



University of **HUDDERSFIELD**

University of Huddersfield Repository

Harrington, George Henry

Voices that 'don't fit': case studies in the reception of 'queer' high male singing voices.

Original Citation

Harrington, George Henry (2019) Voices that 'don't fit': case studies in the reception of 'queer' high male singing voices. Masters thesis, University of Huddersfield.

This version is available at <http://eprints.hud.ac.uk/id/eprint/35356/>

The University Repository is a digital collection of the research output of the University, available on Open Access. Copyright and Moral Rights for the items on this site are retained by the individual author and/or other copyright owners. Users may access full items free of charge; copies of full text items generally can be reproduced, displayed or performed and given to third parties in any format or medium for personal research or study, educational or not-for-profit purposes without prior permission or charge, provided:

- The authors, title and full bibliographic details is credited in any copy;
- A hyperlink and/or URL is included for the original metadata page; and
- The content is not changed in any way.

For more information, including our policy and submission procedure, please contact the Repository Team at: E.mailbox@hud.ac.uk.

<http://eprints.hud.ac.uk/>

Voices that 'don't fit': case studies in the reception of 'queer' high male singing voices.

GEORGE HENRY HARRINGTON

A thesis submitted to the University of Huddersfield in partial fulfilment of the
requirements for the degree of Masters by Research

The University of Huddersfield

August 2019

Abstract

The human voice has historically been synonymous with identity and provides a platform where genderqueer, androgynous and trans identities can be explored. This thesis investigates the social and cultural implications of a 'voice that does not fit'. There is an exploration into how voices 'do not fit' either, social expectations or how an artist feels their voice does not fit them; or rather the voice fits their bio-sex, but their bio-sex does not fit their gender identity. The project looks into the social expectations of voice and the personal accounts of how artists have had to deal with these expectations. The study is navigated by looking specifically at the reception of different queer voices in both modern and historic society. There is also an emphasis on vocal training and its implications to resultant pitch, timbre, identity and reception.

The different case studies in this project are all 'voices that do not fit' in one way or another. They are all defined as being voices that are by society's expectations 'non-normative'. The case studies are categorised in several ways: the voice of a castrato (Alessandro Moreschi); a 'cis' identifying person with a voice that does not fit societal expectations (Javier Medina); a transgender voice without any hormonal treatment (Wilmer Broadnax); and a transgender voice that has undergone hormone treatment (Alexandros Constansis, and an anonymised participant who has followed Constansis's suggested vocal training). These four case studies are grouped into two correlating pairs with both pairs providing a modern and historic case study along with one that has undergone medical treatment and one that has not. The first pair of case studies is Alessandro Moreschi and Javier Medina and the second pair is Wilmer Broadnax and Alexandros Constansis.

Table of content

Abstract.....	2
Table of content.....	3
List of tables.....	5
List of figures.....	5
List of examples.....	5
Glossary.....	7
Chapter one: introduction.....	8
The scope of the research.....	15
Chapter two: issues in studying identity and the singing voice.....	17
Reception theory.....	21
The physiology of the human voice.....	22
The power source	23
The sound source	25
Size and shape of larynx.....	26
The sound modifiers	29
Different types of voice.....	30
The effect of hormones on the voice.....	31
Chapter three: high male voices.....	33
The history of the castrato.....	35
Castrato training	35
The castrato voice as ‘desireable’	36
Sexual ambiguity	38
Reception	40
Case study 1: Alessandro Moreschi.....	42
Reception of Moreschi’s contemporaries.....	43
Assessing Moreschi’s voice: ‘Ave Maria’.....	50
Limitations of Moreschi’s recordings.....	54
Moreschi’s present-day reception.....	57

Case study: Javier Medina	58
Assessing Medina's voice: 'Eres tú'	68
Assessing Medina's voice: 'Ombra fedele anch'io'	71
Chapter four: trans voices.....	75
Case study: Wilmer Broadnax (Little Ax)	75
Assessing Broadnax's voice: 'You Are My Sunshine'	76
Black transgender males in gospel music	78
Broadnax's death.....	80
Case study: Alexandros Constansis.....	83
Constansis: vocal care during transition.....	84
Assessing Participant 1's voice: 'Silver Street'	88
Chapter five: conclusion.....	92
Bibliography.....	97

List of tables

Table 1. List of Javier Medina's recordings of pop songs that he has uploaded to YouTube.....	65
---	----

List of figures

Figure 1. A labelled diagram showing the respiratory system in detail.....	24
Figure 2. Showing the resultant pitch of the top average Hertz for adult biological male and female speaking voices.....	28
Figure 3. Showing the resultant pitch range of biological male and female speaking voices along with the crossover between the two voices.....	28
Figure 4. Screen shot of Javier Medina singing Eres tu by Juan Carlos, demonstrating the poor video quality	70
Figure 5: Collage of photos showing Wilmer Broadnax.....	78

List of examples

Example 1: a transcription of the lines "...hora In hora mortis nostrae" from <i>Ave Maria</i>	52
Example 2: a transcription of the opening line "Ave Maria" from <i>Ave Maria</i>	53
Example 3: Felix Mendelssohn's transcription of appoggiaturas in a letter to Carl Friedrich Zelter, his singing teacher, written in 1831.....	54
Example 4: transcriptions of Javier Medina chest and head vocal registers.....	59
Example 5. the pitch range of the song <i>Eres tú</i> by Juan Carlos (1973).....	70
Example 6. A transcription of the line 'Mio che tanto adoro' from Javier Medina's version of Riccardo Broschi's 1730) 'Ombra fedele anch'io'.....	74
Example 7. Transcription of the Golden Echo's version of 'You Are My Sunshine'.....	77
Example 8. A transcription of the line "if you want me just shake me up" from Participants 1's song 'Silver Street'.....	91

The author of this thesis (including any appendices and/ or schedules to this thesis) owns any copyright in it (the “Copyright”) and he has given The University of Huddersfield the right to use such Copyright for any administrative, promotional, educational and/or teaching purposes.

Copies of this thesis, either in full or in extracts, may be made only in accordance with the regulations of the University Library. Details of these regulations may be obtained from the Librarian. Details of these regulations may be obtained from the Librarian. This page must form part of any such copies made.

The ownership of any patents, designs, trademarks and any and all other intellectual property rights except for the Copyright (the “Intellectual Property Rights”) and any reproductions of copyright works, for example graphs and tables (“Reproductions”), which may be described in this thesis, may not be owned by the author and may be owned by third parties. Such Intellectual Property Rights and Reproductions cannot and must not be made available for use without permission of the owner(s) of the relevant Intellectual Property Rights and/or Reproductions.

Glossary:

Primo uomo: the male lead, often a hero, in an opera which in the seventeenth century was typically a heroic and virtuous lover.

FtM: a trans person who has transitioned or is transitioning from female to male, this could be by taking hormones and or from medical surgery.

MtF: a trans person who has transitioned or is transitioning from male to female, this could be by taking hormones and or from medical surgery.

Grain of the Voice: The concept was created by French literary theorist, Roland Barthes, he describes the grain “as specifically the perceptibility of the body’s presence in the singing voice: ‘The ‘grain’ is the body in the voice as it sings, the hand as it writes, the limb as it performs’” (Barthes, cited in Jarman-Ivens, 2011, p.5).

Bio-males: a person who is born as biologically male, their sex is male.

Bio-females: a person who is born as biologically female, their sex is female.

Falsetto: A style of high (typically) male singing technique with the range of an alto or higher (Negus, et al., 2001). Falsetto is more of a ‘style’ of singing rather than a voice ‘type’ as one can be a bass and still sing in falsetto.

They: a plural pronoun that some trans individuals wish to be used as a singular for themselves.

Pitch naming system: The pitch naming system used in this thesis is based around middle C being C4. Thus B just before middle C is B3 and D just after middle C is D4.

Chapter one: introduction

Identity is an integral part of any musical performance, whether considered from a creator, performer, or audience point of view. The concept of identity concerns the fact of being who or what a person is or what they want to be. Identity is all about how a person relates and how they represent themselves within society, it is an expression of their emotion, their true being. British socio-musicologist and former rock critic, Simon Frith, explains how identity is an ideal, what a person desires to be like, not what they actually are (Frith, 1996, p. 123). Roy Shuker is an associate Professor in Media Studies at Victoria University of Wellington, and he defines identity as the “cultural descriptions of individuals (self and others), groups and sociopolitical entities which we identify with. ‘Identity is cultural since the resources that form the material for identity formation...are social in character’” (Shuker, 2017, p. 182). Gender is a fundamental part of a person’s identity as it determines how a person presents themselves within society and is a representation of how they wish to be received and accepted into society whether this is as ‘cis’¹, trans or something else. The personal nature of gender arises from the many different factors that affect it. Judith Butler is an American gender theorist who has stated that “...gender intersects with racial, class, ethnic, sexual, and regional modalities of discursively constituted identities. As a result, it becomes impossible to separate out ‘gender’ from the political and cultural intersections in which it is invariably produced and maintained” (Butler, 2007, pp. 4-5). Gender is one of the most basic human categorisations and in reality, the way people chose to identify themselves breaks away from the outdated restrictive gender binary. Identity, however, is ‘mobile’, it is not a thing but rather a process, a ‘becoming not a being’; it is always changing and is heavily influenced by a person’s experiences (Frith, 1996, p. 109).

¹ Cis is a “prefix frequently used in conjunction with the word ‘gender’ or ‘normativity’ to denote people who identify with the biological sex they were born with” (Griffin, 2017, n.p.).

This project intends to investigate the extent to which queer voices fit sociological expiations in modern and historic societies. In addition to this the project also examines the different methods queer singers use to change their voice and what consequential effect these changes have on their reception. The structure of this thesis follows a voice categorisation structure with the four case studies being split into two correlating pairs. Both pairs provide a modern and historic case study along with one that has undergone medical treatment and one that has not. The first pair of case studies is Alessandro Moreschi and Javier Medina, these are both castrato voices with Moreschi being a medically intervened historical castrato and Medina being a modern day 'natural castrato'. The second pair of case studies is Wilmer Broadnax and Alexandros Constansis, they are both transgender men with Broadnax being a historical example who has not undergone medical treatment but passed as a man all his life and Constansis being a current example of a transgender man who has undergone medical hormonal treatment.

Music has historically been a very close associate of identity and is a massive part of creating a person's sense of belonging. Music shapes a person's identity and expresses it in diverse ways, these include, what people listen to, what music they collect, save, archive, how people dance, how they sing or play, what they sing or play, when they use or experience music, and how their own music sounds (Shuker, 2017, p. 182). As identity is synonymous with experiences, music, music making and music listening, is a fundamental part of people's identity (Frith, 1996, p. 109). The music a person listens to instantly helps to shape their identity, they are then associating with a scene or group of people, and they are united with the common ground of liking a particular artist. A fan of a certain group or artists is, by being an advocate of their music or fan scene, supporting or affirming how they relate to the messages of the artists music. However, it is important to note that being a fan of a certain type of music does not mean that person identifies the same as the artist someone could be a fan of baroque cello music but not identify as a baroque cellist. This idea is supported by Frith's account that "in taking pleasure from black or gay or female music I don't

thus identify as black or gay or female (I don't actually experience these sounds as 'black music' or 'gay music' or 'women's voices') but, rather, participate in imagined forms of democracy and desire” (Frith, 1996, p. 123). Fans also identify through music by using it as a way of distancing themselves from their parents, their community or society in general. This involvement of fans and music shows music as being a strong part of self-identity as it involves people situating themselves in relation to an opposing discourse (Shuker, 2017, p. 182). The quality of an experience is what provides identity and is not actually a state of being. People can use songs or artists to represent their own emotions or political and social beliefs or movements. Supporting these ideas, music has been argued to “define identity at the level of self, the local community and national identity” (Shuker, 2017, p. 182). Fans and musicians can identify musically not only with the music they choose to listen to or play but also through the type of music associated with a certain geographical area. A person’s self-identity, as explained by Shuker, “can be expressed through the use of music consumption to indicate membership of constituencies based around class, gender and ethnicity. At times, this is more loosely organized around particular scenes, sounds and subcultures, as with rave culture and contemporary dance music” (Shuker, 2017, p. 182).

Not only can music be used as a way of self-identification but also provide a community with a sense of cohesion. Music is frequently used as a way of representing regional, national or community identity (Shuker, 2017, p. 255). Historically people have used music with a specific geographical location to create a sense of ownership over the community and land where they live (Bohlman, 2002, p.72). Different communities would distinguish themselves from others with their music but also use it as a way of celebrating their nationality and thus their identity (Bohlman, 2016, p.169). Historical events that have caused groups of people to be displaced, like the diaspora of the Jews for example, encouraged people turn to the music of their place of national origin to provided them with comfort and a sense of belonging; the music is ‘theirs’. People rely on music as it signifies a strong sense of identity that acts as ‘cultural glue’, giving minority groups common ground (Bohlman, 2016, p.169). Music in this way is very

powerful at bringing people together as they feel their self-identity is the same, the music provides a community in a place where migrants might feel otherwise isolated. Location and music can also be identified in different ways, as some cities or regions, as Shuker states, can commonly be “identified at a specific historical juncture with a sound, e.g. Chicago blues” (Shuker, 2017, p. 255). This strong identification with a group of people, ideologies or practices through music are examples of ‘subcultures’ and ‘scenes’. The term subculture is one that has been difficult to define as it has variant meanings to different people, however subcultures can be more generally described as a social group that is focused around common interests and practices, such as a certain band or musical artist (Gelder & Thornton, 1997, pp. 83-89). The term scene is very similar is concept of subcultures, with some writers claiming it is the modern version of the term subculture, but it has a strong emphasises geographical place (Shuker, 2017, p. 307).

The human voice is arguably one of the most integral parts of a person’s identity as it is a personal, unique and intimate aspect of a person and can show their vulnerability. It is therefore not a surprise that, not only musicians and artists, but people in wider society use their voice as a way of representing themselves and their identity in everyday life. This project focuses on how different voices are created, what their reception is and how these can change for both the artist and society. The two main elements that are emphasised throughout are the differing training for each voice and the reception of each voice. The study examines the reception of the human singing voice and its delicate but intrinsic relationship with gender and identity, including ‘genderqueer’, ‘androgynous’, and ‘transgender’ identities. Discussions around gender dysphoria have grown significantly in recent years, and modern society is beginning to appreciate and understand the fragility of identity. Issues surrounding transgender identity have been present throughout history but have very much become more visible in modern society, as academic Alexandros Constansis, whose work focuses on singing voices, states: historically “transsexuals were rarely documented, except in myth and legend” (Constansis, 2008, n.p.). In this project Constansis is both the

subject of a case study and an author of secondary research materials. However, although literature on transgender and genderqueer subjects are become more common, there is currently limited research tackling the ideas of the transgender voice and how it fits into modern society.

For someone who identifies as transgender, genderqueer, as 'cis' or as something else, their voice is paramount to how they represent themselves and how they identify. For example, if someone is born a biological male (bio-male) but feels their true gender or identity is actually female then their voice is a crucial way in which people can change their identity and societal reception. A large part of identity can be intrinsically linked to reception, how someone is received and accepted into society. People often what to 'pass' in society as what they feel is their true identity, whether this be a gender binary or something more androgynous. As Butler states, gender is "the cultural meanings that the sexed body assumes", and gender, unlike sex, is not rigid, as I will discuss further in Chapter two, thus the fluid nature of gender makes a person's environment and reception important aspects of their identity (Butler, 2007, p. 9). This concept is not only true of gender but of any identity a person chooses to associate themselves with. When trying to identify with a group or subculture one's clothing and behaviour becomes extremely important even if these signifiers are not always immediately obvious (Hebdige, 2012, p. 101). For example, if someone regards themselves as a punk, or historically as a 'Teddy Boy' during the second world war, they would make sure they conform to the exceptions stylistically of the group, so they pass as their identity (Cross, 1998, p. 263). It has been stated that Teddy boys were known for their "outrageous 'Edwardian' costumes" as well as "their delinquent and sometimes violent behaviour" (Cross, 1998, p. 263). They felt ostracized by society and by all dressing the same they had a sense of unity, looking and passing, for example, as a Teddy Boy would have been just as important as actually being one. The same concept can be said for gender and identity, people often want to pass as their gender or identity within society or deliberately go against it. How people dress, the music they listen to and the social circles they are involved in represents their identity (Shuker,

2017, pp. 333-335). An important part of identity is a person's interaction and acceptance into society. Someone who does not identify with a specific gender and feel a more androgynous, genderqueer identity best represents them or who does not identify with any gender, their voice can be a powerful tool to how they present themselves and operate in society.

Looking at how voices 'do not fit' either social expectations or how an artist feels their voice does not fit them, or rather the voice fits their bio-sex, but their bio-sex does not fit their gender identity. The project looks into the social expectations of voice and the personal accounts of how artists have had to deal with these expectations but also how the voice is created and changed. The training of the human singing voice can be vital in creating a person's identity as the colour and timbre of the voice can be heavily altered through professional training, which in turn helps form an identity. In the same way a choice to not train a voice also gives it a specific characteristic and identity.

This project researches if or how transgender and genderqueer voices as a whole, regardless of whether a person has had medical or hormonal treatment or not, are perceived differently in society. Thus, this project will investigate transgender and genderqueer voices that are both undergoing hormonal treatment and ones that are not. Within each voice type I will be looking into how the voice operates, what training is involved and what society's reception is of a voice. Unlike Constansis's work which exclusively focuses on the classically trained voice, this project investigates different genres of voice including the 'less trained' pop voice. Genre is obviously going to have its own unique complexities when it comes to gender, identity and reception and I want to take this into account. Although I am not looking in depth at the relationships between different genres, the project looks at voices across all genres and is as inclusive as possible.

Research into the human singing voice, identity and gender will be explored using a variety of materials and methodologies from varying academic disciplines such as

scores, interviews, as well as drawing upon modern internet and social media-based resources for modern social issues surrounding identity and reception. Some popular and journalistic texts, such as online blogs or people's comments on YouTube videos, are vital for this kind of research as they give an accurate insight into how different voices are received in society but also how people present their identity online. For some of the delicate issues in modern society the internet is the main way for individuals to explore their identity and get the support they need, therefore it is paramount to include online resources such as blogs, comments, and discussion boards in this project. The case study on Moreschi uses an analysis of his vocal recordings along with written accounts of his voice by both his contemporaries and by modern authors. Medina's voice is explored using primary internet-based sources including his YouTube videos and the comments he has received on them. The case study investigating Broadnax includes recordings of his voice along with written secondary accounts of his voice. Finally, the case study on Constansis is explored using his own work and studies he has published along with the analysis of a recording by a singer, Participant 1, who followed Constansis vocal training techniques. Collectively these approaches aim to give an inclusive account of different voices and their reception as the project deals with historic voices and modern voices ranging from castrato to current performing artists.

Historically voice categorisation has been, and is still, very rigid and heavily gendered. The rigid gender binary is explicitly apparent with adult voice categorisation as tenor and bass voices are stereotypically 'male' whereas the alto and soprano voices are stereotypically 'female'. This categorisation of voice types is based on the ideology that low voices are 'powerful' and 'masculine' whereas high voices are 'delicate' and 'feminine'. Although the voice is a great way to express a person's identity, society still restricts it to rigid gendered boundaries. The human body, however, is not that simplistic, people in many ways are very similar but no one person is the same. The complexities of humans subsequently mean a person's speaking and singing voice are completely unique thus cannot exactly match a simple restrictive gendered binary. For

example, anyone who has experienced singing in a choir will be able to recall countless times that themselves or another singer is unable to sing a piece properly as the part written for 'their section' is not comfortably in their vocal range. This is not uncommon or an indication of a poor singer, it instead outlines how unique voices are and how they should not be dictated by gender.

The scope of the research

The different case studies included in this project are all 'voices that do not fit' in one way or another. They are all defined as being voices that are by society's expectations 'non-normative'. Their gender identity, voice type and genre of the singing voice are different in each case study to provide an inclusive insight into how transgender voices are received. The case studies are categorised in several ways: the voice of a castrato (Alessandro Moreschi); a 'cis' identifying person with a voice that does not fit societal expectations (Javier Medina); a transgender voice without any hormonal treatment (Wilmer Broadnax); and a transgender voice that has undergone hormone treatment (Alexandros Constansis, and an anonymised participant who has followed Constansis's suggested vocal training). The range of musical genres covered is purposefully broad, as it showcases not only how voice training and singing style are very different but also that societal expectations of different voices changes for each genre. For example, in classical music a high male voice, such as a countertenor, is received in society as being a 'feminine' voice, whereas as a rock singer singing in falsetto over heavy distorted guitar is seen as being hyper masculine. Simon Ravens, performer writer and director of Musics Contexta, and Stan Hawkins, musicologist researching within the field of popular music studies, provide evidence of this contrast in opinions of high male voices. Ravens states how the use of the upper registers of the voice is what makes a male countertenor "not a true man" (Ravens, 2014, p. 182). Whereas Hawkins describes how, in relation to rock music, "the sheer force of...high pitching through a powerful falsetto range signifies a masculinized passion" (Hawkins, 2009, p. 130). This indicates how society treats voices differently depending on their context as a result of socially constructed expectations. Consequently, having a range

of different voice types, identities and genres allows a study that is a true representation of how 'non-normative' voices are received in society.

Chapter two: issues in studying identity and the singing voice

In order to discuss transgender voices it is paramount to first define some key terminology and explain some of the current debates surrounding the term transgender. Some of the terminology and topics in this area of study are very difficult and delicate matters to navigate as there are many competing perspectives and the subject deals with a heavily subjective, individualised and very personal set of issues.

For example, the history of the term transgender can be very problematic. Many people have the misconception that transgender is intrinsically linked to sexuality and some people argue that sexuality is paramount when theorising gender and professor of Sociology and Gender Identities, Sally Hines, and trans author Tam Sanger, comment how society's understanding of gender is “developed from experiences of sexuality” (Hines and Sanger, 2012, p. 4). In the 1970s there was very little sociological interest in the subject and the term transgender did not exist, instead the terms ‘transvestism’ and ‘transsexuality’ were used instead (Ekins & King, 2006, p. 1). The term transvestite refers typically to someone who dresses and acts as the opposite gender to their bio-sex and has no relation to how someone identifies with regards to gender. According to transgender sociologists, Dave King and Richard Ekins, the 1970s definition of the term transvestite was a “person who gains psychological release through dressing in the clothing of the opposite sex” (Ekins & King, 2006, p.3). However, this concept was apparently made radical if a person were to wear the clothes of the opposite sex in public without trying to pass as that sex. The social viewpoint at the time was that transvestites were deviant, non-normative and perverse (Ekins & King, 2006, pp. 1-4). The term ‘transsexual’ makes it appear that a person is conceptualized around sexuality, however it is important to point out how transgender, and gender as a whole, have nothing to do with sexuality or homosexuality. Gender is an aspect of identity and transgender is a category of gender. Whereas sexuality regards a relationship conceptualized around ‘sexual practice’, this includes a person’s

sexual orientation (Kallberg, 2001, n.p.). It is very important to establish a definite this distinction between gender and sexuality.

