

# **“Boys can’t sing that good”: Perceptual judgements of vocal identity by the peer groups of accomplished boy singers**

**Martin Ashley, PhD**

## **Abstract**

*This paper is a reprint of extracts from the author’s 2008 monograph on vocal identity in boys. They are reproduced to reach a larger audience as current work has confirmed that the exercise and results are still relevant. Recordings by accomplished boy singers were played to peer group audiences in schools. It was already known that the peer group was very rarely the audience for the recorded output of the singers. The intention was not to evaluate the performances but to explore the perceptions to elicit data useful in breaking down prejudice against boys’ choral singing in schools. A surprising result was the frequency of gender misidentification through belief that boys were incapable of accomplished singing. Primary schools did less well than secondary schools in the accuracy of perceptual judgement. There was some validation of the ragazzi principle (George Malcolm’s preference for the playground voice). Masculinity was more likely to be recognized in voices that had shouty qualities than in voices that could be described as refined in the tradition of cathedral singing. The paper concludes that poor quality choral work in schools may be a significant factor in misperceptions of gender in voice. Improvements initiated by the 1997 -2010 New Labour government have subsequently lapsed.*

## **Introduction**

It is not uncommon for males who sing in the same pitch ranges as females to be accused of “sounding like a girl”. The early adolescent years during which boys’ singing is disrupted by voice change coincide with the years when boys experience heightened anxiety about identity, how others perceive their gender and how they are going to form future relationships. Many boys find the additional burden of being told they “sound like a girl” a difficult one to bear and opt out of singing in consequence. That, at least, was the belief held by the author when he sought to investigate the matter during an AHRC funded post-doctoral fellowship.

An issue identified during preparation for the study was that though there were many commercially produced albums recorded by boy sopranos or “trebles”, the main audience was an adult one. Older women who could be the mothers or more commonly grandmothers of the performers constituted the largest segment of the audience demographic. The performers’ own peer group was very seldom an audience for their work. Consequently, although school pupils had some familiarity with children’s voices through assemblies and school concerts, very few had attended to an accomplished performance by a boy. The aim was to understand better how the school peers of boy singers perceived gender as an attribute of vocal identity.

Empirical work was undertaken in twenty schools distributed across the entire British Isles, including the Isle of Man. Approximately 800 children aged between ten and fourteen were cast in the role of peer audiences and gave their views through an iterative process in which a sequence of school music lessons was given over to research activity. Three banks of tests were administered and are described here. For the first, accomplished boy singers were asked to record a verse of the well-known hymn *Amazing Grace*. The voices differed in timbre and pitch and audiences were asked to estimate the age and sex of the singers. They were given a role as judges for a film company that had shortlisted three voices for the opening titles of a film. For the second, audiences were cast in the role of purchasing a

CD, by themselves on behalf of their grandmothers, and by their grandmothers for them. In the third test bank, recordings of six accomplished boy singers were played and audiences asked to rate the voices on qualities identified by the “continental tone” or ragazzi movement associated with Benjamin Britten and George Malcolm. In this test, the audience were told in advance that all the singers were boys. An experienced singing teacher and vocal coach who had herself been a boy chorister parent also sat the tests.

### Saving the Bryans

In order to test perception purely of the male high voice itself, three young singers were specially recorded in an acoustically controlled environment. Each was asked to sing unaccompanied the first verse of the song *Amazing Grace* in the same tempo and style of delivery as that rendered by the young male singer Declan Galbraith. *Amazing Grace* was chosen on the grounds that it would be known to most of the school audiences, and the Declan Galbraith style was selected because of its relative freedom from possible ecclesiastical associations. Both assumptions turned out to be justified.

Two of the singers were treble choristers, and the third an ex-chorister singing in a stage 5<sup>1</sup> new baritone voice. Of the two trebles, one sang with laryngeal tilt and perceptible vibrato, a sound described by the singing teacher colleague as “finessed”. The other sang with a vibrato free tone described by the same colleague as “more naïve”. It was hypothesised that the more finessed voice might be more frequently identified as female. The recordings were dubbed into a mock-up of the beginning of a feature film entitled “Saving the Bryans”. This was shown to the school audiences, who were told that a new film was being made and that the song *Amazing Grace* was to be used for the title sequence because the film was a tragic comedy about an old lady’s mission to “save” a family of delinquent children.

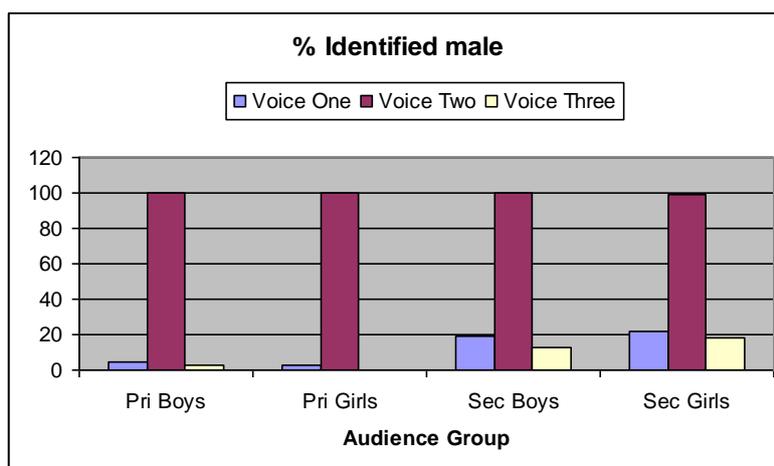
The audiences were told that the producers had arrived at a short list of three after auditioning over a hundred singers and were asked to choose the one voice they thought should get the part. They were asked to give a reason, and to identify each of the three voices as male/female and child/teenager/young adult/older adult. The results of this are shown in Table 1 and Figure i below. Voice one is the finessed treble, voice two the new baritone and voice three the naïve treble.

**Table 1**

% Identifying voice as male					% choosing each voice				
	<u>pri</u> boys	<u>pri</u> girls	sec boys	sec girls		<u>pri</u> boys	<u>pri</u> girls	sec boys	sec girls
Voice 1	5	3	19	22	Voice 1	25	19	41	29
Voice 2	100	100	100	99	Voice 2	28	12	28	18
Voice 3	3	0	14	18	Voice 3	47	69	31	53

<sup>1</sup> As described by John Cooksey in his “eclectic theory” (Cooksey, 2000).

Figure i



It will be seen first of all that, amongst primary school children, the tendency is to judge the gender of the voice purely by the criterion of pitch. With very few exceptions, *any* high voice appears to be thought female. This is confirmed shortly by responses to the second exercise that reveal varying degrees of surprise or shock that the high voices could be male. Although the majority of secondary school pupils are still likely to identify any high voice as female, when the chi square test is applied to the raw data, a statistically significant trend ( $>0.01$ ) is revealed whereby secondary school children perform better than primary school children in identifying a high voice as male.

