup>227</sup>your colleagues and <sup>227</sup>your conductor. Erm... I think, I guess, <sup>228</sup>that would be my main creative outlay as an <b>ensemble singer</b>, erm, is simply to be available to whatever could happen in the moment.</p> <p><b>JS</b> So you said you want to be available to communicate, to look at and communicate with your colleagues.</p> <p><b>B1</b> Yeah</p>	<p>concentrate solely on the ensemble experience. <sup>226</sup>Visually, ensuring that you have an openness with your colleagues, but also having clues in your physicality and manner that means your intention is portrayed to the group. Could this also be vocal communication. <sup>228</sup>The creativity here is the creation of a new choral sound, not necessarily artistry (or does one lead to the other). These are the same thoughts as characterization and stagecraft (physicality) in his opera work, that which is the conscious performance mind.</p>	<p>actually indicative of a lower standard of performance, rather than the ideal as was described through T3's description of his work. <sup>225</sup>Temporality is an inherent part of the creative performance process, and has connotations of a loss of conscious thought.</p> <p><sup>227</sup>B1 feels an ownership over the space. The colleagues and conductor belong to him. This is because he is reciprocally available to them. It is interesting that he feels ownership to the conductor, given the traditional power dynamics of conductor to singers. It's a whole team effort, and everyone is working towards the same goal.</p>	<p>that his notes will be correct, and in the ensemble situations he finds himself in, he will always want to put the corporate sound first.</p> <p>One of the more interesting points of agency lies with the fact that B1 believes that as part of the whole team effort, the creation of a new choral entity that he has a stake of ownership in this. This includes over the conductor, and perhaps over their interventions through the communication that happens between singer and conductor.</p>	<ul style="list-style-type: none"> <li>• Watching</li> <li>• Communication</li> <li>• Temporal Nature of Ensemble Singing</li> <li>• Ownership of Group Sound</li> <li>• Agency of Conductor over Group Sound</li> <li>• Ownership of Conductor</li> </ul>

Interview	Description and Content	Language Use	Interrogative and conceptual coding	Emerging Themes
<p><b>JS</b> What are you communicating? What is that?</p> <p><b>B1</b> <sup>229</sup>The great intangible [laughing] creative experience, isn't it.</p> <p><b>JS</b> haha, yeah.</p> <p><b>B1</b> Er, you, erm. Again, <sup>230</sup>context is key in this, in that regard, erm. Because if you're. <sup>231</sup>Singing a fugue as a group is very different to, you know, singing.... I don't know some <sup>232</sup>German four part, you know, kind of <sup>233</sup>bombastic, er. So you, you, your communication is different based on.</p>	<p><sup>229</sup>B1 struggles to articulate what this communication is, but also this communication is artistry to him- it is the level of intervention that creates a successful performance. It is ephemeral (as polyphony is described later), but is an experience. Something that acts upon the whole being.</p> <p><sup>230</sup>The context here is in terms of the repertoire, which has the most agency over the <i>style</i> of ensemble singing that B1 feels is appropriate. There are also performance practices such as forces and venue that impact through the repertoire.</p> <p><sup>231</sup>Fugue is polyphony, but also has connotations of a particular era of</p>	<p><sup>233</sup>Bombastic suggests not only is the piece loud and triumphant, but is more than likely secular, and therefore have quite a different set of forces associated with the <i>stylistic</i> implications of the repertoire.</p>	<p>There is an intangibility of how this creative process works. It is about <i>flow</i> in the broadest possible sense, and also the temporality of the beast, combined with the liminal space of that performance. The <i>creative</i> experience, the creation of a new thing, not the recreation of a score accurately.</p> <p>Repertoire is tied in with compositional style, but also therefore, in to the aesthetic context of each piece of repertoire. These are both harmonic / melodic (fugue), period, national, and also the genre and style of text all add to the context in which B1 sings a particular piece of repertoire. This comes</p>	<ul style="list-style-type: none"> <li>• Flow</li> <li>• Temporality of performance</li> <li>• Creation</li> <li>• Artistry</li>   <li>• Stylistic Context</li> <li>• Repertoire Context</li> <li>• Harmonic vs Melodic</li> <li>• Period of repertoire</li> <li>• Characterization</li> </ul>

## ***Appendix B***

The following sheets represent part of the organisation of themes that is described in [3.6.7](#).