In recent years people have begun to understand what transgender actually is and the term has become dissociated from homosexuality and has been positioned as separate from 'transvestism', this social change came about largely as a response to the *Die transvestiten* study of Hirschfeld and Ellis (Hines, 2007, pp. 10-11). Magnus Hirschfeld was a 'sexologist' and physician from Germany and Havelock Ellis was an English physician, they both studied human sexuality and helped create this social reform. Ellis and Hirschfeld studied the topic of the transgender phenomena and together they helped to establish a new definition and cultural understanding of transgender that was distinctly separate from concepts of homosexuality (Ekins & King, 2006, pp. 61–64). The definitions and conceptions surrounding what is now referred to as transgender and genderqueer studies, were centred around othering, being 'non-normative' and relating to sexual practices. It is widely accepted in the modern day, however, that the term transgender concerns gender identity differing in some way from one's bio-sex. This idea is supported by the comment that "erotic desire does not automatically fit preconceived binary identities of either gender... or sexuality" (Hines and Sanger, 2012, p. 4).

Historically, and this is still very much the opinion of many today, a 'true' transgender person is someone who has undergone or is undergoing hormonal treatment (Hines, 2007, p. 11). The official government information provided on transgender people living in the UK defines 'trans' as a "general term for people whose gender is different from the gender assigned to them at birth. For example, a trans man is someone that transitioned from woman to man...They take serious, life-changing steps to change their gender permanently" (Government Equalities Office, 2018, n.p.). This definition of transgender, that certain aspects of society fixate on, claims that a 'true' and 'ideal' trans person is someone who is undergoing or has undergone medical treatment. The language used, that they take "serious" and "life changing" steps, provides

connotations that if someone is not prepared to make these changes, they are inauthentic and 'not truly transgender'. It is a very narrowminded and exclusive term, meaning that someone is only transgender if they have undergone medical treatment, it is not acknowledging trans as an identity but a medical phenomenon.

Trans identifying singer and activist, CN Lester, defines what it means to be trans in their book *Trans Like Me: Conversations for All of Us* (2018). They provide differing views of what it means to be 'trans' and as well as this view that 'trans' means someone who has medically transitioned, Lester outlines other people's definitions including: "people who live as the opposite sex without surgery or hormones, people who combine or blur sex and gender categories, and people who cross-dress" (Lester, 2018, p. vii). My definition of transgender is, and what I will be using for the purpose of this project follows similar ideas that Lester mentions latterly. My conceptualization of the term is a very inclusive one encompassing all aspects off of what people consider transgender to be. Any person who has challenged or changed their sex or gendered labels that they were given at birth, regardless of any kind of treatment, can be classed as transgender. Gender is all about identity and how someone wants to be represented, it is a way of people showing their 'true selves' (Lester, 2018, p. viii). It is not based on a person sexuality for example someone who was born a man but identifies as a woman might still be attracted to women, their sense of identity and gender is not informed on their sexuality. Anyone who identifies as 'trans' or transgender is 'trans' or transgender, it is not a medical or scientific fact but a social conception.

In relation to the trans singing voice a lot of studies, especially that of Constansis, focus on the transition of a classically-trained voice. However, I am interested in voices of all trans artists and without excluding people who are untrained or not wanting medical treatment. Biologically, because of the shape and size of the larynx biological females (bio-females) tend to have higher pitched voices than bio-males. However, the societal representation of bio-males and bio-females is fascinating as there are very

blurred lines between the voice types and their subsequent identity.

The voice specifically is a very important and intimate aspect of music and identity as a person's body is their instrument. On a very basic level the distinction between the pitch and timbre of a voice is intrinsically linked to ideas of identity. Associate professor in the School of Music at the University of Michigan, Naomi André, explains how the vocal term 'break' refers to the crossover of the lower and higher registers of the voice, this break has been reported to be the socially regarded "place within one voice where the split male and female occurs" with it being referred to as the "gender line" or the "hetero/homo line" (André, 2006, p. 31). The fact masculinity and femininity, which are both products of identity, can be portrayed through the pitch of a voice indicates how the voice is a key part of identity. As associate professor in the School of Music at the University of Michigan, Naomi André, states, by "revealing the register break, a singer exposes the fault lines inside a body that pretends to be only masculine or only feminine" (André, 2006, p. 31). The voice can be extremely emotive and the term 'grain of the voice' has been used to describe where the voice conveys a strong sense of identity (Shuker, 2017, p. 356). French literary theorist and philosopher, Roland Barthes, provides the concept of the 'grain of the voice' defining it as "where the melody really works at the language not at what it says, but the voluptuousness of its sound-signifiers...it is the body in the voice as it sings" (Barthes, 1990, p. 182). The concept means the 'grain' "is the body in the voice as it sings", thus if a performer is perceived as being masculine in their mannerisms both on and off stage, their voice too will represent this masculinity (Barthes, 1990, p. 188). A compelling aspect of the voice is how personal it is, every voice is unique and as well as being biological, is, like identity, dependent on a person's experiences. The voice is an insight into who the person is as, unlike instruments which will have roughly the same sound as the next, the voice is individual and is used in the unique manner the singer chooses. Instrumentalist also have an instrument to 'hide behind', whereas a vocalist is much more exposed and therefore arguably more of their personality and identity comes across. Another way the voice is specifically linked to identity is the fact that it is the

singer who delivers the lyrics and the message of a song, they are not just playing notes but providing a narrative. It is often the lyrics that fans connect with and encompassed into their own identity. The vocal within a song have a strong tendency, especially in pop music, to provide a 'unifying focus' within a song (Middleton, 1990 in, Shuker, 2017, p. 356). Music is an important part of everyday identity and the voice is an integral aspect of music that makes it such a vital part of identity. The voice is such a significant part of a person's body making it an important part of a person's identity and trans bodies have a particular relevance to this physiologically.

Reception Theory

Part of this project has an emphasis on reception making it important to establish some ideas surrounding reception theory. Reception is a term used to describe the critical, historic and social responses to music, and art more generally, with an aesthetic that 'privileges' these responses (Samson, 2001, n.p.). The study of reception in relation to genre, specific composers and musical works, allows a more in depth understanding of their social constructions of musical meaning, aesthetics and ideologies (Beard & Gloag, 2016, p. 185). There are some key issues with reception theory that have caused many scholarly debates and one of the main issues is the idea of the musical canon. The musical cannon comprises of pieces that are highly valued and because of this they have achieved a high social status. The musical canon has been noted to have started with the anticipation Beethoven's Ninth Symphony (1822). As musicologist Nicholas Cook has explained, the piece resulted in the "establishment of the classical repertory as we know it today – a more or less fixed and unchanging repertory of 'great and immortal works'", by way of expression it laid the foundations of the musical canon (Beard & Gloag, 2016, pp. 186-187). The issue with the setup of the musical canon is it became a very elitist collection of works, pieces that fell outside of this were neglected, meaning in modern society a lot of the reception ideology is outdated. It is important that my study moves beyond the ideas of canonic repertoire which is something I have been very conscious to ensure when handling my case studies and examples. It is paramount to the fundamentals of reception aesthetics that

studies go beyond the canon formation to provide accurate social histories (Samson, 2001, n.p.). As musicologist Jim Samson has stated, there has been a social shift to include ‘*Trivialmusik*’ and popular music in the repertoire of the canon, however reception still fundamentally based around the idea of a canonic structure and even if the castigation expands it still provides rigid boundaries (Samson, 2001, n.p.).

Another problematic aspect of the history of reception theory is the idea of ‘expert listeners’ who have the authority to express their opinions on a piece of music or genre because they are highly respected. It has been stated that Music critics are “highly cultured ‘guardian of... artistic tradition’” thus legitimising their opinion and regarding it as authentic. The discourse is disinterested in individual people’s responses, it is concerned with the well-established opinions on a work (Samson, 2001, n.p.). This ideology provides a very narrowminded discourse of reception as it is important, with regards to gaining an understanding of the true social reception of something, to value public opinions as well as the establishments. This is something I have been conscious of in my project, I have been as inclusive as possible and have valued all opinions to provide an accurate reception picture. Reception is more than just ‘neutral opinion-collecting’ as it is important to examine the data in different ways to help arrive at an accurate and in-depth conclusion (Samson, 2001, n.p.). I have been as inclusive as possible in all aspects of this project so as not to discriminate and this is extended to reception helping ensure the conclusions I arrive at are as unbiased as possible.

The physiology of the human voice

Before looking at the science behind human voice production it is first beneficial to define some key voice production terminology. There are three main elements or mechanism with regards to vocal production and they are, the power source, the sound source and the sound modifiers. The power source in vocal production is the lungs, it is the breath from the lungs that provides the power of the voice. The sound source in vocal production is the vocal folds, the vocal folds in the larynx vibrate resulting in pitched sounds. Finally, sound modifiers, there are what are more

commonly known as the ‘resonators’. As Professor David Martin Howard from the University of York has explained, there are “varying resonant acoustic properties of the tubes of the throat, mouth and nose above the larynx” such as the nasal cavity, mouth, and throat (Howard, 2014, n.p.). For the production of human vocal sounds the above mentioned elements are used as part of respiration (an intake of breath), phonation (initiation of sound in the larynx), resonance (reception and manipulation of the sound), and articulation (sound is shaped into recognisable units) (Haston, 2007, p. 4).

The power source

In both speech and singing, as mentioned above, the power source is the air flow exiting out of the lungs as a result from exhaling (Clapton, 2008, pp. 230, 231). Therefore, to investigate the power source I intended to start by examining the respiratory system, which is simply the set of organs that allows a person to breathe. The respiratory system is built up of different organs, these are, as illustrated in figure 1, the lungs, trachea, bronchi, pharynx, nose, nasal cavity, and larynx. The act of breathing, air entering and exiting the lungs, is scientifically known as ‘pulmonary ventilation’ (Rice University, 2017, p. 1048). The processes of pulmonary ventilation are dependent on a pressure gradient between the atmosphere outside the lungs and the area inside the lungs (Rice University, 2017, p. 1048). The muscle groups that are used for breathing during healthy singing, to change lung volume thus creating variant pressure gradients, are the diaphragm and intercostal muscles, they both respectively expand and contract the width of the ribcage (Clapton, 2008, p. 231). Changes of pressure gradients are the fundamental process of breathing and are consequently a major driving force in singing.

In simpler terms the process of breathing is as follows: when breathing in the diaphragm and intercostal muscles contract causing air to flow into the lungs. When breathing out the diaphragm and intercostal muscles relax meaning air is forced out of the lungs. The action of the diaphragm and intercostal muscles during breathing provides a supply of air, which is known as the power source. The aptly named ‘power

source' is what provides the power behind the voice and drives the sound source in singing (Clapton, 2008, p. 231). The power source is the same regardless of sex, great power and control is obtained through training not someone's bio-sex.

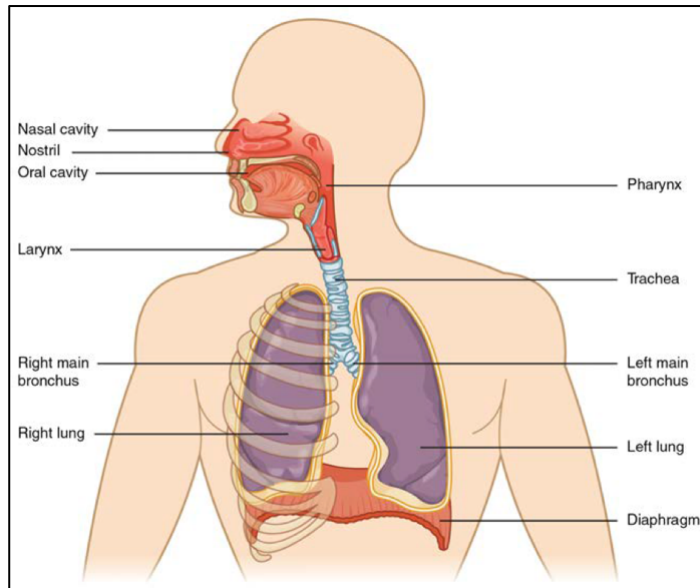


Figure 1. A labelled diagram showing the respiratory system in detail (Biology Dictionary, 2019).

When at rest going about normal daily life not doing anything strenuous, the diaphragm and intercostal muscles only need to make small movements to maintain steady breathing. However, during singing the diaphragm contracts considerably deeper towards the abdominal cavity and the external intercostal muscles are much more vigorous in their expansion of the ribcage, resulting in greater airflow into the lungs (Davies, 2006, p. 2). Once the lungs are full the diaphragm and intercostal muscles, unlike in normal respiration during rest, control the air flow out of the lungs up to the larynx (Davies, 2006, p. 2). These respiratory muscles precisely release the required amount of air for a given note; this refined process takes great skill and control, which is only obtained through extensive training (Davies, 2006, p. 2). It is paramount to perfect a good breathing and support technique when singing as skilled and trained singers are dependent upon this equilibrium of breathing forces (Davies, 2006, p. 2). Not only do differing notes affect the workload of the diaphragm and the intercostal

muscles, the dynamics of a given note also affect the workload as louder notes require more air whereas softer, lower notes require much less air (Davies, 2006, p. 2). The volume of a singer's lungs, the length of different phrases, and the use of consonant articulation are all additional factors that affect the necessary workload for the respiratory muscles (Davies, 2006, p. 2). Therefore, the airflow from the power source in trained singers is controlled and manipulated in very specific and precise ways.

The larynx is an organ that is positioned in the throat and has three main functions, it protects the airway, acts as a valve that is used to control air pressure and airflow, and is used in the production of the voice. It is situated at the entrance of the windpipe and deep within the larynx are the vocal folds. Vocal folds are two muscle strips that are approximately one to one and a half centimetre in length and are covered in a 'mucosal membrane'. The folds are bound to the front of the windpipe and stretch backwards across its opening where they are separately attached to a cartilage. The position and length of the folds can be altered by rotating and tilting the cartilages, in singing the vocal folds are drawn together to ensure the power source vibrates them. When relaxing the cartilages position the vocal folds in a 'V' shape to guarantee air can pass through them (Davies, 2006, p.3).

The sound source:

Although the power behind the voice is provided by the power source, it is actually the sound source that truly provides the voice with sound. In human speech and singing there are two sorts of sound source, the first being vibrating vocal folds in the larynx that produce a pitched sound enabling the production of different sung notes known as 'voiced sounds' (Clapton, 2008, p. 232). The second, as famous countertenor and author Nicholas Clapton, has stated is where air is "forced past a narrow constriction in the mouth which produces a noise-based sound such as the consonants in see and she", there is no pitch associated with this sound and it is known as a 'voiceless sound' (Clapton, 2008, p. 232). Voiced sounds are usually associated with vowels whereas voiceless sounds are associated with consonants, for example one can sing

notes on an A or E but cannot on an S or T. Clapton further explains how there are some sounds that use “both sound sources together to provide a mixed sound source, such as the final consonants in hedge and heave and these do have a pitch because the vocal folds are vibrating” (Clapton, 2008, p. 232). Sound more generally is produced when something vibrates; the vibrating matter is known as ‘the vibrating body’ that in affect causes ‘the medium’ (in this case the air) around it to vibrate (Hollis, 2017, n.p.). These vibrations in the air are known as ‘traveling longitudinal waves’, which are a wave the human ear detects as sound (Hollis, 2017, n.p.). For a human singing voice, it is the vocal folds that are the vibrating body, their tension varies the resultant pitch, for example, if tension increases the resulting pitch will be higher. Vocal teacher and academic, Gillyanne Kayes, explains that pitch “...is determined by the number of times...[the] vocal folds close and open per second... [which is known as] the fundamental frequency” (Kayes, 2005, p. 4). The pitch of the sound produced depends on, like with all sounds, the number of vibrations per second. There is a direct correlation between number of vibrations per second and pitch, the more vibrations there is per second the higher the resulting pitch. When speaking a bio-males vocal folds vibrate, on average 100 – 130 times per second; for a bio-female it is roughly 180 – 220 times per second (Davies, 2006, p. 3). When singing these folds vibrate a lot more, a bio-males vocal folds vibrate up to 500 time per second and when a classical soprano sings a high C their fold will be vibrating over 1000 per second (Davies, 2006, p. 3).

Size and shape of larynx

Similar to how shorter strings on a piano or harp have a higher resulting pitch than longer strings, larger and thicker vocal folds will usually produce a lower fundamental frequency than smaller thinner ones. This is because longer vocal folds vibrate slower than shorter vocal folds meaning short vocal folds have an increased vibration frequency (The Voice Foundation, 2017, n.p.). Tension has a similar affect as length, a vocal fold under tension will have a higher resulting pitch than the same vocal fold under less tension. Typically, there is a correlation between the two, a large larynx with

large vocal folds will tend to be under less tension than a smaller larynx with smaller vocal folds. The taller an individual the larger their larynx is, therefore the longer their effective vocal cord length is and the deeper their resultant vocal pitch and vice versa (Ravens, 2014, p. 39). Therefore, as the average height of bio-males in the UK is 178 cm and only 164 cm for bio-females, it seems a fair assumption that female voices are going to be higher in pitch than male ones (Roser, Appel, & Ritchie, 2018, n.p.). This is sported by the statistic that on average a bio-male's larynx is roughly twice as large as a bio-female's (Howard & Murphy, 2008, p. 30). The vocal pitch of bio-female singers is on average 75% higher than the vocal pitch of males as a direct result of differing vocal fold lengths (Haston, 2007, p. 3).

It becomes clear then, as a results of shorter fold vibrating faster, why there are socially constructed gender binary expectations of voice types, because the vocal folds of biological adult females and children will vibrate more than the vocal folds of a biological adult males (Howard & Murphy, 2008, pp. 41, 42). The vocal folds vibrate rapidly in a sequence of vibratory cycles known as Hertz (Hz), on average the top Hz for a bio-male's speaking voices is approximately 260Hz which, as figure 2 shows, has a sounding pitch C4. For bio-females the average top frequency of their speaking voice is roughly 525 Hz which, as figure 2 shows, has a sounding pitch of C5. It is therefore understandable how the social convention of bio-males having lower voices than bio-females was created. It is not, however, that simple, defined, or rigid as can be seen when one examines the frequency ranges more closely. As figure 3 indicates, the average range of a bio-males voice is 65 to 260 Hz which has a resultant pitch range of G2 to C5 and the average for bio-females is 100 to 260 Hz which has a resultant pitch range of G2 to C4. Therefore, as figure 3 shows, there is actually a range of 100 to 260 Hz, sounding pitch G2 to C4, where the voices are the same pitch, this provides an androgynous platform for a voice where it can be just as 'masculine' as it is 'feminine' (The University of Iowa, n.d.). It provides evidence that the human voice does not work on a gender binary as there are so many crossovers and the rigidity of registers is a social construct. It also indicates how if a transgender person trained their voice, they

could access the vocal registers of the ‘other’ genders without hormonal treatment making it easier for them to pass within society.

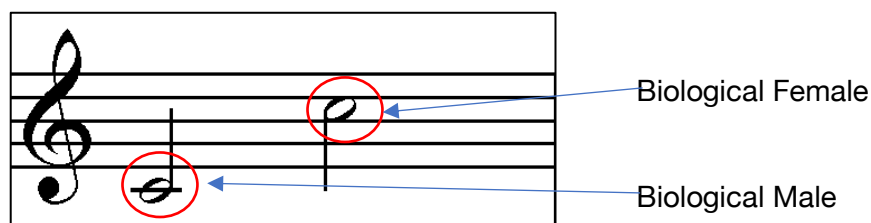


Figure 2. Showing the resultant pitch of the top average Hertz for adult biological male and female speaking voices.

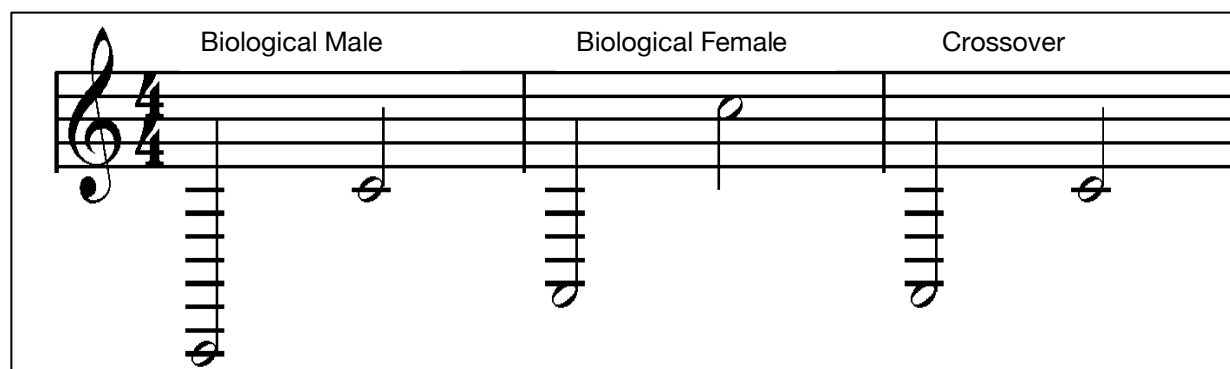


Figure 3. Showing the resultant pitch range of biological male and female speaking voices along with the crossover between the two voices.

Although the laryngeal anatomy and vocal fold length is genetically determined, vocal tract shape and muscular agility can be manipulated and controlled through vocal training (The University of Utah, 2015). For example, with training it is possible for the fundamental frequency to be adjusted by ‘tilting’ the larynx, this results in a lengthening or shortening of the vocal tract making the fundamental frequency respectively higher or lower (Kerry, 2017, n.p.). However, although training has an important impact on a singer’s vocal range it is primarily a result of the larynx and vocal fold size that determines a person’s vocal range. As a result, a person with a larger larynx will sing lower notes with greater ease than someone with a small larynx (and vice versa) (Lee, 2012, n.p.).

The height of humans has increased steadily over time and the average modern bio-male is approximately 10cm taller than the average Renaissance bio-male. Between 1700 – 1850c the average height of a bio-male was 170cm whereas the current average is 178 cm (Roser, Appel, & Ritchie, 2018, n.p.). Considering a modern bio-male tenor is on average 2.6cm smaller than a modern bio-male bass singer (providing a pitch difference of five whole tones), it is quite clear that the average Renaissance bio-males voice would have been a much higher modal voice than a modern bio-males voice (Ravens, 2014, p. 42). The height difference and pitch of Renaissance modal voices is a more likely reason why Renaissance repertoire was written for high male voice rather than all Renaissance males singing in falsetto. As Simon Ravens, performer, writer, and director of Musica Contexta, states “...when we see a Purcellian counter-tenor line ascending above the range of a normal modern tenor...to assume that this part must have been written with the falsettist in mind: the much shorter stature and higher voice of the average seventeenth-century man warns us against such an easy assumption” (Ravens, 2014, p. 42). This provides an insight into how historically high bio-male voices were perceived as ‘masculine’ whereas in modern society they are perceived as ‘feminine’ because the modern bio-male is taller. The modern social construction is that high voices connote femininity while low voices connote masculinity.