This was found to be the case consistently across all twenty groups sampled. It is not as easy to explain as might at first appear. The children have received no formal voice education and have little serious experience of choral singing. It may be that the secondary school pupils were more aware than the primary school pupils that the high voices *could* be male. In this respect, the primary pupils seem consistently very naïve and a profound ignorance of boy voices seems to offer itself as the most likely explanation. The secondary pupils might be more aware of voice change as a result of school choirs with changed and unchanged voices, or through greater experience of listening to voices in the media. These results indicate an urgent need to investigate why some secondary pupils perform significantly better than any primary school pupils. The introduction of voice education interventions in primary schools might help with this if primary school pupils perform significantly better on a similar test after voice education.

There was no statistically significant difference between the finessed and the naïve treble with regard to likelihood of being identified male, though it might be noted that the finessed treble was identified as male very slightly more often than the naïve one by all four audience groups. The category analysis in Figure iii below suggests that this may be associated with a tendency to identify the naïve treble as the sweeter voice, which is in turn associated with girls' singing. Figure ii first shows the frequency with which each voice was actually chosen for the "film part". It will be seen here that the naïve singer was the most frequently chosen by three out of the four groups, whilst the new baritone was the least frequently chosen.

There are some small gender differences. The primary and secondary girls show the same ordering, with the baritone voice liked the least and the naïve treble the most, the difference diminishing with age. Both boy groups chose the baritone more frequently than either of the girl groups. Boys were more likely than girls to choose the finessed treble. It is clear that girls have a strong preference for the high voices, whilst boys have a weaker preference for the high voices. When Figures i and ii are considered, together, the conclusion has to be that the sample as a whole *prefer the high voices but*

*imagine them to be female.* Good quality high boy voices that are thought to be those of girls are preferred to low young male voices by peer group audiences. This is the most robust of all the conclusions that can be drawn from this particular exercise.

Figure ii

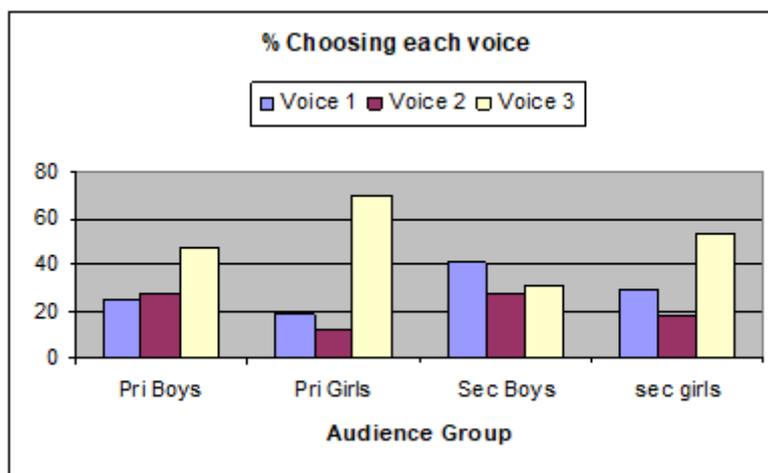


Figure iii below is a category frequency analysis of the reasons given for choosing particular voices. It shows, first of all, that the naïve treble was in receipt of the highest number of favourable comments overall (112 for naïve treble, 77 for finessed treble and 40 for new baritone). It will be seen that there was a strong tendency amongst the girls to pick this voice because it was thought to fall into a category describable as sweet/nice/soft. For example:

The sound was good and the sound was sweet FT (primary girl)

It was very gentle and it sounded better MC (secondary girl)

It sounded sweet and innocent MC (secondary girl)

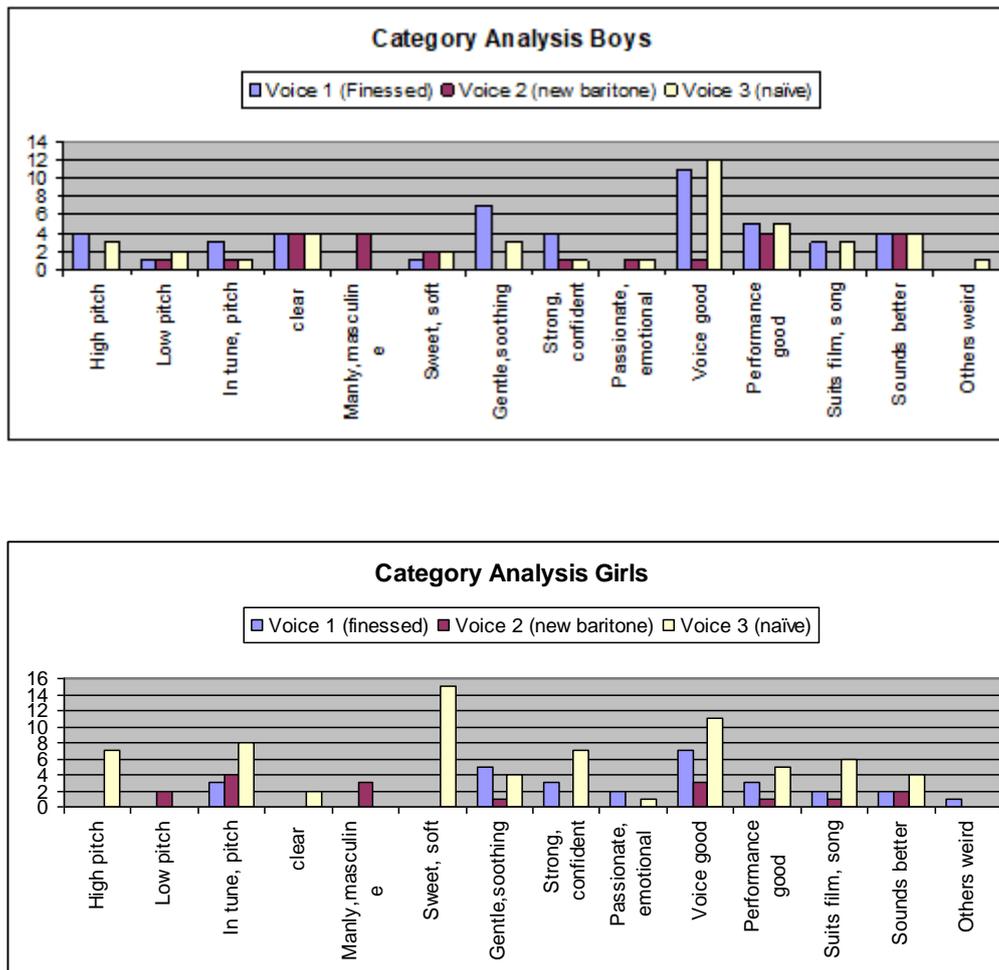
I liked this one because it's very nice and subtle and I just really liked it FT (secondary girl)

The suffix FT means the voice was identified as a female teenager, whilst MC means male child. It is notable that, contrary to the overall trend to identify the voices as female, there was a tendency amongst the secondary girls who described the voice in such terms as sweet, gentle or innocent also to recognize it as that of a male child. The comments selected are an approximate proportional representation of this. Boys, on the other hand, did not recognise or articulate this quality of sweetness and innocence, but nevertheless showed a tendency to judge this voice as an unqualified "good". The finessed treble was also judged "good" by almost as many boys, whilst only one boy thought the baritone voice "good". A small number of boys and girls chose the baritone voice because it was thought manly/masculine, but this was contrary to the overall trend to select the higher voices as both better and more suited to the film.

