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Association of Teachers
of Singing

2000
A Voice Odyssey

Volume 6
2000

Australian Voice

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Cover

The cover features the logo of the Fifrth Voice Symposium of Australia "2000: A Voice Odyssey", superimposed over a panoramic photograph of Brisbane, the host city. This event was jointly sponsored by the Australian Voice Association and the Australian National Association of Teachers of Singing for the first time this year.

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From the Editor

Adele Nisbet

In the tradition of accurate and verifiable reporting, this edition of *Australian Voice* can be described as the last for the 20th Century — can you hear the stirring music accompany this editorial: it could be Mahler's Symphony of a Thousand or is it Thus Spake Zarathustra, the Space Odyssey theme?

However, I admit to being cynical about the hype surrounding a mere number crunch in the calendar. What does it matter if the market place and the mathematicians don't agree on which big number is the most significant: the party last new year was enjoyable enough to repeat!

In reality, the global community has come a mighty long way in the last hundred years, to say nothing of the last thousand! And our human minds seem to need gates on which to nail signposts to keep us heading in the right direction. *(This is starting to take on the flavour of a Campbell McComas script — help!)*

So at the gateway into the 21st Century, we can have our turn at reflecting on the past and planning for the future. What direction have we come from and in which direction are we heading? *(Oh dear, Campbell, get off my shoulder!)*

This edition of the journal is number six and I think ANATS deserves heartiest congratulations on both the initiative and the sustained support of the venture that is continuing into the new millenium. It was begun to provide a forum for serious and scholarly discussion about all topics relating to voice. It has had a wide variety of topics from a small but growing group of professionals interested in either voice science, voice medicine, artistic performance and voice education. Papers and interviews have featured names like Janice Chapman (UK), Dr Stephen Austin (USA), Dr Pamela Davis (Aus), Dr Ronald Lafonde (USA), Dr Jean Callaghan (Aus), Richard Jackson (UK) and the international connections have given us a valuable benchmark for the currency of the content. I would like, at this point, to acknowledge with gratitude the excellent work of Jean Callaghan and Sally Collyer as Editors of the 1999 edition — thankyou both.

As for the year 2000, *Australian Voice*, through this edition, marks the occasion of the Fifth Voice Symposium of Australia, held in October, in Brisbane. The significance of this co-operative event may only be judged in retrospect, but the principle of greater sharing of research, methods and practice will only enhance the *raison d'etre* of both ANATS and the Australian Voice Association. Some of the papers included in this volume were submitted for the Symposium program but due to programming constraints have been published rather than presented. This journal looks forward to publishing the highlights of the symposium program in the year 2001. Until then, in the spirit of 2000: A Voice Odyssey, may your journey be full of new discoveries about voice!

Master Performer — Master Teacher

Joseph Ward in conversation with Adele Nisbet

Joseph Ward has a distinguished international career as an opera singer, an opera director, a voice teacher and in the field of tertiary education.

Originally a principal baritone at The Royal Opera House, Covent Garden he subsequently transferred to the tenor repertoire and became a resident principal tenor. During this period he worked with some of the world's greatest conductors – including Klemperer, Kempe and Solti, and in productions by Zefferelli, Sam Wanamaker and John Gielguid. He created the role of Starveling in *A Midsummer Night's Dream* by Benjamin Britten, sang Demetrius in the second-ever performance and created the same composer's eponymous hero Billy Budd in the revised two-act version now generally performed. He also created the role of Patroclus in Michael Tippett's opera *King Priam*.

He has sung throughout Europe, in America and was a principal tenor with the Sutherland-Williamson Grand Opera Company in a 1965 tour of Australia which has now become part of operatic legend. Opera recordings include *Albert Herring*, *Wuthering Heights* (Bernard Hermann), *Norma*, *Les Huguenots*, *Beatrice di Tenda*, *The Pilgrim's Progress* and *Montezuma* (Graun). Joseph Ward founded the Opera School at the Royal Northern College of Music in Manchester and subsequently also became Head of Vocal Studies. More recently he became Opera Consultant to The Queensland Conservatorium of Music, Griffith University for whom he directed Billy Budd and Elijah – The Opera for the 1993 and 1995 Brisbane Biennial Festivals.

An eminent singing teacher and vocal coach, he has taught, since 1978, Jane Eaglen, one of the world's most-in-demand dramatic sopranos. Other students with international reputations include Joan Rodgers, Arthur Davies, Ian Caley, Rosalind Sutherland, Barry Banks, Jon Villars, Maria Pollicina, Andrew Collis and the West-End star, Claire Moore.

Recent opera productions include *The Pilgrim's Progress* for The Royal Opera House, Covent Garden and *La Fille du Regiment* for Opera Australia.

Joseph Ward has television credits as Musical Director and worked closely with Sir Laurence Olivier on his last major acting role in *Lost Empires* – the eight-hour serialistion of the J.B. Priestley novel by Granada Television.

In November 1991 Joseph Ward won The Manchester Evening News Opera Award and the following year, for services to music and opera, was appointed Officer of the Order of the British Empire in Her Majesty the Queen's Birthday Honours List.

This year marks the fourth occasion on which he has been National Adjudicator for the Australian Singing Competition and he is the distinguished presenter for the classical voice Masterclasses at the Fifth Voice Symposium of Australia in October 2000.

This is a good way to begin Joseph, talking about keeping active! It would be interesting to know how you came to singing, whether it was the passion of your life when you first started and how you came to where you are now, as someone who passes on all you know to young aspiring singers.

Yes, it was and is still the passion of my life! When I audition young people who have an alternative career I usually say, "take the alternative because singing isn't a lucrative job for most of us and only a few make enough to live on let alone a lot". Therefore one must have a burning desire to sing, because you don't do it for the money in the first instance. Also in my case I couldn't do anything else, — I still can't. Someone once said to me 'What would you really like to do' and I said 'Well, there are all sorts of things I'd *like* to do but I can't.' I don't have that intelligence; I have a singing intelligence and a singing nous!

Were you a child singer, in an English tradition as it were, singing in a cathedral choir?

Yes I was; I sang in a very good church choir, St James Church in Preston, and I had a marvellous choir master. I went along and sang *Ah Sweet Mystery of Life* for my audition. All the other little choir boys were standing around listening and I had a real soprano voice, not like a treble sound. I'd always been a show off and I can remember at age five standing on chairs at parties and singing *Little Old Lady Passing By* and all sorts of popular Deanna Durbin songs with top notes and coloratura.

I loved the coloratura (and had a natural facility for it), which I'm glad about now because I feel strongly that coloratura is an essential aspect of vocal technique. I believe if you can't move your voice, you can't sing anything. But on the converse side I think you can do more damage singing quick music than with slow music if you don't know what you're doing.

I became the soloist in the choir eventually and I used to sing the standards — *Hear My Prayer, Olivet to Calvary* and everything of that ilk. Whilst I was there, the World War II was on, and I used to do troop concerts. I'd sing for American or British troops at various charity raising events; in particular I remember doing an Easter sunrise service for the American troops out in the country where they were based.

How old were you then?

I would have been 8. Then I started making broadcasts on radio and also made several records as a little boy

Do you still own those records?

Yes I do — I remember the first thing I ever did on the radio. It was a troop concert which was broadcast. There were quite a number of stars in it. It was my debut and I remember what the announcer said. "At an audition some weeks ago we heard a boy soprano sing Stephen Adams' *Holy City* and here is Master Joe Ward to sing it to us tonight." It was live with an orchestra and I was going on 9, and didn't have a nerve in my body then — I loved it. Ignorance is bliss.

Can you identify a time when things changed? I know when I was a girl, I just sang and it didn't occur to me that it wasn't natural to sing. But there was a point when it became more nerve wracking

And more important!

Yes. Can you identify something or a time when you became aware of your nerves?

Yes I can. I started to take it seriously after I started with the choir when I was 9! My choir master who was great on breathing and non-forced production, gave me breathing exercises. I used to walk along the street counting my paces, taking in a breath, counting my paces and letting out my breath, which I believe was a very good grounding. I became very aware of my breath control, support and the distribution of breath into a phrase. These skills are all separate entities which become a whole package when you join them together. But support isn't necessarily anything to do with distributing the air for the sound. He made me aware of all this and he was very strict about things. I was not allowed to miss a rehearsal and he would come to my house and ask my mother why I was not there. So I was brought up under a very strict regime — but thank God. He was a terrific man and he gave me a sound basis. Let's face it, singing is primarily about breathing and when you are young you have to learn about using your breathing equipment with all its components. He did all that, so that's when I started to become aware it was more serious than getting up in the morning, opening your mouth and singing. Then I started in Music Hall doing weekly variety. My mother went around with me as my chaperone. I sang *The Holy City, The Pipes of Pan, Bless this House. Smiling Through* and the likes. I had a 15 minute act and I went all around the north of England doing it.

I met my first real celebrity when I was 9! This was at the Theatre Royal, Rochdale, the theatre home of Gracie Fields. I finished my performance that night and the Manager of the Theatre asked my mother would I mind staying behind as there was someone who wanted to speak to me. I stayed on stage and the manager escorted this old man — well, he was white haired and therefore seemed old — and a white-haired old lady. He said to me he had enjoyed my singing very much, that my diction was splendid and that I ought to work hard at my singing as he felt I probably had a future in music. He suggested that I go and see a movie with a famous tenor (whom I'd never heard of) called Bengiamino Gigli in it. He then patted me on the head and said well done and goodbye! The lady turned to my mother and said "You know, there are a lot of stars in the world who would give anything for Mr George Bernhard Shaw to say that to them!

Wow! How amazing!

Yes it was amazing, because I didn't know who he was! I was a little boy from a working class family…

To move on, did you have other music training, such as piano lessons or theory?

Well, yes. The piano was the bane of my life. My mother sent me to a local lady called Harriet Bowen. She was too nice for me, giving me a sweet at the end of every lesson and saying well done when it wasn't. I was hopeless but I did try; I learnt basic note values and rhythms and drove her to distraction in the process. I have to be honest — I didn't enjoy the piano, I didn't practise because I only wanted to sing — I was wrong!.

And although you may not have enjoyed it at the time, as a developing adult singer did you ever regret not have done more?

Well, I had to take it bit more seriously later because like all little boys my voice changed. When this happened, and it happened quite suddenly. I was 14, and I woke one morning, opened my mouth to speak and nothing came out. I was desperate at first but it came back after a while. However I didn't sing anymore. My singing teacher, Mr Newsham didn't allow me to sing through the transition and he said he thought that my voice wouldn't be ready for singing again until I was 16 or 17. And I didn't use my singing voice at all until the age of 17.

This was the right advice for you but is this the sort of advice you would pass on to a young person today?

I would say this to a boy and to a girl also. But I couldn't be exactly sure if it is the right advice. It worked for me, therefore and I certainly wouldn't expect a young male singer to sing as a young tenor having just been a treble. Leave it alone for a while and let the muscles settle or develop physiologically. I don't entirely know what happens because I'm not a doctor, but I wouldn't advise someone to sing through that period. Rather they should wait and see what sort of voice comes back naturally. When I eventually tried out my new voice — (I had been quite good at keeping 'stumm') — my sister cried; she thought it sounded like the voice of my father who had died earlier. It was an adult voice, I know it was a nice sound quality, and I enjoyed singing again.

But I've told you this story because you asked about the piano and musicianship. When I began singing again, I joined an amateur Opera group. I auditioned with a dreadful piece called *Melisande at the Well.* Fortunately the lady in charge was a retired Opera singer and she recognised some talent in me but told me never again to sing *Melisande at the Well* again! I was working in a cotton mill, nevertheless, she took me to the Royal Manchester College to sing for the principal R. J. Forbes. I was offered a place. The opera group director, Mrs Rodgers supported my cause and so the Local Education Authority gave me my daily train fare to travel between Preston and Manchester and fourteen pounds per year to live on! On the first day, I had to report to this marvelous woman with blue rinsed hair called Elsie Dove. She was to be my piano teacher and she was terribly strict. According to Miss Dove, my project was a simple one, to play Beethoven's Sonata in G for the first lesson. Well, I can still play that sonata from memory because I played it for four years!! — Every lesson. But I had to take it seriously, and I was good at keyboard harmony, because I had a good ear. This is good because I can play the exercises for my students I can read Aria Antiche, and I can play Concone and Vaccai, and all those sorts of things. I can play the piano in a rudimentary way — some Handel for example, but certainly not *Love Went A Riding (Frank Bridge)*! When pressed I can convert an accompaniment to basic chords so that my students can hear the harmony. But it is essential to have keyboard skills as a singer especially these days.

Because there is so much competition and if you can't do it, the next person will be able to.

Yes, and that makes them that much better than you, it's very important.

So you completed the course and then after that did you go straight into being a professional singer?

Yes I did, I was very lucky. The then principal Frederick Cox, who was my singing teacher, was a colleague of Harold Fielding who was the biggest theatre agent in Europe at the time; he presented all the big shows at the London Palladium and Drury Lane and brought Opera companies over to England. Mr Cox said to me, "I want you to sing for Harold Fielding". This was in my final year, and I had done rather well, so I went to the Opera House in Blackpool when Harold Fielding was presenting a pop singer called Guy Mitchell — he was marvelous, an enormous American singing star. I went along and I sang an operatic aria or two — *Eri tu* and *Largo Factotum* to be exact — he liked it very much and he said he would represent me. The first engagement was Pantomime at the Connaught Theatre, Worthing which was *the* out-of-town pre — West End Theatre. I got a solo, and then straight out of that into a summer season where I got proper billing and had a spot of my own. I sang *Old Man River, Love is a many Splendid thing* and *Mountain Greenery.*

But now as you look back at what happened to you, can you see some parallel for a young baritone coming out of an institution nowadays? Even perhaps to doing some work in music theatre.

I am glad you asked that because at the end of the season, I auditioned for and went straight into a principal role in the Carl Rosa Opera Company. Now what I am skeptical about nowadays are all these Young Artists programs. I don't know if this is a fair comment to be honest, because I know one has to be gainfully employed, but I do think that sometimes it is better to get yourself some real marketplace experience even if its not strictly what you eventually want to do. I think for instance, it was right of me to go into Pantomime. I got tremendous stage experience to take with me into Variety Theatre, in which I got even more experience, and if I am honest, I think I learned more about stage techniques in those two opportunities than I did by being in an Opera Company. When you go into variety and you are on your own, you have to put your personality into what you do or they won't engage you again. Whereas if you go into an Opera Company, you can be lulled into the feeling that you have "arrived" and are secure, when in actual fact you are not. You are an individual who is part of the whole but you have to keep developing your art in all its aspects.

And so the opportunity to look for your individual skills and special talent can sometimes be found in a variety of opportunities and other less vocally demanding roles while you are young and the voice is still developing.

Yes, I agree with most of that. What I think is that in my case to do a solo spot in a variety show was very demanding in as much as I did it twice a day. Also I had to sing the high notes because the audience wanted to hear the full range of the voice. It sorts the sheep from the goats because you find out whether your technique is working for you. If it isn't, you will probably be vocally "finished" by the end of the week. So for my strong voice, I was grateful both to Mr Newsham, my early singing teacher, because my support was always good, and to Freddy Cox at the College, because he was very much into technique (the Italian school). I mean we used to sing Aria

Antiche until I was looking like an antique Aria. Aria Antiche are medicine for the voice.

All singing teachers teach technique,...

Of course, you can't be a doctor or a brain surgeon if you don't know how to operate, can you?

But how much can we teach the essence of performing?

Now that's a difficult one. I do believe that in the first instance, one hopes to get a student that has a good voice. God gives that, but he doesn't necessarily tell the recipient how to use it. Hopefully the student will find a good teacher who will help with this aspect. But there must be a singing instinct. Instinct is the one thing that cannot be taught! You either have it or you have not! We have all had students who come into a lesson and after much repetition get it right. You think 'It's taken me an hour to get you to do that right, but good, you've got it.' But if it's not instinctive, they come back to the next lesson with new repertoire and you have to start and do the same technical work again. The instinctive performer will take what is given to them in a lesson and apply it ever after! That's what you can't teach. I think one can help with the artistic development by giving a person goals and examples and giving them enthusiasm, spurring them on, but you can't actually teach someone how to turn a phrase. You can sing it for them again and again but it will never be satisfactory if it does not come from the student's own imagination — well that's my experience!

So it seems that we've jumped over the story of your adult career and come to your teaching. How much does your teaching reflect the way you were taught or the way you learnt to manage your own voice and perform during your career?

Well, that's a very good question but not easy to answer. I do think that performing experience is invaluable for a teacher, it gives an insight into the problems a singer faces when he or she performs before the public, and I think the fact that the teacher has "been there and done that" can give them a sympathy for the problems of performing. However having said that, I don't think it's the 'be all and end all' because I know many classy performers who are not very good teachers.

I think that teaching is something that has to be learnt. I started teaching when I was still at the Royal Opera House, Covent Garden. Two days a week I went to the College in Manchester and I thought I had all the answers. I was performing at Covent Garden and so I'd *show* the students how to do it — not a bit of help, quite honestly! The student does not need you to show them your way. You have to draw out what *they* can do not what *you* can do. And that is a danger a performer/teacher has to face. A performer sometimes misguidedly thinks that this is the way to do it but of course it is the way to do it for the teacher not necessarily the student! I reckon that after 10 years, I started to know something about teaching. I'll tell you when something clicked — I was sitting in a lesson one day and I found myself repeatedly saying "No, no!" and the person hadn't got out what they wanted to do. I suddenly said to myself 'Joseph, just *listen*!' and you know I found that without my interrupting, by the time the person had sung for five minutes they has righted for themselves what I was going to correct. Then I would say 'That was right, what you just did there. Can you remember what you did because that is your technique, if you remember it.' I didn't have to say 'This is how to do it'. However it's not always that simple because if someone comes in who can't do it, then you have to give examples.