These sheets were used to go back to the interview data and extract pertinent participant quotes into separate documents. These quotes then formed the basis of the analysis chapters of this thesis (Chapters four through six).

These figures show the organisation as described in [Figure 5](#), with overarching themes, superordinate themes, and emergent themes colour coded.











## ***Appendix C***

The following is an example of the participant pack that was provided to participants as they engaged in the data gathering session.

# **James Slimings** **PhD Data Gathering**

## **Chorister Participation** **Booklet**

**Name:**

**Part:**

# Os justi

WAB 30

Anton Bruckner (1824–1896)

komponiert 1879

Nicht schnell

Sopran  
Os ju - sti me - di - ta - bi - tur sa - pi - en - ti - am,  
Alt  
Os ju - sti me - di - ta - bi - tur sa - pi - en - ti - am,  
Tenor  
Os ju - sti me - di - ta - bi - tur sa - pi - en - ti - am, os  
Baß  
Os ju - sti me - di - ta - bi - tur sa - pi - en - ti - am, os

8  
os ju - sti me - di - ta - bi - tur sa - pi -  
os ju - sti me - di - ta - bi - tur sa - pi -  
ju - sti me - di - ta - bi - tur sa - pi -  
ju - sti me - di - ta - bi - tur sa - pi -

15  
en - ti - am, et lin - gua e - jus lo -  
en - ti - am, et lin - gua e - jus lo - que - tur ju - di - ci - um, ju -  
en - ti - am,  
en - ti - am, et

21 *cresc.* que - tur ju - di - - - ci-um, *mf* ju - di - ci-um,  
*cresc.* di - ci-um, ju - di - - - ci-um, *mf* et lin - gua  
*poco a poco cresc.* et lin - gua e - jus lo - que-tur, *f* et  
 lin - gua e - jus lo - que - tur ju - di-ci-um, lo - que - tur ju -

26 *f* et lin - gua e - - - jus, *dim.* *p* et lin - gua e - jus lo -  
 e - jus lo - que - tur ju - di-ci-um, *p* et lin-gua e - jus lo -  
 lin - gua e - jus lo - que - tur ju - di-ci-um, *dim.* *p* et lin-gua e - jus lo -  
 di - ci-um, *f* *dim.* *p* et lin - - - gua e - - - jus,

31 *dim.* *pp* que - tur ju - di - ci - um, et lin - gua e - jus, *mf* et  
*dim.* *pp* que - tur ju - di - ci - um, et lin - gua e - jus lo - que - tur ju - *cresc. sempre* *f*  
*dim.* *pp* que - tur ju - di-ci-um, et lin-gua e-jus lo-que-tur ju - di - ci - *cresc.*  
*pp* *cresc.* et lin - gua e-jus lo-que-tur ju - di - ci -

37

lin - gua e - jus lo - que - - - tur ju - di - ci -  
 di - ci - um, lo - que - - - tur ju - di - ci -  
 um, et lin - gua e - jus lo - que - - - tur ju - di - ci -  
 um, et lin - gua e - jus lo - que - - - tur ju - di - ci -

42

um. Lex De - i e - jus in cor - de ip - si - - us,  
 um. Lex De - i e - jus in cor - de ip - si - - us,  
 um. Lex De - i e - jus in cor - de ip - si - - us, lex  
 um. Lex De - i e - jus in cor - de ip - si - - us, lex

50

lex De - i, lex De - - - i e - jus in  
 lex De - i, lex De - - - i e - jus in  
 De - i, lex De - i, lex De - i e - jus in  
 De - i, lex De - i, lex De - - i e - jus in