The boys also recognised the qualities of gentle/soothing/not too strong in the two treble voices, but clearly on the understanding that these were girls' voices, such "girls'" voices being not only the best voices but also best suited the theme of the film. Six comments were received from boys suggesting this, with no such comments about the baritone voice. These results would be concordant with Cooksey's work on spectral analysis. Although for boys a "proper boy voice" is a low one, the young emergent baritone is perceived as lacking the acoustic interest of the two treble voices. Boys are in a very interesting situation here. They do not choose the voice of one they recognise as being of their

own kind. They recognise the treble voices as the more attractive but their belief that these are girls explicitly reinforces the belief that “boys cannot sing”. These findings are surely the foundation of some very interesting educational dialogues with boys.

Figure iii



What of the singers themselves? It was necessary to let them know that the peer group audiences had liked their voices but for the most part considered them girls. Both faced this with a resigned acceptance of the inevitable. Neither was discouraged from singing for both were confident of their positions. Their singing was a source of satisfaction and self-esteem that was able to withstand such eventualities. These are qualities that I encounter very frequently in choristers.

### A CD for Gran

According to Alan Mould “It is certainly true that nobody would confuse the voices of solo boy-treble Aled Jones with that of solo girl-treble Charlotte Church”<sup>2</sup>. It is not clear where this “certain truth” comes from, whether the assumption has been put to the test or whether young people of school age are included in it. In the following test, it is quite clear that school audiences are extremely confused by the voice of Aled Jones. This test was developed as a follow-on from the *Saving the Bryans* test, this time to investigate the perception of a mature baritone voice against the same voice as a soprano.

<sup>2</sup> Mould, A. (2007) *The English Chorister, a history*. London: Hambledon/Continuum. p269.

Drawing on the known association between Aled Jones and grannies, the test was framed in such a way as to elicit from the pupils a judgement on behalf of their grannies.

The school audiences were asked to choose between a version of the song *Holy Night* sung by Aled Jones as a soprano and a version by Aled Jones as a baritone. They were asked to imagine a "sweet old lady, possibly your nan or gran" and that they had heard that she'd really like "this *Holy Night* song by Aled Jones" as a surprise Christmas present. They were also told that when they went to the record shop<sup>3</sup>, they were confused to find that there appeared to be two Aled Joneses. The only solution to the problem was to listen to both of them and decide which their gran would prefer. Interestingly, hardly any of the English school audience had heard of Aled Jones and appeared to accept the coincidence that there were two singers of the same name. By contrast, over half of both boys and girls in the Welsh schools visited had heard of him. This knowledge cannot be said with statistical certainty to have affected choice though it can be noted that the Welsh pupils reacted with a degree of familiarity (one boy commented "because he is a Welsh man" whilst a girl remarked "she'll already have the boy one").

I have often heard singing teachers and other musical cognoscenti being dismissive of the adult Aled Jones, comments such as "he ruined his voice by singing soprano too long" being quite common. This is very clearly not the view of the young audiences who showed a surprising and statistically significant preference (chi square >0.01) for the adult Aled Jones (at least on behalf of their grans):

Figure iva

Mean preference for baritone in primary schools: 70% boys; 71% girls

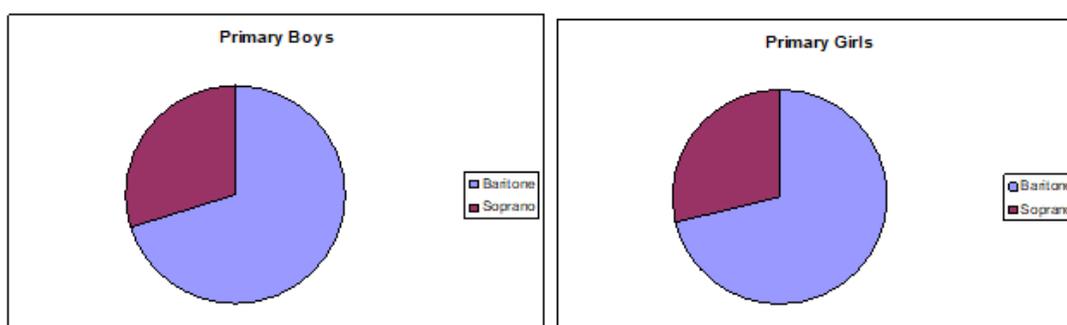
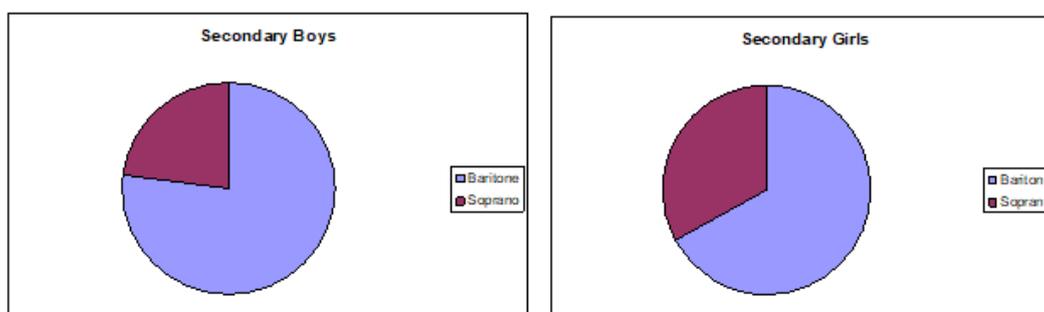


Figure ivb

Mean preference for baritone in secondary schools: 77% boys; 67% girls.



<sup>3</sup> This was during 2007 when on-line purchases were less the norm. The assumption was also made that a "gran" might not cope with streaming which those in days was mainly the preserve of younger generations.

Whilst the voices were played, the album covers with clear pictures of the boy and man Aled were projected onto a large screen. In spite of this, there was more than a little misidentification of the boy Aled as a girl. Nine primary boys and five primary girls made remarks which unambiguously identified the young Aled as female. One eleven-year-old Welsh boy seemed particularly challenged by the Aled gender problem:

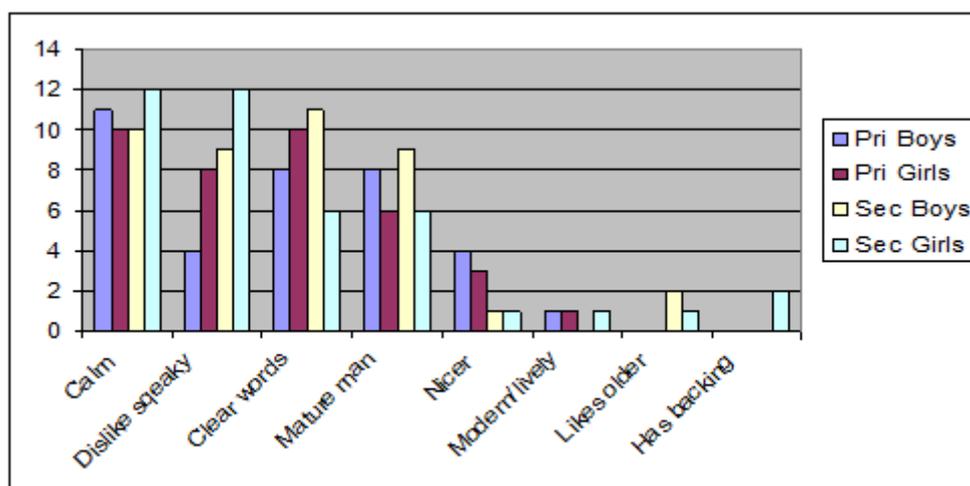
Because Aled Jones is a male not a female, in the first song it was a female and in the second it was a male (Welsh boy, Y6)