As head of Vocal Studies at the RNCM in Manchester the most important part of the job was the allocation of students. There was one particular member of staff who was a good teacher — has taught at least one international singer — but I used to be very wary of allocating him students who didn't know how to make their own sound. If I sent him one such students, he would come out with that teacher's sound. Send him a person who had found his own sound and he was marvellous because he didn't have to demonstrate! The person then came out with a very good technique and his own voice. I think that's a danger for we teachers. I find I teach ladies best because they can't copy my sound. And I have to be wary when I'm teaching tenors; I have my way of doing it and I can demonstrate a note but it is not necessarily their way of doing it. Everyone's got a technique inside and the teachers' job is to be "their ears" and help them establish it. But what I don't believe in is giving them "my technique" that only works for me!

Well, basically, every 'body' is different isn't it? So I guess it behoves us as teachers to learn as much as we can about how the voice behaves, how it works.

Well I do believe in that; I'm aware of the academic work that you do and I think that as a teacher we can't help too much and I am in favour of anything that helps the voice.

You've certainly had some successful students, Joseph. I wonder what qualities, personal qualities apart from having a 'good voice', you feel someone must have if they are going to make a success of a singing career?

I think a person has to be amenable, has to be able to relate to colleagues, has to be able to take on ideas then make them their own not merely copying them. In short, people have to be able to get on with you because no matter how good you are, if you are difficult to get along with, a conductor or director will not work with you, especially when you are just starting. Very famous performers who are difficult or temperamental might get away with it for a while. To be a performer, it is not only having a voice but also other facets such as projecting your personality *through* the voice. I believe that, on the whole, the very best lieder singers who have to work with vocal interpretation and vocal personality as opposed to physical histrionics, make the best opera singers. When you add the physical to someone

who's got the intellectual capacity, then you get the best, I think.

I heard a recital broadcast recently — a female singer of Wagnerian proportions, whose lieder was frightening but whose operatic arias were thrilling.

The very best people must be able to do both! Callas said it well — I have a tape of a marvellous interview with her and she was asked about her technique and her rivals. She said "Well I don't have any rivals. I sing their repertoire but they don't sing mine! For example a violinist must be able to technically encompass all aspects of his instrument so must the singer be able to sing — coloratura, sustained legato, forte, pianissimo etc. in a word all aspects of vocal technique" Richard Bonynge is a great one for using vocalise; he believes in singers doing scales and exercises — I do too. I don't see any point in singing through arias, arias, arias. One must practise technique. I believe very much in the old Concone, Vaccai & Lutgen exercises.

Can you say why they are so important?

I think they develop the muscles, they keep the mind alert, develop the concentration which is very important...

...the inner hearing, the tuning mechanism?

Absolutely, because what makes a singer? I have been adjudicating the Australian Singing Competition recently, and I've been reading Marianne Marthy's book. She has put down some very pertinant pointers — 'a singer must have a natural sense of pitch, rhythm, be able to sing scales, florid passages, triplets...you have to be healthy, you have to have a marvellous sense of concentration" Tremendous discipline goes to making a singer.

Love of language?

Of course language is all important.

It's such a shame that Australians find this a challenge.

Well look at England! It is an island and my generation of singers couldn't travel to the continent because of the war and therefore everyone spoke English and nothing else. But if you go to the continent, everyone speaks another language. Returning to what makes a good singer, a young person should be developing their own individual vocal colour. It is important to find an acceptable vocal colour and style. Again, I have difficulty with the concept of Young Artist's programs because, the young singer is not always getting the experience of singing on stage with experienced people and I do believe a lot can be gained from the example of how to form a dramatically meaningful sound. I think you have to be a bit of a mimic to be a good singer. For instance when I was young I wanted to be Tito Gobi and I would practise sounding like Tito but it put inside me a sound I wanted to make (I do not mean that one should try to sound like any one other than oneself) but by listening to experienced performers one can help establish ones own vocal colour. Some young people come for singing lessons and they don't know what sound they want, they don't know how to make a particular colour. And I don't think they've listened enough.

They probably have no concept of what good vocalising is let alone what good performing is!

Yes, it's not just opening your mouth is it? It's imagining the sound and channeling that imagination from your brain into a sound. The muscles then seem to work. I can ask a person to make a sound but it must be not just physical but from the mind and the heart and the emotions. It all comes together then, but you have to mean it. My teacher Frederic Cox used to say "Look Ward, you can't sing a scale without emotion" You have to imagine that the scale is doing something, going somewhere and you can't do that without emotion, a burning desire to make the best sound you can make — see it!

It must be a thrill for you to see Jane Eaglen doing so well and it was lovely to see her acknowledgement of you in the interview in Opera News

She's very generous to me. She always acknowledges me in every interview she gives!

There is a saying that there are no good teachers only good students. But realistically, as teachers, we do influence our students. Is it fair to ask how you feel you were able to help Jane along the way to where she is today?

I'll try...She came to the RNCM Manchester as a 17 yr old. Jane Eaglen and Joan Rodgers (another notable student) auditioned together and both girls were allocated to me. Funnily enough, I didn't remember Jane's audition particularly. However, I did remember Joan Rodgers' because I thought her audition was very individual. I think she is instinctively the most artistic person I have ever taught and I learned as much from Joan as she did from me. So although I didn't remember Jane's audition, I do remember her first lesson. She sang *O del mio dolce ador* and for a girl straight from school, she had this big voice but there was nothing really above an F. Her voice went from this marvellous sound to nothing much above the stave. It took a couple of years but eventually she was singing G's and A's. But I could recognise in the middle of the voice this potential, this richness. I said to her "If we can get the top to develop there is no doubt in my mind that you will sing Norma and Brunnhilde." (she has quoted this frequently) and this is all gospel truth. I remember she said to me — "Is that good? Should I be pleased about that?" Jane never gave me a days hastle and her phenomenal success is due to her hard work and dedication. Jane believed in me and I believed in Jane.

Did she believe in herself?

Yes, she did. She has a marvellous laid back side to her personality — a bit of an Australian thing really. She never had a crying attack with me or threw a wobbly, unlike Joan. Joan was like a racehorse all

nervous energy, Jane was like a Clydsdale secure in herself and of her own ability. Her personality was such that she could accept the vocal tribulations and go away and sort them out. A young coloratura soprano I was teaching at the time was actually struggling to move the voice and one day, as we were preparing for a performance of Handel's *Messiah*.,I told her I was tired of this. After three years, giving her all I knew, she was still lagging behind in coloratura facility. I said she must go away and come back next semester with it fixed. She left the room and burst into floods of tears in front of Jane. "Whatever am I going to do?" "Well," says Jane, "you shut yourself in a room like I do and stay there until you can do it!" And that's what Jane did — she worked, just worked — of course there was that Rolls Royce instrument!

There's really no substitute for hard work is there

No, none at all. And Jane will tell you now, that she still draws on this work ethic. She won't mind me telling you a story. Recently when she was singing in Chicago, she rang and said, "Come over, I'm having a bit of a crisis of confidence and you are the only person who can put it right because you're the only person I'll listen to". So I went over there and she met me at the airport. She said "You're going to tonight's performance". She'd met me at the airport and was singing Isolde that evening; there's a lot of singers who wouldn't do that but she's not phased by performing — it's just part of the day. She leads a normal life during the day and then into work in the evening to sing! So I had to go that night to listen; we planned a lesson for the next day and then I was to go to the next performance to see if there was a difference. We worked on a few details, some notes that I identified as needing a bit more "anchor"; she sang the next performance and she did it! I admire her for her ability to take on ideas and make them work for her She felt that getting two notes right was a major breakthrough! I think that is the mark of someone pretty special.

And a lazy singer will never make it...

Never, never! I was with Jane in Milan when she was singing the *Siegfried* Brunnhilde. I was with her in her apartment; she is such a brilliant musician that she was learning Isolde from the score, no piano, just reading it like a book. She is amazing. When I then saw her singing it in Chicago, she said "You know, it has not been learning the notes that has been difficult, it's been the text — the character is so complicated and deep. Finding the nuances and the reasons has been so difficult. That's the hard work, not the notes." Isolde has four and a half hours on stage and ends with the *Liebestodt*. After all those hours of singing, the singer still needs to produce a fabulous mezza voce and legato. I hadn't realised it was so high and intense, although I'd heard Birgit Neilssen, (she's my heroine) sing it on several occasions. Of course, I listen more intently to Jane because not only do I teach her but she is extremely special to me as a person. It is amazing really! I just don't know how anyone has the mental and vocal stamina to sustain a role of those proportions and complexities.

I want to ask you about building voices — there is some debate these days about how to develop a balanced voice, whether one begins at the bottom of the voice and grow up, or whether the traditional Italian school of 'top down' is still best. Do you have a strong opinion about how to approach the development of the young voice?

Oh I do, I do. I can refer to Eaglen again. We did a lot of big things but only in the middle of the voice; I left all the top notes out and the bottom notes too and worked on the middle — but we got a flavour of the repertoire she would hopefully one day sing. My opinion is that the middle has always got to be right. I also believe, and this has come with my own maturity, that the teacher has to be patient and not be over ambitious for the student.

There can be a lot of pressure for students to achieve in a designated three or four years at an institution.

Yes, and there is no time scale — everybody's rate of development is different. I think a singer can sing anything provided it's within their range, comfortably and without strain or force. And if you have a young person of say 17 years, it is wrong to pressure the top or the bottom. You must concentrate on making lovely sounds in the middle. If the middle works, they will gain a confidence and satisfaction in the sound. The worst thing you can do is to scare them with extreme notes too early in their development. They may end up with 'mental scar- tissue' which could cause permanent vocal problems.

It seems to me, if I can rephrase your thoughts in slightly more physiological terms, that by working the middle voice you are really beginning to balance both ends of the voice by using in equal ratio the musculature that co-ordinates the top and bottom registers.

Yes, I think so. A person has to be able to sing a high note with maximium excitement but a minimum of strain; that comes not only from physically being able to work the muscles, but also from confidence, and you can knock that confidence by exploiting the extremes of the voice too soon . I believe that if one can sing the five note pattern c^4 to g^4 perfectly on every vowel those notes are intact. Then go to d^4 and go up another fifth, get every vowel in place on those notes, and basically keep doing that comfortably gradually the voice will strengthen and stabilise. This is why I am a great believer in Aria Antiche because they usually sit in the most beautiful part of the voice, most of them don't have extreme high or low notes, and if you match the right keys with the right voices, that's fair dos. I do believe in transposition. If for arguments sake you felt that one day a young singer will sing Tristan, there's no harm in transposing the difficult parts just to let them get the feel and style of it. Maybe that's an extreme example but, you see, I do believe that people can start to enjoy music that they may one day become suited to perform, while they are young, provided they sing the bits that are easily in the voice. As a student, Jane was singing *Casta Diva* with none of the high notes along with *Liebestodt*, both roles she now sings all over the world. It's a great exercise to sing those lovely sustained phrases — you can't damage a voice in doing that , but you can if you ask it sing those high, loud, repeated patterns too soon. Part of a teacher's job is to help the singer enjoy their music and if it means finding a style which suits them, why not also include some of this great music (under careful supervision) in their student repertoire. The serious student who works hard will eventually get a technique that is so natural that they go on stage and they enjoy fully their singing because the technique follows the enjoyment. Those singers who go on stage and are first and foremost concerned with technique at the expense of performance do not, in my opinion, practise enough or haven't quite consolidated their technique. The stage is for performance, the studio is for technical practice.

I read the Opera News interview with Jane in which she said you told her, when she was 17, not to sing so much.

Yes, she was amazed! I tell all the young singers to do 10 minutes, go and have a cup of tea then 10 minutes more etc. They can't sing ad nauseum because the voice gets tired when they don't know how to pace it. Wait until the technique is becoming established and then sing for longer periods. My own yardstick that I use in lessons is to say "Now, am I tiring you, because I expect you to leave this lesson in better voice than when we started" — If I am, then I have to change my approach.

Joseph, it has been my experience that a student can arrive for a lesson complaining of a tired or non-cooperative voice and even after 10 minutes warm up, it is feeling and sounding better.

Marvellous, and that's drawing out of the student their own technique. I'm always suspicious of teachers with 'their method'! It mustn't be a teacher imposing 'their' technique but rather helping the student find his or her on technique through a joint teacher-student voyage of discovery . I have a saying "An amateur practises until they get it right, a professional practises until they can't get it wrong"!

On that challenging note, I think we should stop. Joseph, thank you so much.

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Emotional Connection and Technique in Operatic Singing: Traditional and Scientific Insights

Susannah Foulds-Elliott

Most singers would agree that successful performance involves both some form of emotional communication as well as some kind of technical monitoring of the vocal instrument. Conversely, singing with a purely technically correct approach can leave an audience unconvinced. Gauging the particular relationship between emotional connection and technique in operatic singing was originally addressed by Caccini in his treatise of 1601 (*Le nuove musiche*) in which he refers to singing "con affetto", using emotional recall as the primary impulse for vocal exclamation, which played an intrinsic part in creating what we now know as the operatic sound. The basis of this tradition is that operatic singers must know what they mean in an exclamatory sense, before taking the breath, in order to make vocalisation convincing within the operatic style. Scientific research is now beginning to point to co-ordinated reflexive patterns of muscle use (possibly related to pedagogical use of exclamation) which may be released through emotional brain centre stimulation. In contrast, activation at the voluntary muscle control level may not result in a co-ordinated, convincing sound. Voice Science is beginning to differentiate between "knowing how" to sing and "knowing what" is being used to sing with (Callaghan, 2000), and this paper looks at the relationship between the two. The idea that emotional intention may help to create your technical instrument is explored with reference to recent scientific research including rate of expired air volume during singing, dB level, and duration of sound.

As a singer I have come from a conservatorium/university environment in which science for singers was considered death to singing, where books on how to sing were banned, where students were told that if they wanted to attend Estill workshops they would be failed in their attempt to gain a degree. I am now doing a PhD in Voice Science. Does this mean that I believe my teaching environment was wrong? Not necessarily! I believe that like the relationship between mechanics and racing car driving, the relationship between science and singing is of vital importance. However, great damage can be done if both aspects are considered to be the same thing. Differentiation must be made between learning about what muscles we are singing with, and how to utilise them. If differentiation between these two aspects is not made in both the literature and in day-to-day teaching, singers are at risk. I spend a fair proportion of my teaching time rehabilitating students who are in trouble through the application of mechanical thought, in the false belief that this is going to "make the car go". Mechanical work is not the same as driving the car, and thinking primarily of the muscles we want to use during singing does not usually help the singing, especially with inexperienced singers. On the other hand, if something is not working the teacher at least needs to know what is wrong and how to get it back into working order, hopefully teaching the student about the process itself for future reference. If there is a serious problem it is to be hoped that the teacher has set up a network of speech pathologists and ENT specialists to provide advice and intervention where necessary.

The effective singing teacher's most often-used phrase may well be — "but what are you singing about?" Another variant of this is — "but what do the words mean?" I hope to encourage teachers to keep using these vital and hopefully well-worn phrases. The singer needs to have a strong concept of what they wish to communicate to an audience, and this concept needs to have come from the composer's intentions which the singer has decoded from the music. As a teacher I find that this intention to communicate the music, in exclamatory terms, can create the basic instrument of the voice. As a voice science researcher I am looking at what measurable changes may be found from increases and decreases in the singer's intention to communicate.

History

The intention to communicate through the basic quality of the sound itself, in an exclamatory sense, paved the way for the historical development of opera singing as a specific style. Operatic sound can be said to have begun with the use of emotional recall as the primary impulse for vocal exclamation. The teaching, performing, composing and writing of Giulio Caccini (Le Nuove Musiche, 1601) were instrumental in developing a new style of singing called "cantare con affetto" or singing with emotion,

in contrast to the earlier "cantare con la gorga" or singing with the throat (Galliver, 1974). Both these styles developed side by side, and later became virtually indistinguishable within the "bel canto" tradition (Galliver, 1972). The first published opera, Peri's *Euridice*, 1600 (with part of the music composed by Caccini), was the result of the "bel canto" school of singing which flourished in 16th century Florence. Writers of the 17th century emphasised the importance of the Florentine school in the development of "bel canto", and in particular the influence of Caccini (Fortune, 1954). The Florentine Camerata, of which Caccini was a member, aimed to reinstate ancient Greek precepts, including the Aristotelian view that music purges passion by arousing that passion. Caccini's vocal technique used emotion as the primary impulse for singing, thus utilising a completely different physical orientation and producing a basically altered vocal sound. This change in vocal sound used the natural characteristics of the human voice (rather than imitating instrumental sound as in the "cantare con la gorga" style). The style of "cantare con affetto" had a richer harmonic texture than had previously been heard, which reflected changes of harmony in the music, and enabled singers to be heard in larger venues. It produced a musical equivalent to perspective in Renaissance paintings (Galliver 1969). In order to use emotion as the primary impulse, Caccini's technique emphasized crescendo/ diminuendo, and used exclamation, termed "esclamazione", which could be described as intention to communicate through an emotional outcry.

Research on Emotion

Holstege (1996) and Holstege and Ehling (1996) published an illustration of a young woman with a central nervous system paralysis of the voluntary motor output to her facial muscles on one side which affected her ability to smile symmetrically although she could smile normally when responding to a joke. Holstege (1996) used this illustration as an example of his hypothesis that there are at least two nervous systems — a voluntary motor system and an emotional motor system. When we see performers on stage, we know whether they are just using the muscles of a smile or whether they are "really" smiling convincingly, which we call acting well. Darwin (1872) made a detailed study of the universal way that emotions are expressed. It is possible that singers and actors can use the emotion of music and words to produce a co-ordinated muscle pattern which is different from a voluntarily induced muscle pattern. Co-ordination from an emotional response may include abdominal, intercostal, laryngeal, pharyngeal, tongue, palate, lip, jaw and facial muscles. Chapman (1986), Brown (1996) and Chapman and Davis (1998) have written about this from a pedagogical viewpoint, stating that operatic singing utilises a primal sound which makes involuntary demands upon the body.