The sound modifiers

The respiratory system provides the power source and the larynx provides the sound source in which the voice is created but it is the sound modifiers, that provide the different nuances to the voice that make it truly unique. When humans hear someone singing they are aware of changes in the timbre of the singers voice, they can distinguish if a singer is singing a different vowel on the same note or if the pitch is the same but the timbre is different (Clapton, 2008, pp. 235, 236). These timbral differences are created by the sound modifiers as they alter the traveling longitudinal wave. The only sound modifiers that directly shape the voice are the mouth, nose and throat as the sound wave actually passes through them as it exits the body (Davies,

2006, p.7). A change in the volume of the sound modifiers is how different vowel sounds in speech and singing are produced, this is achieved predominantly by altering the shape of the mouth or oral cavity by means of the jaw, lips and tongue (Clapton, 2008, p. 238). It is therefore evident how it is possible for an androgynous, genderqueer voice to be created by altering the sound modifiers to create an entirely different timbre. This provides insight into how important training is, partially to a genderqueer or trans singer as training allows them not only to adjust the timbral qualities of their voice through manipulation of the sound modifier but also to access the full extent of their vocal range. These changes could help a person feel their voice 'fits' them without having medical treatment if they do not want it.

Different types of voice

The sound waves during voice production create what are known as 'sympathetic vibrations' (vibration caused by the vibration of a neighbouring body) that vibrate in the bones, chest cavity and sinuses (Davies, 2006, p. 7). The vocal terms 'head' and 'chest' voice are how many singers refer to these sensations created from the sympathetic vibrations (Kayes, 2005, pp. 5, 6). The sensations of the head and chest voice are entirely perceptual as the resonance does not actually directly affect the sound produced but does provide 'valuable' and 'instant feedback' about how a singer is producing their voice (Davies, 2006, p. 7). Contrasting the categorisation of voice types, the terms head, chest and falsetto voices, are not dependent on a pitch boundary. The head, chest and falsetto voices are perceptually based on variations in vocal quality or timbre rather than being set voice types with specific parameters (The University of Utah, 2015, n.p.). The term chest register often refers to a rich or heavy timbre which is achieved through a shortening of the vocal folds resulting in a lower pitch range (The University of Utah, 2015, n.p.). When the timbre of the voice is 'lighter' or 'thinner' it can be perceived as being in the head register, where the vocal folds are lengthened and thinned resulting in a higher pitch (The University of Utah, 2015, n.p.). The term falsetto is most commonly used to describe an adult bio-males voice when

singing in the pitch range of a bio-female with the timbre often being described as 'flute like' (The University of Utah, 2015, n.p.).

The effect of hormones on the voice

The larynx is a hormone dependent organ and before puberty adolescent voices are more alike. It is increased levels of testosterone during puberty that causes the vocal folds to thicken, lengthen, this brings a drop in the comfortable vocal range of a person (Lee, 2012, n.p.). Testosterone during puberty also causes the cartilage of the larynx to grow, which further changes the tone of the voice and it is during puberty that the larynx tilts slightly resulting in a bump on the throat known as the Adam's apple (Riverdale, 2009, n.p.). Eventually after the effects of puberty the vocal folds reach their full mature length and for bio-males this is approximately 28.21 mm and 23.15 mm for bio-females (Kahane, 1982 in, Haston, 2007, p. 3). Research from the University of Pennsylvania explains that this difference is also in their vocal fold mass (Embick, 2001 in, Haston, 2007, pp. 3, 4). The tissue fold fluid and blood vessels in the larynx dilate which increases vocal fold mass, these changes are results of hormonal shifts (The University of Iowa, n.d.). These changes in puberty biologically show how testosterone causes all voices to drop to some extent but how much this voice drops depends on the differing testosterone levels in bio-males and bio-females. Therefore, if a bio-female has high enough levels of testosterone her larynx will undergo the same transition as an adolescent bio-male (Lee, 2012, n.p.).

If the pitch and colour of someone's voice is so dependent on the effects of puberty it becomes clear to understand the drastic effects a castrato would have gone through as a result of preventing testosterone production. This is supported by Nicholas Clapton's statement that the "most distinguishing acoustic feature of the castrato singing voice is his pitch range which can be seen... to have much in common with that of a boy treble..." (Clapton, 2008, p. 234). Their voice is frozen in time as testosterone has been prevented from maturing their voice. Thus, with the effect of testosterone being so drastic on the voice it gives evidence that it is easier for a trans man to transition (FtM) than it is for a trans woman (MtF). If an MtF is wanting to

transition it is impossible for their larynx to become any smaller (it is an irreversible change) meaning the only way their voice can adapt to approximate the cultural norm is by training the voice to use higher pitches. However larger larynxes singing at high pitches have different timbral effects than small larynxes singing high (Lee, 2012, n.p.). It is possible to change a voice just by using different mannerism and training one's voice in different ways, this is not only the case for trans people, but cis singers as well. For example, musicologist Leon Thurman, in an article on voice classification, states once a "singer's voice is 'classified,' the singer 'becomes' one of those labels, often for life. It is part of the singer's personal self-identification...Pitch range limitations are often placed on people because of their voice classifications" (Thurman, 1988 in Haston, 2007, p. 13). Therefore, it is not just trans singers that change their voice to 'fit in' with the social norms but most singers do it to make them conform more to their voice classification.

Chapter three: high male voices

A discussion of the high male voice is useful when exploring queer voices as historically males that possess unusually high voices have been ridiculed (Koestenbaum, 1993, p. 165). American poet and academic, Wayne Koestenbaum, explains how the falsetto voice “seems profoundly perverse: a freakish sideshow: the place where voice goes wrong” (Koestenbaum, 1993, p. 164). This highlights how high male singing is seen by society as being nonnormative and unnatural, Koestenbaum goes on to explain how the “falsetto is part of the history of effeminacy” (Koestenbaum, 1993, p. 164). Therefore, it appears that society has a negative relationship with ‘unnaturally’ high male singers. When referring to high male voices and ‘voices that do not fit’ it seems logical to start by discussing the voice of the castrato. In her book, *Queer Voices: Technologies, Vocalities, and the Musical Flaw* (2011), Freya Jarman-Ivens, a Music Lecturer from the University of Liverpool, explains how the majority of people expect a discussion of ‘queer voices’ to feature the castrato along with other “...men who sound like women” (Jarman-Ivens, 2011, p. 18). A huge amount of work in the area of ‘voices that do not fit’ happen to focus on the castrato, primarily because it is such a strong identifiable phenomenon but also because the historical documentation of it is plentiful. Studies of the castrato can be multidisciplinary as they tie into identity studies, but they also tie into a longer established historical musicological tradition. Jarman-Ivens explains the term ‘queer’ stating it “contains and effects an antinormative function; indeed, the moment it becomes normative, it stops” (Jarman-Ivens, 2011, p. 17). This further affirms the castrati as a good starting point as although the castrati became normative at the time, the castrati as a phenomenon is a nonnormative voice with a physical state that created sexual ambiguity. Castrati also provide an interesting case study alongside the FtM voice as they both relate to how testosterone implicates a voice. The two case studies discussed in this chapter are Alessandro Moreschi and Javier Medina.

The term castrato originates from around the mid sixteenth century and is a type of high-pitched male singing voice with an average range of E3 to E6 which is similar to that of a soprano (Clapton, 2008, p. 233). The beginning of the castrato practice was extremely closely connected to the Papal chapel in Rome where they were first heard as early as 1562 (Constansis, 2009, p. 15). The Castrato was a recognised category of voice from, c1500 to 1900s, the progression of the castrato coincided with the rise in popularity of opera with the pinnacle of both being in the middle of the eighteenth century (Koutsiaris et al., 2014, pp. 106-107). A Castrato was the normative voice for the role of the 'primo uomo' and the 'secundo uomo' in eighteenth century Italian Operas (**Hatzinger et al., 2012, p. 2234**). The castrato voice, as stated by Constansis, is an artificially preserved voice "brought about by castrating young boys with promising voices before they reached puberty" (Constansis, 2009, p. 16). The ideology was to ensure a young boy retained their vocal range into adulthood so their voice would remain high, but they would mature and develop the power of an adult bio-male (Feldman, 2015, p. 5). As they grew older and matured, they had the size and strength of a full-grown adult male meaning the timbre of their voice incorporated both a bio-woman's and a boy's vocal characteristics (Constansis, 2009, p.18). The castration was thought to preserve the 'sweet' high timbre of a boy before they reached sexual maturity, giving castrati what was perceived to be their desirable voices (Ravens, 2014, p. 18). The operation of castrating these boys was referred to as a 'sweetening' of the voice and it was often carried out by barbers and surgeons. The procedure was unlawful meaning it had to be done secretly and was usually by request of the Catholic Church (**Hatzinger et al., 2012, pp. 2234-2235**). The castrato is a great example of a voice that throws up questions of queer identity as the voice is a combination of a bio-male, a bio-female, and a child in one being (Constansis, 2009, p.18). Thus, the societal identity of a castrato's voice was stuck somewhere between a female voice and a male voice which created expressions of sexual ambiguity. This ambiguity of castrato voice gave them an 'otherworldly quality' positioning them almost in a state of voyeurism (Constansis, 2009, p. 19). This is because they blur the rigid gender lines as they did not conform to the biological gender categories.

The history of the castrato

There are many different historical terms other than castrati for castrated males such as musici, eunuchi, cantori evirati, and soprani. Eunuchs were a feature of ancient Eastern societies and there is evidence of eunuchs existing from around 2100 BCE. Castration in these societies was not regarded as undesirable as a eunuch could never create a dynasty therefore rulers felt safe to have them as inmates at court (Ravens, 2014, pp. 12, 13). The eunuchs of harem were on occasion noted to have sweet singing voices that were used to entertain their master's 'many ladies' and it was therefore gradually recognised that the early castration of boys, could create a 'beautiful' singing voice (Scammell, 2003, n.p.). Dating back to as late as the fifth century eunuchs were prominent in the music of the Eastern church (Ravens, 2014, p. 15). Initially these boys would sing in church and cathedral choirs until, after arduous training, they were able to sing male and female roles in operas (Scammell, 2003, n.p.). With the recognition that these eunuchs had good voices in churches and cathedrals, eunuch choirs were created. However, the desirable singing voice of these eunuchs was not the reason these boys were operated on, it was actually a by-product of an age-old operation carried out to manufacture sexual guardians (Ravens, 2014, p. 13). Simon Ravens has explained that when these eunuch's voices have been described, they have been noted to have "qualities of softness, tenderness, languor, delicacy and effeminacy" (Ravens, 2014, p. 18). There is much sexual ambiguity surrounding the eunuch and as Ravens further stated there are many records referring to them offering "intriguing depictions of androgynous musical performers" as well as accounts stating how they "were seen as being a trans-gender group..." (Ravens, 2014, p.19). Even though the reason many eunuchs were castrated was nothing to do with the preservation of their voice it was noted that they had very good voices and this voice received very positive reception.

Castrato training

It was not just the castration of the castrati that gave them their unique and desirable voices but also the strict and rigorous training regimes they were subjected to. The fact

the castrati were highly trained and talented performers is a further reason why they were such desirable sexual partners. As Constans comments, the “singers’ vocal qualities were not only due to physiology but their strict training regime” (Constans, 2009, p. 19). The young boys training usually took place in conservatories and lasted ten years **(Koutsiaris et al., 2014, p. 109)**. This is an example of a typical regime of a training school in Rome in c. 1700:

“In the morning, one hour singing difficult passages, one hour of literature, and one hour of solfeggi in front of mirrors. In the afternoon, one half hour of music theory, one half hour of counterpoint on improvisation and one hour of literature. They also had to study composition and learn to play the harpsichord” **(Koutsiaris et al., 2014, p. 109)**.

This intensive training along with the physicality of castration itself gave the castrati extraordinary lungpower and stamina that was extremely difficult to match. As a direct result of this training any modern day natural born or medically induced castrati will not have a voice that matches that of the eighteenth-century castrati, as they will not have undergone the rigorous training regime throughout adolescence. Consequently, their technique would stand out as being overtly modern and would lack their powerful tone **(Koutsiaris et al., 2014, p. 109)**.

The castrato voice as ‘desirable’

Castrati were very desirable to the families that offered their children up for castration, to opera audiences and also as sexual partners. Their wide spread desirability indicates their strong positive reception. The boys that were chosen to be castrated were thought to possess outstanding singing voices so their families offered them up for castration, this was usually by less affluent families who supported the practice in the belief it would bring them prosperity (Scammell, 2003, n.p.). It was often misconstrued by parents that prosperity could be brought to the family if they got their sons castrated with the hope they could secure a position singing in a Catholic church (Feldman, 2015, p. 5). Further adding to the idea of the castrati’s positive reception is

the seventeenth century belief that castration was, as Constansis explained, “regarded almost as a form of celibacy” for those highly respected people following a “monastic vocation” (Constansis, 2009, p. 18). Therefore, poorer families justified the mutilation of their child’s testicles, as it would bring prosperity to the family and it was a desirable voice that was positively received by society.

Castrati appealed to women for a number of reasons, one being the undeniable fact that castrati were very talented and highly trained singers. The virtuosic nature of the castrato was a very attractive quality and for much of European history they were positioned at the top among musical creator-performers, with a castrati’s vocal technique being described as exceptional, heroic, and godlike (Feldman, 2015, p. 5). This further indicates how popular, celebrated and well received the castrati were. Moreover, the way castrati were deployed in operas and on stage connotes a sense of hyper masculinity and power with regards to the castrato. In opera the top tier of the cast was the *primo uomo* (the male lead, often a hero), which in the seventeenth century was typically a heroic and virtuous lover played by a castrato (Desler, 2015, p. 65). As high pitched voices were associated with power the castrati in opera were employed in roles such as heroes, fighters, leaders, diplomats, kings and others with great virility, they were playing hyper male characters regardless of that fact they had been stripped of what made them quintessentially male (Freitas, 2003, p. 198). For example, Francesco Bernardi ‘Senesino’ was a star castrato who was widely admired in London for playing the heroic lead roles in an impressive eighteen of Handel’s operas (Desler, 2015, p. 62). This obviously made castrati appealing to women as they were playing such heroic masculine roles that stereotypically had the qualities a ‘woman wanted’ out of a partner. Ironically the castration of these men, which took away from them what made them ‘the ultimate man’, was actually one of the reasons for their desirability. A Castrati’s ability to function in the same way a bio-man could except for their inability for reproduction actually proved to be a reason why they were such popular lovers amongst bio-women (Pinil, 2006, n.p.). This further indicates the

castrati's popularity and positive reception not only as singers but more generally as well.

Sexual ambiguity

The sexual ambiguity of the castrati is highlighted as, despite their inability to reproduce and that they are stuck somewhere between a bio-man, a bio-woman and a child, they were still desirable partners. The castrati did not fit to the rigid socially constructed gender binary of male or female and they were often described as being a 'myth' (Constansis, 2008, n.p.). Another derogatory term that was used to describe a castrato was 'disturbingly ambiguous' (**Hatzinger et al., 2012, p. 2234**). This idea that a castrato was a myth and 'disturbingly ambiguous' produces connotations of sexual ambiguity as people were unsure what a castrato was. As Ravens explains, the castrati have been seen by many to be a part of a "gradual breaking up of rigid gender identities" (Ravens, 2014, p. 184). This idea of the castrati being unidentifiable and almost not human is backed up when Ravens further states, when listening to a Castrato sing "you would think it was the singing of Sirens, not humans" (Ravens, 2014, p.26). These concepts of the castrati not being human or being different and non-normative open it up to ideas of queer identity. The juxtaposition of the Castrati voice being high and effeminate as well as heroic and masculine provides them with further connotations of genderqueer identity. The sexual desirability of the castrati is highlighted as being 'non-normative' as castrati were often referred to as 'boys' instead of men regardless of their age (Pinil, 2006, n.p.). This creates an odd identity as they are seen as being heroic adult men, but they are referred to as being boys suggesting sexual immaturity.

Up until the nineteenth century gender identity was not really a concept widely used or recognised thus identity was much more fluid. It was only when terms like heterosexual and homosexual around 1870 did concepts of gender identity change and become more rigid. For a gender bias or a 'normative gender' to be present, first there needs to be a distinct sense of gender identity (Ravens, 2014, p. 183). The perceptions of

heterosexuality and homosexuality created a social shift whereby a person identified by their sexual orientation, therefore as a consequence society increasingly required both sexes to conform with distinct gender stereotypes (Ravens, 2014, pp. 183,184). The development of gender identity had a profound impact of the reception of voices as it created a hostility towards falsetto and high male voices (Ravens, 2014, pp. 183,184). Society began to make comments with regards to the castratos voice, for example some women made comments such as “Dare close your eyes and he sounds like an 80 foot Amazon” or “(with my eyes closed he) reminds me of my mother only much, much bigger” (Pinil, 2006, n.p.). As Ravens comments, castrati of the eighteenth century who were considered womanly or androgynous, received positive discrimination as there is very little comment of the castrati and effeminate singing before the nineteenth century. He explains how this is because “effeminacy simply does not appear to be a concept they recognise” (Ravens, 2014, p. 183). It seems that the nature of the castrati’s voice opens it up to genderqueer identities as it is not a ‘natural’ voice.

In the seventeen and eighteenth century high male voices were more desirable because at the time highness was associated with power, meaning the higher a male singer’s voice the more perceived power they possessed (Freitas, 2003, p. 198). Thus, the castrati’s high voice connoted power and power has historically been closely allied with masculinity therefore the high voice of the castrati was a masculine feature (Whiteley, 1997, pp. 29, 29). One of the contributing factors of why highness was associated with masculinity is the ‘one sex model’ concept, making the differentiation between bio-males and bio-females very slight. The view was that bio-males and bio-females all had the same reproductive organs, but they were external on a man and internal on a woman (Schleiner, 2000, p. 180). Therefore, if the biological understanding in the seventeenth century was that the two bodies types were basically the same then its understandable why they expected the voices to be a similar pitch. There was less of a distinction between male and female biologically therefore less of a difference in the perception of their voices so a high voice could be masculine.

A further reason for the castrato voice being associated with masculinity, as mentioned above, is the way in which they were employed in operas. The exclusivity of the castrati playing the *primo uomo* is of interest because in modern day operas it is typically played by a tenor as this is now considered the most desirable voice type. This indicates how the role of the hero is given to the voice perceived at the time to be the most desirable and powerful, which was the castrato voice in the seventeenth and eighteenth century. It can therefore be stated that it was the role the castrati played that made them masculine, this is supported by French literary theorist, Roland Barthes, concept of the 'grain of the voice', as the castrati's portrayal of a character and voice is what convinced the audience of their masculinity and not their sexual inabilities (Barthes, 1990, p. 188). In the seventeenth century tenors and basses sang the parts of old men and comics, this accentuated the heroic and hyper masculine connotations of the castrato as they had high pitched voices matching their high rank (Scammell, 2003, n.p.). However, it could be argued that the voice was associated with masculinity because of the roles they played rather than they played heroic roles because of their voice type.

Reception

The reception of the Castrati and their voice type has differed over time. Initially in the seventeenth and eighteenth century the voice type was highly sought after and appreciated. The Castrati have been described as a mesmerising phenomenon with their voice being considered by many eighteenth century listeners to be 'addictive' (Hatzinger et al., 2012, p. 2233). One of the reasons castrati were able to have such a positive reception is the practice could be viewed to have the backing of the church. As Ravens explains, it has been inferred that the New Testament accepts the practice of castration, "there...[are] eunuchs, which have made themselves eunuchs for the kingdom of heaven's sake. He that is able to receive it, let him receive it" (Ravens, 2014, p. 15). The acceptance of castration in the bible meant people could overlook the cruelty of the surgery and enjoy the resultant voice. The voice was viewed so highly in the seventeenth and eighteenth century that *opera seria*, a type of opera that was

associated with nobility, typically employed castrati in the main roles **(Hatzinger et al., 2012, p. 2234)**. It is fair to conclude that during the seventeen and eighteenth century the castrati voice was extremely well received and celebrated.

Inevitably, it was eventually recognised that the ‘beauty’ of this voice came at a very high cost, not only was it a cruel inhumane practice it was also child abuse **(Hatzinger et al., 2012, p. 2233)**. In the middle of the nineteenth century Pope Pius X banned the custom of castration and the employment of castrati leaving Alessandro Moreschi, who I will discuss shortly, as the last known castrato **(Hatzinger et al., 2012, p. 2236)**. The realisation that the mutilation of young boy was inhumane and the fact it is now illegal indicates how the popularity of the voice seriously declined as the voice became a sign of cruelty not heroism.

The nature of the castrato and its politics have always tainted its reception even in the seventeen and eighteenth century. The underground nature in which the operations were undertaken have always suggested negative feelings towards the castrati. Had these operations been legitimate and viewed as being humane then they would not have been carried out in secret. Up until the mid-sixteenth century the presence of castrati singers in church choirs was kept secret. This shows how from the beginning castrati made society feel uneasy and if castrato were purposely hidden from society in their own time, it is not surprising one cannot positively receive them now (Ravens, 2014, p. 24). Further evidence of this negativity is the fact castrati were frequently referred to as ‘boys’ in the church as a way of keeping the hiring of castrati very low key and the church would deny they were using castrati (Pinil, 2006, n.p.). Today the term castrato carries very negative connotations, with castrati being regarded as victims and slaves of their craft, a disapproving reminder of a harrowing past. These modern views show how the castrato is now received on whole as a despicable mutilation of boys and far from a desired voice type.

Case study 1: Alessandro Moreschi

Alessandro Moreschi was the last official living castrato who was an ecclesiastical singer and choirmaster, not an opera singer who performed on stage and as a result he was more locally renowned rather than internationally renowned (Law, 1984, p. 6). At the height of his career Moreschi was choir director at the Sistine Chapel after working his way up from joining as a chorister in 1883 (Feldman, 2015, p. 80). Moreschi names his first teacher as being Nazareno Rosati, former member of the Sistine Chapel, in around 1870 (Clapton, 2008, p. 62). Moreschi's singing career started with Rosati and he retired in 1912 after being a member of Capella Sistina for 30 years (Hatzinger, Vöge, Sold, & Sohn, 2009, p. 651). It was Rosati that encouraged Moreschi to move to Rome in 1871 where he joined the choir-school at the church of *Scuola di San Salvatore* in Lauro (a Catholic church in central Rome) at the age of thirteen (Clapton, 2008, pp. 65-69). After only two years, in 1873, Moreschi was appointed the role of first soprano in their church choir (Clapton, 2008, pp. 62-75). Then finally in 1883 Moreschi became a part of the Sistine Chapel where he was a member for the next thirty years (Clapton, 2008, p. 102). This very brief history of Moreschi's singing career omits when his castration took place as the precise details are unknown and should not necessarily be an important focus when studying voice, identity and reception.