These gender misidentification figures exclude the six comments where it could not be certain that "prefers man" was being used relative to female as opposed to boy. This strange quirk is likely to be associated with the strong tendency in primary pupils to assume that any high voice must be female. Only one secondary girl made the same error, and no boys. At the same time ten secondary girls and four secondary boys made specific comments that unambiguously identified the transition from boy voice to man voice as an improvement. Only two primary girls and no primary boys showed similar recognition.

Figure v below shows a category analysis of the reasons given for preferring the baritone voice:

Figure v

Frequency of reasons given for preferring Aled Jones as a baritone



It will be seen that most frequently given reasons for choosing a particular voice reflect the perception that old people like calm, slow, relaxing music. It is notable that the baritone voice was chosen 43 times for such reasons, but also that a small number of pupils (9) actually thought the soprano voice the calmer and more relaxing. This might be expected when the question is subjective and a matter of taste, though the trend is clearly towards the baritone. It is concordant with the number of pupils who were confident that their nan would not like a high voice, which was variously regarded as squeaky, operatic, hurtful to the ears and in one case "sounding like a bee". For example:

Because in the other one it sounds like *she* (sic) is screaming

She doesn't like *ladies* (sic) singing opera

The *girl* (sic) has got a horrible voice

The other one is too squeaky

The other one was too high pitched and I think it would hurt her ears

The other is high pitched and after a while you will get a headache

However, one pupil felt that

*Her* (sic) voice is high and calming

and another that

He's a boy and it's more listenable to for an older person

The other notable cluster of remarks was the group that identified the baritone voice as the better performer. Some comments here were relatively banal "it's better" but several noted a clearer delivery of the words by the baritone, concordant with observations elsewhere that clarity of words is important to young audiences and choral singing is disliked because the words are often not clear. No concessions were made by the young audiences for the boy voice. The adult one was simply better because it was thought more polished in tunefulness and clarity.

Finally, and importantly, there was very little recognition of the cute boy effect. Only three remarks hinting at this were recorded in total. The most extraordinary was made by a primary boy:

It's a *female* (sic) and a gran would love the cover.

This really was bizarre given the close up of a boy's face. One can only assume that the high voice association over-ruled the sex clues in the face, given that it was a close up and little gender specific bodily clothing was visible. A secondary boy uncommonly recognised that:

It was by a young *child* and that would appeal to gran...

though notably the sex was not referred to, making a very weak case for the cute boy effect. On the contrary, a number of remarks were fielded, particularly from secondary pupils, that their gran would prefer a mature man, and at least one of these had a slight sexual overtone:

She'd like a man's voice because she might fancy him, knowing he's grown-up on the cover (secondary boy)

This, when compared with the previous test, is a very interesting result. Clearly the mature baritone, where Aled has presumably a richer spectrum of upper partials than the young "emerging" baritone, makes a significantly better impression, to the extent that the high/low voice preference is reversed. Young audiences also seem sensitive to polish in performance and are quick to pick up the relative greater experience of the man. There is obviously a significant difference between the views of adult cognoscenti who hold the Aled boy soprano voice in high esteem and the young school audiences who are encountering it for the first time. With them, it cuts little ice. It is interesting here that terms such as "squeaky" and "hurtful to the ear" are being used when, in the previous test, terms such as "sweet" and "innocent" were being used. As we shall see shortly, there is consistency in this judgement with other perceptual factors and it is almost certain that associations with operatic style, which is greatly disliked by the young school audiences, are of some significance. It can only be assumed that the CD illustration, a close up of the boy's face, made little impact on the audiences. There appeared to be very few "cute" cues, either aurally or visually.

### **A CD for You**

There was some evidence in the study that the ability of corporate power in the music industry to construct successful pop acts can extend to boy performers as young as thirteen. One such performer

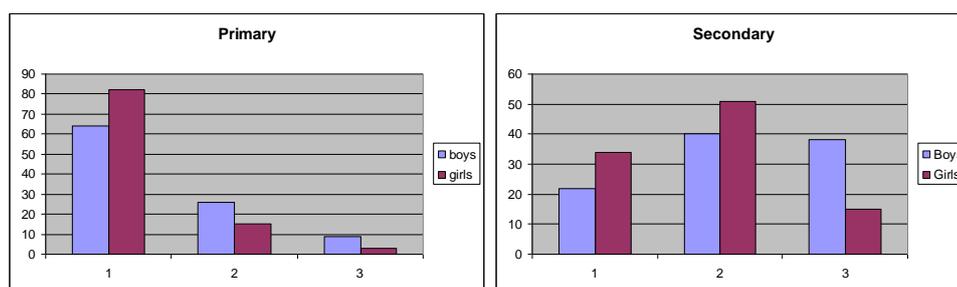
is Stevie Brock whose first album was produced by Wright International and marketed through the Disney Channel. The promotional video for Stevie Brock's album included fantasy scenes of the young thirteen-year-old boy being idolized by teenybopper girls who gazed adoringly at him during a stage performance. Later on, the video portrayed fantasy adolescent romance scenes of sitting together on a swinging bench and leaping into a swimming lake. This video was shown to the school audience groups under the guise of "a CD for you". Extending the idea of buying Aled Jones as a CD for Gran, the pupils were asked to imagine that their gran had also gone secretly to buy a CD for them. The shopkeeper, sensing Gran's lack of knowledge of the contemporary youth music scene, had advised her that her granddaughter/son would just love this new artist from the States who was going "to be big". The pupils were given three response options and invited to make a written comment. The response options were:

1. That's really cool. Thanks Gran!
2. Um, well, thank you Gran (but I'll probably only play it once)
3. Gran, you should stick to Aled Jones.