Emotion, Exclamation and Vocalisation

Emotionally triggered vocalisations externalise and give social indication of internal states using acoustic patterns which are similar across species (Jurgens 1979, Marler and Tenaza 1977, Morton 1977, Scherer 1985). Human vocal expression includes a range of responses from screams, shouts and cries associated with intense feelings of pain, joy, grief, fear or anger to the less dramatic interjections which have been assimilated into language ("ouch", "oh" etc) and which accompany emotional reactions as well as the more subtle changes in human voice quality that occur in response to emotional reactions or sensations in the person.

Emotions differentially shape human vocal expression in speech and music and listeners can identify a speaker's emotional state from the voice alone with a better than chance degree of accuracy, at least for some emotions (Scherer 1995). However, there is still no explanation of how we distinguish between emotions (Pribram 1984) or indeed conclusive evidence on whether specific emotions have specific neurophysiological patterns (Boiten, Frijda and Wientjes 1994). Scherer (1995) reviews the ability of listeners to identify emotion from spoken voice cues, reporting an average accuracy of approximately 50%, or four to five times higher accuracy than chance. Scherer (1995) points out that not all emotions are identified equally as well, with sadness and anger being the best recognised, and disgust as the least easily recognisable. Scherer (1995) reviews the evidence for externalising emotion in the voice. He points out that emotion-specific acoustic patterning has yet to be identified, and that it has not yet been shown how emotional arousal effects the vocal organs. Scherer (1995) defines emotion as "a synchronisation of changes in all organismic subsystems, thus accounting for the pervasiveness and power of emotional states; the identification of the acoustic features which determine listener judgements; and the identification of acoustic features of a speaker's emotional state". The distinction made by Scherer (1995) between the effects of "push" (physiological effects of emotional arousal) and "pull" (the conventionalised form in which communication is shaped in order to communicate within cultural parameters) may be seen to correspond to Holstege's (1996). Holstege's hypothesis differentiates between voluntary and involuntary motor pathways. It may be that the raw material of the operatic singing sound comes from a partial activation of "push" effects, in other words involuntary reaction caused by recall of emotion. This physiologically co-ordinated sound is shaped by the "pull" effects, or in this case the learned patterns of music and language.

Scherer (1995) summarises the study of vocal emotional expression, and continues the direction established by Darwin (1872), identifying the survival significance of the ability to communicate individual reaction, and the propensity for action, to the social environment. Scherer (1995) notes particular emphasis in this field on body posture,

facial features and vocalisation, as the main vehicles of social communication. Animal research is linked to changes in physiological arousal, resulting in vocalisations that communicate the state of the individual. Scherer (1995) contrasts the approach of two German writers. Kleinpaul, writing in 1972, identified human interjections as reflexive feeling sounds, while the much earlier work of Wundt in 1900 describes the inarticulate screams and cries resulting from intense emotional states. Scherer (1995) shows how Wundt distinguishes between these primary interjections (reactions to basic emotional states) and secondary interjections which have been taken into language and turned into everyday exclamations.

Wundt's distinctions between two types of interjections are taken further by Manen (1974), a singer and physiotherapist. She shows how the traditional "bel canto" singing technique develops the primitive emotional exclamations based on "ah" (pleasure), "ee" (disgust) and "oo" (fear and horror) from the physiological level of the larynx (source) rather than from the articulators which are further forward in the mouth and provide the filter for the basic sound once it has been produced. Manen (1974) equates the basic sound with the older, more primitive brain, accessed through emotional connection brought on by a Stanislavski-style (1963) adoption of the posture, breathing and facial expression appropriate to the emotion to be portrayed. Articulators shape the basic, primitive sound in accordance with language and stylistic requirements. The consequent shaping of the basic sound is associated with the evolutionarily younger brain sites. Such an approach is extended by the Holsteger and Ehling (1996) neurophysiological model described earlier, in which the emotional motor pathway creates the sound, which is then modulated through direct corticomotoneuronal pathways (voluntary motor system) to shape the sound according to the specifics of style and structure.

Emotion, Respiration and Vocalisation

What, then, is the role of respiration in emotion and vocalisation? This brings us to the great debate in performance disciplines, in which it is argued that either changing the physical patterns of breathing, posture and facial expression will connect the performer to the emotion (Stanislavski, 1963) or that invoking the emotion itself will give rise to the respiratory, postural and facial changes which will communicate that emotion. One acting method which seeks to incorporate both of these approaches is Grotowski's (1968), in which a two-way relationship between the emotional and the physical is established. What evidence is there for such a relationship?

The six emotional states studied by Bloch et al., (1991), in spite of methodological problems, show well-differentiated changes in breathing patterns. This gives some support to Ley's notion (1994) that there is a reciprocal relationship between emotion and breathing, because the findings of Bloch et al., (1991) suggest that either the emotion may give rise to the breathing pattern, or the breathing pattern may give rise to the emotion. It has also been found in the study of Bloch et al., (1991), that breathing and expression in actors learning the emotional state exercises progressed from an initial "robotic" stage, with few changes in respiratory parameters, to a more "natural" stage showing greater variability. Watson and Hixon (1996) show some support for the findings of Bloch et al., (1991) in their study of respiratory behaviour during the learning of a new aria by a highly trained classical singer, demonstrating increases in lung volume initiation and excursion as learning and memorisation progress towards convincing performance. These findings would suggest that not only is there a reciprocal relationship between breathing and emotion in vocalisation, but that it is a relationship which can be developed.

Mechanisms of Closure

Some singers today fear that emotion will have a negative effect on their singing and that it will prevent good use of technique. There is some truth in this — singers know that being emotional on stage is not going to convince an audience, and can lead to mechanisms of closure in the vocal instrument. Voice scientists describe "pressed phonation" (Sundberg, 1987), "constriction" (Estill, 1996) and "the overly energised glottal attack" (Miller, 1986). Sundberg (1987) describes a continuum from pressed phonation, through flow phonation, to breathy phonation. Pressed phonation is the combination of high subglottic pressure with strong adductive force without much gain in sound pressure level — in other words a lot of work for not much result. Flow phonation is the desirable method, gained by using lower subglottic pressure and moderately adductive force, but capable of producing higher sound pressure level — less work, more sound. Breathy phonation does not have enough adductive force to completely close the glottis, and produces a low sound pressure level (little work, little result). Estill (1996) contrasts constriction and retraction of the false vocal folds, where false vocal fold adduction and constriction results in a constricted tone, and retraction of the false vocal folds gives an unconstricted and free tone. Miller (1986) describes three stages of onset: the hard attack (the overly energised glottal attack where the vocal folds are adducted prior to phonation, building up sub-glottal pressure which is suddenly released. This is contrasted with the soft onset where the singer feels the flow of air before beginning the vocal sound, and the glottis is therefore not firmly closed. The desirable onset is the balanced onset, where glottal closure is modified by a narrow slit in the glottis just before phonation, which prevents too much build-up of subglottic pressure.

In each of these three approaches, there is an undesirable extreme of either glottal or false vocal fold adduction which allows an increased build-up of sub-glottal pressure compared to the desirable situation in each approach. Miller describes certain personality types as fitting naturally into one or

other of the extremes, and having to either increase or decrease energy to get to the balanced onset. Emotional reaction itself could move a singer away from a balanced onset, so of what use is an emotional approach? In pedagogical terms, a teacher may use emotional concepts — or make appropriate repertoire choices that emphasise particular emotional concepts — to either strengthen a weak, breathy voice or to settle an overly active approach. In an overall performing sense, however, the performer's task is to use emotional recall rather than to be emotional. This process is described by Chapman (Chapman and Davis, 1998) as reproducing the physical feeling of the emotion while still keeping the mind in control. Davis (Chapman and Davis, 1998) points out that there are two ways of activating muscles (either voluntarily, or involuntarily through emotion), and that humans have the unique ability in the primate world to inhibit or recreate features of emotional memory from experience. The emotional system appears to have access to a different combination of muscles than can be accessed at a voluntary level.

Recent Research

Traditionally, singing teaching has differentiated between some form of technical monitoring and some form of emotional communication. Callaghan's (2000) recent book on singing and voice science makes a clear differentiation between information about the physical body, as opposed to the development of a highly-tuned internal proprioceptivity, that is ability to perceive and utilise sensory information provided by location, orientation and movement of the systems used for singing. Such differentiation is vital for the relationship between science and singing. Some studies are now looking at whether changes in the singer's intentions at a conceptual level have an effect on singing technique. Thorpe, Cala, Chapman and Davis (in Press) studied 5 opera singers performing arias, and found that when the singers intended to increase their projection (as if singing with an orchestra), compared to decreased projection (as if singing with a smaller orchestra), they showed increase in acoustic power with a decrease in the mean expiratory flow. This implied a move towards more efficient vocalisation. Foulds-Elliott, Thorpe, Cala and Davis (submitted for publication) also studied 5 opera singers, performing both arias and a song. Singers were asked to sing as if rehearsing technically (T), to sing as if performing to an audience with emotional connection (EC), to sing technically but louder (TL) and to sing technically but softer (TS). An example of the average of some results for Subject 2 singing the aria task is illustrated in Figure 1. Figure 1a) shows the flow result, which is the average amount of air expired per second, taken from the average of each phrase of the aria (calculated as % of Vital Capacity). More air is shown to have been released per second in the Emotional Connection (EC) condition than in the other three conditions. Figure 1b) presents the result for duration, showing that the average time, measured in seconds, it took to sing each phrase of the aria was virtually the same. This indicates that the greater flow of air in the Emotional Connection condition was not due to the phrases being lengthened over time. Perhaps, however, the difference in the amount of air expired was due to the sound being louder? We can check this in Figure 1c), which shows the Sound Pressure Level in decibels, illustrating that Emotional Connection singing and Technical Loud singing were not significantly different. This indicated that the increase in Flow for Emotional Connection singing was not just due to increases in dB. Subject 2 is using more air in the EC condition, without necessarily singing longer phrases or singing them more loudly, implying that EC has an effect on singing technique — in this case, on how much air was expired, and how fast it was expired. (Error bars are shown for ± 1 standard error, demonstrating that there is a significantly higher amount of flow for EC compared to the other conditions, but that the dB difference between EC and TL is not significant).

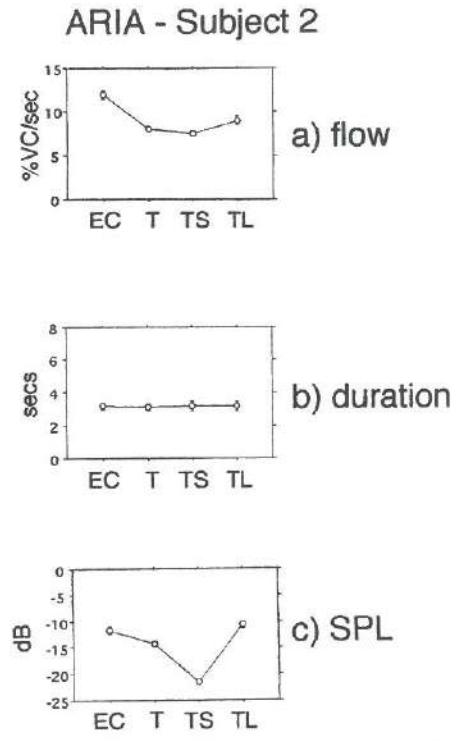

FIGURE 1
Average of some results for Subject 2 singing the aria task.

Pedagogical Application

In my own teaching, I am constantly using emotional concepts in combination with technical information (with continual monitoring to assess what the student is best able to respond to at the time), and the results are always amazing. As an example I will contrast the recent work of three of my current students, all at very different stages with quite different singing goals.

Recently I had a sudden crisis with Student 1, a hitherto excellent student — very young (17 years old) and right at the beginning of vocal development, but musically very mature, astute, and reliable. Student 1 was performing in her lesson at a 90% level two weeks before an important assessment. She had very recently accessed her full singing voice through the whole range (moving smoothly between the transition from middle to high range) due to her response to Quilter's song *The Fuschia Tree* — a very helpful teaching song for young students because they can readily respond to the emotion of losing a pet and can easily be persuaded to "call out" in this context, utilising, in Estill terms, sob quality. Student 1 had made beautiful progress in this respect, and was displaying the potential required to be accepted into a tertiary institution. Then she had a session with a coach, and arrived for her final lesson (four days before the assessment) virtually unable to sing a note. If she had been vocally assessed at that point she would have failed dismally. What had happened? As we explored the situation it became apparent that the coach — full of musically appropriate intentions — had been repetitively working on individual musical details of the song, giving negative feedback for each attempt on the part of the student, until the student truly believed that she was not even able to sing one phrase. Her instrument closed down through fear and anxiety. (In classic teaching terms, her jaw and tongue tightened and her teeth moved close together, her soft palate dropped, she began to frown, her breathing became high and fast, her shoulders hunched over and she began to move physically towards the foetal position). It was no wonder that she could not sing! By the time I began to understand the cause of all this we had twenty minutes left for rehabilitation. This was not the time to talk about the soft palate! Student 1 was at a very new stage of proprioception in Callaghan's (2000) terms, and any discussion of physical movements that were not easily discerned would only have added to the angst of the situation. So, we went straight to the music and talked about what the song meant, and how to tell the story in terms of acting. This was to be done in the context of physical posture (we used Alexander concepts and the stretching up of the spine, with the head balanced on top). We talked about breathing low and deep, as you would if you were about to tell someone something important. Finally we talked about the courage required — the student must stand up and really focus on being the character who is singing the song, and all personal anxieties about the accompanying coach must be completely put aside for the sake of what the singer is required to communicate to the audience, which is why the composer wrote the song in the first place. Four days later I attended the assessment of Student 1, and have rarely felt so proud. Her courage was breath-taking. She sang at 80% capacity (so it was still 10% down on her actual ability) but to get back up to that level so quickly was a huge achievement. I was included in the examiners' discussions, and they marked student 1 down (quite rightly) because they sensed her fear, and because it took three goes to get the first line out! After that, she performed very well indeed, and I was impressed to hear that her instrument was still partly, and constantly, open. In other words, the soft palate was slightly raised, the jaw was looser and the teeth not clamped together, and she still showed resonant and natural vocal tone. Her support lessened as the performance went on, but her concept of the music was rock solid and convincing throughout. At no stage did she make the unsupported sound that she had begun with the year before. Student 1 now has seven weeks before the next assessment, and we are discussing the individual components of the technique, and how to counteract the effects of stress. We have chosen a performance piece that Student 1 already knows musically, and which is appropriate in acting terms because it shows extraordinary courage even in the face of death (Iphis's aria from Handel's *Jephtha*). Student 1 is now incorporating what she learnt proprioceptively from *The Fuschia Tree*, into a more demanding piece. This is not a piece I would usually give to such a young student, but in this particular case she is very musical and making excellent progress, as well as learning the essential fact of life for singers in the process — we must learn to keep the instrument open in spite of how we are feeling! In the case of Student 1, emotional response to the coach brought mechanisms of closure into play, whereas acted emotional response to the music allowed the mechanisms to open (at least partially). While total dependence on acted emotional response is certainly not advisable, it got the student through a crisis, and the resultant proprioceptive response could later be analysed and classified over time.

Student 2, a senior student, is now being employed as a professional soloist after learning with me for two and a half years. She demonstrates a particular talent for oratorio singing. Student 2 completed a singing degree before coming to me, and she understood and had experienced in a proprioceptive sense all the components of singing, but she could not co-ordinate them in any unified way. As a result she often sang with either a breathy or muffled tone. Student 2 benefited from very specific physical information about breathing, support, and voice placement, using the unified Chapman approach which depends on very relaxed inspiration and very supported phonated expiration in which the forced expiratory muscles (used for example in coughing) are utilised, and can be felt by both teacher and student. Repertoire has been guided in this case by Student 2's own natural reaction to particular songs — she has a strong musical response, which meant we could use this without having to talk about it very much. Two and a half years later she is exhibiting a gorgeous silky tone with its own natural warmth, throughout the range. In this case, proprioception was already well-developed but the individual elements were not able to be accessed in a co-ordinated way, so progress really depended on the student's motivation to put up with changing already established habits. Using music that she really loved (and that I sometimes did not like at all!) provided strong musical motivation for putting

up with the mental discomfort of changing old physical responses. In this case, the singer was kept motivated to put up with difficult technical re-structuring because she chose pieces to which she responded emotionally. The joy of learning to freely communicate the music as the technique became more dependable continually increased motivation for Student 2 as she developed.

Student 3 struggles with chronic suicidal tendencies and learns singing for therapy. She is the best attendance record of all my students, and even if she is in hospital after another attempt, she is sent for her singing lesson and then returns to hospital. I decided to take on this student because she responds to singing in such a physically positive manner. She comes in for a lesson looking very dejected, and leaves glowing. It is a remarkable transformation on a regular basis. With this student, I sometimes do little teaching and a lot of singing, relying on the posture, low breathing and slow phonated release of air to do its magic. However, in choosing repertoire for this student I am particularly aware of choosing songs with words that are empowering. Student 3 has little short term memory, but is able to learn at least the first verse of a song from memory, which is a vital step for all singers. I am working on letting the music have its effect at a deep and unconscious level, and for the first year we did not discuss it very much. However, I have been very surprised by the technical development which has begun to happen with this student. In this case I have not consciously intended to bring about technical development, but every now and then the student herself comes out with a technical question, and so far this has always led to surprising progress. With Student 3 I have imposed my own choice of songs (for example *The Call* by Vaughan Williams, *St. Hilda's Homily* by Mintern), focusing quite deliberately on the deep and unconscious emotional effect of strongly encouraging words. It has been a fascinating outcome to find that eventually the student herself asked for technical information. This has meant that she has received technical challenges only when she herself has been ready for them. In the case of Student 3, specific repertoire using songs with emotionally empowering words eventually resulted in the student's own request for further technical information. This student would not have been able to utilise technical information before she was emotionally ready.