# If ye love me

Thomas Tallis  
(c.1505-1585)

John 14: 15-16

Soprano 5

*p* If ye love me, \_\_\_\_\_ keep my com - mand - ments, and I will

Alto

*p* If ye love me, \_\_\_\_\_ keep my com - mand - ments, \_\_\_\_\_

Tenor

*p* If ye love me, \_\_\_\_\_ keep my com - mand - ments, \_\_\_\_\_ and

Bass

*p* If ye love me, \_\_\_\_\_ keep my com - mand - ments, \_\_\_\_\_

S 10

pray the Fa- \_\_\_\_\_ ther, and he shall give you

A

and I will pray the Fa- \_\_\_\_\_ ther, and he shall give

T

I will pray the Fa - ther, \_\_\_\_\_ and he shall give

B

and I will pray the Fa - ther, and he shall

S 15

a - no - ther \_\_\_\_\_ com - for - ter.

A

you a - no - ther com - for - ter. That he may

T

you a - no - ther \_\_\_\_\_ com - for - ter. That he may bide with you for

B

give you a - no - ther com - for - ter. That he \_\_\_\_\_ may bide with

S That he \_\_\_\_\_ may bide with you for e - ver:

A bide with you for e - ver, with you for e - ver: E'en

T e-\_\_\_\_ ver, that he may bide with you for e - ver: E'en the

B you for e - ver, may bide with you for e - ver: E'en

S <sup>20</sup> E'en the sp'rit of truth, E'en the

A the sp'rit of \_\_\_\_\_ truth, e'en \_\_\_\_\_ the sp'rit of truth,

T sp'rit of truth, the sp'rit of truth, e'en \_\_\_\_\_ the sp'rit of

B the sp'rit of truth, the sp'rit \_\_\_\_\_ of\_\_ truth, e'en

S sp'rit of truth, <sup>25</sup> truth, e'en \_\_\_\_\_ the sp'rit of truth. 1. truth. 2. truth.

A e'en the sp'rit of \_\_\_\_\_ truth. truth.

T truth, the sp'rit of truth, the sp'rit of truth. That truth.

B the sp'rit of truth, the sp'rit of truth. truth.



## Royal Conservatoire of Scotland

Dear Participant,

Thank you for agreeing to take part in my study relating to choral blend. This research is part of my PhD study at the Royal Conservatoire of Scotland and St Andrew's University. The study is in two parts, the first of which is a recording of a rehearsal process with the provided repertoire. This will be recorded using close microphone techniques, and also the whole choir will be recorded. You will be provided with a copy of your own individual channel, and also with the whole choir performance.

After this we will arrange a time for you to have a conversation about your thoughts and feelings regarding the recording of your voice in this session. These interviews will then be transcribed and I will use Interpretative Phenomenological Analysis to work with this data. All reference to names will be anonymized, and you are free to view a version of any write up before publication. It may not be possible to grant confidentiality to every audience, but I will make every effort to ensure that any information you provide is anonymized.

Your data will be held securely in accordance with the Data Protection Act. Due to the nature of the research, it is possible that excerpts of the recordings will become public domain. By agreeing to participate in the research, you forfeit the intellectual property of your recording to the researcher.

Your time and talents are appreciated, but it is not possible to remunerate you for your work in providing data for this study. Participation is voluntary, and you are able to withdraw at any time up to publication. You are not required to answer any questions in either the interview or the recording, and don't need to feel that you are changing how you sing in any way for this study. It is much more important that you feel you are singing with a voice that you would work with in an ensemble situation to make excellent music.

If you have any questions at all, please don't hesitate to contact me at [j.slimings@rcs.ac.uk](mailto:j.slimings@rcs.ac.uk), or my supervisor Professor Alistair McDonald on [a.mcdonald@rcs.ac.uk](mailto:a.mcdonald@rcs.ac.uk).

If you agree to take part in the study, please sign below.