The results are shown in Figure vi below:

**Figure vi**

**Primary and secondary pupil response to teeny pop CD**



There are clear and important trends here. First, the majority of primary pupils (82% girls and 64% boys) really did like the Stevie Brock CD. Second, in both primary and secondary schools, girls were more likely than boys to rate the album. It is clear that the fact it was "pop" largely accounted for this first trend. The frequent positive comments fielded generally employed terms such as "nice beat", "lively" or "jumpy". Significantly, these two Y6 boys suggested that they actually like this pop genre:

It's really me and I love that kind of music

It's a really pop song

The general tenor of the girls' comments was similar to the boys':

It's really good timing and it's my kind of music

It's catchy and the beat is good

In secondary schools, however, the performance was much less popular. Only 22% of boys and 34% of girls would be pleased to receive this CD as a present. The most frequent category was the one of polite acceptance and it was noticeable that more girls than boys actually explained that they didn't like the CD but chose category 2 because they didn't want to offend their gran. This Y7 girl's remark was typical:

I can't stand that song but I wouldn't want to hurt my gran's feelings

Some boys also indicated that they didn't want to upset their gran, but generally boys were noticeably less likely to take their gran's feelings into account. The clear difference between the primary and secondary pupils appeared to be that "pop" was a positive for primary but a negative for secondary. Where primary pupils employed terms such as "good beat" or "lively" secondary pupils employed terms such as "cheesy", "fake", "bad" or "annoying", cheesy being by far the most commonly used word. This Y7 boy seemed to think it beyond dispute that "pop" (as opposed to rock) obviously accounted for the rejection of the album:

It is pop, isn't that reason enough!?

Other comments made it clear that the secondary pupils had rapidly progressed from an unsophisticated position in Y6 of liking "pop" to a more sophisticated position in Y7 upwards of rejecting this kind of manufactured teeny pop in favour of more serious rock. It was clear that they regarded the teeny pop as childish:

It's a bit babyish or for younger children (Y7 boy)

It was a bit like a Barbie girl (Y8 girl)

The voice did not seem to be too much of an issue. The third test in this series showed that Stevie's voice was the one both most likely to be identified as male and the one that scored the highest on masculine quality. The pitching of the song in the lower, modal boys' register did not result in the derision that was reserved for boys of similar age singing an octave higher. It was simply accepted that this was a childish piece of teeny pop sung by a perhaps precocious child. By Y9, this judgment had set in strongly. These representative comments suggest that the boys are more likely to be blunt, though both boys and girls, by the age of 14, have clearly rejected as childish the teeny pop that so appealed to Y6 children:

He is weird and gay and it is shit and I would rather listen to an old lady sing (Y9 boy).

It's a bit babyish and pathetic and quite sweet sometimes (Y9 girl).

Interestingly, these Y6 boys are wary of the adolescent sexualisation and teeny romance,

It was a bit too romantic

Too girlish

whilst at least one Y8 girl seemed alert to the issue of constructing girls as fodder and objects of the male gaze:

Every voice that's on television is about girls. Why not something else?

### **It can't be a boy!**

The final set of tests were iterative, perceptual exercises designed to identify whether it is possible for the high voice to project masculinity. Elsewhere in the monograph, the influence of George Malcolm had been discussed. Some of that discussion is moved to here for context.

According to an interview with David Hill by William McVicker<sup>4</sup> one of Malcolm's most famous claims is that "good singing is a form of shouting". If, as is claimed, Malcolm was concerned to develop a more authentic young male sound than the allegedly "emasculated fluty sound" he sought to replace,

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<sup>4</sup> McVicker, W. (1990) 'David Hill on Choir Training', *Musical Times*, 31(1766): 215 – 19.

then evidence from the present study indicates that there may be some grounds for the Malcolm approach:

They like shouting instead of singing. (boy's comment)

Boys don't do singing. They have more gruff voices. (girl's comment)

McVicker continues to quote Hill:

If you listen to children playing in a playground, they don't shout in an insipid head-voice: it is a strong resonant chest-sound that they produce naturally. And if you do the same with boys' singing voices they begin to sound like the parts behind them – their adult counterparts –and that's what singing is about.

Malcolm himself seemed to hold the view that the "old cathedral tone" consisted primarily or exclusively of the so-called "head voice" and that this "head-tone" was an emasculation of the full force of boyhood, rendering the voice "safely exploitable", a "tuneful little instrument" suited to delicate Victorian sensibilities.

Certainly, the tone is 'pure', if purity connotes only the negative, emasculated quality of an angel on a Christmas card; but if it means more, if by any chance it means the positive, vigorous, upstanding integrity of early youth, then this pretty fluting-sound is an insult to boyhood<sup>5</sup>.

At face value, this does indeed sound a strong prescription for an authentic boy sound. That Britten, known for his sexual preferences for "tough small poppets of boys" rather than the "willowy effete type"<sup>6</sup> expressed such a liking for the Westminster sound when composing the *Missa Brevis* adds weight to this possibility.

A paper by Coyle (2020)<sup>7</sup> about Britten's preference for Raggazzi took up this theme in further detail. Coyle's paper analysed thirteen works for which Britten specified a chorus of trebles by the five musical parameters of pitch range, pitch proximity, mean pitch, phrase length, and notated dynamics. The question was whether a raggazzo (literally Italian for boy but generally interpreted as masculine lad) sounds more "masculine" than an "English choirboy" as defined by Kenneth Phillips<sup>8</sup>. The original monograph text resumes here.

Recognition of maleness in the voice by the peer audiences was the principal criterion. The tests were undertaken with the school audiences as a series of multi-media presentations delivered in the reflexive context of a music lesson in which discussion was invited. As often as possible whole class sessions were supplemented by small focus groups convened to discuss some of the issues in more depth. It was possible to construct two main datasets. The first identified eight performers on a scale of likelihood to be perceived as young males and furnished further qualitative data on listener's reactions to misperceptions. The second classified each of the eight voices on four scales of "perceptual masculinity" (perceived pitch; childishness; 'shoutiness'; 'brassiness'). These yielded remarkably consistent results across every audience group as well as statistically significant scales of perceptual masculinity.

In the first iteration, audiences were played different voice samples of approximately 45 seconds' duration twice. The audiences were given no information initially about the singers and were asked,

<sup>5</sup> Malcolm, G. (1967) 'Boys' Voices', *English Church Music*, 24 -n7.

<sup>6</sup> Carpenter, H. (1992) *Benjamin Britten: a biography*. London: Faber and Faber.

<sup>7</sup> Coyle, J. (2020) Boys' Voices, Lads' Voices: Benjamin Britten and the "Raggazzo" (Continental) Sound. *ABCD Choral Research Journal*, 1: 71 – 93.

<sup>8</sup> Phillips, K. (2013) *Teaching Kinds to Sing*. New York: Schirmer.

during the first playing, to indicate the sex and approximate age of the singer, as in the *Saving the Bryans* test above. During the second playing, pictures of the singers were projected onto a screen and the audiences were asked, not to change their answers, but to record their comments, particularly if they had been surprised to find the result was not what they had expected. Observations were also made of the audience reactions and field notes taken. Table 2 shows the singers that were used.