These 3 students are all in completely different situations and at different stages of life, but a unifying factor seems to be the relationship between emotional connection and the technical aspect of singing. Singer 1 is learning the technical aspects of singing through the emotion of the music. Singer 2 has established her technique to a professional level using the music with the particular type of emotion that she personally responded to as a motivator. Student 3 responded to long term application of music with empowering words by asking for technical development steps when she was emotionally ready for them. In speaking to colleagues and in working with students, I find that some rare singers respond immediately and naturally to the composers intentions, and can be quite unaware of this on a conscious level. Others actively search for a connection between the music and their own experience. Most singing students would be in this category. As a teacher, I find that when the singer (at any technical stage) simply focuses on communicating the concept embedded in the music, the unifying effect on technique is astounding. The resulting performance progresses to a new dimension, through which the audience then experiences the music for themselves. This, I believe, is the aim of music.

Conclusion

As we discover more about the workings of the singing voice, we must be ever more vigilant to differentiate between what we sing with, and how we can effectively access these mechanisms. Effective access, where the primary focus is on communication of the music, has an extraordinary effect on technique itself. On the other hand, primary focus on technique can lead to a stilted and unconvincing performance. Science is now beginning to be able to address why this is so. The time for the singing teacher to ignore science through fear is now over. Instead, it is time for singing teachers themselves to be open to voice science developments, while at the same time teaching only what will develop each individual student's ability to access and use the singing voice.

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Pineapple as voice remedy: Alternative or mainstream?

Alison Winkworth, Rob Pensalfini and Patricia Baldock

Voice teachers, otolaryngologists and speech pathologists have long been aware of the informal 'grapevine' operating amongst performers about alternative or folk remedies for voice problems. Such information may be shared around the green room but rarely in the studio or the consulting room, perhaps because there may be little empirical evidence for the effectiveness of the particular preparation.

However, a recent innocent question from a student ("for a friend of a friend") concerned pineapple, or fresh pineapple juice. Reactions from some voice professionals induced suspicion that this might be an urban myth. Most alternative remedies cited for the throat or the voice appear to contain recommendations for enhanced nutrition, various inhalation preparations or lozenges. There was some speculation that the origin of the pineapple recommendation was due to its Vitamin C content, but there are other foods known to have higher concentrations of this vitamin, such as capsicum (red pepper), blackcurrant or kiwifruit.

After hearing about this particular remedy, one performer had the opportunity to try it out, and described his experience to an email discussion group: "I happened to catch something. I drank as much pineapple juice as I could stand, and it was incredible. I could feel there was still something amiss in my throat, but my voice didn't get any worse, and I didn't have nearly the degree of discomfort that I usually have. All of this, of course, goes against my logic. Due to its acidity and high sugar content, it seems that it should have been disastrous to have drunk so much. Yet the results were much better than the usual glass-after-glass-of-water approach that I usually take." (email listserv Vastavox, 2000)

Following this prompting in the email series (Vastavox, 2000), another teacher/performer reported that pineapple is the one fruit juice that provides relief from what she terms the 'clag' of colds and sinusitis — almost immediately. She reported that the Hawaiians also swear by it to relieve cold symptoms.

One Europe-based teacher/performer contributing to the same discussion series also recalled the use of fruit, although in this case it was apples: "We were given little slices of fresh peeled apples, because they were supposedly good for the voice. I have never forgotten this, but have always thought it to be just one of 'grandma's remedies.'"

Jack Horton, from Kentucky, provides the most compelling story for the use of pineapple or its active ingredient (personal communication). Contracted to sing the tenor role in the Verdi Requiem for the Shreveport Symphony in Louisiana some years ago, he arrived early and noticed rapidly worsening allergy symptoms. In panic, he called otolaryngologist Dr Eugene Grabscheid in New York, who advised him to get hold of more pineapple juice than he could stomach. "Drink all you can drink all the time right up until you go on stage," was the prescription. "It has a special enzyme in it that will help you."

Not minding the other effects of so large an intake of fluid, Horton reported noticeable relief for his voice, and the review of his performance was, in his words, "glowing." Although he stated that the symptoms did not disappear entirely, the remedy allowed him enough voice to perform that evening. As Horton said, "When allergy is really bad, the singer's voice can simply cut out — not function at all. This possibility was the cause of my panic. Perhaps the pineapple juice kept my voice from failing in spite of the allergy?" (personal communication)

Some speech pathologists who work with vocal performers also know about pineapple, or its enzyme, bromelain. An opera singer confided to one of the authors (PB) about this natural product to combat inflammation, such as when recovering from an upper respiratory tract infection, prescribed by an Ear Nose and Throat surgeon in Germany. Others who have tried it following such illness report more rapid vocal recovery from acute effects than usual. Most professional voice users may feel happier using a more conservative form of anti-inflammatory agent, as many have tried short term steroids in the past and are aware of their potential side effects.

Pineapple contains a digestive enzyme in large quantities: bromelain. It is known as a proteolytic enzyme as it breaks down proteins. It therefore acts as a meat tenderiser and is used in the meat processing industry. Another of the proteolytic enzymes is papain, derived from pawpaw or papaya.

Derived from the stems of pineapple plants (ananas comosus), bromelain has long been used to reduce the inflammation associated with arthritis and other inflammatory conditions. In many European countries it is used to treat soft-tissue injury associated with trauma and surgery (Zashin, 2000).

In alternative medicine circles, it has been suggested as appropriate for many uses: it is said to inhibit platelet aggregation and have fibrinolytic activity (and thus may be helpful for cardiovascular disease); it has anti-inflammatory and anti-tumour action; it modulates cytokines and immunity; has skin debridement properties; can aid absorption of other drugs; assists digestion; has mucolytic properties; improves wound healing; and is said to improve cardiovascular and circulatory function (Kelly, 1996). However, separating out the evidence from personal clinical opinion is more difficult.

It has been suggested that the enzyme has action similar to the non-steroidal anti-inflammatory drugs (NSAIDs). Its anti inflammatory properties mean that it inhibits inflammatory cytokines — it has been said to block the production of kinins and thus reduce swelling and pain associated with the inflammatory process. Some caution has been advised however as bromelain may theoretically increase the risk of bleeding when given in combination with NSAIDs or anti-coagulants, although the evidence is weak (Harris, 1995). It has also been noted that it may potentiate some antibiotics (Blumenthal, 1998).

Bromelain is also one of those agents, combined into the general heading of enzymes, said to be able to help a great number of ailments, including a group of recent medical puzzles, auto-immune disorders (Cichoke, 1999).

One condition that is said to be helped is fracture. The prescription mentioned in Balch and Balch (1997) is half a fresh pineapple every day until the fracture is healed. The use of fresh pineapple only is recommended, not canned or processed.

While below we discuss the enzyme in relation to the voice, in the same book on 'natural' healing, pineapple is not mentioned under "sore throat". The sore throat remedies suggested are the more traditional slippery elm, fenugreek, lungwort, licorice, honey and lemon, marshmallow root, and mullein poultices (Balch & Balch, 1997). Perhaps the definition of sore throat in this volume has more to do with infection than inflammation.

Another condition said to be helped by the proteolytic enzymes is joint inflammation such as that found in osteoarthritis (Adderly, 1999). Bromelain seems to aid the absorption of curcumin (turmeric), which has also been called a safe alternative to NSAIDs (Antonio, 1999). These preparations have been mentioned for care of swelling associated with joint subluxation and dislocation (Larson, 1999), and sprains and strains (Davidson, 1999). In the same encyclopaedia, bromelain, as a bioflavonoid along with quercetin, has also been recommended for cluster headache (Barrett, 1999).

More scientifically reliable evidence comes from an experimental project examining the immune system. In an animal model a preparation combining proteases was found to aid organ acceptance in transplants, reducing tissue thickening associated with rejection (Gaciong, Paczek, Bojakowski, Socha, Wisniewski & Hedland, 1996).

As a remedy for voice problems, bromelain or proteolytic enzymes are less commonly cited in the literature, although putative benefits may be implied from the actions described above. The most logical beneficial effects would appear to relate to bromelain's anti-inflammatory and mucolytic actions. Via mucolytic action, secretions from the respiratory tract would become thinner, so their clearance is easier. The anti-inflammatory action means that swelling of tissues would be reduced, thus explaining the recommendation of bromelain and other enzymes for sinusitis and acute laryngitis.

At least one otolaryngologist currently recommends a specific formulation of bromelain, in a combination of proteolytic enzymes. Dr Murray Grossan recommends it for both anti-inflammatory and mucolytic activity (personal communication). It could be logically concluded that with this combined activity, many problems of the ear, nose and throat might be helped, including sinusitis as mentioned above. Joint pain, including that of the temporomandibular joint, sinusitis, salivary gland swelling, sore throat, and trauma (eg, post-surgery) might all be ameliorated if the stated actions of the enzymes are effective. Grossan cautions against taking mere tablet preparations of the enzymes, because the gastric secretions will destroy the enzyme before it is systemically absorbed. He suggests a preparation that is dissolved in the mouth (buccal route) and has calibrated enzymatic activity, to ensure potency. These enzymes are sensitive to heat and break down when temperatures exceed 40°C (Balch & Balch, 1997), which is one reason why fresh fruit or juice is better than canned or processed.

Making specific recommendations for the use of bromelain in relation to voice difficulties based on evidence is a challenge because of the paucity of empirical studies. While some clinicians may suggest the use of these enzymes based on their own experiences with patients, many published recommendations for bromelain and its related preparations occur in the popular press (for example, Adderly, 1999, and Antonio, 1999). Bridging the gap between this medium and the scientific literature is always problematic for therapies that are termed 'alternative.' Although there is one relatively recent journal article concerned with alternative therapies and the voice, the authors restricted their consideration to behavioural therapies (DAntoni, Harvey & Fried, 1995). Remedies known as 'herbal', naturopathic or dietary may not be subject to the same legislative restrictions in some countries as specific drugs. Similarly, there might be few controls of aspects such as labelling, potency and purity, thus also paving the way for unsubstantiated efficacy claims. Although recommended as a 'safe and effective supplement' (Kelly 1996), there may well be concerns about bromelain's interactions with other pharmaceutical preparations and cautions if taken in large amounts, hence the need for medical supervision. The time seems ripe, given the climate of grapevine — and now Internet-fuelled speculation and rumour, for further, more system-

atic consideration of this and other alternative 'remedies' for voice problems, especially in performers.

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Patricia Baldock, a graduate of the University of Queensland, developed an early interest in the performing arts, and after working as a speech pathologist for a number of years, saw an opportunity to blend her artistic interest with her scientific training. She practises privately in Brisbane, specialising in the prevention and treatment of vocal disorders and in voice enhancement for professional voice users.

Forging Vocal Pathways

Lorraine Merritt

The Path to Present Day Voice Training

The roots of voice training today lie in the pioneering efforts of Elsie Fogerty, the founder of the Central School of Speech and Drama in London. Her work achieved an innovative balance between the experience of the natural voice and scientific understanding. Fogerty's work opened up the "what" and "how" of the human voice. This approach to voice training was carried on by Gwyneth Thurburn, who further extended the path leading toward the integrated and organic voice training techniques of today. Iris Warren introduced a psychological base to the scientific principles of speech training. In the fifties Clifford Turner carried these principles further. However, apart from the very sound pioneering work of the above mentioned practitioners, a large percentage of voice training prior to the nineteen fifties was elocution based and very removed from the integrated techniques of today. In Australia, the elocution teacher ensured that you learnt to "speak correctly". This style of training imposed a system of speech that could be perceived to be forced and unnatural in its production of an artificial sound. The "voice beautiful" became more important than the sense of the communication.

Voice training changed considerably in the nineteen fifties and sixties. There were two direct influences on this movement. The first was the shift that occurred in theatre in Britain, with the impact of playwrights like Osborne and Pinter. No longer was the "voice beautiful" required. Received Pronunciation lost its hold. The common man, speaking his dialect, was becoming standard fare in the plays of this period. Characters displayed imperfect powers of communication, their fears, and loneliness. Wade (1996) has noted how theatre during this period veered to a mood of quietism, with the actors often working in smaller, more intimate spaces. Now the importance of what was being said rather than how it was being said was becoming paramount.

The other influence was the impact of method acting on vocal training. Method acting spoke of organic and emotional truth and was very much a reaction against technique. For a period, actors mumbled through their roles in search of the truth of the moment. This period of vocal indistinctness was short-lived and the sixties saw a return to the need for vocal clarity in performance. However, the older style speech classes were limited in their elocution and projection focus and were inappropriate to support the changes that had occurred in acting methodology. Vocal training that addressed the demands of the new plays, as well as accommodating the shifts in acting technique, was needed. A number of voice teachers have been instrumental in responding to the aesthetics of modern theatre. In this article, the author will focus on the philosophies of Linklater, Berry, and Rodenburg.

Vocal Directions

Linklater's Philosophy

Linklater's monographs, *Freeing the Natural Voice* (1976) and *Freeing Shakespeare's Voice* (1992), present the premise that by freeing the voice and its habitual physical and psychological impediments, a new free voice is acquired. Linklater asserts that the voice is the means by which the inner world is revealed to the outer world. Linklaters's approach is that in freeing the human voice, the individual will be liberated. Such an approach places Linklater's work in a psychotherapeutic context in its quest to unlock the mind and body in order to free the voice. The notion of personal and socio-cultural liberation is evident in her philosophy of voice practice.

> The voice has been neglected and, apart from screaming primally and talking endlessly, little has been done to free it from its prison of environmental influence, unconscious psycho-physical conditioning, and aesthetic conditioning (Linklater, 1976, p. 4).

Linklater's vision is that voice work will restore the balance between intellect and emotion that she believes has been conditioned out of human beings. She believes that this is due to the evolution of society from an oral culture to a print and technological culture, and by the mind/body split inherent in western educational strategies (Berry, Rodenburg, & Linklater, 1997).

Linklater's style is metaphoric rather than scientific (Barton & Dal Vera, 1995; Martin, 1991). As such, there is little anatomic or technical detail in her work. Rather, the rich use of imagery describes the body's action and structures. Supporters of her work comment on the lack of self-consciousness it gives to vocal delivery. The critics are quick to point out that her approach to voice training is unusually slow and lacks identifiable signposts to measure progress. They also make the claim that students of her work have unsupported voices at times

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(Raphael, 1996; Barton & Dal Vera, 1995). However, Linklater (1976) defends her work as an approach that liberates the voice, rather than one that develops vocal technique.

Berry's Philosophy

The essence of Berry's work is that meaning should inform sound, hence the pivotal point in her method is through the text (Martin, 1991). This does not only mean an intellectual understanding of what is being said, but also an appreciation for the rhythm of words, their organic structure, and the verbal dynamic needed to express them (Barton & Dal Vera, 1995). Berry (1996) believes that through the physical investigation of vowels and consonants, the movement of words becomes one with the inner self and the word becomes active. Therefore, she believes that the energy must reside in the word, rather than in the sound, for it is the word that is the result of thoughts and feelings. Berry's works, *Voice and the Actor* (1973) and *The Actor and His Text* (1987), focus on this investigation of what is being conveyed, and with that, the relationship of the message to how it is said.

Inherent to her philosophy is a strong egalitarian spirit (Boston, 1997) and the exhortation to find the power in language.

> We must never forget that the people with the language have the power. The successful politician is the one who can manipulate the language to coincide with the sound of the moment. We want to give actors that power, not to manipulate but to convey argument, and above all to challenge the listener (Berry, Rodenburg, Linklater, 1997, p. 48).

In her technical approach to vocal development, Berry (1973) focuses on exercises that are designed to free and open the voice. Berry, like Linklater, asserts that the voice is conditioned by four factors. However, contrasting to Linklater's (1976) conditioning factors of family, experience, education and environment, Berry proposes that an individual arrives at his/her voice through an intricate and private mixture of what he/she hears in the environment, how it is heard through the ear and how that sound is interpreted. Additionally, Berry maintains that voices develop through the habit of speech and the individual's muscular speech ability, and how the voice is used in the light of personality, experience, and self-image (Berry, 1996).

Common practice to Berry and Linklater is the quest to unlock tension in the body through relaxation and breathing techniques. Berry notes that tensions and limitations often come from a lack of trust in oneself, thus wasting valuable energy. Berry encourages the individual to discard what is comfortable, and open up possibilities for the voice. For the more responsive and efficient the voice is, the more accurate the intention. Berry advocates a return to listening for the vocal resource one has, for what one has to say and for what the text contains. In order to achieve these ends, there needs to be a delicate balance between technique and imagination, to make what is said remarkable. Berry believes that words are rooted with the breath and that breathing is linked with structure of thought and phrasing. In her work on relaxation and breathing, Berry notes how tension will limit and deprive the voice of its richness and reverberations. The result will be sound rather than word awareness.

In opening out a voice, Berry has always been very committed to the physicality of language. As such, her exercises for articulation are designed to explore how the vowels and consonants are related to each other in each word so that the thought may be released through this physical investigation. Although advocating continual practice of suggested exercises for vocal development, Berry maintains that the verbal energy will be forthcoming if the thought behind the word is focussed. She encourages people to be alive to the music of language and to be alive to the impulses contained in it. At the core of her work is the relationship between text and language, supported by the technical focus of body placement and articulation drills.

Other voice researchers (Boston, 1997; Barton & Dal Vera, 1996; Martin, 1991) agree that there is nothing prescriptive in Berry's approach. Her method is inspired by an attitude of openness, which allows for a strong connecting bridge of formal voice work and her own individual style of liberating techniques.

Rodenburg's Philosophy

The driving value in Rodenburg's work is that each individual should have the right to speak and it is through voice work that the potential lies for such liberation. Rodenburg believes that the inhibition of that right to speak can occur because of the acquisition of habits that lead to a voice encrusted with restrictive tendencies. The source of such habits is complex, stemming from, for example, psychological, social and environmental restrictions. She sees her purpose in voice work to set the individual free from the habits that have armoured the voice allowing it no choice in communication.

> The single task I have set myself is to release you from those habits. When our breath, voice, speech and communication skills are effortless and free, we forget all about them and become blissfully liberated as we utter any sound or word...The right to speak is a right we all have...Our fundamental ease and enjoyment of conversation and making ourselves heard indicate that the right is fundamentally within us. All that remains is for us to release and employ the right fully (Rodenburg, 1992, pp. x-xi).