There is uncertainty into when or why Moreschi was actually castrated as there is no written documentation that has survived to indicate the facts of his castration and, as Clapton has expressed, "Moreschi himself was understandably reticent on the subject" (Clapton, 2008, p. 60). However, there are three main theories that try to explain why and when Moreschi received the operation. The nearest to an explanation ever given is a medical one which Clapton explains: Moreschi "was the only one of his family to have been baptised on the day he was born, which implies he was in imminent danger of death", castration was often used as medical treatment for childhood accidents and with infants it was "sometimes invoked as a lifesaving procedure" (Clapton, 2008, p. 60). This could be why he started singing lessons, if he had already been castrated his parents might have thought they should get him into singing. However, there are two

other main theories that could be the cause of Moreschi castration, the first being that he was castrated later when he was eight as a cure for the 1867 cholera epidemic. The other being that he took a 'traditional path' to castration after his teacher convinced his parents that Moreschi's voice should be 'preserved' because of its high quality (Clapton, 2008, pp. 60-62). There is no real way of knowing which of these reasons for Moreschi castration is correct, but it does raise interesting questions with regards to reception and how the different reasons for his castration might change his reception. For example, if his castration was a result of a medical emergency people might take pity on his voice and feel sorrow whereas if he was castrated by the church people might be repulsed and sickened by his voice. Even though it should in many ways be irrelevant how or why the castration of Moreschi was carried, the very fact that authors such as Clapton write in some length about the different possibilities of Moreschi's castration suggest it is important to society and therefore important to how society receive Moreschi.

Reception of Moreschi's contemporaries

It would appear from this timeline of Moreschi's career that he was a very successful ecclesiastical singer who would have been well received, however it is not that simplistic, and it has been argued that a possible reason for his success was a result of him being the last castrato rather than his singing ability (Law, 1984, p. 6). As Moreschi is a historical case study and is concerned with a voice type and vocal practice that no longer exist, the reception of Moreschi's voice by the public at the time he was alive and singing differs to his modern-day reception. Stereotypically those who view Moreschi and his work in modern times find it second-rate and uninspiring. However, as Ravens comments, "when we stand Moreschi in an accurate historical context, he emerges as a serious artist: when we do not, he will always be found wanting" (Ravens, 2014, p. 188). Therefore, one should analyse and appreciate Moreschi's singing against the musical preferences of his time. The change in reception is not only down to a change in performance practice but also human ethics have realised that the castration of boys is inhumane. Before looking into Moreschi's lasting legacy, his

changed reception and how he is received in modern society, it is important to investigate his reception in his own time.

When Moreschi started lessons at *Scuola di San Salvatore* he was taught by St John Lateran's Master of the Music, Gaetano Capocci. Moreschi obviously showed great vocal potential and was viewed highly by his teacher as after only two years of holding his position he was appointed the post of primo soprano at St John Lateran which ensured he began to acquire a following (Clapton, 2008, pp. 73-75). This shows how he must have been received as a very competent singer as he was given the top soprano role in a relatively short period of time and Capocci's reception of Moreschi was obviously shared with the audiences' as he gained a following. In his early years there are reports of Moreschi having coloratura flexibility with plenty of coloratura-style pieces in his repertoire (Feldman, 2015, p. 89). This suggests that he was an accomplished singer with a breadth of skill and flexibility in his performances that was, to the audiences at the time, impressive. Lillie de Hegermann-Lindencrone, who was an acclaimed professionally trained singer, comments on Moreschi's effective use of coloratura which was demanded in his performance of *Jewel Song* from the 1859 Opera *Faust* (Law, 1984, p. 6). She frequently visited the Sistine Chapel to hear the vocal performances which apparently were often so popular it was hard to find a place to stand, showing how much of an attraction Moreschi was (Clapton, 2008, p. 76). Hegermann-Lindencrone recalls sitting at these performances listening "entranced" to Moreschi's "tearful...[and] almost supernatural" voice (Feldman, 2015, p. 128). The comments from Hegermann-Lindencrone not only outline his popularity but his accomplished singing. Moreover, Moreschi's vocal flexibility and technical mastery were highlighted in his 1883 performance in *Cristo all' Uliveto*, which, according to Nicholas Clapton, demonstrated his ability to sing any soprano solo "however stratospheric its tessitura" (Clapton, 2008, p. 104). Accounts like this of Moreschi's singing provide evidence that he was well received regardless of the fact the castrato voice was going out of fashion. It is said that the priests and singers from the Vatican must have been aware of Moreschi's voice and his talent, and Clapton commented

how Domenico Mustafa, “the most famous soprano castrato of his day, who had been a member of the Sistine Choir since 1848”, was “keeping an eye on him as a possible successor” (Clapton, 2008, pp. 69-75). The fact that such a prestigious and famous soprano castrato thought Moreschi was worthy of being his successor is high praise, showing positive reception towards Moreschi. However, it equally could have been that Mustafa was ‘keeping his eye’ on Moreschi as he was the last young castrato so was by default the only possible successor.

An indication of Moreschi’s positive reception in his own time is how he was in such high demand as a performer. Affirmation of this high demand is provided as, outside of church services, Moreschi frequently sang for private events and musicals. This demonstrates how people thought highly of Moreschi which is supported by the view that “no Roman concert was thought properly conducted without this singular artist” (Law, 1984, p. 4). Another example of how Moreschi was in high demand was in 1900 when the Italian royal family requested him to sing as a soloist at the funeral of Umberto I. This massive honour to perform at such a prestigious event furthers ideas of Moreschi’s popularity and there are reports of “spontaneous ‘bravos’ with which his Sistine colleagues touchingly greet the end of his recording of *Ideale* by Tosti”, signifying how Moreschi was admired (Ravens, 2014, p. 187). *Ideale* has a relatively low tessitura but is, however, instead rhythmically demanding (Webb, 2012, p. 36). The double and triple rhythms in the vocal line, for example on the lines “E de la terra ogni affanno, ogni croce” and “In quel giorno scordai” are sung against triplets in the accompaniment providing a two against three feel which is a challenging skill to master (Tosti, 1987, pp. 18-20). These technical difficulties of the piece could, if the singer is not careful, disrupt the melodic and timbral flow unless they maintain consistent breathing with a vibrant tone in their phrasing (Webb, 2012, p. 37). It is therefore a sign of Moreschi’s skill as a singer that his performance of a rhythmically demanding piece at a prestigious event was met with such praise.

In addition, an event that emphasises Moreschi’s demand and positive reception was the celebrant bishop having to move the pontifical mass (high mass) from 11am to

midday to enable Moreschi to perform there. This was the pontifical mass for the feast day that celebrated the birth of the Blessed Virgin Mary, on the 8th September at the Santa Maria dell' Orto, a Catholic church in Trastevere Rome. As can be expected it was a very busy time for Moreschi and the fact the bishop subordinated himself to Moreschi's needs indicates how Moreschi was highly sought after (Clapton, 2008, p. 79). Moreschi's performances as a soloist in these pontifical mass were on the whole very popular and a Roman alto wrote in his diary that Moreschi had a "voice of gold, not just rare but unique", giving him great praise (Feldman, 2015, p. 107). In an interview about his studies with Moreschi (beginning in 1904), Domenico Mancini supports ideas of him being sought after as he recalls coming "under the spell of [Moreschi's] outstandingly beautiful voice" (Feldman, 2015, p. 89). It would appear then that Moreschi was extremely well received for his vocal abilities.

The history of Moreschi's professional career is an indication of his positive reception especially with his admission into the Sistine Chapel. As a direct result of his 1883 performance of *Seraph* in Beethoven's oratorio *Christus am Ölberg*, which was arranged for Moreschi by his singing teacher at the time Capocci, Moreschi was given the lasting nickname 'L'Angelo di Roma' which meant 'The Angel of Rome' (Clapton, 2008, pp. 81-82). This sobriquet provides Moreschi with benevolent, celestial, and supernatural connotations, suggesting he was received highly by society. Nevertheless, this name could have been given to Moreschi as a result of the characters he played rather than his singing ability as *Seraph* is a celestial, heavenly being and is arguably more where these supernatural connotations originate. The role of the Seraph was a very important and vocally demanding one with lots of coloratura and Moreschi's performance of it provided him with great public acclaim (Feldman, 2015, p. 89). It is evident that Moreschi gave a very strong performance showing his great ability as the performance resulted in him being invited to apply for admission to the Sistine Chapel (Clapton, 2008, p. 82). This indicates his positive reception and provides evidence of his strong vocal capability as his performance of a technically demanding role was accomplished enough for him to gain interest from the prestigious

Sistine Chapel. Once Moreschi was accepted into the Chapel he very quickly worked his way up to becoming first soprano within three years of being there which suggests he was received well by his superiors in the Sistine Chapel. As Clapton explained Moreschi achieved this role in an unusual way against the hierarchical traditions of the Chapel, as he achieved full membership “without the usual years of apprenticeship as a soprannumerario” (Clapton, 2008, pp. 107-108). The Sistine Chapel allowing him this privilege without the usual work involved indicates how they admired his voice and wanted it as a preminent part of their choir. This is further supported by the fact there were four other castrati working alongside Moreschi who were considerably older than he was, and they did not achieve this membership (Clapton, 2008, p. 107). Ideas of Moreschi being a talented singer were solidified early on in his career in the Sistine Chapel with his performance in *Cristo all' Uliveto*, as it demonstrated his ability to sing any soprano solo regardless of its stratospheric tessitura and this inevitably insured he gained publicity (Clapton, 2008, p. 104). Again, this not only demonstrates Moreschi's virtuosic musicianship as a performer but also his popularity especially in his early years at the Sistine Chapel.

On the other hand, not all accounts of Moreschi from his time are positive, there are ones that suggest his voice is not as strong as others have alluded. When discussing the great castrati, it is often singers like Farinelli that come to mind and not Moreschi. This is partly as a result of him not being an operatic castrato, so he did not put his voice through the same training and development required of an eighteenth-century operatic castrato. Instead Moreschi was a singer who exclusively trained for the church, so he was not required to obtain the impressive range of skill like his predecessors (Law, 1984, pp. 8-9). Therefore, indicating how Moreschi would have been a technically less accomplished singer than the castrati of the operatic stage, he has been described as being both physiologically and technically under developed (Law, 1984, p. 9). This is obviously a negative view of Moreschi connotating that he is an inferior singer and almost an inferior human to other, ‘more serious’, operatic singers. Evidence further supporting this idea of Moreschi being an inferior singer is the

planned 1914 tribute to Farinelli. The famous German castrato researcher, Professor Franz Haböck, organised a celebration where Moreschi would sing the parts Farinelli used to sing. However, by this point (aged 56) Moreschi was no longer capable of singing these difficult parts. This was partly a result of age but also largely as a consequence of his stylistic nineteenth century training meaning he was unable to master the virtuosic parts written for Farinelli (Hatzinger, Vöge, Sold, & Sohn, 2009, pp. 651-652). A further point that outlines Moreschi potentially less accomplished voice is the fact his singing technique did not develop in a way that allowed him to sustain and reserve his voice. For example, there are reports where “Moreschi had declined to sing on account of an indisposition caused by having sung too frequently” (Law, 1984, p. 6). Thus, indicating that Moreschi voice was not as strong as other castrati, especially not those performing the operatic stage who were able to sustain their quality of voice night after night.

In addition to this, another factor that suggests Moreschi negative reception is Alessandro Gabrielli’s account of the castrati. Gabrielli has been described as a kind of disciple of Moreschi as he was a “boy soprano soloist beside him at the Cappella Giulia in Rome”, therefore they became quite familiar (Feldman, 2015, p. 309). However, when Gabrielli gave his account on the castrati he completely omits Moreschi without even giving him a passing mention. This shows a negative reception towards Moreschi, especially since Gabrielli worked so closely alongside him and it suggests that Moreschi’s voice is not worth mentioning. Gabrielli’s account of the castrato is not the only one of Moreschi’s time that misses him out completely, other sources on the primo Novecento in Rome did so as well (Feldman, 2015, p. 309). Obviously Moreschi’s voice was not to everyone’s taste and this evidence of people at the time omitting him from accounts of the castrati suggests that he has become more of a historically important singer as he was ‘the last castrato’ and not because he was ‘a great castrato’.

Although it is known, that Hegermann-Lindenchrone used to enjoy going to the Sistine Chapel and listening the choir, it has also been noted that she used to alternate between “fascination and distress in the face of Moreschi’s singing” (Feldman, 2015, p. 128). Hegermann-Lindenchrone enjoying the voices of the choir but finding Moreschi ‘fascinating’ and ‘distressing’ could be because she felt Moreschi was technically incompetent, however I feel this is unlikely. Castrati were much less prevalent at this point and Moreschi was one of the only castrati left in the choir therefore it is possible that Hegermann-Lindenchrone might have been unaccustomed to the voice of the castrato. This could have placed her in a state of bewilderment of what the voice is or repulsed by how it was physically created, meaning she was both fascinated and distressed. Her choice of language provides strong connotations of othering and ambiguity of Moreschi’s singing voice. The linguistics of the words ‘fascination’ and ‘distress’ situate Moreschi as being different, strange, non-normative and subject him to enfreakment². The ideas of enfreakment are emphasised in her apparent incapability to decide, she is ‘alternating’, if she is distressed or fascinated, inferring she cannot decide what he is and thus how she feels about him. Further ideas of Moreschi being subjected to enfreakment are supported by a letter from Maestro Meluzzi (in 1883), the Master of the Music at the Cappella Giulia. In the letter Meluzzi writes, referring to Moreschi, “It does not seem proper to me that the Vatican Chapter should be dictated to by the whim of a hermaphrodite” (Clapton, 2008, p. 80). This shows how Meluzzi thought of Moreschi as being subhuman and unacceptable purely because he is a castrato. He is using Moreschi’s physicality as a way of identifying him in a derogatory way. These ‘freakish’ accounts of Moreschi provide evidence of negativity towards him in his own time as well as a societal intolerance of the non-normative.

² “Enfreakment...in life, people with disabilities are often depicted in negative ways, confined to narrow and stigmatized roles...Such stereotypes have the effect of othering these “starees,” causing us to look down at them in pity for their deficits, or across a vast distance at them in amazement or horror at their exoticism or freakishness, or up at them in awe of their apparently superhuman difference” (Howe, Jensen-Moulton, Lerner, & Straus, 2015, p. 7).

Assessing Moreschi's voice: 'Ave Maria'

Although it is not a specific attack on Moreschi himself, the Pope's official banning of castrati from the chapel in 1903 is a clear indication of how the reception of the castrato voice had changed (Feldman, 2015, p. 81). The opinions on the castrati voice had gone from it being one of brilliance to it being a cruel inhumane practice that was frowned upon. This could have been the end of Moreschi legacy but in 1902 and 1903 the London based *Gramophone and Typewriter Company* recorded the Sistine Choir under Moreschi direction. Nine sides of recordings that were captured that featured Moreschi's voice (Law, 1984, p. 4). Although the recordings are of poor quality, they provide important historical evidence of an old vocal practice. When one listens to these recordings, as Sam Abel, author of *Opera in the flesh: sexuality in operatic performance* (2019), states, Moreschi's voice "evokes a physical presence, the image of a solitary, wounded baby singing its glory and its pain from the depths of its absent vitals" (Abel, 2019, n.p.). These recordings are the only opportunity the modern listener has to hear the actual voice and sound of the castrato. This provides a reason for Moreschi being remembered as not only was he the last castrato, but he is also the only castrato to have recordings of his voice making him an important historical case point. The recorded piece that is the most renowned and easily accessible is the *Gounod's Méditation sur le premier prélude de piano de* by J.S Bach (1853), more commonly known as *Ave Maria*. The likely reason why *Ave Maria* is the most well know of Moreschi recorded songs is because it has had the greatest number of recordings produced in the shortest period of time by different artists, as well as already being a widely popular song (Feldman, 2015, p. 82). The songs popularity helped Moreschi's legacy as it has provided people with a way of accessing the voice of the castrato through a song they already knew and liked. The recordings, specifically *Ave Maria*, provide a way to investigate how Moreschi voice is received in modern society and allows an analysis of a castrato voice.

Moreschi frequently sang *Ave Maria* in his early career and is the type of piece he used to sing in Roman hotels and salons (Feldman, 2015, p. 82). Therefore, it is probable that, rather than choosing to record a song that showcased his talent, he chose *Ave Maria* as it was a nostalgic and important song to him. Additionally, as it was a song he knew well, it was one he could perform easily with minimal preparation needed for the recording. In 2014 the record company *Trunk Records* released an album called “Alessandro Moreschi: The Last Castrato” and it features all the recording that were captured at the *Vatican by the Gramophone and Typewriter Company* in 1902 and 1903 (Moreschi, 2014). The CD, which is easily available on *iTunes* and other platforms, includes all the solo pieces captured of Moreschi making them easily accessible and these are the recordings I have used for my analysis.

One thing that becomes apparent in Moreschi’s recording of *Ave Maria*, and has been mentioned by several authors, is his narrow use of range with the highest note being a B6, on “ho” of the line ‘Nunc et in hora mortis’, and the lowest being a D4 on “ae” of “nostrae” on the line ‘In hora mortis nostrae’ (the low D happens in a couple of other places but is most prominent here), both shown in example 1 (Moreschi, 2014, track 1). For the majority of the recording, however, Moreschi uses an octave range of F3# to F4# (Law, 1984, p. 8). This range seems narrow compared to the verbal accounts of earlier singers and does not fit previous descriptions of Moreschi’s ability to singing up to an E6 (Feldman, 2015, p. 89). However, this could purely be a result of the choice of repertoire as *Ave Maria* in the key of G major, the key of Moreschi’s recording, only has a limited range. Thus, it would be naive to assume from this recording alone that Moreschi was incapable of singing outside of this range or that it was as result of a decline in his vocal ability. Moreover, within the range he does use, his tone is very bright and secure, and it is particularly evident in the climax of the song on the high B6, shown in example 1. Here Moreschi sings ‘ho’ in the line ‘Nunc et in hora mortis’, this B6 is the highest note in the song and Moreschi voice is well supported here and the note is very clear with beautiful portamento sliding down to the G6 on the same vowel, the “o” of “ho”, and subsequently down to the B4 on “in” with lovely coloratura

(Moreschi, 2014, track 1). Martha Feldman, a cultural historian of European vernacular musics, supports this idea as she comments on Moreschi's "lightness and agility in the upper" register of his voice (Feldman, 2015, p. 126). Although in the recordings Moreschi does not sing as high as might be expected, the high notes he does sing are strong, well supported and not strained suggesting he is capable of singing higher.



Example 1: a transcription of the lines "...hora In hora mortis nostrae" from *Ave Maria*, transcribed from the Trunk Records 2014 release of *Alessandro Moreschi: The Last Castrato* (Moreschi, 2014).

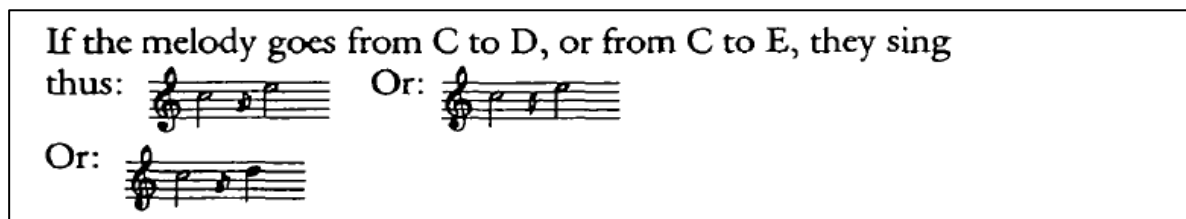
Moreschi struggles with the C5 in the opening phrase of *Ave Maria*, the opening is strong and confident but when he moves to the C5 on the 've' of the word 'Ave', shown in example 2, the pitching is less secure and unstable as a result of a lapse in his support (Moreschi, 2014, track 1). The lack of sort of his transition from the B4 on 'A' to the C5 on 've' means the C5 is slightly flat but he manages to secure the C5 quickly on the next quaver on 'Ma' for 'Maria', also shown in example 2. This is again then followed by secure pitching and lovely portamento on 'Ma-ri-a' going up from a C5 on 'ma' to a D5 on 'ri' sliding down to end on A4 on 'a' (Moreschi, 2014, track 1). This lack of support leading to pitching issues occurs several times throughout the recoding and it would be easy to assume it indicates a decline in Moreschi's vocal ability or shows he had poor technique (Law, 1984, p. 7). However, it is unlikely that Moreschi had bad technique as he managed to sustain a successful singing career in the Sistine Chapel. Although it could be assumed that Moreschi's vocal abilities were in decline, he was only in his mid-forties in 1904 which is commonly an age where singers are in their vocal prime (Ravens, 2014, p. 187). Thus, it seems most fitting that the recording instead provides evidence of a historical 'bygone' vocal structure that uses a different mode of singing (Feldman, 2015, pp. 127-128). Moreschi's voice to the modern listener might sound unsupported and insecure but if the voice is considered in context of Moreschi life this is not the case.



Example 2: a transcription of the opening line “Ave Maria” from *Ave Maria*, transcribed from the Trunk Records 2014 release of *Alessandro Moreschi: The Last Castrato* (Moreschi, 2014).

A further example that suggest the recording provides evidence of a different vocal practice is the transition of vocal registers. Modern singers often try to make the transition between their head and chest voice, their ‘break’, as smooth and inaudible as possible. However, in this recording of *Ave Maria*, Moreschi’s break is obviously noticeable in many places, with a good example being on the phrase ‘hora mortis nostrae’ (Moreschi, 2014, track 1). As example 1 shows, this phrase descends from a D5 on ‘mor’ down to an F4 on ‘strae’ and on the recording the notable change in register is on ‘no’ of ‘nostrae’ (Moreschi, 2014, track 1). The notable change of register on ‘no’ suggests that Moreschi’s break is between the D5 and C5. Moreschi uses an acciaccatura to get from the D5 on ‘tis’ down to the C5 on ‘no’ (Moreschi, 2014, track 1). The contrast of the two registers is very pronounced but rather than being a technical mishap of Moreschi it is more likely to be a historical stylistic feature of his time. This is supported by the account that Moreschi uses acciaccaturas as a technique for leaping into his head voice and he sometimes drops an entire octave below the note he is aiming for (Law, 1984, p. 9). Although this use of acciaccatura is unusual to modern singing practices, it is an historical stylistic feature that has change over time and is something that was reportedly common in Moreschi singing (Feldman, 2015, p. 127). In 1831 Felix Mendelssohn, in a letter to his singing teacher, wrote of the effect of appoggiatura’s as being disagreeable and that they remind him of an old woman singing in church. Mendelssohn goes and provides an example and a transcription of an ‘appoggiatura’, shown in example 3, and his example exactly describes Moreschi’s practice of acciaccatura’s, and the application of the device occurs in the same area of the voice in Moreschi’s singing (Law, 1984, p. 10). Despite the recordings of Moreschi being seventy years after this letter, and being acciaccatura rather than an appoggiatura, it provides evidence of historical fashion of musical

ornaments in a similar time period. The account outlines only Mendelssohn's personal opinion and although he is scathing of the practice, the fact he is commenting on the ornament provides evidence that it was being widely used by singers at the time. It can then be concluded that although Moreschi's uses of acciaccaturas is of selective taste, it was common practice by his contemporaries and is the most probable reason for his use of them in his vocal practice.