**Table 2**  
**Performers and Style Used in Perceptual Tests**

	<b>Singer/age</b>	<b>Song/genre/style</b>	<b>Range</b>
1	Alex Prior (12)	<i>Nessun Dorma</i> Operatic (the “Little Paverotti”)	G3 – E5
2	The Choirboys (12)	<i>Hear My prayer</i> (wings of a dove) mature treble	F#4-G5
3	Declan Galbraith (11)	<i>Carrickfergus</i> Irish folk/funky pop – with twang	C4 – D5
4	Stevie Brock (13)	<i>U Be My Baby</i> ; formulaic pop, heavily backed	Efl 4–C5
5	Joseph McManners (12)	<i>Bright Eyes</i> ; naïve, <u>child like</u> “cute” rendition	D#4-C#5
6	Inigo Byrne (13/14)	<i>Close Every Door</i> (Joseph); “cambiata” voice	A3 – D5
7	Robert Harris (14)	<i>Who Is Sylvia?</i> ; mature boy soprano (recorded 1934)	E4 – F#5
8	Antony Way (11)	<i>Panus Angelicus</i> ; naive treble (early in career)	F#4 – E5

It was anticipated that it might be possible to identify what was perceived as a more masculine sound through an analysis of which of the singers were most frequently thought to be male. Second, it was anticipated that the exercise might elicit useful sociological data on audience perception of the performers and their styles of music. An analysis of these data, it was hoped, might yield results that would indicate which types of young male vocal performance in the high voice might be the more and less likely to achieve peer group approval. In the case of primary school boys, the question of which of the performers (average age 12) might be a good role model for younger boys’ high voice singing was considered to be of particular significance.

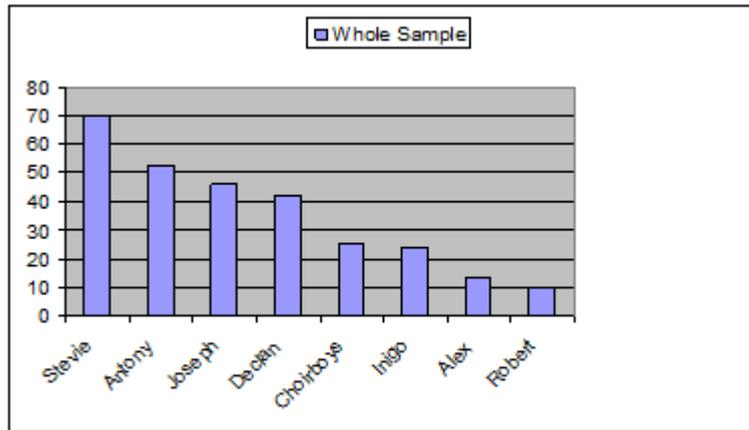
For the second iteration, fresh audiences were provided with data from the first iteration and told that all the singers were in fact male. They were asked to assess four vocal qualities that are explained shortly. Archives of boy performances were searched to find the best representative samples of eight contrasted vocal styles and techniques, the only common factor being that all the voices were stage 3 or earlier. Considerable ethical consideration was given to the use of the young performer’s work in this way. It was finally considered that, since all the work was published and in the public domain, anonymity need not apply. In two cases however, the performers selected were also performers interviewed. Where performers have been interviewed, no attribution has been made in order to protect anonymity. The performances finally chosen are shown in Table 3.

Figure vii overleaf shows which voices (at the time of recording) were most likely to be identified as male. It shows that the singers could be approximately divided into two groups of four. Stevie, Antony, Joseph and Declan constitute a group who stand a chance of between 40 and 80% of being thought to sing with a boy like sound, whilst the Three Choirboys, Alex and Robert could be said to have more girl voices, according to the peer audiences. The gap between Declan and the Choirboys is significant according to the chi square test ( $p = >0.01$ ). There were no significant differences between

schools in different areas. In fact, the results were remarkably consistent. However, there were differences between age and gender. These can be seen in Table 2 which shows the results according to age (primary = Y5-6; secondary = Y7 – 9) and gender.

Fig vii

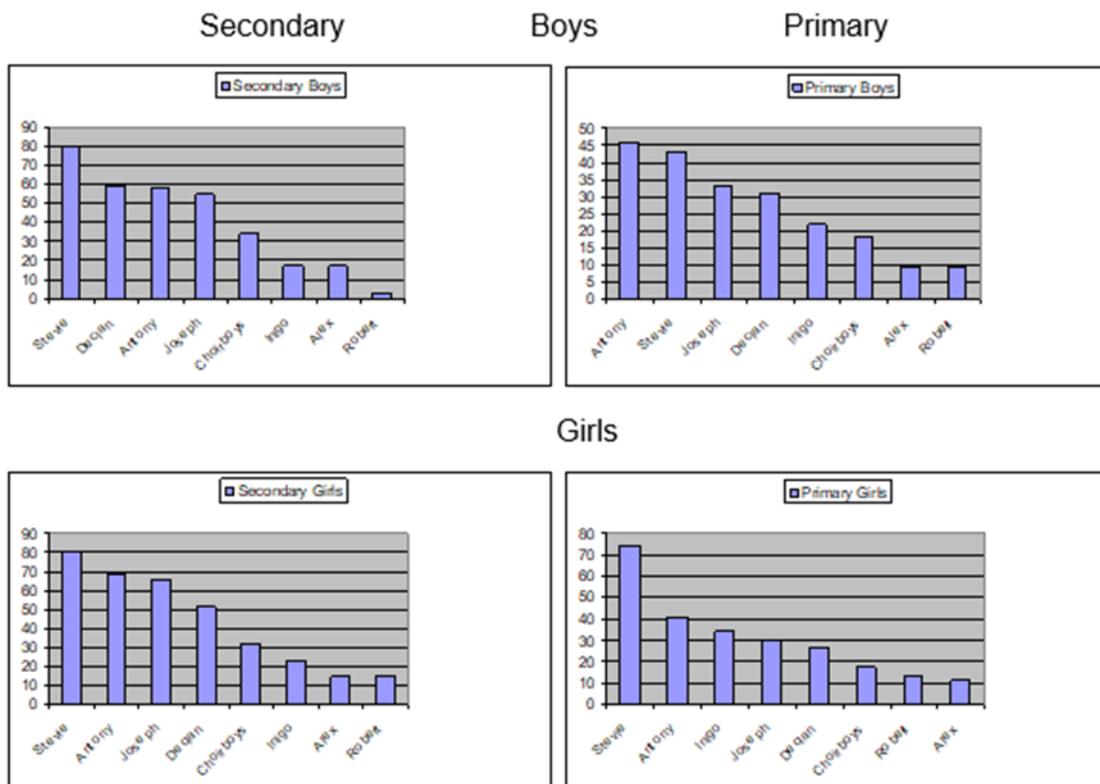
Frequency of solo voice identification as male



This reveals an important trend of some statistical significance for secondary pupils to do better than primary pupils in recognising the gender of a vocal performance ( $p = >0.001$ ). When primary pupils' judgments are excluded, the secondary pupils' judgement shows more clearly and confidently that Stevie, Declan, Antony and Joseph are perceived as the boy like voices.

Figure viii

Identification as male by school type



The qualitative data support this quantitative analysis. Primary pupils almost invariably simply expressed amazement that boys could sing:

I didn't know that boys can sing that right  
 O my gosh  
 How could it be a boy?  
 I didn't realize that boys could sing that good  
 It sounded so like girls, I am fed up!