Boston (1997) sees that this call for the right to speak is a strong drive for the liberation of the social structures and practices that inhibit an individual's right. That this is so is reinforced by Rodenburg's (1993) beliefs about the impoverishment of the spoken word. She finds fault in education systems that value the written over the spoken word, and elevate logical and scientific thought above the imagination and intuition.

Rodenburg makes, as her starting point in voice training, the removal of the habits, that may have

separated a person from his/her natural voice. Unlike Linklater whose approach is psychotherapeutic, Rodenburg's approach is one of practical investigation. She starts with the body and through the release of tension and body alignment removes the blocks that may have masked the voice. The next stage of her process is to liberate the breath, and exercises are used to develop freedom, strength and flexibility in the breath. Once the breath is free, the connection of this powerful column of air to the voice is developed. This concept of a supported voice is developed through technical exercises. Once the voice is well supported by the breath, her process extends into exercises to free and place sound, to extend range, to balance the resonators, and to find the gymnastic action of the articulators. Rodenburg's process considers very clearly ways of owning words and revealing the word's power. This is a similar style to Berry.

Rodenburg presents very clear technical knowledge in her texts, *The Right to Speak* (1992), *The Need for Words* (1993) and *The Actor Speaks* (1997), and her approach places the investigation of voice training in a positive and empowering frame. Boston (1997) believes that Rodenburg has been able to provide in her texts that which Berry lives in practice, but has not formalised in her writing.

Similar Roots, Varied Approaches

Linklater, Berry, and Rodenburg share similar roots. However, there are definite points of difference in their pedagogy.

Common to their practice is the quest to engender an integration of the source of sound between what is said and how it is said. These practitioners advocate the removal of tension and habitual physical impediments, using relaxation and breathing exercises to develop a free voice. The descriptors outlined in Linklater's exercises however are metaphorical rather than scientific and are aimed at encouraging the participant to indulge in pleasurable participation. Whilst Linklater's work is rich in images for implementation, its premise is emotionally based. Berry, in contrast to Linklater, is critical of the over-reliance on voice and emotion.

> The vocal transformation of yourself into another character must come from the words and rhythms of the writing; if this leads you into a different way of speaking that is fair, providing no tension comes from it (Berry, 1987, p. 132).

Similarly, Rodenburg's approach is soundly based on the importance of technique and she does not see voice work as a means of purging an inner self.

Common to all practitioners is the belief that there is no one correct way of speaking, nor a proper style of pronunciation. All practitioners argue strongly against the vocal imperialism of the right sound and a defined pronunciation.

Boston (1997) believes that the three practitioners share roots and a desire for political and social transformation through voice awareness, and their practice reveals a diversity of emphasis and priorities. In contrast, Werner (1996) believes the three practitioners, in their emphasis on freeing the self, relate voice work to a desire to return to a more primitive and innocent version of the self in an idyllic past. However, Werner's research is strongly challenged by the three practitioners, who have argued that such an interpretation reveals no understanding of the reality of practical voice work (Berry, Rodenburg, & Linklater, 1997).

Conclusion

The vocal visions and methodologies of Linklater, Berry, and Rodenburg have succeeded in removing the elocution residue from voice training. Their practice has responsibly shaped and informed present day voice training. Voice training, as informed by the above-mentioned practitioners, is capable of empowering an individual's spoken communication. It allows for the development of subtlety and nuance in vocal expression through mediums such as confidence in one's sound, ease in delivery, and commitment to language. In the age of the technological super highway when the spoken word is increasingly at risk, the work of Linklater, Berry and Rodenburg continues to be of paramount importance.

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Register Change in the Countertenor Voice

Lois Bogg and William Thorpe

This paper reports on part of an investigation into the countertenor voice, focussing on range and the use of register, using data from interviews and frequency analysis from an acoustic study of the voice quality over the range of their voice. Countertenors use their voices in special ways; they sing in a high voice, most often in the falsetto register. We can hear also that there are differences in quality between countertenors, as there are differences within any voice classification, male or female. Voices cannot be classified from timbre alone, as subjective judgments about timbre will vary widely between observers. Physiological measurement by Welch, Sergeant and MacCurtain (1987), using radiography, and acoustic measurement by Castellengo, Roubeau, and Valette (1987), are two previous studies which also attempted to define some parameters of the countertenor voice.

Preliminaries

A definition of the countertenor voice has been offered by Welch et al. (1987) p.152 as "a male singer who customarily sings in the uppermost register, rather than the lower (modal) registers, and whose use of this register is a matter of habit and / or training ..."

The notion of register seems to have no generally accepted clear definition. Musicians of the twelfth century took the term "register" from the pipe organ, adding their own observations about the origin of the sound as felt by a singer. Twentieth century voice scientists such as Hollien (1974) searched for alternative terms for register, such as "loft" and "modal", while Titze (1988), a voice scientist interested in singers, prefers to use "falsetto" and "chest". In the nineteenth century Manuel Garcia (1894) offered a definition of register based on his observations of the mechanism of the larynx using the laryngeoscope, which still seems to be the clearest.

> By the term register we mean a series of successive sounds of equal quality on a scale from low to high produced by the application of the same mechanical principle, the nature of which differs basically from another series of sounds of equal quality produced by another mechanical principle. (1894, p. 8)

Garcia decided at that time that the change between chest (modal) and falsetto was more important than the higher shift into head voice.

The term "falsetto'" can be used as a description of voice quality, but in this paper I use it as a name for the higher register. The term "modal" is equivalent to "chest" and is the term applied here to the lower range of the male voice. Range refers to the entire compass of the voice, the extent of the pitches used to perform the music repertoire appropriate to the individual voice, and the particular area which encompasses the change of register.

Frequency means the number of times something occurs per second. A voice sound consists of a regular vibration at a frequency determined by the pitch — for instance if a countertenor sings E4 at 330 Hertz (Hz), the vocal folds open and close 330 times per second. Acoustic energy is also present at multiples of this frequency,and such harmonics are termed voice partials. The frequency spectrum of the sound indicates how the acoustic energy is distributed across the partials of the voice, and this special distribution is determined both by the mode in which the vocal folds vibrate, and by resonances in the vocal tract which tend to amplify certain partials and reduce others. Strong peaks in the spectrum are called formants, and the frequencies and relative magnitudes of these formant peaks are largely what determines the vowel identity and voice quality. "The singer's formant is a term used to describe a prominent peak between 2800Hz and 3000Hz in the acoustic spectrum of the voices of singers, particularly male singers." (Sundberg, 1990). Vennard (1987) mentions "the 2800Hz that produces the ring in the voice." The ring he refers to is alluded to as "formant" by Sundberg.

The transition between falsetto and modal registers is an important part of the countertenor's voice. In order to meet the demands of the music, he trains this part of his voice, working to smooth out any audible break. Rene Jacobs (1983) says that countertenors often choose to sing only in the falsetto register in order to avoid the transition. The lowest note possible in their falsetto register defines for them the lower limit of their performing voice. Others extend their performing range by accessing the modal voice, training the voice to an even scale throughout. It has been suggested by Garcia, Rene Jacobs, John Large (1973) and others that there is an overlapping range of pitches of about an octave where either register may be sung.

Methods

Two investigations were designed to explore the transition between falsetto and modal registers: a semi-structured interview with each countertenor subject was followed by an acoustic study to examine the range and transition regions of his voice. Eight countertenors participated in the study. The age range was 22 to 52 years and included both student singers and professional singers.

The interview inquired about the countertenor's personal history in relation to singing, his personal and cultural status and his knowledge of his own voice, his general understanding of technique, range and other countertenor voices. Information about transition and range was available to the acoustic study, as the interview always preceded it. The acoustic study was designed to show the extent of the range of the voice and its features across that range. In particular, the capability of the voice with respect to fundamental frequency (pitch) and sound intensity (loudness) were examined across the entire range of the falsetto and modal registers.

Subjects were seated on a straight-backed chair in a sound-proofed recording booth. Communications with the investigators was maintained through open field headphones that did not interfere with their ability to hear their own voices. Sounds were recorded via a Bayer-Dynamic microphone placed at a fixed distance of 30cm from the subject's mouth onto digital audio tape, then transferred to computer at a sampling rate of 44.1Hz.

Wide-band spectrographic images of the major scale were computed within the Cool Edit waveform editor with a band-width of 300Hz (256 point Blackman-Harris window and FFT length 1024 samples). Individual notes were identified and labelled, and register transitions and voice qualities were subjectively noted by both visual inspection of the spectrographic patterns and aurally by listening through headphones. Using the frequency analysis tool in Cool Edit, a wide-band frequency analysis (band-width 300Hz) was performed on each note, averaged along its duration. Because the first two formant frequencies of the vowel "ah" are close to 1000 Hz, the wide-band analysis revealed only a single peak at or below this frequency. A peak was also observed between 2000 and 4000 Hz, corresponding to the singer's formant. The frequencies and amplitude of these two major peaks were manually recorded, and the difference between the two peak magnitudes calculated to provide a measure of the singers' formant in relation to the sound energy at lower frequencies. Sound pressure level (SPL) calibrations were obtained by measuring the C-weighted SPL of 1Khz tones by a hand held SPL meter placed next to the microphone, and referencing the recorded signals to these measurements.

In the interview, subjects had been asked to assess their comfortable range and the whole range of the voice, their use of modal register and of the transitional pitches between modal and falsetto, from knowledge of their own vocal technique. In a section of the acoustic study, subjects were asked to sing a major scale downwards from G above middle C (G4) to the G below middle C (G3), then a major scale upwards from G3 to G4, both in mezzo-forte, at a medium-slow tempo using the vowel "ah". This octave encompasses the pitches in which both falsetto and modal registers can be sounded and contains the transitional pitches between modal and falsetto. In a second separate task the subjects were asked to sing in falsetto from a high pitch of their choice down to the lowest pitch possible in falsetto; they were then asked to sing in modal voice upwards from the lowest comfortable pitch to the highest pitch possible in modal register. Beginning pitches were chosen by the subject. The aim of this task was to identify the range of pitches which could be sung in both registers.

Results

The extent of the pitches performed by subjects in the second task is shown in Figure 1.Three subjects performed the task as directed. Subjects 2 and 5, both tenor voices, had an almost identical range, subject 2 from E5 to E3 and Subject 5 from E5 to Dflat 3, showing an extensive range of overlapping pitches.Three subjects changed into another register at a transitional pitch, identified by subjective aural and visual inspection. Subject 7 had G4 to G3 as his overlapping range, but in each scale changed into the other register at a transition.Two subjects sang both scales in falsetto register, seemingly unable to begin a scale in modal register.The classic overlap suggested by Garcia and performed as directed, was shown in only one subject (12) who showed a range of one octave between G4 and G3 where both registers were sung.This task showed a good deal of variation in how the countertenors used the overlap area of their voice and how they approached the change of register.

In order to compare the transitional pitches made by each subject, a table was constructed using information from interviews, the task on the G4 to G3 octave and the modal/falsetto task. Assessments of transitional pitches were made both visually and aurally. When compared with the acoustic results, all subjects had reported their transitional pitches accurately.

A comparison of subjects singing a slow mezzo-forte scale between G3 and G4 was supplemented by information obtained in interview. Figure 2 indicates that two subjects, both baritones (Subjects 1 and 7), use some modal voice. Their transitional pitches are similar. Both speak in a light baritone voice.Two subjects (2 and 5), although markedly different in voice quality and training, had a similar transition and range; both have trained as tenor and countertenor. In both, their speaking voice matches their singing voice. Although one subject (12) nominates D4 as his "spot", he manages the transition beautifully. Another subject (9) blends the voice so well that it becomes difficult to classify; he has had many years of training and is self-styled as a male mezzo. Each of these subjects speak in a light baritone voice. Two subjects elected to sing only in falsetto. One of them (11) does not use his modal

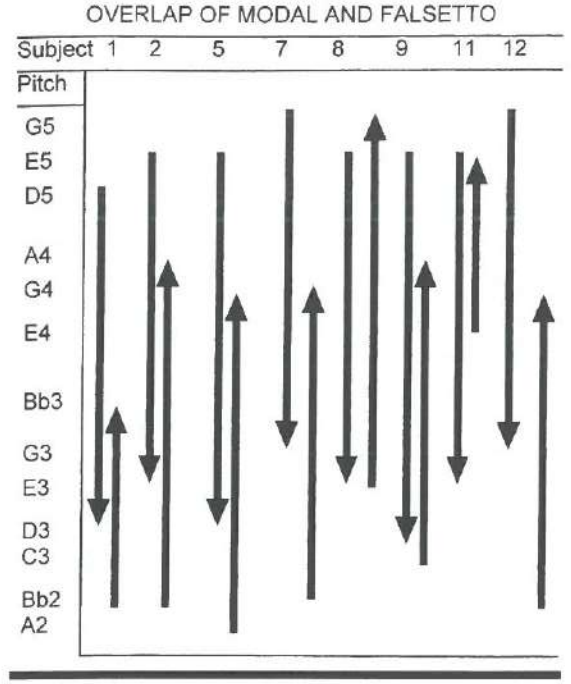

FIGURE 1

Graph showing the extent of the entire voice in 8 subjects. The position of the arrow points indicate the extent of the overlap. Down-pointing arrow = downward scale. Up-pointing arrow = upward scale.

voice, either in speaking or singing; the other (8) often uses his chest voice in speaking, rising to a falsetto when excited. Both have sung in a treble voice since childhood.

The subjects who performed the scale with no visibe change seemed able to do so either because of extensive training which "ironed out" the transition area, or by using only falsetto. Where the change of register was noticeable, two different events were observed. The first event was either a "chink" at the beginning of the transitional pitch, ranging from very slight loss of intensity or frequency, particularly of the higher partials around 3000Hz, to an extension in some subjects to half the duration of the note. The second was a drop in energy in the higher partials at two pitches before the transition followed by a gradual resumption of the other register after the transition. Subjects sometimes mistook where the transition would take place, resulting in a momentary loss of quality.

Figure 3 shows an example of the spectrographic change for subject 7. It indicates a very brief, sudden drop in energy, seen in the spectral view as a definite "chink" which is soon recovered. The listener hears an even flow of pitches with very little interruption. The same subject in Figure 4 shows some perturbation in the higher partials leading to and away from the chink. There is a slight falling-away at the end of D4, then the pitch is resumed on E4 after the chink with a little perturbation. This event cannot be heard by a listener. It can be seen that a drop in the brightness at higher frequencies does momentarily occur at the point of transition, and that it does not visibly affect the lowest partial.

In Figure 5, the magnitudes of the two main spectral prominences are shown at each pitch for both the upward and downward major scale. Difference in overall magnitude is shown between subjects, with three main groups: subjects 1, 11 and 12 (low), subjects 8 and 9 (medium-high) and subjects 2, 5 and 7 (highest). Subjectively, the lower amplitude voices had a soft falsetto quality whereas the higher amplitude voices had a louder, fuller quality.

Figure 5 also shows the energy difference between the high and low formant peaks at each pitch. Several subjects, in particular subjects 1, 2 for part of his range, 11 and 12, exhibit large differences in the magnitudes of the first and third formants, with a soft,light sound quality. Subjects 5, 7, 8 and 9 in contrast, exhibit a more robust quality in their voices, which is reflected in the small magnitude difference between the higher and lower formant peaks. In these subjects their sound quality is heard as well-controlled and well-blended. Subject 9 has a transition in both directions between C4 and D4, whereas subject 5 makes no transition on the downward scale and a transition between E4 and F#4 on the upward scale.The difference in the two formant magnitudes for Subject 2 has large jumps across the

TABLE OF TRANSITIONAL PITCHES

Subject	Interview	Scale G4-G3 down	Scale G3-G4 up	Falsetto Down	Modal Up
S1	D4	NVC	C4	D4	NVC
S2	C4-F4	C4	F#4	C4	F#4
S5	C4-F4	NVC	F4	Bb3	NVC
S7	C4-D4	C4	E4	NVC	NVC
S8	None	NVC	NVC	NVC	NVC
S9	C4 or D4	D4	Eb4	C4	NVC
S11	None	C4	NVC	C4	NVC
S12	D4	NVC	D4	NVC	NVC

FIGURE 2

C4 = middle C; NVC = No Visible Change noted on zoomed spectral view

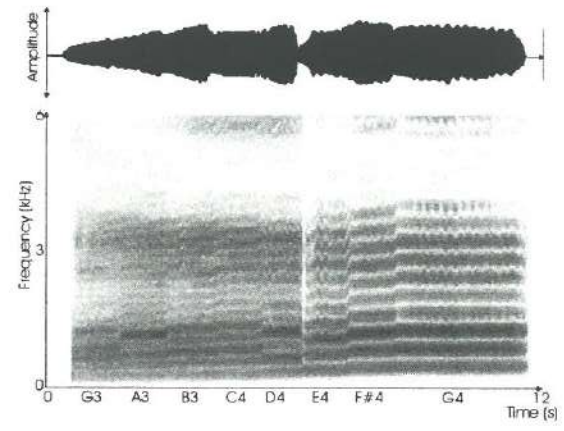

FIGURE 3

Waveform and spectral view of the major scale from G3 to G4 sung by Subject 7. Time indications have been included.