---

Participants Signature

---

Date

---

Researcher Signature

---

Date

## **Appendix D**

A script that was read out to participants at the start of the research intervention.

*Thank you for agreeing to take part in this study looking in to how trained singers view their singing in vocal ensembles. The recordings that you are making today are for you to listen back to and inspire conversation topics in the interviews that will happen later in the year.*

*I appreciate that you are giving your time and energy for free, and I am extremely grateful for this. The data that you give me will be anonymized before the writing up stage and your names won't be identifiable in the write up. Some of the recordings may be used for further analysis, but samples will be small and no names will be mentioned.*

*I will be in the room observing and will use these observations to help guide our conversations after this session. All personal information will be stored securely in accordance with the data protection act. If you wish to withdraw, or to not answer any questions, this is absolutely fine. This study is nothing to do with your course and you will in no way be assessed or judged on the answers you give in the interviews, or the way in which you sing in this session.*

*Does anyone have any questions regarding the process?*

*Does anyone wish to withdraw at this time?*

*Thank you.*

**Appendix E**

The risk assessment that was carried out as part of the ethical approval process from the Royal Conservatoire of Scotland Ethics Committee.

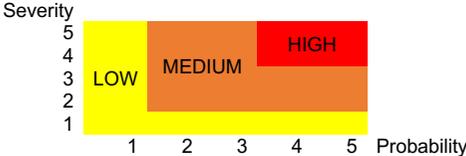


**RESEARCH ETHICS RISK ASSESSMENT AND MANAGEMENT**

This form should be used to support the assessment of risks associated with your research project and their mitigation. This must be completed and submitted where relevant (see question no. 6. on the application form for Research Ethics Approval).

Prior to completion, if there is any aspect of the risks or risk management process associated with your proposed research that you feel unsure about then it is **your responsibility** (as the researcher) to seek further guidance.

Calculation of risk



<b>Identify the risks</b>	<b>Who might be harmed and how?</b>	<b>Probability</b> (on a scale of 1 – 5 with 1 being highly unlikely and 5 being very likely)	<b>Severity</b> (on a scale of 1 – 5 with 1 being a minor effect and 5 resulting in major harm)	<b>Risk Score (probability x severity)</b>	<b>How could the risk be reduced to an acceptable level?</b> <i>(Can the probability and severity of the risk be reduced?)</i>	<b>Residual Risk</b>
Discussion of individual vocal technique.	Participant might be psychologically affected	2	2	4	Ensure that participant is aware they don't have to answer any particular question.  Ensure the researcher is able to move away to a different topic if needed through researcher training.	1
Using the voice in a sustained choral rehearsal.	Vocal fatigue	2	3	5	Ensure that regular breaks are taken, and that an experienced conductor is facilitating the rehearsal.	2

**Assessment completed by: James Slimings  
necessary):**

**Date to review revisions (if**

**Date of Assessment: 04/10/17**

**Signature:**

**Position: Researcher**

## **Appendix F**

An example of interview preamble with participant B1.

**JS** So. Thanks for coming along.

**B1** No bother, sorry I'm the last.

**JS** Erm. It's alright, somebody had to be. Somebody had to be first, somebody had to be last. Erm. So what this is interview is, is it's not going to be, erm, a conversation where like I ask you a question, and you answer.

**B1** Ok.

**JS** It's not going to be that sort of, formulaic, erm. The idea is that we talk about your experiences, and you are the expert in your own experiences.

**B1** hm-hm

**JS** So an ideal interview like this is where I say very little and you say a lot.

**B1** Ok.

**JS** Don't think about what I, what you think I want to hear.

**B1** Ok.

**JS** Don't answer questions based on what you think I'm asking, I'm not digging for anything in particular. I'm just trying to tease a little more information out of you. So. I'm going to jot down some of the stuff that you say so that I can remember, like, wording and go back to that. So. Erm. It's all anonymous and you can have a look at it before it's published in case you say anything particularly shady.

**B1** Ok.

**JS** So are you ready? Ready to start?

**B1** I am indeed.