Secondary pupils showed greater awareness, both for and against the high voice:

He is good because he can sing high pitches  
 A very young voice  
 Sings like a boy and it is a boy!  
 He sounded like an old woman

Table 3 below shows the reactions of the experienced singing teacher when sitting the same test as the school pupils. She did not, at this time, know the identity of the singers, but she identified all as male.

**Table 3**

	<b>Singer/age</b>	<b>Reaction/judgement</b>
1	Alex Prior (12)	Twang, middle constrictor or both? <u>Tenorish</u> but no bottom.
2	The Three Choirboys (12)	Finessed treble, possibly older child, has vibrato too but falsetto in top range
3	Declan Galbraith (11)	Breathiness and a register break. Use of sob and cry, some vibrato but not much at top.
4	Stevie Brock (13)	Not much twang. Thick folds and a narrow range.
5	<u>Joseph McManners</u> (12)	No comment offered.
6	Inigo Byrne (13/14)	Swooping. Lots of muscle tension.
7	Robert Harris (14)	Sounds like the voice of an old castrato
8	Antony Way (11)	Falsetto with lots of free breath

Some time has elapsed since the work was undertaken. The singers used were mostly near contemporaries of the audience groups but may not now be so well known. Additional information is provided here in the form of brief biographies matched to the singing teacher's observations.

**Alex Prior** (Twang, middle constrictor or both? Tenorish but no bottom) marketed himself as "just a boy" with "unusual vocal maturity resulting in him being described as the "little Pavarotti". The description "tenorish but no bottom" is probably an accurate perception of a voice early into change.

**The Three Choirboys** (Finessed treble, possibly older child, has vibrato too but falsetto in top range). The perception here is entirely accurate. The "three choirboys" were choristers from Ely Cathedral

and Southwell Minster and would have been at the end of their careers when a treble range would have been in a hybrid phonation in which the top notes were falsetto. Which of the three sang the solo is unknown.

**Declan Galbraith** (Breathiness and a register break. Use of sob and cry, some vibrato but not much at top.) Again, an accurate perception. Declan had no chorister training. His back story was that he was discovered performing at a street festival. The voice would have been modal with no developed top register.

**Stevie Brock** (Not much twang. Thick folds and a narrow range.) An entirely accurate perception of a young boy attempting to emulate pop vocals through perhaps pressed phonation. The range would indeed have been limited.

**Joseph McManners** (no comment) Joseph had the full range of an unchanged boy voice with a well developed and easy top register. He had been a probationer in a cathedral choir but had been "spotted" by a major record label after a film part. Aged 12 and peripubertal.

**Inigo Byrne** (Swooping. Lots of muscle tension). Inigo (Dominic) has been a cathedral chorister but had left his choir early to be coached by a London teacher who did not support "choir head voice". The voice was at this time was in early change and avoiding the top range that the cathedral choir would have used. An interesting perception by a singing teacher detached from this process.

**Robert Harris** (Sounds like the voice of an old castrato). An interesting and again perceptive comment. Taken from the Betterland CD series, Robert would have been trained by the old head tone method that eliminated the "chest register" and prolonged the soprano range through puberty.

**Anthony Way** (Falsetto with lots of free breath). Recorded in 1995 when the singer was in Y8 (age 12 – 13). It was intended to be the voice of a prepubertal soprano, but the singing teacher correctly identified a changing voice, in which case the only unchanged voices were McManners and Galbraith.

The accuracy of the singing teacher's perception was remarkable. The peer group audiences could not, of course, be expected to have anything like this knowledge of singing. However, drawing on the notion first proposed by George Malcolm that "shoutiness" and "reedy/brassiness" are masculine qualities in a treble voice, peer group audiences in the second iteration who were told that all the voices were male were asked to rate them according to the following scales:

Flute-like voice	1 2 3 4 5 6 7 8 9 10	Reedy brass-like
Dainty voice	1 2 3 4 5 6 7 8 9 10	Shouty voice
Childish voice	1 2 3 4 5 6 7 8 9 10	Old voice
High voice	1 2 3 4 5 6 7 8 9 10	Low voice

The first two of these continua of qualities were explained and demonstrated before the test. For the continuum child-old, no explanation was given. The audiences were simply told that they would probably have in their minds an image of how old and young voices would sound and that the younger the voice sounded to them, the nearer to child. They were told that this was because it was desired that judgements should be made about the sound of the voice and that the object of the exercise was not in this case to guess the age of the singer.

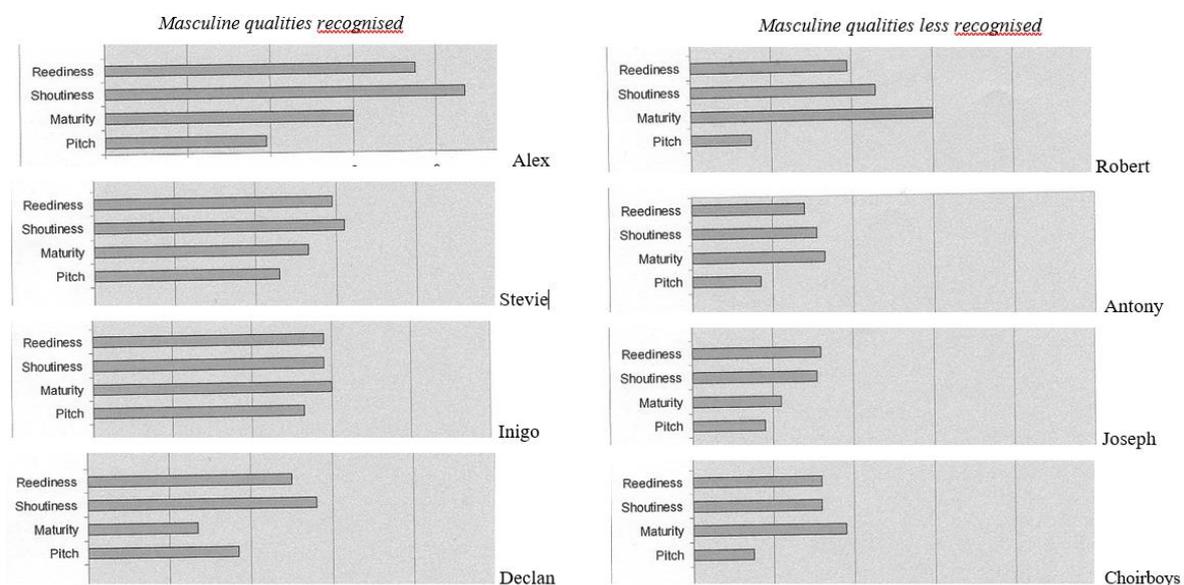
Minimal explanation was given for the continuum high-low. The audiences were simply asked to indicate "how high the voice sounds to you". Again, the reason for this was that it was not desired to

obtain an accurate estimate of actual pitch, but to assess the perception of pitch, which is different. Cooksey's account makes it clear that pitch can be misjudged during certain stages of voice change owing to shifting balances of frequency peaks with the acoustic spectra. A tendency for young audiences to misattribute pitch according to the perception of timbre had also been noted with some of the voices used.