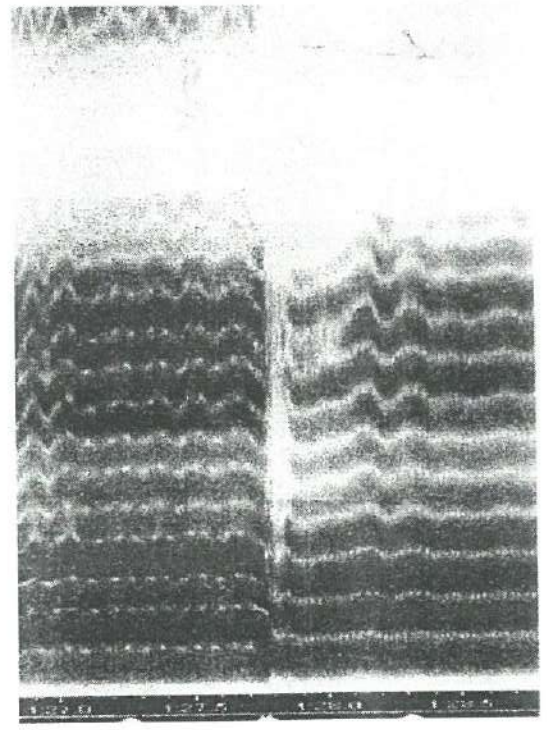

FIGURE 4

A section of the spectral view as in Figure 3 shows the spectral view of pitches D4 and E4, with the 'chink' between them.

scale. In the downward scale the magnitude of the higher formant drops significantly on pitches E4 and D4 leading to the transitional pitch C4. Then there is a gradual recovery after the transition. This demonstrates the second type of register transition described earlier. In his upward scale however, the sound quality is more controlled until a transition into falsetto is made at F#4. In the spectral view the first partial is not affected so that we hear a continuation of voice sound but with a weaker, softer quality. Roubeau, Chevrie-Muller and Arabia-Guidet, in their acoustic and EGG study (1987), give supporting evidence of the transition events observed in Figure 5. They saw very little perturbation on the register change in a professional tenor, and their professional countertenor showed considerable perturbation of the amplitude preceding a loss of frequency (Figure 6, p. 285). Both singers were changing register on a single pitch.

Discussion

There are several ways in which countertenors approach the change between falsetto and modal registers. They may choose to sing only in falsetto or they may wish to train their voice to blend the two registers. Their degree of success in the latter seems to depend on training and use. Two countertenor subjects in this study (8 and 11) chose to sing only in falsetto, thereby avoiding a register change. Three subjects (5, 7 and 12) achieved a well-blended, smooth transition throughout the change of register. Three subjects (1, 2 and 9) showed some disturbance of pitches around the register change.

Despite these different approaches, the term "countertenor" continues to refer to all male voices using the falsetto register. There are certain characteristics — the extent of the entire range, the precise area of transition, voice quality and training — which contribute to the differences between countertenors. The subjects usually nominated a single transitional pitch, whereas there were often different pitches performed on upward scales and downward scales (Figure 2).

From the results presented here, several separate types of countertenor canbe suggested: the baritone-based "male alto", the tenor-based countertenor, a "male mezzo" — self-styled — who may be either high baritone or tenor-based, and what could be called "male soprano." The first three of these types match those previously given by Hough (1937, p. 1) but three of the singers did not seem to fit into any of these groups. One of these is a "natural" falsetto voice, made stronger by training and use; one countertenor has been trained as a soprano ; one is a student who has always sung as a high treble. The countertenors' use of their speaking voice can also provide an indication towards categorising an individual voice. Rene Jacobs says that the countertenor is a "voce mezzana" or middle voice,that is, a voice which uses both modal and falsetto. According to Rebecca Stewart (1987), the high male falsetto or alto / contralto falsetto and the middle male vocal type or contratenore describe two types of voices who reached "a technical peak and singularity of function" (p. 100) at the end of the fifteenth century, the contratenore being equivalent to the voce mezzana. This observation seems to give support two of the categories found in this study, the baritone-based "male alto" and the tenor-based countertenor.

The differences both between countertenors and other voices and also among countertenors themselves may have a physiological basis. Rebecca Stewart reminds us that the male person usually went through the puberty change at a much later date (about eighteen years) at the end of the sixteenth century than now, at the end of the twentieth century. Data contributed in interview placed the countertenor subjects' age at puberty at between thirteen and seventeen years, with most subjects in the fifteen to seventeen years age group. All of these subjects sang in a treble voice until this change for a longer period than usual, thus establishing a habitual use of the higher voice.

Welch et al. (1988) measured by radiography a professional bass, baritone and tenor group and compared them with professional countertenor subjects from a previous study (Welch et al., 1987). They found no significant difference in the dimensions of the pharyngeal tract, but they did find that the resting length of their vocal folds was significantly smaller in the countertenors compared to other voice types. Cleveland (1977, p. 1628) however, showed that tenors have significantly higher formant frequencies than basses, at the same time having a shorter vocal tract length. This seems at

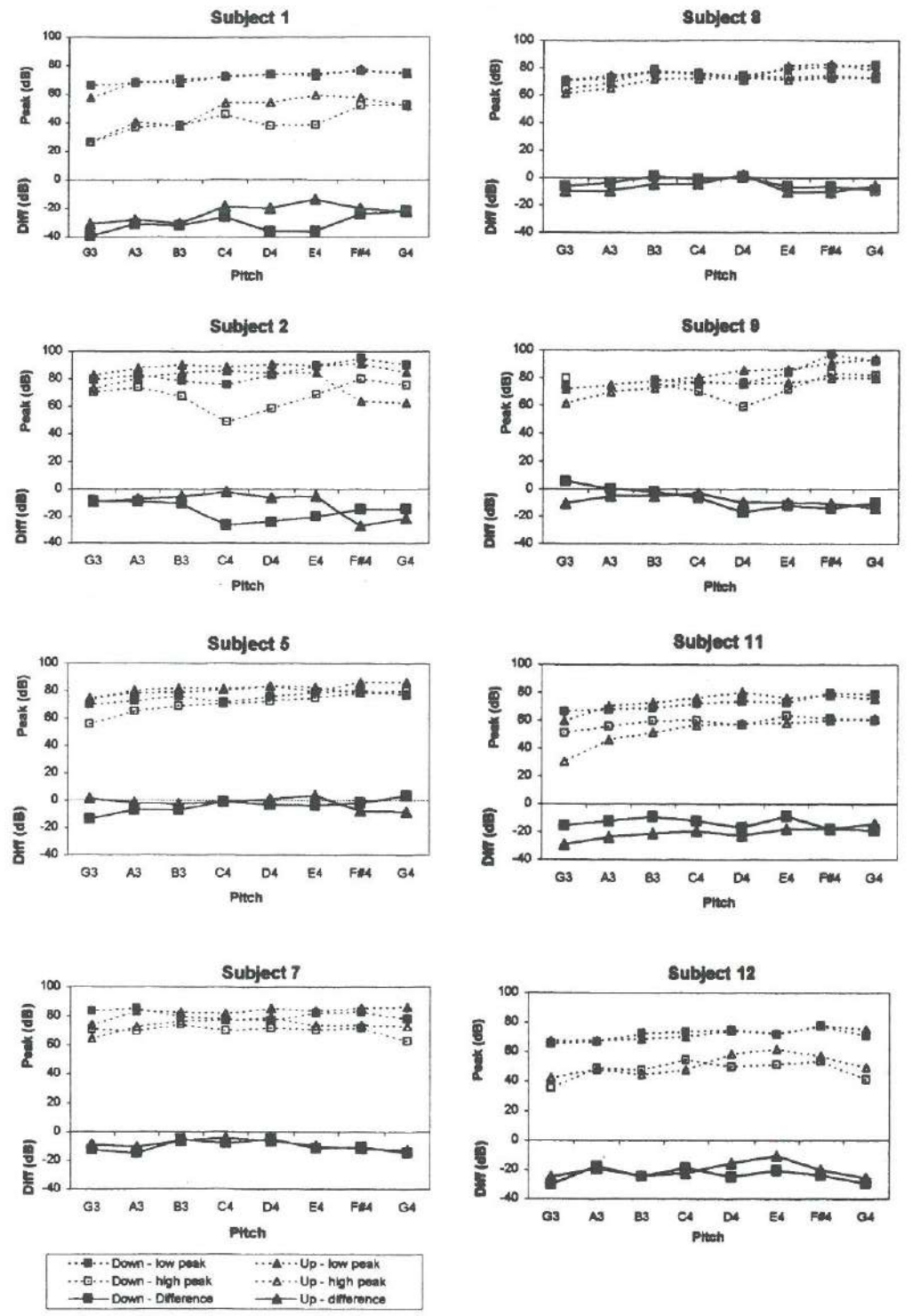

FIGURE 5

Frequency analysis of the major scale G4 to G3 (down) and G3 to G4 (up). The amplitudes of the two major peaks, one below 1000HZ (Low) and one between 2000 and 4000Hz (High) are shown for each scale, as is the difference in decibels between these two formant peaks.The graphs of all 8 subjects are shown.

odds with the result from Welch et al. that countertenors have a pharyngeal length which is similar in size to other male voices. The matter of the resting length of the vocal folds may affect the mode of phonation of the individual countertenor. The presence of physiological factors cannot be ignored.

Lower formant amplitudes were observed in several subjects as shown in Figure 5. This may suggest that the amplitude of the singer's formant is lower in falsetto than in the modal voice. However, the amplitudes of the higher partials is also determined by the mode of phonation, as well as by the vocal tract resonances (Sundberg, 1987).

He also says (1987) that a wide discrepancy between the first and third formant is accompanied by a rather weak sound, and indeed the subjects

showing a large difference between the high and low formant peaks had a soft light quality . In Subject 8 , there was very little audible change in quality between D4 and E4 in his down and up scales between G3 and G4 , and the spectrogram is quite consistent with this, showing no visible change. However, in Figure 5 a distinct jump between these two pitches is shown. On closer inspection, it seems that the jump is in fact because the formant at 1000Hz has increased about 10dB, but the 3000Hz formant keeps the same level. This can be observed also in subject 5, where the same high level is seen for the 3000Hz formant. For both subjects the difference signal is the closest to zero of all the subjects.The loud high third formant is probably quite significant in carrying the quality of the voice. It is possible that the level of the high formant may be critical for the perception of vocal quality.

Some of the factors contributing to differences between countertenors and other voices are the use of subglottic pressure and airflow in the countertenor, the action of the vocal folds in falsetto singing, phyiological differences from other singers in countertenor subjects and the modification of vowel sounds. The vowel 'ah' was the only vowel used in the countertenor study; the issue of vowel modification has not been addressed. Sundberg (1987) refers to Isshiki in his opinion that phonation frequency in the falsetto register is almost exclusively controlled by airflow, although this may differ between different types of phonation .

Teachers have found generally that factors which influence register change and blending in all singers are "the co-ordination between vocal fold adduction, breath management, and vocal tract conformation." (Callaghan, 1996). Countertenors have a special interest in this co-ordination, particularly concerning the pitches surrounding the change from falsetto to modal register. It is hoped that this study is able to make clear the ways in which the countertenor approaches the change of register and to dispel some of the confusion that teachers may feel about the countertenor voice. Nothing in the study indicates that countertenors should be taught any differently from any other voice.

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The Experience of Contemporary Australian Female Vocalists: An Exploratory Study

Leigh Carriage

This paper discusses the findings of an exploratory and qualitative study of the experience of contemporary female vocalists in Australia. The study consisted of a small sample of fifteen contemporary female vocalists, who were interviewed during 1999–2000.

The aim of the study was to chart the nature of these vocalists' practice, identify possible barriers to their participation in the music industry, and suggest directions for teaching and development of contemporary voice.

There is a distinct lack of research and resources — historical and theoretical — specifically dealing with contemporary voice, but particularly in the Australian context. This gap is even more pronounced in the area of female vocal performance, which is not well understood nor documented. It is unclear how female vocalists learn their craft, how they work with technique, what their needs are in terms of formal musical education and skills to cope with workplace environment.

I have tried to gain an understanding of the specificity, and diversity, of practice of contemporary female vocalists. I sought to make a preliminary identification of possible barriers to participation in different areas of the music industry, and to consider the implications of this for pedagogy.

The perspective taken in this study is one very much informed by recent musical scholarship which looks at contemporary music and voice in social and cultural context (see the handy overview represented in the work of Shuker 1995, as well as the many excellent examples to be found in the research of a number of different scholars, among them: Cohen 1991 & 1993; Frith 1988 & 1996; Hayward 1998; Hooks 1994; Martin 1995; Middleton 1990). This body of popular music scholarship seeks to take seriously the study of popular music, including contemporary voice, and to look at innovative ways to understand the nature of such music — which has not been well understood in the available traditions to date, based on classical and art music forms.

In addition, I draw on the small but growing literature on music and gender (such as the pioneering work of Citron 1993; Cooper 1995; O'Brien 1995; Johnson 2000; Macarthur & Poynton 1999; McClary 1991; Whiteley 1997 & 2000). Especially helpful is the first book-length study of music, gender, and education (Green 1997). My interest in this study is the important role that education plays in the formation of all contemporary musicians, but particularly how it shapes the deeply gendered aspects of contemporary voice we find today.

I have chosen a qualitative method here appropriate to an exploratory study. However, I also feel the qualitative method is helpful for the nature of the issues I am investigating. It is worth noting here Denzin and Lincoln's characterisation of qualitative research as 'multimethod in focus, involving an interpretive, naturalistic approach to its subject matter' (:2). Like them, I read the qualitative research act as a 'multicultural, gendered process' (p.1), and view the 'qualitative researcher-as-bricoleur uses the tools of his or her methodological trade, deploying whatever strategies, methods, or empirical materials as are at hand' (:2).

Methodology

The focus of the research was on documenting and analysing the experiences of contemporary vocalists as they perceived and reported it. Semi-structured interviews were conducted with fifteen contemporary female vocalists. Interviewees were carefully chosen to give some sense of the diversity of practitioners, with a broad cross-section in terms of: genre of music (rock, country, jazz, hip hop); sector of industry (theatre, television, venue-based); type of practitioner (performer, session vocalist, teacher); years in industry; ethnic and cultural background.

Those interviewed were: Lily Dior, Christine Sullivan, Chrissy Amphlett, Jeanie Lewis, Grace Knight, Inga Liljestrom, M'chele Morgan, Lisa Ryan McLaughlin, Jo Jo Smith, Karen Jacobsen, Elizabeth Lord, Megan Albany, Justine Bradley, Margret RoadKnight and Nina Harris.

I was fortunate in the sample to interview a mix of established well-known artists (such as Chrissie Amphlett, Grace Knight, Jeanie Lewis, Christine Sullivan, and Lily Dior) and of emerging artists (such as Karen Jacobsen, M'chele Morgan, and Inga Liljestrom).

As well as being performers, composers, and recording artists, the majority of those interviewed are also voice teachers (mostly in a private capacity, though some have also taught in schools and TAFE, and two respondents have taught for short stints in tertiary institutions),

As this is an exploratory qualititative study, the aim of the interviews was to identify issues, and to document experiences. Hence I chose only a small but diverse sample of contemporary female vocalists. Roughly half of the interviews were conducted

face-to-face, but in some circumstances participants were interviewed via e-mail and by phone.

A common set of questions was used, covering a range of topics: career development; supports in developing career; main influences and role models; barriers experienced; discrimination and effects experienced; role of music education for contemporary vocalists; vocal health problems; education on vocal preservation; educational needs of contemporary vocalists.

The interviews were transcribed and analysed. Common and differing features of practitioners' experience were considered, and some of the salient findings are discussed below.

- Career Development and Early Influences
- Role of Music and Education
- Vocal Problems and Vocal Preservation
- Possible Barriers
- Discrimination: Effects and Strategies

Career Development and Early Influences

Three questions in the interview aimed to explore career development and early influences of the respondents. There were a range of different answers to these questions, as would be expected.

Nearly every interviewee nominated listening and live performance experience as key factors in career development. General health and 'stamina' were mentioned by most respondents. Confidence and self-motivation were also important — 'Gall! Hutzpah! Cheek!' said one interviewee. The role of a musical family was very important also, cited a number of times as a critical factor in providing support.

A solid musical grounding was quite important to most, including a background in an instrument (typically piano, and guitar also — only in two cases did respondents not play an instrument). One-to-one tuition emerged as important for half the respondents in their musical development.

Musical influences were very diverse across the sample. However, two interesting findings emerged on the question of influences. Firstly, only two of the respondents cited classical music as a direct influence, and in both case, cited instrumental classical music, not classical vocalists. Secondly, it was quite striking that Australian cabaret and jazz vocalist and educator Kerrie Biddell was mentioned by over half the respondents as a direct influence — more mentions than any other overseas or Australian artist.

Role of Music and Education

Respondents offered some very interesting responses to a series of questions about what they saw as the key elements in vocal education for contemporary vocalists, and what would they have liked to have known before they went into the music business:

> Contemporary singing has more hazards and there is a need for singers to understand them....including knowledge of sound systems.
>
> How to read people. How to read music. How to read contracts.
>
> one of the things about being an artist is when you first begin, one of the things I had to learn was to become a recording artist. I mean I was a performer and I ... but there are so many different aspects that you know, [but] to be a recording artist, [you have to]...learn to function in the studio.
>
> I would have liked to have training in music legals, not to have been star struck. Had I known then what I do now, I would have almost definitely have earned a decent living for the ten years that I was the lead singer in [name of group].
>
> I would have liked to have been better prepared for the financial hardships and knock-backs.
>
> [I would have like to have known] that's its very competitive and you're a small fish in a big sea. That talent alone is not enough. That performing is addictive.

A few wished that they had been encouraged to do their own material earlier in their career:

> ...not to be self-conscious about performing. Just to really own what I do and follow that. Not to try to be all things to all people...I have skills in a broad range of areas because I was too frightened to just concentrate on my original songs from the start.
>
> I would have liked to somehow have been encouraged into original music earlier and known that covers actually aren't a long-term career path.

At least one respondent felt that the nature of teaching institution needed to improve:

> I would love to see an atmosphere of encouragement and support introduced into our learning establishments, replacing the hierarchical attitudes of competitiveness and emotionally disconnected over-critical aloofness that seems rampant and does little to produce marvellous music.

A number suggested that education was not everything, and (ironically in some cases) said that they may have been discouraged by knowing too much about the difficult aspects of the music industry:

> The old saying about the less you know the better really applies here. I honestly don't think there would be entertainers if we knew what a strange and sometimes frightening business this is. So, maybe a little knowledge in this case is *not* a good thing. But as an educator, I feel it is my duty to warn the inexperienced about the pitfalls and dangers of this industry.