Example 3: Felix Mendelssohn's transcription of appoggiaturas in a letter to Carl Friedrich Zelter, his singing teacher, written in 1831 (Law, 1984, p. 10).

Limitations of Moreschi's recordings

The recordings of Moreschi are very valuable as they provide an account and documentation of the castrato voice, however they are not without limitations. The recordings of Moreschi's voice alone cannot provide an impression of the range of different castrati voices of the eighteenth century or their extraordinary virtuosity, they instead provide an example which allows people to make assumptions on other castrati voices (Hatzinger, Vöge, Sold, & Sohn, 2009, p. 651). Professor of classics and ancient history at the University of Warwick, Michael Scott, has written about these recordings and he claims, "the virtuosity of the earlier singers is missing from these records" (Law, 1984, p. 7). Moreschi being the only castrati recorded means the attributes of other castrati cannot be heard. Regardless of a person's opinion on Moreschi's voice it would be inaccurate to judge the entire castrato discourse on recordings of one singer's voice. For example, in modern times people do not assume that every female pop singer sounds like Madonna just because there are recordings of her voice. In addition, the recordings do not exemplify florid singing or extraordinary breath control which are two of the castratos most frequently mentioned technical

accomplishments which might suggest how Moreschi's singing technique was different from other castrati (Law, 1984, p. 6). However, the recordings do not show this because they only provide a small snapshot of one singer's career never mind the entire castrato discourse. Moreschi's recordings are important as they are the only existing recording of a castrato however this voice needs to be analysed within its historical context.

The recordings from the Sistine Chapel were captured on phonographic wax cylinders that used 'pre-electrical horn' and 'cutting-stylus technology' (Feldman, 2015, pp. 81-82). The nature of phonographic wax cylinders provides limitations to Moreschi recordings, both in the process of recording and in the nature of the resultant sound. The early recording style does not fully capture the entire vocal or instrumental resonance range meaning the recordings will always have an inferior sound quality to the live performance with a flattening of the overall pitch and a degeneration of timbral quality (Law, 1984, p. 7). A factor that causes a reduction in sound quality is the conditions of the environment when the recording process took place. The environment can have drastic impacts on the quality of sound and a key parameter is the temperature of the space when recording. If the temperature is too low, then it becomes problematic for the cylinders to register the sound meaning the instrumentalist or vocalist would have to play louder and the resultant sound would be fairly weak. The temperature affects the sound as it dictates how the wax is cut, including how deep the grooves are making temperature crucial to the recording process and it can have detrimental effects if it is not right (Stanovic, n.d., n.p.). To add to this when the recordings are played back it is paramount to ensure the playback speed is correct as the speed affects the pitch and overall timbral quality of the sound, meaning the resultant sound can be inconsistent (Law, 1984, p. 7). It is clear that phonographic recordings are very delicate in both their recording and playback process, so it is important to be aware of this when using them. Therefore, when listening and analysing the voice of Moreschi it is important to understand the sound on the recordings is not completely what Moreschi would have sounded like. Part of

the reason the voice sounds odd to the modern listener is the nature of phonographic wax cylinder recording. When making accusations about Moreschi's voice the recordings have to be analysed in consideration of how wax cylinders change the sound.

In a study carried out by Dr Inja Stanovic from the University of Huddersfield, Dr Stanovic recorded an old 1881 Streicher piano using phonographic wax cylinders. These recording and Dr Stanovic's project in general are useful in providing a case study that highlights how the recording process effects the sound. Modern recordings of pianos are commonplace meaning they can be easily compared to Dr Stanovi's recordings. It becomes immediately apparent how her recordings sound extremely odd in comparison with modern recordings as the pitch is insecure and weak (Stanovic, n.d., n.p.). From listening to Dr Stanovi's recordings it is evident how phonographic wax cylinders have an exoticising effect as a piano, which is a very familiar sound, is made to sound peculiar and alien (Howe, Jensen-Moulton, Lerner, & Straus, 2015, p. 7). A sustained note on a piano has a constant pure tone with secure pitching, however on Dr Stanovi's recordings they are flat, inconsistent and the pitch is constantly fluctuating. Moreschi's voice in the recordings from the Sistine Chapel are in the same vein and his odd insecure pitching is likely also to be a result of the phonographic wax cylinder recoding process. This provides insight into the difference between Moreschi's actual voice and his voice on the recordings indicating how these are likely to differ greatly.

It can therefore be concluded from Moreschi's recordings that it is important to approach the recordings and the voice of Moreschi with knowledge and context of the castrato discourse and with an understand of phonographic wax cylinder recoding, otherwise the voice is disregarded as being weak. This is supported by eighteenth-century French writer Charles de Brosses who commented "one must be accustomed to the voices of castrati in order to enjoy them...they are brilliant, light, full of sparkle, very loud, and with a very wide range" (Law, 1984, p. 5). As Feldman comments

without the necessary context these recordings are “often dismissed as useless romantic artefacts of the Roman church by a singer said to have been past his prime” (Feldman, 2015, p. 81). This is not to say that Moreschi voice was spectacular but when investigating his reception, it is important to understand the historical context in which he stood.

Moreschi’s present-day reception

In modern society the reception of Moreschi can be measured by the majority of literature on the castrati often referring to him with regards to the decline of the castrato and books that celebrate the ‘castrato greats’ generally omitted him entirely. It has been stated that Moreschi’s voice being the only one able to represent this lost vocal skill is ‘unfortunate’ inferring how Moreschi is not a worthy representative of the castrati discourse as he does not do it justice. This suggest how in modern society Moreschi has a poor reception with his worth being the fact he was the last castrato. Moreschi is often only mentioned as an afterthought and commonly only mentioned as he was the only castrato to make recordings rather than for his talent. For example, in the article “The voice of the castrato” by Jenkins (1998), the only mention of Moreschi is at the end under the heading “The decline of the castrati” (Jenkins, 1998, p. 1880). This is further supported as it has been noted that Moreschi is mostly “relegated to footnote status or receives the most perfunctory of encyclopedia entries” (Law, 1984, pp. 3-4). Unlike the voice of Farinelli who is widely celebrated in modern society Moreschi is mostly neglected which indicates his negative reception and withering legacy. One of the LPs that was printed with Moreschi’s solo recordings on was titled “*Freak Voices*” which provides clear negativity towards Moreschi and subjects him to enfreakment (Law, 1984, p. 5). Although modern critics might dismiss Moreschi as having a voice that is ‘frankly beyond nature’, as Ravens stated, if they listened to Moreschi with the context of his period they would regard his “portamenti and sobs as a stylistic commonplace, and not necessarily a mark of inferior singing” (Ravens, 2014, pp. 187-188).

Case study 2: Javier Medina

A 'natural castrati' is a term used to describe a castrato who has not been purposely castrated as a method of 'preserving' their voice, as was the case with regular castrati. An example of a singer with this type of high male voice is Mexican singer, Javier Medina, who performs classical, musical theatre and pop songs although he is not a fulltime vocalist (Potter, 2008, n.p.). Medina was born in 1970 and in 1976 he was diagnosed with leukaemia when he was three years of age and his treatment for this leukaemia resulted in chemical castration (J. Medina, interview, May 26, 2019). Medina explains how in the 1970s cancer was thought to be a viral disease rather than a cellular disorder and the doctors were experimenting on him and 37 other children different cures of the disease (J. Medina, interview, May 26, 2019). The treatment Medina experienced subjected him to a lot of acid and he took large amounts of the drug *famotidine* from the years 1976 to 1984. *Famotidine* is the predecessor to *ranitidine* both of which are used to decrease stomach acid production, however a side effect of *famotidine* is a prevention in the production of testosterone. Thus, Medina was unable to produce testosterone and he explained how he became aware of this when he was fifteen as he had not gone through puberty and he had no sexual desires (J. Medina, interview, May 26, 2019). The age of Medina when he was treated for leukaemia, causing his chemical castration, is significant as seven years of age was roughly the age choirboys with a promising singing voice in the churches would have been castrated in an effort to 'preserve' their voice. Thus, the medical effects on the voice in both cases are likely to be similar as they happened in the same period of a young boy's life.

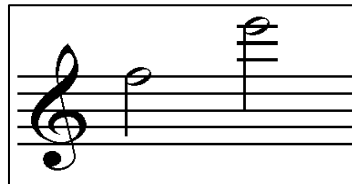
As a result of this chemical castration Medina has a vocal range of G below middle C to F above middle C, as shown in example 4. The result of Medina's treatment gave Medina his remarkable vocal ability as it provided him with a 'hybrid larynx' which is similar to the larynx of a seventeenth century castrato (Potter, 2008, n.p.). Medina, therefore, describes himself as a castrato as he has a similar vocal range to a seventeenth century castrato. The term castrato seems a fitting description of his voice

as many musicologists, such as Dr John Potter, have compared Medina's voice to that of a castrato, as he is "able to recapture the remarkable vocal feats of the castrato Farinelli and his contemporaries" (Potter, 2008, n.p.). However, Medina also describes his voice type as being a soprano, stating how 'soprano' is a masculine noun and not feminine claiming that castrati such as Tosi referred to female singers a 'soprane' (J. Medina, interview, May 26, 2019). It is worth mentioning that Medina, although he possesses a hybrid larynx giving him a 'voice that does not fit' societal expectations, is a cis-identifying male who identifies with masculinity, highlighting the relationship between identity, reception and voice. (J. Medina, interview, May 26, 2019). It is possible that Medina refers to himself as a soprano as it is more easily distinguished in modern western classical musical parlance and because of the negative connotations surrounding the term castrato. Medina has described the term castrato as a "nasty/horrible/in the dark noun" so it is feasible that in society he sometimes feels more comfortable identifying as a 'soprano' over 'castrato' because of the castrati's taboo connotations (J. Medina, interview, May 26, 2019).

Chest Voice:



Head Voice:



Example 4: transcriptions of Javier Medina chest and head vocal registers (J. Medina, interview, May 26, 2019).

As Medina was born in the twentieth century, he was not subjected to the same gruelling training through his adolescence that an eighteenth-century castrato would have endured (see pp. 30-31). Medina explains how he started proper vocal training when he was eighteen, in 1988, where he calls teachers being taken aback by his voice and unsure how to train it (J. Medina, interview, May 26, 2019). The institutional training that shaped the castrato voice is something that Medina lacked meaning his voice sounds noticeably modern in comparison as he is missing the tenorial chest register an eighteenth-century castrato possessed (Haböck, 1923, pp. 10-15). I have been in

contact with Medina so all referenced direct quotations of Medina in this section are from my 26th May 2019 interview with him. His first language is Spanish so some of his English has spelling or grammatical errors, but his intended message is always clear. With regards to gender identity Medina is a cis-identifying male and he states, “I am gay, but I have...always...related with my gender, I don’t feel like a woman” (J. Medina, interview, May 26, 2019). He further went on to explain how early on in his life the pitch of his voice made him question his identity, but this was only brief and mainly as a result of social pressures, again demonstrating the relationship between identity, reception and voice.

As with any artist Medina has received both positive and negative reception however due to the nature of his voice, he has been subjected to more than his fair share of negativity. When asked if he got any negative reactions to his voice, specifically its pitch, Medina stated that they were extremely common (J. Medina, interview, May 26, 2019). Medina explained in the interview that he received negativity as a result of his voice from peers at school, the church, vocal teachers and even his father. This shows how in modern society the castrato voice is not well received even when the voice is a result of an illness and not abuse. The voice is ‘non-normative’ and goes against societal expectations therefore it makes them uncomfortable and they reject the voice.

As a child Medina was involved with the church, singing in church choirs, he recalls how the children there “were cruel” to him and mocked him for his voice because he was different (J. Medina, interview, May 26, 2019). In his church Medina was not supported by the priest as they made it clear they were concerned about Medina’s voice because it was troubling. The priest expressed to Medina that his voice was of concern because it would be problematic for him to be accepted by society as a result of his vocal pitch and timbre. This shows clear negativity towards Medina, his voice and the wider castrato discourse and would have been an understandably difficult period for him. It indicates how society was unwilling to change their expectations of what a person’s voice ‘should sound like’. Medina had a break from church while he

was at school, but negativity of his vocal reception extended to his school life where his vocal teacher told him that he would never make it as a singer as a result of his high voice. It is ironic that a voice type that was a result of abuse was once so popular but in modern society, even when the voice type occurs naturally, the singer is subject to a different kind of abuse and discrimination as their voice is non-normative. Despite the negativity Medina received he was determined to be a professional singer and returned to church singing where Medina explains his experience was “horrible” as they mocked him saying he had a “voice of child” and “body of a fat-farmer” (J. Medina, interview, May 26, 2019). These are clearly very derogatory and prejudiced comments that reinforce his negative reception within the church. It is interesting that Medina’s voice had such poor reception in the church considering this is where the castrato voice originated.

As a consequence of Medina being a castrato, he similarly experienced negativity from his vocal tutors. Medina accounts how his teachers had no idea ‘what to do with him’ they could not understand his voice type; his teachers did not want or know how to train it. This provided Medina with feelings of isolation and he explained how he felt like a nuisance, which is a common emotion for many queer voices in society and further highlights his negative reception. He explains how his teachers urged him to stop singing, asking him to ‘do something else’ because they believed he would never be a good singer that audiences would listen to because in their view, his voice was unfamiliar and unappealing. Medina was not taken seriously by the majority of singing teachers who all had different classifications of his voice type. Some referred to him as a “very high tenor without the low register” and others in a more degrading way suggested he was a baritone who was ‘faking’ his timbre (J. Medina, interview, May 26, 2019). This shows clear ignorance, lack of respect with a negative view of Medina’s voice type. Regardless of what Medina’s voice type is both these descriptions connote that his voice is lacking and is inferior to other voices.

The prejudice and narrowminded nature of many of the singing teachers Medina was subjected to are based on the gender binary of masculinity and femininity. The concept and expectation that bio-males have low, deep, voices which are 'masculine' and bio-females have high, light 'feminine' voices. The semiotic codes of a gender binary identity provide a platform that allows Medina's voice to emerge as an 'abnormal', queer, and 'against the grain' voice (Barthes, 1990, p. 182). This is supported as Medina recalls how a male chauvinist singing teacher that he encountered referred to him as a 'silly sissy' (J. Medina, interview, May 26, 2019). This derogatory misogynistic remark connotes the belief that Medina is not a true man, stripping him of his masculinity and suggesting not only is he feminine but connotes homosexuality and cowardliness. This is all evidence of the prejudice that queer voices more broadly are subjected to in modern society and Medina is subject to enfreakment and othering. It outlines how society is against something that is nonnormative, they are uncomfortable with 'voices that do not fit', a male singing high, or woman singing low, is 'unnatural'.

When Medina started to study voice seriously, at the National School of Music (UNAM), now known as Music Faculty UNAM, it became overtly obvious that they considered Medina to be abnormal as they sent him for vocal cord analysis. The analysis resulted in Medina's vocal cords being likened to that of a child of ten or thirteen. The School made it clear to Medina that he did not fit neatly into their vocal categorisation as they told him not only were his vocal folds too thin, they were not like any other vocal folds. They stated, contradicting themselves, that his vocal folds were not like that of a child or of an adolescent, he was different from their normative expectations which they portrayed as a negative. The contradiction of descriptions of Medina's voice saying it was like a 'child of ten or thirteen' but also 'not like that of a child' suggest that they felt negatively towards his voice, were not taking it seriously and were making up problems of what was 'wrong' with his voice. Medina explains how this experience knocked his confidence after being told he had an abnormal and problematic voice that the professional world seemed against. This shows how certain establishments view the high male voice of the castrato and queer voices that do not conform to the rigid

gender binary of classical voice categorisations, as worthless. Potentially suggesting that the unpopularity of the castrato is not just its cruel inhumane surgery but also the resultant voice is not desirable anymore. It suggests that if a male had a voice as high as a soprano it strips them not only of their masculinity but also their professional integrity. However, in contrast, the fact Medina passed the requirements to study at the UNAM is a huge affirmation of his ability and indicates that his voice does fit more broadly. His voice was good enough to belong at UNAM it just did not fit their gendered expatiations of who should have his voice.

Medina commented how receiving negativity from the majority of aspects of his early vocal life had a detrimental effect on his mental health. The negative reception also extended to his father who Medina explains was 'afraid' of him and his voice. As a direct result Medina decided to move out and live alone, he stated how at this stage in his life he had "MANY social troubles" (J. Medina, interview, May 26, 2019). The views and thoughts of his father must have been powerful and negative and in his eyes, Medina went against the masculinity norms. This further enforces how Medina's voice and queer voices more generally are not well received in modern society as it was the catalyst of the breakdown of a father and son relationship. It also shows how dedicated Medina is to his voice and singing, he has put up with grief from many aspects of his life because of his voice yet he still pursues signing.

After his negative vocal experience from his father, the church and from professional singing teachers Medina recalls how he turned to pop music he learnt from his mother as a coping mechanism and a release. He used pop songs as they allowed him to continue singing without being judged against what he saw as the rigidity of the classical system. When I asked Medina who his biggest vocal inspiration was, he stated "My mother. We sang together all day... singing the music Mum Loves" (J. Medina, interview, May 26, 2019). It is clear that singing with his mother was very important to Medina and the pop songs were his safe haven as they provided him with nostalgic comfort. Medina decide to sing these pop songs as a street performer, and

he received relative success and interest in his voice. Medina commented, “I reached to the pop music I learned at home with my Mum...I had nowhere to sing so I started to sing at the streets” (J. Medina, interview, May 26, 2019). While performing on the street various singing teachers and musicians noticed Medina and showed interest in being involved with his voice. Some were genuinely interested and invested in developing Medina’s voice however others only concerned in exploiting and exoticising his ‘freakish’ voice. Despite the mixed ‘help’ Medina received the fact these pop songs and his street performances allowed a him to pursue his singing outlines how important music and pop songs have been to Medina and his career.

In addition, it is interesting that, because of his voice type, the main vocal opportunity available Medina was singing on the street, a kind of public performance not often considered highbrow or prestigious, representing how he has been ostracised by society. The street being Medina’s main stage outlines how he had been subject to enfreakment as he was noticed by the public because his voice was unexpected not necessarily because of his talent. There is the stigma and connotation that street performance is a form of begging and it is possible that people stopped to take pity on Medina because of his condition vocally and physically. This is supported by Dr Paul Simpson, Lecturer in Human Geography at Plymouth University, as he stated, “a common response [to street performers] has been to dismiss a performer as ‘basically a beggar’ or ‘little more than a vagrant’ (Simpson, 2015, n.p.). It could be argued that although Medina was not begging for money, he was begging to be accepted into society. The negative connotations associated with street performers suggest that Medina is a product of his childhood illness, he is not considered talented enough for classical or professional singing because he is a castrato. This could indicate how pop music is more inclusive and less rigid than classical music as it provided a space where Medina is musically accepted (or at least less obviously rejected). The only music that Medina has uploaded to YouTube are his versions of pop songs, as shown in table 1, which indicates how he feels more comfortable publicly sharing his pop voice and is more reserved with his classical voice as his is

concerned of its reception. Medina takes his pop voice less seriously and has commented how “when I receive... bad opinions from social media users... I do not care a bit!”, however if people reacted negatively to his classical voice, what he considers his more serious voice, he would take it as more of a personal and professional attack. As I will explain later, the recordings of his pop songs on YouTube all have relatively poor audio quality which provides another barrier for him to hide behind as it makes the songs harder to hear and analyse in detail.

Song	Date Uploaded
One Moment in Time	15/10/2012
You Raise Me Up	19/11/2014
Eres Tú	17/04/2018

Table 1. List of Javier Medina’s recordings of pop songs that he has uploaded to YouTube (Medina, n.d., n.p.).

A measure of how Medina was not taken seriously as an artist is the fact he considered his role as a deputy (stand in singer) if one of the regular singers of the voice group *Ars Nova* were ill or unavailable for a concert, ‘the best thing’ he had. He was not considered good enough to be a part of the group and he recalls how it was very rare for him to actually perform with them which indicates negativity towards his voice (J. Medina, interview, May 26, 2019). However, he did meet some people that really enriched his career through signing on the streets such as pianist Juliet Haas who has helped Medina expand his vocal register through vocal exercises. Medina explains how Juliet Haas approached him asking if she could work with him which he saw as an indication of his vocal talent.

In Medina’s current stage of his career he explains how his voice is received in two different ways, the first being that he has ‘the voice of an angel’ and the other being he is inauthentic. People have pre-informed concepts of what a castrato should sound like and they argue that Medina does not fit their ideal and is therefore ‘faking it’ and is inauthentic. Society accepts the fake manufactured voice of Farinelli in the film *Farinelli*

(1994) over the real voice of a living castrato as being more authentic. The blend of soprano and countertenor voices to create the voice of Farinelli is said to be 'arresting' and an accurate representation of a real castrati voice (Myers, n.d., n.p.). The artificially created voice in the film *Farinelli* being considered a truer representation of the castrato voice than Medina is an insult to his voice and credibility. The people that view Medina as having a voice of an angel when unpacked has both positive and negative connotations. The fact people think his voice is good enough to be comparable to an angel is of great praise as it demonstrates his skill and virtuosity as a singer. However, especially given that he is a castrato, the connotations of angels being supernatural creates a sense of othering, indicating how he is different from other singers. Angels are also in fine art are often symbolised as being 'genderless' which could also be a connotation of his physical state (Whetstone, 2006, n.p.). Referring to him as an angel could be seen as a way of outlining his otherness, how he is different from the rest of the singers in modern society, although it is likely that this is intended to be an inoffensive likening. His voice has effectively become a historical artefact, an exhibition piece that belongs purely in the past, rather than just being seen as his singing voice.

Although growing up and during his career Medina has received a lot of negativity towards his voice, he has also received plenty of positivity. One place where Medina receives positive reception is on the comments of his YouTube videos. He has had some high praise on his videos for example, he has had comments such as "Purely beautiful" (Sherry the gypsy Salzman, 2018) and "It is so wonderful to hear you singing, you have to give so much to the world!" (Ruth Ruhfaut, 2012, n.p.). These comments prove how Medina's voice can receive positive reception in modern society. YouTube is a good platform to gauge what society thinks of Medina as YouTube can be accessed by anyone meaning people are able to express their opinion and Medina does not often perform in England making them a valuable means of hearing his voice. There is a video of Medina being interviewed in relation to a production called "De monstruos y prodigios, la historia de los castrati", there are only a handful of comments on this video and all of them are positive. For example, one comment states

that Medina is “A great Master” (Juliet0307, 2018, n.p.) and another claims “I would like to have a voice like yours that seems to be represented as the angels themselves” (Angelina Velaz, 2016, n.p.). Both these comments provide examples of positive reception towards Medina’s voice especially the idea that he is a ‘master’. Medina does not sing in the video and these comments are both written in Spanish therefore it is possible these two ‘YouTubers’ are commenting on Medina’s voice having seen him perform live, however can only speculate.