Figure ix below shows the results of this arranged in rank order of shoutiness. It will be seen that shoutiness and reediness are quite closely related. There are a number of important similarities and differences to Figure viii. When the two datasets are compared, a number of plausible interpretations present themselves that may be of some significance for the question "How Should I Sing?" It will be seen, first of all that when all four criteria are considered, Stevie is on both assessments the singer who sounds *most like a boy*. The fact that Stevie sings formulaic pop in a limited modal range with thick folds does not mean that he represents the ideal for boys' singing. There can be very little doubt, however, that a low, modal treble voice with thick folds met with young audience approval. Next, it will be seen that by the criteria of shoutiness and reediness, Alex moves from low down to the very top of the order. The voice is also judged relatively mature and low in pitch. This "young Pavarotti" is, then, far from "girly". It is perceived as a very masculine voice if Malcolm's criteria are employed. The most likely reason for its being so unlikely to be recognised as such is almost certainly the operatic style, coupled with vibrato and treble pitch. Numerous qualitative comments confirm that, not only is this the case, but that operatic singing is actively disliked by young audiences.

Figure ix

## Perceptual recognition of "masculine" qualities



A similar explanation can be given for Robert. Here, the young audiences perceive a particularly high pitch. They also recognise a level of maturity equal to that of Alex. Hence the comment "he sings like an old woman". The only major discrepancy between the young audiences and the expert judgment was over the degree of shoutiness. Whilst the young audiences rated it the fifth highest, the expert rating was 1 for extreme daintiness, which would indicate the identification of a lack of robustness due to the use of falsetto to fight a relatively advanced stage of voice mutation.

Inigo's voice also differed in position between first and second datasets. Although it stood an almost 75% chance of being identified as a girl in the first set, its overall profile in the second shows a remarkable balance of all four qualities which suggest that it does have a rounded profile of *sound like a boy* quality. It can only be said that, throughout the research, it was this voice that proved the most enigmatic. It inspired admiration from a cathedral chorister who recognised it as male and called it "quite lovely" and it inspired awe in another informed listener struck by its alluring cambiata quality. The perceptual data here simply confirm that it is an interesting, if somewhat unusual, voice to explore in educating listeners about boy sound.

Of the remaining four voices, Antony and Joseph's are very similar in perceived qualities and both were amongst the four most likely to be recognised as young boys. It will be seen that Joseph's is identified as the least mature, a fact that exactly matches the marketing of his album as a "pure, child voice" and of which an adult reviewer on the Amazon website said:

The first thing I noticed was the extreme clarity and freshness of his beautiful voice. It is such a relief to hear that no ecclesiastical choirmaster has got at him . (Amazon, 2005)

Both are recognised as high in pitch, which was also accurate, and the perceived quality of reediness and shoutiness was very similarly orientated to daintiness and flutiness in each. Whilst the primary pupils mostly regarded these voices as female simply because they were high in pitch, a small but significant proportion of the secondary pupils did seem to recognise that these two voices represented the flowering of the boy child soprano. This cannot be said of the three Choirboys, however, who, whilst rated very similarly in reediness, shoutiness and pitch were rated higher in maturity. This is on the face of it an accurate perception since the voice heard was an older boy. It was judged by the expert listener to be a finessed treble resorting to falsetto to reach the higher range. It is probable that this ecclesiastically trained voice was well into stage 2 and therefore no longer a boy child soprano. However, it was still a "choirboy" sound, so the selection of repertoire (*Hear My Prayer* as opposed to *Pie Jesu*) may have influenced judgement. The price that is paid seems to be its perception as *not a proper boy*.

Last, Declan's voice was recognised as within the top four on reediness and shoutiness, relatively low in pitch and immature. This is again an accurate perception in all ways. The reediness and shoutiness is due to its belt like quality achieved using twang. The pitch was significantly lower than the Choirboys' G5, and, though a C5 was reached, mostly centred around C4 – F4 making it lower overall than Joseph. Whilst those who value the high voice singing of older cathedral choristers would almost certainly disagree, the young audience verdict would seem to be that, if young boys must sing in high voices, then it is Declan, Joseph, and Antony who are the nearest to being *boy children*. Young audiences might not care much for some of Joseph's or Antony's repertoire, but some at least seem to be unknowingly in tune with Cooksey regarding the voices.

## Conclusion

The purposed of this paper was not in any way to evaluate the performances of the singers. It was taken as a given that all were accomplished in their various fields. The principal aim was to explore the perceptions of peer group listeners, given that it was already known that the peer group was very rarely the audience for the recorded output of the singers. The purpose of so doing was to elicit data that might be useful in breaking down prejudice against boys' choral singing in schools, or to reduce the level of taunts or bullying that might be experienced by singers. A surprising result was the frequency of gender misidentification through belief that boys were incapable of accomplished singing. This alone ought to be a matter of serious concern but it was also the case that, whilst boys preferred male singing to be in a lower range, there was a tendency to reject a young baritone in

favour of a high boy voice provided that that voice had been wrongly identified as a girl. A considerable degree of prejudice against boys' treble voices is thus revealed.

Another unexpected finding was that primary schools did less well than secondary schools in the accuracy of perceptual judgement. This might be thought a degree counterintuitive in that almost all singing by boys in primary schools will be at the same pitch as singing by girls. Secondary pupils, however, recognized that children of either sex sing differently to boys who have begun puberty. Some evidence emerged that primary school pupils believe boys' voices to be lower than girls' in spite of the fact that pupils hear each other's speaking voices almost constantly every day. This appeared to have less impact than the effect of boys not trying at singing, evidenced by remarks such as "Boys don't do singing. They have more gruff voices."

The overall conclusion at the time of the publication of the monograph was that most, if not all findings could be explained by a general lack of singing in schools, or that singing was often of poor quality when it did take place, particularly in primary schools. Shortly after the research was undertaken, large scale government funding for the *Sing Up* programme resulted in improvements identified in evaluations of the programme by Graham Welch and colleagues<sup>9</sup> at the International Music Education Research Centre (iMerc). These improvements confirmed the need to address the paucity of good singing in primary schools, though the present paper supports the proposition that education about boys' voices, speaking as much as singing, could still be more explicit. This is particularly the case in Y6 where a proportion of boys will be approaching puberty.

Explicit education about puberty and voice was provided for lower secondary schools by the AHRC funded *Widening Young Male Participation in Chorus* project ("Boys Keep Singing") which was a direct outcome of the research described in this paper. It was concluded that boys might be more receptive to singing if they understood their voices at the time of puberty better. Evaluation of the programme for the AHRC produced a portfolio of evidence that confirmed that boys in the lower forms of secondary schools were indeed more willing to try singing or join choirs after sessions on puberty and voice. Unfortunately, funding for both initiatives has subsequently lapsed and current research by the author with a new generation of young recording artists indicates that the overall position in the 2020s may have regressed to a state little different to that when the original monograph research was undertaken.

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<sup>9</sup> Welch, G., Himonides, E., Saunders, J., Papageorgi, I., Vraka, M., Preti, C. and Stephens, C. (2009) *Researching the second year of the National Singing Programme in England: an ongoing impact evaluation of children's singing behaviour and identity*. London, University of London International Music Education Research Centre.