Vocal Problems and Vocal Preservation

All except one of the respondents were aware of and reported personal vocal problems:

> A very tired and raspy voice
>
> Laryngitis and had no voice for a while...scary
>
> Repeatedly tired and sore throat

> Touring for almost ten years non stop...I suffered a raspy throat and pushed myself so hard that I would loose my voice completely
>
> Mainly when I was young, eighteen or so working with dance bands and always absolutely always to this day as a result of disgusting fold back...The singer not seen as an important element of the band, the band being way too loud and the singer overcompensating.

Most had taught themselves the vocal hygiene and other voice preservation skills, or sought professional advice and care from an ear, nose and throat specialist:

> Knowledge you build up slowly through experience and bits of advice
>
> I educated myself, rest when necessary...I regularly go to an ear nose and throat specialist.
>
> I have gone to see ear, nose, and throat specialists — I used to go quite often because I was quite paranoid about the whole thing, but I was singing in a loud group and I'd sort of really belt it out and that was [name of band] — it was like almost a heavy metal chick band — you know — not heavy metal more avant garde/rock but it was awfully loud and just my voice would hurt afterwards — I realise now that maybe that wasn't the right way for me to actually sing.

All strongly believed that more emphasis was needed in educating contemporary vocalists, and therefore educating contemporary vocal teachers; more specifically for the contemporary vocalist's hygiene, environment, acoustics, and the nature of their professional work:

> In the last 5 years since I've been doing more band work my voice has become very trashed, mainly from the environments where I make my living — loud sound systems, draughts, smoke from cigarettes and machines and noise levels...we need to know how to protect ourselves from the insid'
>
> using the microphone and preserving the voice has to be a starting point
>
> some teachers over the years who never mention anything but scales practice...consequently I began to self educate in order to save my voice and have longevity
>
> Contemporary singing has more hazards and there is a need for singers to understand them. This includes, I think, knowledge of sound systems and how important they are, to have adequate foldback at the gig. One should always be able to hear themselves above the band onstage...A knowledge of acoustics of rooms
>
> Not nearly enough [emphasis on how to preserve/protect voice], but I observe this to be a society where self-destructive practices flourish & where people value experiences where things are "hard" or painful. People become addicted to their own damage, proud of it...warm-ups should be part of music from childhood for everyone.
>
> We need much more informed advice on how to protect our voices and what precautions may be followed to avoid damage, or remedial procedures taken when damage has occurred.
>
> If [budding vocalists] are introduced to vocal health at an early stage, they will always be aware and take the correct precautions. It is so important to have a physical handle on the vocal area, in the same way an instrumentalist knows about the construction of their chosen instrument.

A number of respondents raised issues pertaining to contemporary music vocal technique, styles and environment, which they felt were not sufficiently addressed by pedagogy historically based in classical methods:

> Well, [voice preservation] was always discussed in a classical sense when I studied singing so no, I don't think enough is offered. Using the microphone and preserving the voice has to be a starting point.
>
> A broad range of learning from stylistically diverse material can be made available to the diligent student of voice.
>
> Some respondents qualified their support for teaching voice preservation and technique, by suggesting that it needed to be approached appropriately:
>
> Yes, I've had "problems" with my voice, but to quote my late friend Prof. Alex Bradford (the stunning Black American gospel singer): "Sure I'm hoarse — I'm supposed to be hoarse — I'm a singer". I'm bored by people who are constantly 'taking care of' their voice apart from not actually abusing it &/or expected it to be as robust when you have a virus/infection...All the health/dietary etc. tips should be taught, but in such an atmosphere so as to avoid singers giving them undue emphasis...The most inspiring & intriguing singers of all (to me, anyway) — Black Gospel singers and Bulgarian village women — are not usually schooled in, or precious about, the voice.
>
> I do believe that some vocal coaches deserve a very pointy stick up the butt, and unless they have actual professional experience in touring, they often can teach the pupil to un-learn their most natural and gifted part of themselves.

Possible Barriers

One important part of the interviews was to discover what possible barriers to practising their craft contemporary vocalists faced.

Most respondents felt that one of the main barriers was the common perception of vocalists as not being legitimate musicians. One musically well-educated respondent noted surprise when she played piano: 'I do recall the acts I had backed being amazed that a girl could play piano OK'. Another said: 'Singers were considered the thing that draws the crowds but were thought of with a little contempt seeing it all seemed so easy for us.'

Two other barriers were the low wages and the conditions in the industry: 'The main barrier has got to be earning a living while trying to stay true to being a singer'.

Physical stereotypes and appearance were mentioned as a barrier by most respondents. One respondent stated that: 'Discrimination has mainly affected me in regard to my personal appearance. Too fat for

something, too short for something else.' Another put it more succinctly: 'Being a shortish person with smallish bosoms didn't help.'

Personal attitudes, including lack of confidence, anxiety, and fear, were mentioned by quite of number of the respondents as a barrier: 'My inexperience. My shyness. My lack of confidence.'

Lack of education for vocalists was one of the most common replies.

Discrimination: Effects and Strategies

Nearly all respondents mentioned that they had experienced discrimination on the basis of gender:

> Oh boy, where do you want me to start!!! There were obvious discriminations, of gender, of style, of age. The industry when I started out was so completely run by the olds boys club (still is)...The old casting couch syndrome. Also I found they were very narrow as to my ability, for once you had performed certain styles, you were heaped into that pile, never to surface as anything else.
>
> As I am no longer young and gorgeous (was I ever?), I find I am fighting the "you're too old to be hip" attitude.
>
> chick singer cul de sac
>
> I think I am through the whole chick singer thing!...I walked into [it] initially as a willing participant & it took a long time to dawn what was happening in the course of struggling for my own voice. I also found I was struggling for respect from other musicians, even to the extent of it being a struggle to accept myself & be accepted as musician myself. As for audiences, it's largely as Frank Zappa says of the music industry — titties & beer.

One respondent who felt she had not experienced much gender-based discrimination, phrased it in this way: 'I tend not to notice that stuff, but I do recall the acts I had backed being amazed that a girl could play piano OK'. Another felt she was discriminated because of the content of her songs (too political) rather than just because she was a woman: 'Oh, for me I feel the doors that were closed to me they have been more to do with what I sing about, than the fact that I am a woman.' Even this respondent, however, then went on to say: 'I don't, I haven't even fitted, fitted some sort of pretty image, so I've not fitted the physical image, so, I think that's quite a men episode sort of rejection.'

One respondent suggested that genre of music is an important factor in interaction with gender:

> I'm unaware of being discriminated against on the basis of gender (genre, yes, but you can't legislate for taste).

Other sorts of discrimination were also mentioned:

> In my experience, gender-related discrimination and drug related discrimination are rife in the music industry, closely followed by religious and cult inspired discrimination.
>
> I doubt there is a musician in the world that has not felt discriminated [against], in the areas of finance, housing and employment. It's the nature of the beast. Any profession that has an artistic bent, the normal people don't trust. We must be flaky etc.

Respondents spoke of a range of different strategies for coping with discrimination:

> It affects me enough to speak out if I see it going on.
>
> When I first participated in "the industry" historically, it was definitely male dominated. Once [my band] started to gain some recognition, I learned...how to use my 'femaleness' and let me make this clear, femaleness in the 'wily wolf' sense and not sexually. We often played good cop — bad cop with the record industry.

Conclusion

Care needs to be taken with analysing the findings of this study, as the sample is small. Nonetheless, it is possible to identify some common patterns which pose some important questions for practitioners and educators of contemporary female (and male) vocalists).

In terms of career development and influences, popular music plays a significant role, especially in terms of role models and exemplars. While respondents had a wide variety of educational backgrounds and paths into music industries, listening, live performance, a solid musical background, health and well-being were all identified as important issues.

Not unexpectedly, the vocalists interviewed identified a range of barriers to their musical practice. As well as low wages and condition, negative perceptions of vocalists as musicians was a commonly experienced barrier. Physical and appearance-based stereotypes were also cited as an barrier.

One barrier which emerged very clear in the interviews was discrimination specific to female vocalists. This was discrimination on the basis of gender, something experienced more acutely because of the negative perception that vocalists are not proper musicians. While older respondents felt that the industry had been more discriminatory in the past, a high degree of discrimination is still being experienced. Respondents used a range of strategies to deal with gender-based discrimination.

Vocal education in the practice of styles, techniques and knowledge of popular music was seen by most as important — even for those who themselves had had limited formal musical education. As well as personal skills (confidence and motivation), a majority of respondents felt vocal education needed to do a better job of imparting an understanding of the nature of contemporary vocal practice and its industry settings. Some still felt there were definite limits to education, and that actual experience, performance and listening was always going to be of crucial importance.

The feelings of respondents in regard to vocal education emerged most clearly when they were asked about vocal problems and preventative education. Most said they had experienced vocal problems, and nearly all were in favour of better education on voice preservation and protection,

specifically targeted to popular, contemporary vocalists.

Overall, then, this study has identified important issues about, firstly, barriers and discrimination faced by contemporary vocalists, and, secondly, perceived priorities for vocal education. While I intend to follow up this preliminary study by interviewing a much larger sample of contemporary vocalists, the study has identified serious issues of discrimination faced by contemporary female vocalists, identifiable mainly as incorrect perceptions of vocalists as musicians. In addition, I believe that the study's findings underline the need for formal and informal vocal education which:

- understands and addresses the specific nature of the diversity of popular contemporary vocal styles;
- gives contemporary vocalists a better grounding in issues they will face in a career in the music industry (such as amplification and acoustics in venues; business aspects of the industry; motivation and career development);
- provides vocalists with a solid foundation in voice preservation and protection.

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Hyperventilation in Actor Training and the Myth of 'Oxygenation'

Rob Pensalfini

In the early days of my serious actor training (all of four years ago), I occasionally experienced some rather unpleasant sensations during voice or acting classes. Many of my fellow students reported similar sensations, and since that time I have watched dozens of students go through the same thing. The sensations I am talking about typically involve a tingling or numbness in the hands, feet, and face, usually accompanied by spotty, blurry or tunnel vision, and sometimes accompanied by any or all of sweating, shaking, dizziness, confusion, dry mouth, chest pains, clammy hands, hot flashes, and a feeling of unreality. They most typically occurred during sessions in which the student was sitting or standing still and being encouraged to breathe more deeply and/or more rapidly, and were often (though not always) accompanied by strong emotional experiences.

Many readers will recognise the sensations described above as the symptoms of hyperventilation, which, if not dealt with, will ultimately result in a loss of consciousness but are otherwise quite harmless. However, my teachers at the time, and (as I have discovered since then) many other teachers, encouraged this and identified these sensations (particularly the numbness and tingling) as signs of important psychophysical 'shifts' which would ultimately benefit the actor. For example, Kristin Linklater writes that such feelings of dizziness come about "...because, with deep relaxation, more oxygen begins to enter and leave the body, stimulating circulation and pumping more blood to the heart and the brain." She further claims that "this is a healthy situation... if you can learn to accept dizziness when it occurs... you will find you can embrace the state as a useful disorientation out of which you can explore a new use of yourself."[1] This belief is by no means confined to teachers of the Linklater method, but I quote her work because it is the tradition that I am most familiar with (and I may well be guilty of biting the hand that feeds me in this instance). A recent (May 1999) discussion of 'tingling' on *Vastavox*, the electronic discussion list of the Voice and Speech Teachers Association of America, for example, indicates that this may actually reflect the majority view among voice teachers of all stripes. I note that Linklater is careful to avoid using the term 'hyperventilation', [2] but I have encountered many teachers who acknowledge that the sensations I have described are indeed symptomatic of mild hyperventilation. These teachers are quick to point out the etymology of the word *hyperventilation* in support of their belief that the sensations arise from higher than previously typical levels of oxygen. Several teachers carefully explained to me that ultimately these higher levels of oxygen will aid cells in ridding themselves of toxins and in regenerating, and will eventually result in a greater feeling of aliveness and a greater capacity to experience life to its fullest. They claim that thereby such mild hyperventilation aids general health and well-being as well as supporting one's development as an actor.

In this brief article I wish to argue against the position outlined above. First of all I will present evidence that hyperventilation is in actual fact associated with decreased blood supply to the extremities and brain and a lowered ability for the cells to rid themselves of toxins. Secondly I will argue that, while it is not physically dangerous, encouraging hyperventilation is actually counterproductive to an actor's training.

Hyperventilation is not Oxygenation[3]

Even a folk etymologist can quickly point out that the parts of the word *hyperventilation* translate as 'too much' and 'air'. So hyperventilation is indeed the result of more air entering the body. However, more air entering the body does not translate to more oxygen reaching the cells. The body's chemical reactions, right down to the cellular level, are dependent on maintaining a specific balance between oxygen (O_2) and carbon dioxide (CO_2), so that the blood's pH level (acidity) stays within a narrow range. The balance between these two important gases is regulated by depth and rate of breathing. Within the optimum pH range, haemoglobin has a certain 'stickiness', an ability to 'hold onto' oxygen molecules. Hyperventilation occurs when the rate and depth of breathing are too much for the body's needs at a particular point in time. Under these circumstances, more O_2 does indeed enter the body, and more CO_2 is dumped, than under normal ventilation. The sudden drop in CO_2 levels results in a rise in the blood's pH, with the result that the blood becomes alkaline. Haemoglobin in alkaline blood is 'stickier' than in normal blood, which means that more O_2 is in fact able to enter the bloodstream. The problem is that the 'sticky' haemoglobin in alkaline blood does not release that oxygen into the cells, so in actual fact less O_2 enters the brain and other organs despite there being an abundance of it in the blood.

Hyperventilation is actually an important survival technique, and is part of our sympathetic nervous system's response to perceived danger — the so-called 'fight or flight response'. But the sympathetic nervous system is a system, and the triggering of one part of the response (in this case, hyperventilation) typically triggers the other parts of the system too. For our purposes, the most important of these reactions are restricted blood flow to the extremities (by a constriction of blood vessels) and muscular tension. In evolutionary terms, these are fantastically useful responses. In dangerous situations, the body optimises its ability to fight or flee — the pupils dilate (hence the oft-reported spotty or tunnel vision); breathing speeds up in order to prime the organism for action (which is the cause of the hot flashes and chest pain which can accompany hyperventilation); and restriction of blood flow to the extremities will prevent the organism from bleeding to death if it is injured.

Note that if the organism does either fight or flee, hyperventilation will likely not take place, for the simple reason that the body's processes speed up as a result of physical activity. More O_2 is burned; more CO_2 is produced; and more O_2 is needed to maintain the blood's pH. Hyperventilation is therefore induced when the 'fight or flight' reflex is not met by either fight or flight. This is likely to result in increased muscle tension because the muscles, now primed for action, are being asked not to act.

If the sympathetic nervous system's reaction is not tempered or reversed by the engagement of the parasympathetic nervous system (the 'mellowing out' system), blood flow (and therefore oxygen supply) to the brain will eventually be reduced to the point where consciousness is lost. This loss of consciousness may not immediately appear to be a useful survival technique, but remember that it is more important for the organism's survival to keep the vital organs in the torso supplied with blood and O_2 than to maintain consciousness. In cases of extreme danger, the stillness and silence produced by loss of consciousness may, in actual fact, be life saving. Once the organism loses consciousness, the parasympathetic nervous system will take over and breathing and blood flow will be restored to their normal state. Therefore hyperventilation is never dangerous (unless the collapsing person falls on a sharp object or some similar tragic accident occurs).

The tingling sensation in the fingers, toes, and lips is simply the first sign of hyperventilation, which corresponds to a reduction, not an increase, in blood flow and oxygen to the cells, particularly those of the brain.

Hyperventilation is Counterproductive to Actor Training

If hyperventilation is not dangerous, then, could it not still be of use to an actor in training? If it is so, the previous section has shown that it is not for the reasons that many acting teachers give. If there is a use for hyperventilation in actor training, it might be in teaching actors to control hyperventilation so that if nervousness induces it, they will be able to prevent it from turning into a full-blown panic attack (panic attacks are triggerings of the sympathetic nervous system without apparent external cause). Some commonly-used techniques for controlling hyperventilation are slow controlled breathing (such as the single-nostril breathing practised in some forms of yoga) and breathing into a paper bag (which puts CO_2 back into the body, lowering the blood's pH). Some other methods are discussed in section 4.

I believe, however, that hyperventilation may actually be counter-productive to the training of actors, for a variety of reasons. To come back to the etymology of *hyperventilation,* note that the prefix *hyper-* does not mean 'more', but 'too much' or 'more than appropriate.' Hyperventilation is the result of breathing that is inappropriate to the situation in which the body finds itself. Assuming that part of training an actor is honing responses that are appropriate to the situation (being 'in the moment'), then it hardly seems productive to encourage a situation in which rate and depth of breathing are out of kilter with the body's needs. Responses appropriate to the moment of being on stage may well require, as is often stated, a slightly heightened or larger reality, which may well demand more breath, but in order for this heightened reality to communicate to an audience, a larger 'heightened' expression is also required, manifested as greater expenditure of energy through the voice or body.

A greater problem may be caused by some of the autonomic responses that accompany hyperventilation, particularly the increase in muscular tension. Much of actor training, and voice training in particular, is geared at attaining a state of relaxed preparedness, a state of poise from which action can occur organically (the quote from Linklater in section 1 speaks of 'deep relaxation'). Hyperventilation is actually destructive to this alert poise because it brings on a preparedness to fight or flee that we then quash, resulting in a tense and unresponsive body. Furthermore, if we trigger this fight or flight response and yet train the body to neither fight nor flee under these circumstances, we engender mistrust in the body's natural responses. Actors who are on the one hand instructed to 'listen to what your body tells you' and on the other hand are taught to suppress reaction to autonomic responses will become confused and this must stifle their development.