In 2008 Medina gave a recital at the University of York which helps to highlight some of his positive reception in modern society. Being asked to give a recital at a prestigious red brick university is an affirmation of his artistic integrity in itself. Medina’s positive reception is further supported by Dr John Potter from the University of York as he states in the program notes for the concert, "Javier Medina is one of a tiny handful of singers able to recapture the remarkable vocal feats of the castrato Farinelli and his contemporaries" (Potter, 2008, n.p.). Here Dr Potter describes Medina as a very serious and virtuosic singer positioning him as a comparable to great castrato of Farinelli. Dr Potter is highly academically acclaimed so his complimentary words about Medina’s voice are important as he has the respected of other academics. Dr Potter’s approval therefore highlights to others how there is a place for Medina’s positive reception in modern society.

Medina sings and performs songs in a range of different genres including classical, musical theatre and pop both at an amateur and professional level. A small selection of his recordings, especially of his pop songs, are available on YouTube, shown in table 1, which have been advantageous in my study as it provided an insight into Medina’s voice. The recordings also allow a comparison between Medina’s voice and that of other recorded voices, especially the voice of Moreschi. For the purpose of this study I will investigate one pop song, ‘Eres tú’ by Juan Carlos (1973), and one classical song, ‘Ombra fedele anch'io’ by Riccardo Broschi (1730), that Medina has recorded in order to provide an overview of his work and reception.

Assessing Medina's voice: 'Eres tú'

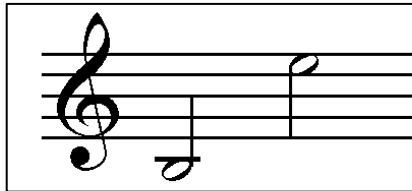
'Eres tú' ['It's You'], is a 1973 Spanish pop song written by Juan Carlos and made famous by the Spanish singing group Mocedades. Mocedades represented Spain in the 1973 Eurovision Song Contest with a very successful performance of 'Eres tú' which placed them second overall after Luxembourg. Medina uploaded a recording of himself singing 'Eres tú' to YouTube on 16th April 2018 and it is the most recent song he has shared publicly. With regard to identity, 'Eres tú' is an interesting choice because it has such strong connotations with Spanish national identity as a result of its use in Eurovision. Medina's native language is Spanish so he nationally identifies with the song and it is probable that many of the songs Medina recalls singing with his mother would have been in Spanish. To add to this the song's use in Eurovision opens it up to ideas of queer identity as Eurovision has become a stage associated with queerness. From as early as the 1960s Eurovision entries have become increasingly more camp with them often featuring a 'kitsch aesthetic' which has given the competition queer association (Chua, 2016, n.p.). It is possible that Medina made a conscious decision to sing a song that is so closely associated with Eurovision because it signifies homosexuality and queerness, which supports his identity and how he feels about his voice. It is of interest that all previous songs uploaded by Medina have been famous pop songs in English and do not have the same strong connotations of national and personal identity and for this reason it is likely Medina felt safer sharing them. 'Eres tú' appears in many ways to be the first song that hints towards Medina's sexuality and sense of national identity suggesting that he now feels more comfortable in himself. This idea is supported by Medina's comment that fifteen years ago he was afraid to say he was a castrato because he was "in the closet", it is interesting that Medina equates his voice with his queerness too (J. Medina, interview, May 26, 2019). This idea that Medina is now able to publicly and proudly talk about himself being a castrato is spurred by his comment on his video of 'Eres tú', "SO happy because I looks like Alessandro" (Medina, 2018, n.p.). Medina being happy that he looks like a famous castrato is proof that he is proud of who his is.

However, the recording quality of all Medina's songs on YouTube is very poor and are likely to have been recorded on his phone without any additional micing. The video for 'Eres tú' is of such low quality the picture itself is unclear and blurry, as shown in figure 4. In terms of audio quality, the backing track introduction sounds out of phase with slight pitching anomalies. When Medina starts singing the backing becomes almost inaudible, it becomes a very muffled rumble in the background. The quality of the recording could be a purposeful tool used by Medina to act as an auditory 'safety blanket' that he can 'hide' behind. As a result of the recording quality it becomes problematic trying to analyse Medina's voice accurately and any vocal imperfections can be blamed on the recording. In this way Medina is keeping the listener at 'arm's length' ensuring the recording is not too intimate or personal. The standard of the recording is a conscious choice of Medina as he commented how he has better recordings that he has not yet uploaded but he might next year (J. Medina, interview, May 26, 2019). This shows, potentially as a result of his experience of negative reception towards his voice, that he is cautious of how the public receive him, making him careful with the material he posts. A parallel can be drawn between Medina's recording and Moreschi's recordings as the quality of both recording makes them difficult to hear the true voice and therefore analyse them. However, with Medina it was a purposeful process where as with Moreschi he had no choice.

In 'Eres tú' Medina's voice is strong and powerful throughout as he is singing in his chest voice. As example 5 shows, the range of the song does not raise above an E5 meaning Medina does not have to use his head voice as he can sing up to an F5 in chest voice. This is particularly apparent on the line "Eres to como el fuego de mi hoguera" where Medina sing an E5, on 'tu', and the microphone distorts as the high notes are powerful and well supported causing the microphone to peak. Therefore, indicating how Medina has a strong voice in the upper register of his chest voice however, it does not show off his true upper register of his voice or the use of his head voice as he can sing up to a E6.



Figure 4. Screen shot of Javier Medina singing *Eres tú* by Juan Carlos, demonstrating the poor video quality (Medina, 2018, n.p.).



Example 5. the pitch range of the song *Eres tú* by Juan Carlos (1973) (Medina, 2018, April 17).

Recordings of Medina's voice are scarce as he has been very selective with the songs he has shared online and all of his YouTube uploads are of pop songs only, which shows very careful curation I think given everything is online now. There are even fewer recordings available when it comes to Medina's operatic repertoire and his only recording online is 'Ombra fedele anch'io' by Riccardo Broschi (1730). This recording has been uploaded to a website called *SoundClick* which is a free platform for musicians to share and listen to music (SoundClick, 2019, n.p.). It is of interest that Medina has made a clear conscious effort to keep his pop and classical material segregated meaning anyone listening to is pop repertoire would not necessarily find his classical recording and vice versa. This separation effectively creates two different

online personalities of Medina and further indicates his attempts of creating a barrier between himself and the public. In doing so he minimises any negative reception he might receive as the audience that ridicule his pop singing might heavily criticise his classical recording. Medina considers his classical singing to be more 'serious' and would be more offended and troubled if his classical voice received negativity, this is shown as he sates "classical and musical theater is more serious and important to me" (J. Medina, interview, May 26, 2019). YouTube used by a large range of people that are not all interested in music and it is well known for people making offensive cruel comments on videos.

SoundClick, on the other hand, is a much more underground website that is not as well known or established. Therefore, the people on SoundClick are more likely to look for a certain artist therefore should appreciate his voice more rather than criticise it which provides Medina a sense of security that it will not reach as many people. Although the underground nature of *SoundClick* would have provided Medina with a sense of security it also outlines negativity towards his voice. *SoundClick* is a relatively unknown in comparison equivalent sites, it is a free website for artists that potentially have no alternative with regards to distribution and promotion of their work. One might expect a more successful or 'serious' artist, especially one who provides an insight into a 'bygone area', to have their music available on *iTunes* or *Spotify* for example. Medina's use of a free underground platform to share his music suggests the more accredited companies are not interested in his work and therefore undermines his commercial credibility and provides an example of his negative reception.

Assessing Medina's voice: 'Ombra fedele anch'io'

'Ombra fedele anch'io' is a song from the opera *Idaspe* and was composed by Riccardo Broschi. The aria was included in the 1994 cult film *Farinelli* which is of great interest to this study. With regards to identity it is significant that the only operatic song that Medina has uploaded has such strong connotations with the castrati indicating Medina's intended vocal representation. Medina is a castrato and in sharing a song

with such strong tropes Medina suggests he wants his vocal identity to be known. However, it could mean that Medina's voice is associated with a 'fake' voice as it is common knowledge that the voice in the film has been artificially created and provides an example for Medina's voice to be compared to. The voice in the film was created by recording soprano Ewa Malas-Godlewska and countertenor Derek Lee Ragin, in separate rooms and they were digitally merged after (Harris, 1997, pp. 182-183). In relation to the eighteenth-century Castrati it could be argued that Medina had an artificial castration as it was a result of medical treatment and not an operation specifically to 'preserve' a voice thus adding to its inauthenticity. It is odd that Medina explains how the critics have complained saying Medina's voice does not sound like that of a true castrato but the voice in *Farinelli*, which is an artificial voice, is considered an accurate representation of a real castrato (J. Medina, interview, May 26, 2019). The voice from the film has been described as a voice that "soars and ripples with unhuman ease through a variety of arias...[the] voice created here is a thing of unearthly beauty...[and the] artificial perfection is staggering" (Bernheimer, 1995, n.p.). A fake voice to society seems to be a more authentic and realistic castrato voice, or just a more preferred voice, than the voice of an actual castrato. This indicates the negativity towards Medina as his voice is considered to be an ill representation of the voice type that he is even though he is one of the only singers alive that can call themselves a castrato, it also indicates the strength of the cultural shift.

Medina's recording of 'Ombra fedele anch'io' is of far better quality to the other songs he has uploaded to YouTube. This further solidifies ideas that Medina values his classical singing more highly and views it as more 'professional' than his pop singing. 'Ombra fedele anch'io' is a long piece that lasts around eight minutes and Medina has good stamina throughout. Medina's high notes, particularly at the end, are superb. They are really well supported with pure tone and clarity; they are also loud with secure pitching. Medina's demonstrates how he has a very strong upper register which would have been expected from a castrato. However, he tends to lack support when singing lower notes and then can often sound breathy. This is especially notable on the line

“tanto adoro”, as shown in example 6, where he struggles with the support and the resultant sound is rather breathy (Medina, 2005, n.p.). He is secure on the B of “tan” but when he drops to the D on “toa” and then subsequently down to the C on “ro” there is a noticeable lack of support and thus the notes are slightly flat (Medina, 2005, n.p.). As a result of his lack of support on the lower notes that are less audible and could get lost within the accompaniment meaning the “...to adoro” is hard to hear. Furthermore, there are places where it sounds as if Medina is using his throat more rather than engaging his diaphragm. This is only really noticeable on the line “che tanto” which sounds weak and pitchy however it does not affect the flow of the piece and the rest is well supported (Medina, 2005, n.p.). The quality of Medina’s pop songs is far inferior to ‘Ombra fedele anch'io’ and this is mainly a result of him taking them less seriously and he records them for his own pleasure. Therefore, if one listened to his pop repertoire on YouTube alone it could be possible to see more flaws in his voice.

In a comparison of Medina’s version of ‘Ombra fedele anch'io’ to the one used in the film *Farinelli*, the film version sounds in many ways more accomplished and polished. This is unsurprising as the voice in *Farinelli* has been recorded for a film and is a manufactured voice that has been heavily produced ensuring any imperfections have been removed. For example, the voice is much more flexible in the film and this is especially noticeable on the same line “tanto adoro”, shown in example 6. The soft palette is more relaxed here creating an overall more technically-secure sound with the drop down to the D on “toa” and then the C on “ro” being well supported and effortless in sound (Corbiau, 1994, n.p.). The musical director, French harpsichordist and conductor Christophe Rousset, ensured that the best parts of each singer’s voice were used to create a super human voice that matched that of an eighteenth-century castrato (J. Medina, interview, May 26, 2019). These differences are mainly as a result of the film using technology to blend multiple voices to create a ‘perfect’ castrato voice. Although the film version is technically more secure Medina’s voice sounds

more human and real with human imperfections and interpretations which add to the overall feel.



Example 6. A transcription of the line 'Mio che tanto adoro' from Javier Medina's version of Riccardo Broschi's 1730) 'Ombra fedele anch'io' (Medina, 2005, n.p.).

Overall Medina's voice has received a lot of negative reactions throughout his life and there have been a number of reasons for this, including societal preconceptions of what a castrato voice should sound like. However, the actual quality of his voice is very good especially in 'Ombra fedele anch'io' suggesting that his negative reception has been a result of the prejudice nature of society. Medina has clearly struggled throughout his career with self-confidence as a result of the negative reception his voice received however, he kept singing it he stated how all of his experiences made him stronger. He still performs in concerts mainly in Mexico but also in America and is intending to perform internationally (J. Medina, interview, May 26, 2019). It could be argued that unlike the highly trained castrati of the eighteenth century who were greatly regarded as virtuosos, Medina's voice is just a product of sickness. His voice is a symbol of resistance and not of hard work and training therefore he is in some way inferior and amateur. His illness has defined his voice type not his sacrifice to higher western art.

Chapter 4: trans voices

Trans voices are an important aspect of queer voices especially when researching into voices that don't fit. A person might feel their voice either does not match the social expectations placed upon them or they feel the voice fits their bio-sex, but their bio-sex does not fit their gender identity. It then becomes important for them to change the pitch of their voice, this can either be achieved through medical transitioning, for example an FtM taking testosterone, or through the training of the voice to make it higher or lower in pitch. The voice, as stated in chapter one, is an integral part of identity, thus is it an import part of how a trans person manages to 'pass' within society. The two case studies discussed in this chapter are Wilmer Broadnax and Alexandros Constansis.

Case study 3: Wilmer Broadnax (Little Ax)

Wilmer Broadnax was an African-American male gospel quartet singer who was born in 1916. Broadnax was a high powerful tenor who worked and recorded with many influential groups of his day including the 'Spirit of Memphis', who were a gospel quartet, where he sang alongside the 'legendary' gospel singer Silas Steele (Roberts, 2013, n.p.). Broadnax stage name was 'Little Ax' partly because he was very short but in part because his older brother was a famous baritone singer who went by the name "Big Ax" (Heilbut, 2012, p. 29). All his life Broadnax performed and passed as a cis male without any speculation and it was not until after his death in 1992 his autopsy revealed he was actually a transman who was assigned bio-female at birth (Gettell, 2016, n.p.).

Broadnax had an extremely strong voice and has been described as an 'heroic screamer' who could hold his own "with some of the strongest leads, Archie Brownlee or Silas Steele" (Maglott, 2017, n.p.). However, although his voice was powerful and he could scream high notes, his voice was very versatile as he also had a very sweet and

emotive voice. Author and journalist for the Guardian, Noah Berlatsky, outlines the versatility of Broadnax's voice as he explains how some describe his voice as "sweet but almost vicious, dripping with emotion" while others, in contrast say he "would offer almost a growl'" (Berlatsky, 2014, n.p.). This outlines Broadnax's capabilities as a singer and his positive reception. The language used here to describe Broadnax's voice is very masculinised with words like 'vicious' and 'growl', which indicate how he successfully created a masculine persona helping him pass as male in society.

Assessing Broadnax's voice: 'You Are My Sunshine'

Broadnax's 1963 recording of 'You Are My Sunshine' with the Golden Echoes demonstrated his vocal versatility. The Golden Echoes were a gospel quartet set up by Wilmer Broadnax and his brother William Broadnax (Big Ax) in the mid 1940s. In 'You Are My Sunshine' Broadnax's vocal power and agility is evident along with the smoothness and sensitivity of his voice. For example, on the opening line "late last night when, I recline, something still, still across my mind", Broadnax voice is very smooth, gentle and expressive. However, in the chorus as soon as he sings "You are my sunshine, My only sunshine" he begins to scream and sing the lyrics with a lot more power and grit. As example 7 indicates, on the line "You are my Sunshine" Broadnax extends the "a" of the "are" and it is on this "a" sound that he growls for the first time, this 'gritty' sound provides his vocal performance with a sense of masculinity (gospellin, 2009, n.p.). On the words "I said you make me", also shown in example 7, the notes are really short, staccato and syncopated with a Broadnax growl on each word. He then ends this phrase with a legato "happy" that lands on the beat, providing a contrast as it is much smoother and sweeter in timbre (gospellin, 2009, n.p.). In the second verse the pitch on the line "Whom I could see" is lower than the chorus and Broadnax over comes this by lowering and roughening his voice which highlights a connection between his voice and the female gospel tradition (Berlatsky, 2014, n.p.). If people were not so convinced that he was male, then this characteristic of his voice could have been a huge give away. Broadnax could arguably be said to sound

feminine in this recording because his purposeful lengthening of his vocal cords and subsequent lowering of his voice gives the impression of a “woman imitating a man” (Berlatsky, 2014, n.p.). However, is it probable that this comment has been made possible with the benefit of hindsight as Broadnax managed to pass as male all his life. Regardless of identity the recording showcases Broadnax’s talent and provides an insight in to his positive reception.

G~~~

You a- - -re my sunshine

My only sunshi- -ne

G~ G~ G~ G~ G~

< < < < <

I said you make me happy

G~~~

When are thi- - -ngs are wrong

Example 7. Transcription of the Golden Echo’s version of ‘You Are My Sunshine’ I have used ‘<’ to symbolize staccato and ‘G~’ to symbolize Broadnax’s growl (gospellin, 2009, n.p.).

Another aspect of Broadnax’s voice that suggest femininity is his delivery, it is unlike what would have been expected from a male quartet singer, is has been commented that it was ‘impassioned’ in a way that was “associated with women of his generation” (Heilbut, 2012, p. 29). This is supported by the statement that if a listener did not know Broadnax was male, it would be easy to assume it was a “blow-out, earthy, growling performance by one of the great women of gospel” (Berlatsky, 2014, n.p.). Like the voice of Shirley Caesar, for example, in the song ‘Jordan River’ (1968), Caesar’s voice is extremely powerful with a feeling of ‘grit’ that is similar to the timbre of Broadnax’s voice (JayEm86, 2009, n.p.). The signs of Broadnax’s femininity are not just audible they are visual as well. Photos of Broadnax show physical signs of stereotypical femininity that were clearly overlooked by the majority of society. As figure 5 shows, Broadnax was extremely short and considerably shorter than any of his fellow band

members. On average, as I mention previously, bio-females are shorter than bio-males, thus his height could have been an indication to his bio-sex. It is also clear, mainly in the two photos on the left of figure 5, that Broadnax had a very smooth and feminine complexion with absolutely no facial hair or blemishes on his skin. Anthony Heilbut, an American writer and record producer of gospel music, has further stated how it was “clear that his bottom could give Mahalia’s or Marion’s a run for the money” and therefore he “was not surprised...the autopsy revealed he was not an anatomical male” (Heilbut, 2012, p. 29). It may seem obvious in hindsight that Broadnax was not a bio-male but at the time this was clearly not the case as it remained a secret until after his death. There is a small chance that people were aware of the possibility of Broadnax being a transgender man but because they enjoyed his voice did not raise the question as it could have been detrimental to his career. If this is true it would be a large indication of his positive reception, but one can only speculate.



Figure 5: Collage of photos showing Wilmer Broadnax (Gettell, 2016, n.p.).

Black transgender males in gospel music

A small number of quartet singers, for example JoJo Wallace of the ‘Sensational Nightingales’, claimed that Broadnax never deceived them. Wallace stated “I always wondered about Ax” but despite these comments in reality Broadnax fooled almost everyone (Heilbut, 2012, p. 29). One of the main reasons Broadnax was able to pass

unquestioned as a bio-male was as a result of the nature of quartet singing. It was commonplace in quartet singing to have high soaring male vocals where in other genres it was less normative and undesired. Men in quartets were expected in some cases to ‘sing like women’ and unlike in other genres it was not emasculating that Broadnax was a high tenor, it just made him another male who sings ‘in the stratosphere’ (Berlatsky, 2014, n.p.). Typically, female gospel singers at the time would push their voice to the top of their chest register where they would ‘shout’ high notes with their strong belting voices and they had an overall dark timbre (Pennington, 2018, p. 122). These techniques and vocal qualities of female gospel singers are also fitting descriptions of the overall effect of Broadnax’s voice. However, it was not just Broadnax’s voice that borrowed of female vocal practices it was indicative of the male gospel quartet practice. For example, as associate professor at Tufts University, Stephan Pennington, has stated, female gospel sensation Mahalia Jackson³ used her powerful melismatic vocal technique to ‘articulate a resistant black femininity’ and male gospel quartet singers, such as Alex Bradford, adopted these stylistic features into their own singing (Pennington, 2018, p. 122). Therefore, it is not such a shock that when a woman was imitating a man it went unnoticed as the affect is likely to have been very similar to men imitating women in quartet singing. This idea is supported as it has been mentioned that Broadnax’s voice “was as male as the female gospel performers, and as female as the tenors in male gospel quartet” (Berlatsky, 2014, n.p.). Historically gospel children have vocally imitated women by both singing and performing like them (Heilbut, 2012, pp. 29-30). If the children were imitating women from a young age it must have been common practice amongst the gospel community. It has been stated that the lack of black women’s voices in gospel quartet signing could in part be a result of the high numbers of high-voiced male singers, this statement provide further evidence that high-male voices were a common aspect of the gospel tradition (Pennington, 2018, pp. 122-123). Broadnax’s voice is androgynous, and it might have been picked up in other genres but because he chose

³ A good example of Mahalia Jackson’s voice and the stereotypical vocal sound of midcentury gospel women more generally is Jackson’s 1951 song “Get Away Jordan” (Pennington, 2018, p. 122).

to sing in a gospel quartet it went unnoticed. Another reason that helped Broadnax to pass as a bio-male was his powerful voice that matched any other male in gospel and if he lacked the volume expected of a male singer it could be justified by the nature of lyrical tenors and 'light-voiced singers' having quieter voices (Heilbut, 2012, p. 30).

Broadnax's death

Broadnax's life came to an abrupt end in 1992 when he was subject to a knife attack by his girlfriend, Lavina Richardson, after they reportedly had a row (Heilbut, 2012, p.29). The incident happened on the 22nd May and it was not until 1st June that he actually passed away (Moore, 2012, n.p.). The resulting events after Broadnax's death are unusual, one being the discovery he was a transgender man which he had managed to keep a complete secret his entire life. Another being the unusual circumstance, considering it is a recent case study, that it has been kept underground with Broadnax still being relatively unknown. It is bizarre that the story did not even get a mention in Jet magazine, which is a magazine marketed at African-American readers (Moore, 2012, n.p.). It seems suspicious that there is very little documentation on Broadnax's story and a possibility could be as a result of his apparent violent behaviour towards Lavina Richardson making researchers reluctant to delve into the story. The relationship between Richardson and Broadnax seemed a little unorthodox with, at the time of Broadnax's death, Richardson being only 42 while Broadnax was 72. A large age gap obviously does not necessarily mean a cause of concern; however, Richardson was told by the judge to "stay away from older men" during her trial. The judge found Richardson guilty of manslaughter rather than murder as she did not think Richardson was a vicious person but had instead been victimized and driven crazy by Broadnax and his violence (Racher, 1993, n.p.). Broadnax's violent and dark characteristics might have affected his subsequent popularity and ruined any chance of a historical legacy. The secret Broadnax's carried to the grave is made even more potent as its exposure attracted very little interest and did not cause much of a stir (Berlatsky, 2014, n.p.). This lack of interest as a potential result of Broadnax's violent nature suggest how he was received negatively, certainly in his later years.

It is also important to consider race in this discussion as gospel is a strong African-American identified genre making ideas of Broadnax's identity intersectional. Broadnax is not 'just' othered because he is queer, but also a result of his race, he navigated his life through gender and racial stereotypes. African-Americans in the late nineteenth century were, and in some areas still are, subject to all kinds of abuse as a result of their race. It became a long-standing tradition for American media to refer to black men as 'lazy buffoons', 'rapacious villains' and 'bumbling social climbers' (Allen, 2007, p. 84). It was as a result of these kinds of racial abuse and tension that that led to the formation of the gospel quartets as it provided an opportunity for African-American males to overturn the unjust media stereotypes (Allen, 2007, pp. 82-84). Gospel provided a platform where African-American men could explore their own sense of masculinity as many had rejected stereotypical performance of hypermasculinity because of their deep rooted white connotations (Pennington, 2018, pp. 121-122). As a result of the racist culture in America at the time it is possible that six days out of the week a quartet singer might have been derogatorily referred to as a 'boy', but onstage no one could not mistake their undeniable status as a man (Allen, 2007, p. 84). Thus, as a result, these racial African-American 'norms' are very similar to the gender 'norms' of gospel as a result of the social climate.

The case study of jazz musician Billy Tipton is interesting with regards to the intersectional nature of Broadnax's identity as he was also discovered to be a transgender man after his death. First it is important to restate how Broadnax's was an extremely successful quartet singer who was only revealed to be a transgender man after the autopsy and his story received little attention meaning he still remains relatively unknown. However, as Pennington has stated, after Tipton's death "the media seized on the story, and he was mentioned in tabloids and talk shows. Much later he has continued to generate interest, including a biography, a fictional novel, songs, and plays, with academics and even bands taking inspiration from him" (Pennington, 2018, p. 117). Tipton was a minor regional jazz musician and bandleader and did not have

anywhere near the musical success of Broadnax, however he was white, and Broadnax was black. This difference in race has clearly had a massive impact on the legacy of these two musicians with Broadnax being left in obscurity while Tipton received publicity, however their interaction with gender also played a role. Tipton completely conformed to a 'hegemonic masculine' gender ideal as he was married, had (adopted) children, and was a white middle class male; whereas Broadnax was an unmarried, childless, black male of 'alternative class' (Pennington, 2018, p. 117). Therefore, Broadnax did not conform to the societal performance expectations of masculinity which has been of clear detriment to his social reception and legacy.

The reception of Broadnax and his voice is mixed, as is the case with the majority of 'queer voices', but as a general overview his early career he was well received, and this declined in his later years. Broadnax's position as the lead singer of the extremely popular gospel group *Spirit of Memphis* outlines the pinnacle of his career. The *Spirit of Memphis* are considered to be one of the most superlative and influential Gospel groups, thus Broadnax not only being a member but being the lead singer shows how in the 1950s he was received very highly (Cummings, 2010, n.p.). Being the lead singer indicates how Broadnax had a very accomplished voice which is supported as the *Spirit of Memphis* reached its popularity height with Broadnax singing lead (Gettell, 2016, n.p.). The success of the group with Broadnax and his role within the group outlines how positively his voice was received. Broadnax has been described as being able to 'hold his own' with the strongest leads in gospel singing which further outlines his strong ability and positive reception (Moore, 2012, n.p.).

Prior to this, when Broadnax sang with the *Golden Echo's* his clear 'sky-high voice' gave the group a unique sound that could not be matched (Gettell, 2016, n.p.). The unique nature of Broadnax's voice was authenticating and added to his positive reception as he was a super 'non-normative' voice (Berlatsky, 2014, n.p.). However, his positive reception and success did not last as he showed an inability to move with the times. Artists began to create a new 'rock and roll' sound from a fusion of gospel and

rhythm and blues music. According to a short film on Broadnax's life created by *Entertainment Weekly* editor Oliver Gettell, this new sound gained huge popularity and with it the popularity of gospel wilted and Broadnax "faded in to obscurity" (Gettell, 2016, n.p.). This shows how in his later years Broadnax reception was relatively poor and this is highlighted as many gospel artists managed to navigate the transition, retaining a successful career but Broadnax never managed it (Gettell, 2016, n.p.). Understanding the reception of Broadnax is a very difficult one as there are multitude of different factors with his intersectional identity, gender, race and arguably class, all effecting on his position within society.

Case study 4: Alexandros Constansis

Alexandros Constansis is a key figure in the area of transgender voices and provides leading research into transitioning voices, with a specific focus on the FtM voice. With the nature of the topic of trans and genderqueer voices being a very personal one sometimes, understandably, artists are reluctant to share materials. Constansis has no accessible recorded material and was not comfortable sharing any material with me when I was in contact with him. For this reason, my final case study will differ from the others in the project and will focus more on the application of technique rather than the aesthetics, but it is important to include Constansis as he is a massively influential figure in the field. I have therefore also included an analysis of a different FtM voice who follows Constansis's vocal practices and techniques.

Constansis has been working with the voice for almost forty years, his work includes being a performer, conservatoire teaching and in the later part of his career in academia (Changing Voice, 2019, n.p.). One of the things that inspired Constansis into the research of trans voices was the lack of previous research and he stated that "the mainstream media either deliberately ignored the existing artists or only recognised them as 'drag' novelties" (Constansis, 2009, p. 230). More than anything this shows the negative reception and difficult position trans people and their voices face in society. Constansis took a specific interest in the voice of an FtM singer as he was wanting to

transition himself and there was very little research in the field prior to himself (Academia, n.d., n.p.). Before Constansis started his medical treatment in 2003 he wanted to ensure, as a professional singer, he had the best possible chance of retaining his singing voice. This was a conscious thought process that Constansis had to tackle extremely carefully as he stated, “most transmen report the loss of their singing voice, as well as of the effective use of their speaking voice, soon after the start of testosterone injections” (Constansis, 2008, part. 6). Not transitioning was not an option for Constansis so it was paramount he found a way of transitioning and preserving his voice and this ideology is what formed the basis of his research (Constansis, 2008, part. 6).

Constansis: vocal care during transition

It was of utmost importance for Constansis to find a method of transitioning that was voice friendly as Constansis was thirty-nine when he started transitioning and it is even harder to retain a singing voice when over the age of thirty. This is as a consequence of endochondral ossification, endochondral ossification is the process where cartilage grows, hardens and forms into bone (University of Leeds, 2004, n.p.). Biologically, without any medical innervation endochondral ossification in the larynx usually takes place after puberty when the larynx is fully developed at the average age of twenty-five (Constansis, 2008, part. 11). Although the process for the majority starts at the age of twenty-five the cartilage does not fully ossify until the approximate age of sixty (Constansis, 2008, part. 11). It is therefore much harder for a voice to transition post endochondral ossification as the cartilage in the larynx is no longer supple and malleable. For FtM singers the transition can be likened to a ‘second puberty’ but it happens a lot later in their life than it would for an adolescent boy meaning the larynx is a lot more rigid (Constansis, 2008, part. 14). Constansis age seriously aggravated his problems of transitioning because it meant he had lost the flexibility and subtleness of the cartilage in his larynx as a result of endochondral ossification. The vocal folds were able to thicken but were not in a situation where they could lengthen in the same way a biological adolescent males would (Constansis, 2008, part. 15). Testosterone is known

to speed up the process of endochondral ossification perpetuating the problem for FtM singers on testosterone (Constansis, 2008, part. 15). High levels of testosterone prevent the cartilage from adjusting slowly meaning the resultant voice can be weak and permanently hoarse as the larynx is unable to fully grow meaning the vocal folds are entrapped (Constansis, 2008, part. 15). To try and overcome this hurdle Constansis began to research how he could imitate as closely as possible the transition of a male adolescent's vocal passage through puberty (Constansis, 2008, part. 14).

In the U.K most clinics consider the maximum strength intramuscular injection to be the only method of initial testosterone administration, regardless of the fact it is widely accepted it could have detrimental effects on the voice. The only real rationale for such a high dose of testosterone, as Constansis explains, is that it “induces maximum masculinisation in the minimum required time for transmen to ‘pass’ in their acquired gender” (Constansis, 2008, p. 6). This is supported by Dutch endocrinologist Louis Gooren's assumption that the goal of treatment for FtMs “is to induce virilisation, including a male voice pitch... [along with] male physical contours” (Gooren, cited in Constansis, 2008, part. 8). It is obviously not natural for someone to receive such high levels of testosterone in a short period of time. For example, in a bio-male, testosterone secretion does not commence at the highest level all at once and they do not ‘turn into a man’ within six months to a year like is expected of FtM patients (Constansis, 2008, part. 14). Therefore, the medical treatment of transmen and FtMs is based on the sociological need to ‘pass’ and be accepted into society by conforming to the gender binary. The very nature of the medical professionals administering testosterone with the aim of getting a person to transition as quickly as possible shows the negative reception of transmen in society. However this is only one way of looking at it, to some transgender men a speedy transition is a relief, if they have been stuck with the ‘wrong’ body all their life and once they've made the difficult decision to transition they could find it frustrating if it takes a long time to ‘pass’.

As a result of all this on the 27th March 2003 Constansis started taking testosterone after convincing his consultant to let him start on the lowest possible level (Constansis,

2008, p. 6). Even at this point the consultant expressed to Constansis his concerns of how such a low dosage would seriously delay the masculinising effects, again suggesting negative reception towards transitioning transmen. Constansis has commented how “the results of low testosterone...have been perceived to be socially and psychologically detrimental due to their inability to “pass” successfully and, as such, their proneness to discrimination” (Constansis, 2013, part 8). This illustrates how socially the most important factor is being able to ‘pass’ quickly and convincingly as the gender one is intending to transition too. It creates a sense that a trans person that looks like a trans person and neither distinctly male nor female is socially ‘unacceptable’. This is supported by Constansis report on how the first month of his transition was like ‘slow motion’ with his gradual hormonal start making him susceptible to discrimination (Constansis, 2008, p. 6). This obsession with slow transition being negative is not only damaging to the trans community but it shows their negative reception. Despite this discrimination throughout his transition, Constansis never regretted his choice of a slow transition as it was of up most importance that he preserved his voice and this method is, as he stated, “kinder to the vocal instrument” (Constansis, 2008, p. 6).

Unfortunately, this negative reception is not only held by wider society and the medical profession but also within the trans community itself and from their peers. If an FtM transitions of a low dose of testosterone is it often seen as a medical bias (Constansis, 2008, p. 6). The problem lies with the medical profession, if they have doubts about the integrity of gender dysphoria as a diagnosis, they are often inclined to start the FtM patient on a low testosterone dosage as a safety precaution. This safety precaution is in case the trans person ‘changes their mind’ about transitioning therefore gains negative connotations of being inauthentic. Being on low doses of hormones then could be perceived as an indication to their lack of commitment and inauthenticity in relation to gender dysphoria, a ‘fake trans’ (Levy, Crown, & Reid, 2003, p. 416). It provides a sense of inauthenticity as they were unable to ‘prove’ they were trans or that they are fully ‘committed’ to their gender. However, this belief in the trans

community is not widely held and it is more commonly believed that it is discrimination from the medical professionals and that some of them “are not interested in their plight” (Levy, Crown, & Reid, 2003, p. 416). There is the sense that some medical professional simply do not take gender dysphoria and the needs of some transgender individuals seriously.

Constansis had a very successful transition in part because of, his in-depth medical research, his training, and the psychological position he started from. As a result of all three factors, he has managed to retain his singing voice post transition with an impressive vocal range of four octaves (Foulds-Elliott, 2008, p. 6). Before transitioning Constansis had an unusually deep speaking and singing voice with what were considered to have ‘masculine manners’ (Constansis, 2008, part. 2). Constansis recalls how growing up he was subject to harassment and discrimination because he had a voice that ‘did not fit’, it was ‘too low’ for a female’s voice. This highlights society intolerance and negative reception towards voices that go against the expected gender binary. Constansis explains how his voice type was labelled as an “alto with the capacity for very low notes” because of his ability to sing down to a C3, octave below middle C (Constansis, 2008, part. 19). Society having to give Constansis pre transition a female voice category even though he had a low voice just highlights the gender binary in music and the negative reception of trans voices. Constansis already low voice, however, put him at an advantageous starting point for transitioning as it means he had longer and thicker vocal folds than were normally expected. His larynx was also larger than usual because he was a professional singer with a trained voice (Constansis, 2008, part. 14). These physiological factors of Constansis vocal structure eased his transition as his voice was already similar that to a male adolescent.

Another factor was his training as Constansis noted “none of this would have been made possible without my gradual hormonal and careful exercising regimes” (Constansis, 2008, p. 6). Thus, not only was Constansis extremely careful with his dosage of testosterone he was also very mindful of his vocal exercise regime.

Constansis quickly abandoned his open-vowel exercises after he soon began to find them demanding and disappointing, so he did not want to push it. He instead decided to approach his voice through carefully selected fricatives that matched the needs of an FTM voice (Constansis, 2008, p. 6). Another aspect of his careful training concentrated on breathing, these included rhythmic breathing, indefinite pitch ('sirens') and definite pitch (tongue or lip trills) to try and build up his voice again (Constansis, 2008, pp. 6-7). Constansis appreciated how his voice was undergoing colossal change so he stripped his training back to basics as if he was learning to sing again, thus enabling the muscles of his new voice to be trained. These training requirements draw clear parallels to the voice of the castrati as they also had strict training regimes to deal with medical intervention of their voice.

A study into Constansis professional and personal life highlights how in modern society transmen and their voices are still subject to negative reception and abuse. Although Constansis transitioned relatively late on he was extremely careful with his medical treatment and his training to enable a successful transition. Constansis work is vital as not only does it provide evidence for the transgender community that it possible to transition and retain a good singing voice, but it also advises how a transgender person should approach their transition with lots of tips and guidance for each stage of the journey. However, I believe that given transgender and trans voices are not new concepts their negative reception can be portrayed by the fact that Constansis's work is the first leading research in the area. The neglect of the topic suggests it is not considered an important topic by wider society and is poorly received.

Assessing Participant 1's voice: 'Silver Street'

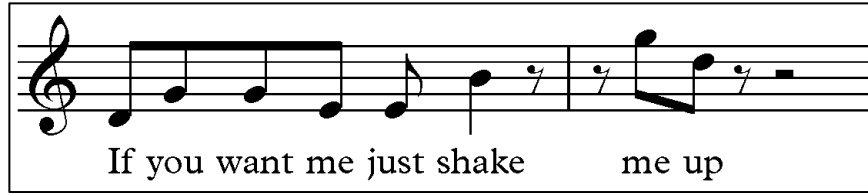
As there is no available audio material to analyse for Constansis I have instead been in contact with a different FtM singer who, although is not one of Constansis's pupils, followed Constansis's approach to transitioning and vocal training. I have had correspondence in the form of an email interview with the singer however due to the sensitive nature of the subject he has requested to remain anonymous so I will be referring to him as Participant 1. Participant 1 is a singer, composer and transgender

man who started his transition in 2009. He said in my email interview with him that singing after transition was almost like learning singing again but with patients and a good singing regime it was possible (Participant 1, interview, July 26, 2019). He was very apprehensive to transition because of the expectations that it would result in a loss of singing voice however when it became clear transitioning was the only option for him he explains how “Alexandros’ work was inspiring as it proved to me there was hope for keeping my singing voice after transitioning” (Participant 1, interview, July 26, 2019). In the appendix of Constansis’ 2008 article ‘The Changing Female-To-Male (FTM) Voice’ he provides two pedagogical notes, the first being “Retraining ourselves in diaphragmatic breathing” and the other being “Daily Practice Pedagogical”, these formed the basis of Participant 1’s training while transitioning (Constansis, 2008, n.p.). Like Constansis Participant 1 transitioned slowly starting on the lowest possible dose of testosterone and building this up slowly which appeared to help him retain an impressive voice (Participant 1, interview, July 26, 2019).

Participant 1 sent me an mp3 of one of the songs he wrote which is titled ‘Silver Street’, this song is fascinating as it features both Participant 1’s pre and post-transitioned voices (Participant, 2012). To create the song, he edited an old recording of his pre-transitioned voice and added vocals of his post-transition voice over the top, creating the effect he is singing a duet with his past pre-transitioned ‘feminine’ self (Participant 1, interview, July 26, 2019). The first verse is his current transitioned voice the second verse is his pre- transitioned voice and the final verse and all the chorus’ are both voices together (Participant, 2012). Not only is this interesting from an artistic perspective it also highlights the difference between his two voices and provides a clear indication to how much his voiced has changed. The effect is interesting as one can tell the voice is from the same person even though it has changed in pitch and timbre, the voice has a familial sound as though it was his sister singing (Participant 1, 2012). Creating the song was something participant 1 decided to do before he transitioned as he explained “it was almost impossible to find recordings of both someone’s voice before and after T [testosterone] so I wanted a document of it and

maybe if I feel brave I will put it online one day so others can hear a voice pre and post T” (Participant 1, interview, July 26, 2019).

The song ‘Silver Street’ starts on an E3 which is at the bottom end of a typical tenor’s range but participant 1’s voice here is really rich and well supported (Participant 1, 2012). There is an expectation that a transitioned voice might be breathy in this register, especially as his pre-transitioned voice was a mezzo soprano, however his tone is full, and this is partly because of the careful time he spent dedicated to his breathing exercises. One of the lines in the first verse “if you want me just shake me up” he goes into his falsetto voice briefly on “a” of “shake” and remains in falsetto for the rest of the line, as in “me up” (Participant 1, 2012). As example 8 shows, Participant 1 goes from a D4 on “u” of “just” to a B4 on the “a” of shake, this suggest his break is somewhere between E4 and B4 (which is relatively low). His falsetto voice is much weaker than his chest voice and this is partly because he is not used to having a falsetto range and although it is similar in range to his previous voice it is a different technique to access this voice. Participant 1’s resultant falsetto sound is much airier, less supported and has less secure pitching than his transitioned chest voice or his pre-transitioned mezzo voice, which is very pure, soaring and technically secure in verse two. In part because of the big vocal leap but also because he has not quite mastered his falsetto voice, his pitching is slight flat on the B4 (“a” of “shake”) and the subsequent falsetto line is also flat, potentially because it started flat or potentially because this part of his voice is weaker. However his chest voice it technically very accomplished and it is fascinating that when going back into his chest voice, from a C5 on “up” to a E4 on the word “if” of the next line “if you need me”, he uses an acciaccatura singing a D4 that resolves up to the E4. He sings this acciaccatura with technical accomplishment, but it is most interesting as it draws a parallel between his voice and the voice of Moreschi. As I stated on pages 52 and 53, Moreschi used an acciaccatura in ‘Ave Maria’ and was a common ornament used in his singing to help ‘leap’ in and out of his head voice.



Example 8. A transcription of the line “if you want me just shake me up” from Participants 1’s song ‘Silver Street’ (Participant 1, 2012).

The way Participant 1 speaks of Constansis and the fact he managed to transition successfully using Constansis’ methods and advice is an indication to Constansis’s positive reception. As the recording of ‘Silver Streets’ highlights, participant 1’s voice is very well accomplished and although he put in the hard work participant 1’s says he “owes the quality” of his new voice to Constansis (Participant 1, interview, July 26, 2019). Both singers have been successful in transitioning which proves it is possible for an FtM to retain their voice post transition and they both suggest a more positive reception of the FtM voice in modern society.

Chapter 5: conclusion

This project is focused in its take on identity but within this focused area I am dealing with historical topics, real people, recordings, live music and reception. Therefore the research for this project could have been taken in many different directions and what I have tried to do is give a representative overview within this focused area. Although biologically it seems there is a notable difference in voice pitch between bio-males and bio-females when one studies the voices there is a sizable crossover in pitch register between the biological sexes. The concepts of high and low voices being assigned to differed genders is built of the foundations of a socially constructed idea of a gender binary . Although the study covers a large time period it is interesting how views of ‘non-normative’ queer voices have not changed greatly. Stereotypically society is more comfortable with familiar voices and if a voice goes against societal expectations, if a voice does not fit, it is often subjected to negative reception.

This study has examined how queer voices typically do not fit sociological expectations in modern and historic societies. Throughout this study it has become apparent that the majority of queer voices go against societal expectations, which is partly a defining factor of why they are referred to as ‘queer voices’. However, time has proven to impact reception, and this is especially true with the voice of the castrato and with Wilmer Broadnax’s voice. Broadnax was viewed as being one of the greatest gospel singers in the beginning of the twentieth century and not necessarily queer until after his death where it was discovered he was actually a transgender male. After this discovery his voice received more negativity as it not only went against historical norms, as female gospel singers typically did not reach the same popularity he had achieved, but also modern norms as transgender singers are still not considered to be mainstream.

Similarly, the castrato voice in the sixteenth and seventeenth centuries was viewed by the church as a form of higher western art, the voice being virtuosic and unmatched. In modern society however, it is considered a cruel repugnant practice and the voice is

undesirable as people think of the abuse when they hear the voice providing sinister connotations. However, this social belief that castration was inhumane was present even at the time of the castrato as the 'sweetening' of children's voice was often an underground secretive process. Although the voices of Moreschi and Medina are subjected to the connotations of an inhuman practice, both voices have received positive reception and high praise. This can be shown through Moreschi's involvement in the Sistine chapel as castrato soloist and, even though Medina struggled with a lot of negativity, the fact singing is a part of his career and that he was able to go to a conservatoire indicates his positive reception in society. Both these singers are cis identifying meaning although their 'voices do not fit' societal expectations their navigation of the gender binary does.

Broadnax and Constansis however do challenge the gender binary and their reception within society is very different because of this. Considering Broadnax's successful career and how recent this case study is, it is unusual that Broadnax is almost entirely unknown in modern society. This suggests that society does not respect Broadnax's voice enough to make it an important part of modern societal knowledge, and this is potentially because he was transgender, and also the issues surrounding race and intersectionality. Similarly, Constansis reception can be seen as negative, as society seems to show negativity towards transitioning voices. Although a quick transition allows a trans man to pass in society it does not take into consideration the singing voice. Trans singing voices do not seem to be considered a serious factor by the medical professionals as there are still few options for a slow transition even after Constansis published research. The lack of options for a gradual transition indicates his negative reception as Constansis study has potentially not been taken seriously. It highlights how FtM voices are not received well in society which is supported by the fact there are almost no famous FtM singers within popular culture. Therefore, it would appear society is more accepting of a voice that 'does not fit' than a gender that 'does not fit' (a breaking the rigid binary). Although it is not this simplistic and the queer

voices types in this study have received both positive and negative reception however these reception ideas are often based around ideas of gender and identity.

The two main methods queer singers use to change their voices that have been discovered in this project are their vocal training methods and different forms of medical treatment. With all the queer voices that have been explored throughout this project training is integral part of the construction of their identity and reception. Training, for example, was intrinsically linked to the identity of a castrato. This is supported by the case study on Medina in chapter three as, although physically Medina is a castrato and he himself identifies as a castrato, his lack of rigorous seventeenth century castrato training means critics do not view him as a 'true' castrato. Medina has had professional singing training to a very high standard at UNAM which have given him a different quality of voice as he has focused on singing classical and musical theatre repertoire and this is how he identifies his voice (J. Medina, interview, May 26, 2019). Consequently, Medina does not have the same power or vocal agility a castrato possessed as he is not trained in the same way.

Moreover, vocal training is important to trans voice and, as Chapter four demonstrates, particularly to the FtM voice. Finding the perfect training regime when on testosterone is paramount, if an FtM trains too much or does the wrong exercises for them, they could damage their voice and if they neglect vocal training, they could lose their singing voice all together. It is a fine balance to help stretch the larynx and build up the muscles of a different singing voice without causing permanent harm. Training is an important tool for transgender singers as even for singers that do not wish to undergo medical treatment, a singer can learn to make the pitch of their voice higher or lower which can help them pass as their intended gender or make them sound more androgynous. As stated in chapter two, bio-males and bio-females have a crossover in pitch which means a singer can train their voice to make it sound more like one or the other. In this way training is hugely important as it helps to create a person's identity and has a direct impact on their reception within society.

As this project covers some sensitive identity topics people can be a bit reluctant to share information. One of the hurdles in navigating such a study is the anxieties of participants and their reluctance to share information of their own experiences. One has to be really careful when contacting people in this area as it is of up most importance to be as sensitive and understanding as possible. This makes some of the evidence more problematic to analyse or process, for example, Constans has successfully transitioned and retained his singing voice but he is unwilling or unable to share any recordings so one cannot assess his transitioned voice.

Two main subsidiary findings have come to light during this project and they are the concepts of studying recordings and the other is the intersectional aspects of identity. The recordings of Moreschi, Medina and Broadnax analysed throughout this project have been of poor quality, for example the wax recordings of Moreschi or the distorted poor-quality recordings of Medina, the recording of Broadnax are not of high quality either because of the age and nature of live recordings. It is interesting how, as explained in Chapter three by looking at Dr Stanovi's work, the recording process changes the resultant sound thus the subsequent reception of a piece. This is specifically true of wax cylinder recording as these recordings sound extremely different from the live sound itself meaning assumptions made on recordings alone are an inaccurate representation of someone's voice. This is an area that could be explored in further detail in another project. Investigating how different recordings and the distributions of these recordings affect the reception of an artist and their identity. If an artist releases music, the way they distribute it and the artwork they create (packaging of a CD for example) is another way of them expressing their identity.

Identity is very intersectional meaning it is very difficult to assess one aspect of someone's identity without understanding how the different aspects all interlock. For example, with Broadnax, because the history of gospel quartet music is based around African-American music and culture race provides him with a clear difference in identity

to Moreschi, Medina and Constansis who's music is firmly within the Western classical tradition. It then becomes important to understand the different implications of race on reception and how different cultures receive different forms of music and culture. Would Broadnax have been received the same if he was white and sang in church choirs; could he have passed as bio-male unnoticed in this setting? These questions provide areas of further study with an investigation into the complexities of gender, race, class and other aspects of identity and how this effects the voice and its reception. Genre is obviously another factor that comes to light here, although I touched on this briefly with Broadnax, it would be interesting to see how the reception of queer voices changes in different genres. For example, instead of Medina's voice getting ridiculed for being too high by some of his classical music teachers, as explained in chapter three, how would his voice be received on the rock stage, would he be viewed as a 'hyper masculine' high falsetto singer who is very desirable? There are clearly many factors that affect identity and reception, therefore it is important to put parameters on a study to ensure there is enough depth to the research rather than it being too broad.

Bibliography

Abel, S. (2019). *Opera in the flesh: sexuality in operatic performance*. New York: Routledge.

Academia. (n.d.). *Alexandros N Constansis*. Retrieved from <https://independent.academia.edu/AlexandrosConstansis>.

André, A. N. (2006). *Voicing gender: Castrati, travesti, and the second woman in early nineteenth-century Italian opera*. Chesham: Indiana University Press.

Allen, C.A. (2007). "When we send up the praises": race, identity, and gospel music in Augusta, Georgia. *Black music research journal*, 27 (2), 79-95. Retrieved from <http://www.jstor.org.libaccess.hud.ac.uk/stable/25433785>.

Angelina Velaz. (2016). Re: *Javier Medina recomienda...de monstruos y prodigios, la historia de los castrati*. [Video file]. Retrieved from <https://www.youtube.com/watch?v=dtWvwsGcFNs>.

Barthes, R. (1990). "The Grain of the Voice". In S. Frith & A. Goodwin (Eds.) *On record: rock, pop, and the written word* (pp. 293-300). London: Routledge.

Beard, D., & Gloag, K. (2016). *Musicology: the key concepts*. Retrieved from <https://ebookcentral.proquest.com>.

Berlatsky, N. (2014). *Male and female in christ*. Retrieved from <http://www.hoodedutilitarian.com/2014/11/male-and-female-in-christ>.

Bernheimer, M. (1995, April 2). The castrato sound: real and imagined. *Los Angeles Times*. Retrieved from <https://www.latimes.com/archives/la-xpm-1995-04-02-ca-50067-story.html>.

Biology Dictionary. (2019). *Respiratory system*. Retrieved from <https://biologydictionary.net/respiratory-system>.

Black Revolutionary Theatre Workshop. (2017). *BHM heroes: willmer "little ax" broadnax*. Retrieved from <http://www.blackrevolutionarytheatreworkshop.org/bhm-heroes-willmer-little-ax-broadnax>.

Bohlman, P. V. (2002). *World music: A very short introduction*. Oxford: Oxford University Press.

Bohlman, P.V. (2016). Where they came from: reracializing music in the empire of silence. In R. Radano & T. Olaniyan (Eds.) *Audible empire* (pp. 25-44). London: Duke University Press.

Butler, J. (2007). *Gender trouble: Feminism and the subversion of identity* (2nd ed.). New York: Routledge.

Changing Voice. (2019). *Changing attitudes in changing singing vocality*. Retrieved from <http://www.alexandrosconstansis.com>.

Chua, J.Y. (2016). *Eurovision and the making of queer (counter-)cultural diplomacy* (Degree dissertation). Retrieved from <http://yris.yira.org/essays/1650>.

Clapton, N. (2008). *Moreschi: And the voice of the castrato*. London: Haus.

Constansis, A. N. (2013). The female-to-male (FTM) singing voice and its interaction with queer theory: Roles and interdependency. *Transposition*, 3(3) doi:10.4000/transposition.353.

Constansis, A.N. (2008, July). It's up to us to make our voices sing. *Voice print*. Retrieved from <https://www.australianvoiceassociation.com.au/wp-content/uploads/2017/05/VP33.pdf>.

Constansis, A.N. (2008). The changing female-to-male (ftm) voice. *Radical Musicology*, 3 (32), 1-32. Retrieved from <http://www.radical-musicology.org.uk/2008/Constansis.htm>.

Constansis, A.N. (2009). *Hydride vocal personae* (PhD Thesis). Retrieved from <https://core.ac.uk/download/pdf/77022853.pdf>.

Corbiau, G. (Director). (1994). *Farinelli* [DVD]. France: Sony Pictures Classics.

Cross, R.J. (1998). The Teddy Boy as Scapegoat. *Doshisha society for the study of language and culture*, 22 (1), 263-291. Retrieved from <https://doors.doshisha.ac.jp/duar/repository/ir/4428/g00012.pdf>.

Cummings, T. (2010). *Spirit of Memphis quartet: tracing the history of a classic gospel group*. Retrieved from http://www.crossrhythms.co.uk/articles/music/Spirit_Of_Memphis_Quartet_Tracing_the_history_of_a_classic_gospel_group/39430/p1.

Davies, S. (2006). How the voice works. [PDF]. Retrieved from <http://shelaghdavies.com/files/How%20the%20Voice%20Works%20handout.pdf>.

Desler, A. (2015). From Castrato to Bass: the Late Roles of Nicolò Grimaldi 'Nicolini'. In C. Haworth & L. Colton (Eds.) *Gender, age and musical creativity* (pp. 61-82). England: Ashgate Publishing Limited.

Ekins, R. & King, D. (2006). *The transgender phenomenon*. London: SAGE Publications.

Erickson-Schroth, L. (Ed.). (2014). *Trans bodies, trans selves: a resource for the transgender community*. Retrieved from <https://ebookcentral.proquest.com>.

Feldman, M. (2015). *The castrato: Reflections on natures and kinds*. California: University of California Press.

Foulds-Elliott, S. (2008, July). It's up to us to make our voices sing. *Voice print*. Retrieved from <https://www.australianvoiceassociation.com.au/wp-content/uploads/2017/05/VP33.pdf>.

Freitas, R. (2003). *The eroticism of emasculation: confronting the baroque body of the castrato*. *The Journal of Musicology*, 20 (2), 196-249. Retrieved from <http://www.jstor.org/stable/10.1525/jm.2003.20.2.196>.

Freitas, R. (2003). The Eroticism of Emasculation: Confronting the Baroque Body of the Castrato. *The journal of musicology*, 20 (2), 196-249. Retrieved from <http://www.jstor.org/stable/10.1525/jm.2003.20.2.196>.

Frith, S. (1996). Music and Identity. In S. Hall & P. D. Gay (Eds.) *Questions of cultural identity* (pp. 108-127). London: SAGE Publications.

Gelder, K. & Thornton, S. (1997). *The subcultures reader*. London: Routledge.

Gettell, O. (2016, March 01). Little axe illuminates transgender gospel singer Willmer Broadnax. *Entertainment Weekly*. Retrieved from <http://www.ew.com/article/2016/03/01/little-axe-transgender-gospel-singer-short-film>.

gospellin [gospellin]. (2009, Mar 27). *Little Axe & the golden echoes singing you are my sunshine 1963* [Video file]. Retrieved from <https://www.youtube.com/watch?v=ziJhLHDaWLA>.

Government Equalities Office (2018). *Trans people in the uk*. (ISBN: 978-1-78655-673-8). Retrieved from https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/721642/GEO-LGBT-factsheet.pdf.

Griffin, G. (2017). *A dictionary of gender studies* (7th ed.). Oxford: Oxford University Press.

Haböck, F. (1923). *Die Gesangkunst der Kastraten*. Germany: Universal Edition.

Harris, E. T. (1997). Twentieth-century Farinelli. *The musical quarterly*, 81(2), 180-189. doi:10.1093/mq/81.2.180.

Haston, G.L. (2007). Physiological changes in the adolescent female voice: applications for choral instruction (Departmental Honors Thesis). Retrieved from [http://thevoice.college/uploads/7/8/4/2/7842626/physiological_changes_in_the_adolescent_female_voice_\(haston\)_thesis_lc.pdf](http://thevoice.college/uploads/7/8/4/2/7842626/physiological_changes_in_the_adolescent_female_voice_(haston)_thesis_lc.pdf).

Hatzinger, M., Vöge, D., Stastny, M., Moll, F., & Sohn, M. (2012). Castrati Singers: All for Fame. *The journal of sexual medicine*, 9(9), 2233-2237. doi: 10.1111/j.1743-6109.2012.02844.x.

Hatzinger, M., Vöge, D., Sold, M., & Sohn, M. (2009). Kastraten - alles für den ruhm. *Der Urologe. Ausg. A*, 48(6), 649. doi:10.1007/s00120-008-1932-x.

Hawkins, S. (2009). *The british pop dandy: masculinity, popular music and culture*. England: Ashgate Publishing Limited.

Hebdige, D. (2012). *Subculture: The meaning of style*. London: Routledge. doi:10.4324/9780203139943.

Heilbut, A. (2012). *The fan who knew too much*. New York: Random House.

Henry, D. (2017). *Trans voices: becoming who you are; foreword by Professor Stephen Whittle, OBE; afterword by Jane Fae*. London: Jessica Kingsley Publishers.

Hines, S. (2007). *TransForming gender: transgender practices of identity, intimacy and care*. Bristol: Policy.

Hines, S. & Sanger, T. (2012). *Transgender identities: towards a social analysis of gender diversity*. New York: Routledge.

Hollis, B. (2017). The method behind the music. Retrieved from <https://method-behind-the-music.com/mechanics/physics>.

Howard, D. (2014). Singing synthesis and the vocal tract organ. In *SEMPRE conference: researching music technology in education: critical insights*, London, Retrieved from http://eprints.whiterose.ac.uk/87529/1/voiceSynth_DMH_10_03_2014.pdf.

Howard, D.M. & Murphy, D.T. (2008). *Voice science acoustics and recording*. Abingdon: Plural Publishing.

Howe, B. Jensen-Moulton, S. Lerner, N. W. & Straus, J. N. (2015). *The oxford handbook of music and disability studies*. Oxford: Oxford University Press.

ivan vusurovic. (2013). Re: *One moment in time by Javier Medina in the style of Whitney Houston: singsnap karaoke* [Video file]. Retrieved from

<https://www.youtube.com/watch?v=HzVLI2KtdVk&lc=UgxjeWQRWDaTACAmOfx4AaABAg>.

Jarman-Ivens, F. (2011). *Queer voices: Technologies, vocalities, and the musical flaw* (1st ed.). New York: Palgrave Macmillan US.

Javier Medina [SoundClick]. (2005, June 11). *Ombra fedele anch'io* [Audio file]. Retrieved from <https://www.soundclick.com/html5/v4/player.cfm?songID=2522114>.

JayEm86 [JayEm86]. (2009, Feb 5). "Jordan River" (1968)- Evangelist Shirley Caesar [Video file]. Retrieved from <https://www.youtube.com/watch?v=TBiVGPN27HI>.

Jenkins, J. (1998). The voice of the castrato. *The Lancet*, 351 (9119), 1877-1880. doi: 10.1016/S0140-6736(97)10198-2.

Juliet0307. (2018). Re: *Javier Medina recomienda...de monstruos y prodigios, la historia de los castrati*. [Video file]. Retrieved from <https://www.youtube.com/watch?v=dtWvwsGcFNs>.

Kallberg, J. (2001). Grove Music Online. *Sex, sexuality*. Retrieved from <https://doi-org.libaccess.hud.ac.uk/10.1093/gmo/9781561592630.article.41236>.

Kayes, G. (2005). *Singing and the actor* (2nd ed.). New York: Routledge.

Kerry, J.K. (2017, January 22). Changing your voice part 6 – cross-gender vocal techniques [Web log post]. Retrieved from <https://kjkmusic.co.uk/mabno/2017/01/22/changing-your-voice-part-6-cross-gender-vocal-techniques>.

Koestenbaum, W. (1993). *The Queen's throat*. New York: Poseidon Press.

Koutsiaris, E. A., Alamanis, C., Eftychiadis, A., & Zervas, A. (2014). Castrati singers: surgery for religion and art. *Italian journal of anatomy and embryology*, 119(2), 106-110. Retrieved from <https://oajournals.fupress.net/index.php/ijae/article/view/1221/1219>.

Laqueur, T. (1990). *Making sex: body and gender from the Greeks to Freud*. Cambridge: Harvard University Press.

Law, J.K. (1984). Alessandro Moreschi Reconsidered: A Castrato on Records. *Opera quarterly*, 2 (2), 1-12. doi: 10.1093/oq/2.2.1.

Lee, B. (2012). Are male and female voices really that different?. Retrieved from <https://vocalability.com/are-male-and-female-voices-really-that-different>.

Lester, C.N. (2017). *Trans like me: a journey for all of us*. London: Virago.

Lester, C.N. (2018). *Trans like me: conversations for all of us*. London: Hachette UK.

Levy, A., Crown, A., & Reid, R. (2003), Endocrine intervention for transsexuals. *Clinical endocrinology*, (59), 409-418. doi:10.1046/j.1365-2265.2003.01821.x.

Maglott, S.A. (2017). *Wilmer broadnax*. Retrieved from <https://ubuntubiographyproject.com/2017/12/28/wilmer-broadnax>.

Medina, J (2018, April 17). *Eres tu Javier Medina* [Video file]. Retrieved from <https://www.youtube.com/watch?v=Xn81GWkaO7Y>.

Medina. (n.d.). Home [YouTube Channel]. Retrieved from <https://www.youtube.com/channel/UC5ZJB1W9olcCXZQcRLIXnWA>.

Moore, L. (2012). *A tenor passes: wilmer broadnax*. Retrieved from <http://ubleproject.tumblr.com/post/29515613795/a-tenor-passes-wilmer-broadnax>.

Moreschi, A. (2014). Ave Maria. On *Alessandro Moreschi: The Last Castrato* [CD]. England: Trunk Records.

Myers, C. (n.d.). *Farinelli*. Retrieved from <http://www.peersdance.org/revfarin.html>. Participant 1 (2012). *Silver street* [mp3]. Provided by email.

Negus, V., Jander, O., & Giles, P. (2001). Falsetto. *Grove music online*. Retrieved from: <https://www-oxfordmusiconline-com.libaccess.hud.ac.uk/grovemusic/view/10.1093/gmo/9781561592630.001.0001/omo-9781561592630-e-00000009270?rskey=4wILmB>.

Participant 1 (2012). *Silver street* [mp3]. Provided by email.

Pennington, S. (2018). Willmer broadnax, midcentury gospel, and black Trans/Masculinities. *Women and Music: A journal of gender and culture*, 22(1), 117-125. doi:10.1353/wam.2018.0012.

Pinil, J. (2006). *They were not really boys, they were castratis*. Retrieved from <http://myincarnations.com/bard/sopranoguys.htm>.

Potter, J. (2008). *University hosts first UK recital by natural male soprano*. Retrieved from <https://www.york.ac.uk/news-and-events/news/2008/male-soprano>.

Racher, D. (1993). *Girlfriend guilty in stabbing*. Retrieved from https://web.archive.org/web/20160624185421/http://articles.philly.com/1993-02-05/news/25955189_1_manslaughter-perfect-candidate-battered-woman-syndrome.

Ravens, S. (2014). *The supernatural voice: A history of high male singing*. Woodbridge, Suffolk: Boydell Press.

Rice University. (2017). Anatomy & physiology. America: OpenStax.

Riverdale, J. (2009). Testosterone and the trans male singing voice. Retrieved from <https://transguys.com/features/testosterone-ftm-singing>.

Riverdale, J. (2012). *A brief history of ftm civilization*. Retrieved from <https://transguys.com/features/ftm-trans-history>.

Roberts, M. (2013). *Black trans history: wilmer 'little axe' m. broadnax*. Retrieved from <http://transgriot.blogspot.co.uk/2013/07/black-trans-history-wilmer-little-axe-m.html>.

Roser, M., Appel, C., & Ritchie, H. (2018). *Human height*. Retrieved from <https://ourworldindata.org/human-height>.

Ruth Ruhfaut. (2012). Re: Javier Medina discussion [Blog]. Retrieved from <https://www.youtube.com/user/javiermedinavila/discussion>.

Samson, J. (2001). Reception. *Grove music online*. Retrieved from <https://doi.org.libaccess.hud.ac.uk/10.1093/gmo/9781561592630.article.40600>.

Scammell, E. (2003). *All you would like to know about the castrati..... but not quite!!*. Retrieved from <http://www.velluti.org>.

Schleiner, W. (2000). Early modern controversies about the one-sex model. *Renaissance quarterly*, 53(1), 180-191. doi:10.2307/2901536.

Sherry the gypsy Salzman. (2018). Re: *You raise me up* [Video file]. Retrieved from <https://www.youtube.com/watch?v=6LwWYRjFRg8&t=96s>.

Shuker, R. (2017). *Popular music: the key concepts* (Fourth edition.). London: Routledge.

Simpson, P. (2015). *The history of street performance: 'music by Handle' and the silencing of street musicians in the metropolis*. [Transcript]. Retrieved from <https://www.gresham.ac.uk/lectures-and-events/the-history-of-street-performance>.

SoundClick. (2019). *SoundClick: Music. Artists. Social..* Retrieved from <https://www.soundclick.com>.

Stanovic, I. (n.d.). *(Re)constructing early recordings*. Retrieved from <https://injanstanovic.com/reconstructing-early-recordings>.

The University of Iowa. (n.d.). Voice academy: male and female voices. Retrieved from <https://uiowa.edu/voice-academy/male-female-voices>.

The University of Utah. (2015). Voluntary register changes. Retrieved from <http://www.ncvs.org/ncvs/tutorials/voiceprod/tutorial/voluntary.html>.

The Voice Foundation. (2017). Learning about the voice mechanism. Retrieved from <https://voicefoundation.org/health-science/voice-disorders/anatomy-physiology-of-voice-production/the-voice-mechanism>.

The Voice Foundation. (2017). Understanding voice production. Retrieved from <https://voicefoundation.org/health-science/voice-disorders/anatomy-physiology-of-voice-production/understanding-voice-production>.

thegodieinafire. (2014). Re: *One moment in time by Javier Medina in the style of Whitney Houston: singsnap karaoke* [Video file]. Retrieved from <https://www.youtube.com/watch?v=HzVLI2KtdVk&lc=UgxjeWQRWDaTACAmOfx4AaABAg>.

Titman, N. (2017). Practical androgyny: the practicalities of defying binary gender classification. Retrieved from <https://practicalandrogyny.com/2017/04/14/video-relaunching-practical-androgyny>.

Tosti, F. (1987). *Romanze: per canto e pianoforte = Songs for voice and piano*. Milano: Ricordi.

University of Leeds. (2004). *Cartilage, bone & ossification*. Retrieved from https://www.histology.leeds.ac.uk/bone/bone_ossify.php.

Webb, A.M. (2012). *Art songs for tenor: a pedagogical analysis of art songs for the tenor voice* (Dissertation). Retrieved from: <https://ir.uiowa.edu/etd/3401>.

Whetstone, D. (2006, August 30). Art's vanishing act: [01A Edition]. *The Newcastle-upon-Tyne journal*. Retrieved from <https://search-proquest-com.libaccess.hud.ac.uk/docview/350797565?pq-origsite=summon>.

Whiteley, S. (1997). *Sexing the groove: Popular music and gender*. London: Routledge.
World Data. (2018). Average sizes of men and women. Retrieved from <https://www.worlddata.info/average-bodyheight.php>.

World Health Organization. (2019). *Gender, equity and human rights*. Retrieved from <https://www.who.int/gender-equity-rights/understanding/gender-definition/en>.