Many teachers who encourage mild hyperventilation, mistaking it as a sign of increased oxygenation, observe that eventually the body becomes used to the newer levels of oxygen and the student will stop hyperventilating under these conditions. If the disappearance of the sympathetic response is indeed due to adjustment to the new levels of oxygen in the body, then this is some cause for concern, because, as we have seen in the previous section, it means that the person has become accustomed to lower levels of oxygen in the cells and brain (which might lead to a slowing down of processes such as detoxification). It means the actor has reprogrammed herself to automatically suppress a natural and healthy

response. However, I think it is more likely that the eventual disappearance of the hyperventilation reaction is due to the student, breathing a little less, or a little more slowly, thus regulating air intake by her body's needs. This is something that teachers should encourage, rather than to pass off hyperventilation as a constructive 'shift'. In fact I have observed that the more experienced a teacher is, the less likely their students are to hyperventilate. I believe that these teachers develop, through experience and perhaps unconsciously, a sense of appropriate breathing that varies from individual to individual and from situation to situation.

Recall that the sympathetic nervous system's 'fight or flight' response is a reaction to a perceived threat. I suspect that the most common trigger for this response in actor training is actually emotion, rather than actual tangible physical danger. Emotions might be perceived as threats either because they are associated with actual threatening, harmful, or dangerous situations in a person's past, or because they are unfamiliar. In the former case, it is the association of the emotion with the situation, rather than the emotion itself, which triggers the response. In the latter case, the unfamiliarity with the emotion is most likely due to suppression (again probably related to a situation or situations in the person's past).

A suppressed emotion can be released in one of two basic ways, which we can call 'psychological' or 'physiological' for current purposes, though I suspect that both are actually psychophysical. The 'psychological' release comes about through memory of an event or situation in which the emotion was originally experienced. 'Physiological' release, on the other hand, is triggered when a person's habitual physiological strategy for coping with an emotionally laden situation is denied them. If, for example, I clench my jaw every time something displeases me in order not to get angry, but then on some such occasion I am prevented from clenching my jaw, I will experience anger. Unfamiliar emotions released in these ways are likely to be perceived as threatening.

If hyperventilation is not averted in such cases of emotionally-triggered sympathetic response, all that happens is that the strategy for avoiding the experience of the emotion is transferred from physical blockage or memory suppression to a cellular level: the organism begins to shut down (as described section 2) in order to avoid experiencing the emotion. It is only by fully experiencing the emotion, without hyperventilating, that the student will eventually learn that the emotion itself is not a threat. Once that happens, they will no longer fear the emotion and seek to avoid it by suppression or by physiological means. That emotion then becomes available to the student, increasing her range and communicative power as an actor.

Appropriate Breathing

I would encourage actors to develop breathing that is appropriate to the situation. Lying on the floor does not require much breath, running does. If, from the earliest stages of training, awareness of the body's needs and responses is emphasised, students can learn to automatically temper their breathing to the demands (physical, emotional, and intellectual) that are being placed on them at any given time. They can do so without going through a counterproductive stage of hyperventilation, tension, and dissociation brought on by over-breathing. Most experienced teachers seem to know this instinctively, though few express it explicitly.

It should be said that sometimes, despite the best intentions of student and teacher alike, hyperventilation might occur. In these cases, rather than encouraging the process or passing it off with some misinformed psycho-physical explanation, the teacher should take steps to remedy the situation, and to accurately explain the physiological processes at work.

One of the best remedies for hyperventilation within the context of acting training would be to increase physical activity, rather than to incite yogic breathing or breathing into a paper bag. In this way, the student learns to associate greater breath impulses with increased physical activity, and the autonomic response is strengthened, not suppressed. One difficulty is that a hyperventilating student may feel as if she is going to pass out or have a heart attack, and therefore may be resistant to the idea of physical exertion. Hyperventilation has never been known to induce a heart attack in the absence of a previously existing cardiac condition, and physical activity will actually cause more CO_2 to enter the bloodstream, lowering the blood's pH so that oxygen can once again be taken up by the cells.

One more thing that teachers can do is to recognise the early warning signs of hyperventilation, particularly chronic (habitual) hyperventilation, and take steps to avoid it. We have already observed that tingling sensations in the fingers are signs of mild acute hyperventilation, and at this stage the student could be encouraged to do something physical with their hands (such as squeezing the teacher's arms or a tennis ball). More advanced hyperventilation demands more rigorous physical activity, and I have used stomping and pounding mats to good effect here. However, in cases of habitual hyperventilation these symptoms typically do not occur. The habitual over-breather hyperventilates at a very subtle level that keeps them just below the threshold of noticeable tingling, but reduces oxygen supply to the brain nonetheless. Habitual hyperventilation is often developed as a means of cutting oneself off from external stimuli. The classic symptoms of chronic over-breathing are excessive habitual yawning and sighing. Yawning and sighing are actually mechanisms for dumping CO_2, and excessive habitual yawning and sighing are usually symptoms that a person's habitual breathing patterns are not in sync with their body's needs. Sighing and yawning are used extensively and to great effect in a number of voice training traditions, and I am not suggesting that these practices are counterproductive in themselves. However, some students take these too far,

and I have often observed students and teachers who are in the habit of sighing audibly before they say anything at all, or who go through their entire day yawning every few minutes. This level of sighing and yawning is most likely symptomatic of inappropriate breathing.

Conclusion

It has been my aim to debunk certain popular misconceptions in theatre training about hyperventilation and tingling sensations in the body's extremities. Such phenomena are signs of inappropriate breathing and, while harmless, are probably undesirable elements of any training that aims to teach the actor body awareness, connection to (external or internal) stimuli, or healthy breathing practices. I have suggested that an understanding of the body's natural physical processes and an environment supportive of those processes can enhance the effectiveness of training, and have suggested practical methods for identifying and dealing with both acute and chronic hyperventilation.

None of what I have written should be taken as a criticism of the core ideas of the training techniques in which hyperventilation is currently encouraged or ignored. Rather, I hope to encourage a greater understanding of human physiology among practitioners of those techniques, which I believe are essentially highly effective, with the aim of making them even more effective.

Endnotes

1. Linklater, Kristin. 1976. *Freeing the Natural Voice.* New York: Drama Book Publishers.
2. Linklater herself is quite likely not referring to hyperventilation when she describes 'dizziness' in the passage quoted above, but rather to the feeling of dizziness that occurs when one 'gets up too fast'. However, this same explanation is given by many teachers, in my experience, with reference to tingling, numbness, and other phenomena that clearly are symptomatic of hyperventilation.
3. The information on this section on the physiology of hyperventilation and the sympathetic nervous system can be gleaned from any reputable medical text which addresses the issue. One excellent starting point is Barlow, David H (1988) *Anxiety and its Disorders* New York: Guilford.

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The Role of Ethnographic Research in the Studio

Sarah Collins

> The study of a particular, specific context gives meaning to big concepts. It provides the sort of sensible actuality that makes it possible to think not only realsitically and concretely about them but most importantly — creatively and imaginatively with them.[1] (Clifford Geertz)

Currently, much of the literature and discussion concerning the improvement and development of singing teaching tends to focus on the advances and application of scientific research. However, there has as yet been little attention given to the educative practices employed by voice teachers. Inquiries into the specific nature of teaching and learning within the context of the singing studio may reveal valuable insights into its workings and offer opportunities for reflection and development..

Successful investigation into teaching, allowing for its individuality and diversity, requires appropriate methodologies. Qualitative research techniques, in particular ethnography, are a means of understanding and articulating what it is that good teachers do to develop and support their students' learning. It is particularly well suited to research in which the objectives are to explore and learn form the practice of others. By introducing the basic tenets of ethnography and by demonstrating that there is a particular role for this type of research to play in the reality of the singing studio, I hope to encourage an interest in and support for the continued development of this work.

Taylor notes that in the field of general education *recent studies have indicated the widespread distrust that teachers have of much academic research*[2] Although there is little comparative evidence to substantiate that this is also the case for singing teachers, there has been some work to suggest a similar sentiment or at least an uncertainty in the practical application of research findings. In her study *The Relationship between Scientific Understandings of Voice and Current Practice in the Teaching of Singing in Australia*[3] Callaghan, who surveyed singing teachers working in Australia's music institutions, suggests that although the majority of practitioners agreed to its benefits, there is a lack of interest in acquiring theoretical knowledge and a continuing skepticism by many on how to use the information in the singing studio.

> teachers, while advocating the need for a knowledge of vocal anatomy and physiology, lacked such a knowledge themselves [4]

Her work also revealed that many singing teachers did not believe it was necessary to have any specific teacher training.

> The majority of respondents did not consider traditional teacher training relevant to their work [5]

Furthermore, 48% of the respondents believed that their original training as singers was sufficient "formal training" to take on the role of teacher, leaving only slightly more than half the participants believing that there were additional skills which needed to be learnt to enhance their teaching ability. These figures probably reflect a general understanding of singing teaching as an intuitive exercise, which depends upon the empathy, personality and experiential knowledge of the teacher for success.

Two important conclusions can be drawn from these facts. Firstly, it appears that teachers consider developments in scientific research (regarding anatomy, acoustics etc.) more useful in improving their own teaching practice than research into teaching methods. Secondly, it can be seen that even if teachers accept the usefulness of research it does not necessarily equate with application and action in the day to day activity of the voice studio. Although perhaps those at the forefront have incorporated the advances of voice science into their practice, some with great recognition, the fact remains that a silent majority is in all likely hood continuing to teach singing the same way they themselves had been taught, with very little change or acknowledgement of these advances in research.

Thus in pursuing research, we must be aware of both gaining acceptance from our audience, and developing ways in which this acceptance can be transformed into action and acknowledgment.[6] Although the latter issue is of too wide a scope for this paper, some attention will be paid to the case for accepting the usefulness of research into teaching methods.

There is a need for exploration, description and reformulation of what occurs within the educative frame of the studio. At the very least, research may provide practitioners with a mirror of their own work to enhance self-reflection and development. Examining and articulating teaching processes can help to clarify a teacher's own practice. Arnold illustrates how this sense of identification between a teacher's practice and a researcher's theory can take effect in her discussion of the use of empathy in teaching.

> When naturally empathic educators encounter the concept of empathy, it holds stable a mass of professional experiences that have been informed by an empathic ability, and coalesces those experiences under this word and concept [7]

Arnold's success in capturing and articulating a particular facet of teaching provides the potential to move forward. For the teachers involved, her work makes sense of and enhances effective practices in education. Through theory, they were able to take a step back from their work and consequently view what they were doing in a new way. Theory and practice thus represent different modes of thought or "different ways of knowing". In a sense, denying the need for research denies this possibility for further growth and reflection within the teaching and student community. It also denies those teachers who are not "naturally gifted" the opportunity to learn and develop from the experience of other, more "intuitive" teachers.

Having established the need for further research into this area we must then consider which methods of research are most appropriate. In many disciplines, such as the social sciences and education, qualitative research methodologies have gained much broader acceptance in recent years. In spite of this, the field continues to be dominated by the scientific paradigm and its contingent ideologies of positivism and empiricism. Some commentators who favour qualitative methods, have noted the stigma that is still attached to such work. McAuley writes

> The scientific paradigm is now so strongly entrenched that any investigation that does not meet its requirements (a hyposthesis to be tested, empirical working methods and objectively verifiable results) is likely to be dismissed as "mere scholarship" and not acknowledged as research at all.[8]

Similarly, Peshkin notes that

> Research that is not theory driven, hypothesis testing or generalization producing may be dismissed as deficient or worse. This narrow conception does an injustice to the variety of contribution that qualitative research can make.[9]

There has certainly been a much greater amount of scientific research carried out than qualitative research with regards to the singing voice [10] Correspondingly, this choice of methodology seems appropriate for the subjects, such as physiology, which have been explored. However, when the focus of research moves to modes of teaching and learning and the examination of human interaction, the extent to which scientific or quantitative research can discover meaningful truths (and hence be useful to the teacher) within the singing studio is questionable. Singing is a very personal and individual experience. During a lesson, a teacher may focus on the use of sensation, intuition and empathy. These interactions are not measurable or quantifiable. Furthermore, there is no single, truthful interpretation of events.

The same event may have a variety of different meanings for the teacher and student; the very antithesis of scientific research. The benefit of using qualitative methods such as ethnography, is that they share the same epistomological framework as the singing studio. Qualitative methods require us to consider the world as a complex of many meanings and understandings. They aim to try to perceive how a community creates meanings and then interprets those meanings in all their complexity and variety.

In addition, ethnography has the positive benefit of uniting the researchers and practitioners in a common task and provides an opening for initiatives across the two sides.

> It is very important that theory emerge from practice and feed back into it, but this is difficult when the people charged with theorising about our culture are institutionally separated from those charged with practice.[11]

By bringing the two parties together for the duration of the research, the incentive to the teacher to act upon findings surely is greater.

Aims and Ideologies

Ethnography literally means "writing about people". It is a form of quantitative research that derives from anthropology and draws its precepts from a wide range of disciplines including phenomenology, semiotics and hermeneutics. Unlike scientific research which searches for an objective truth, ethnography is underpinned by a belief in individual truth and is interested in uncovering how individuals interpret and make sense of their world. In this way it is much like phenomenology.

> Phenomenology's primary concern is with the engagement in lived experience between the individual consciousness and the real which manifests itself not as a series of linguistic signs but as sensory and mental phenomena — the "world" as encountered in perception and reflection rather than the earth as things in themselves. [12]

In order to reveal these meanings, researchers position themselves "within" the world of the participants, in order to become insiders rather than outsiders. Rather than imposing their own perspectives and modes of thought on those being studied, researchers try to see the world through the eyes of the participants, to be able to interpret the meanings which the participants give to certain interactions and events.

In comparison to the scientific or qualitative model of research, which occurs within a controlled and specific environment, ethnography is naturalistic and holistic, aiming to observe participants in their own setting and social context. Since the investigation is carried out under everyday circumstances, rather than in those set up for the express purpose of research, the danger that the findings will apply only to the research situation is greatly lessened. With research extending over a considerable period of time, ethnographers aim to minimise their own impact on events as far as possible in order to observe a more natural and uninhibited interaction between the teacher and the student. Equally important is the recognition that events are influenced by the whole culture within which they occur. Thus researchers may need to take into account whether

the student is learning in an institution or in a private studio, as well as the qualities which define the space in which the singing teacher works, for example, the master-apprentice style relationship and the transmission of kinesthetic knowledge. A key feature of ethnography is the important strategy of incorporating and examining the world under its gaze in its entirety.

The process

The ethnographer participates, overtly or covertly, in people's daily lives for an extended period of time, watching what happens, listening to what is said, asking questions, in fact collecting whatever data are available to throw light on the issues with which he or she is concerned. [13]

Since ethnographers are intimately involved in the world of the participants and are attempting, through a process of empathy, to adopt the perspective of those involved

> By taking the role of his subjects he recreates in his own imagination and experience the thoughts and feelings which are in the mind of those he studies.[14]

they must be constantly aware of their own role and subjectivity. Firstly it is necessary to take into account how the participants have positioned the researcher within their world. Obviously, in the initial stages of observation the presence of a new figure may affect the way in which both teacher and student behave and react. Hopefully, over a longer period of time, the presence of researchers will become "normal" and their influence on events be minimised. In addition researchers must be wary how they position themselves and the way in which their own cultural viewpoints may come to bear on the information and conclusions which are being drawn. Thus although on the one hand researchers try to see through the eyes of the participants, they must at the same time maintain a critical detachment from the process, and an active self awareness and self monitoring in order to avoid random subjectivity. Naturally some degree of subjectivity is inescapable and to counter this researchers should introduce their own background and experience as part of their reportage. Unfortunately, it is because of this inherent "subjectivity" that much ethnographical work has been considered unsubstantial.

> Ethnography has sometimes been dismissed as quite inappropriate to social science on the grounds that the data and findings it produces are "subjective", mere idiosyncratic impressions that cannot provide a solid foundation for rigorous scientific analysis. Others argue that only through ethnography can the meanings that give form and content to social processes be understood.[15]

Hammersley suggests that one solution to this dilemma lies in the concept of reflexivity, or the fact that all researchers (whether qualitative or quantitative) are part of the social world that is being studies.

> We act in the social world and yet are able to reflect upon ourselves and our actions as objects in that world. By including our own role within the research focus and systematically exploiting our participation in the world under study as researchers, we can develop and test theory without placing reliance on futile appeals to empiricism, or either positivist or naturalist varieties. [16]

Perhaps subjectivity should be embraced as a different but valid way of seeing the world, adding to the complexity of life, rather than being dismissed.

Ethnology essentially involves descriptive data collection as the basis for interpretation. Although researchers will have some research questions, they do not generally enter the observation with any particular theories set in place, but rather allow the observation to develop and modify previous ideas. This flexible nature of field work, in which questions may be generated and modified, allow rapid and efficient theory development in response to the processes in the studio.

Data may be collected in various ways; via field notes on observations, interviews, video and photography. This use of multiple data sources provides the basis for triangulation in which different forms of data can be systematically compared. This system allows researchers to cross check their conclusions with other sources. For example, conclusions made by researchers on the basis of field notes could be then cross checked in an interview with the singing teacher. This method of cross checking means that the participants themselves have a greater involvement in the development of theories so that the research becomes more meaningful for them.

Ethnographers must demonstrate that the categories are meaningful to the participant, reflect the way participants experience reality and are actually supported by the data. [17]

The data record itself should be a *thick description* meaning an *extensive description and interpretative effort at explaining the complexity of social discourse* [18]. Ethnographers often adopt a descriptive narrative style of writing to relay their findings. Observation of body language, verbal interactions and atmosphere are all included in the report to try to create the world under study for readers. Through this intimate reconstruction, they too can enter the world of the participants, in this case the singing studio, and make their own judgements on whether the researchers' conclusions are credible. This narrative style of ethnographic reporting is often more accessible and interesting to readers as it provides them with concrete human experiences with which they can identify.

Outcomes

Ethnographic research ought to generate a rich analytical description or reconstruction of a social world. In the field of singing this particularly important. Since we are discussing creativity, it makes sense to provide an account of the creative events. Not only do descriptions afford the reader a fascinating insight into another world, but they also encourage personal identification and reflection, whether they be descriptions of processes, systems, relationships or people. [19]

By interpreting the data, researchers can achieve a range of outcomes, including explaining the creat-

ing generalisations, developing theory and providing insights. The conclusions that are made do not need to remain specific to the particular case that was studied. One of the researchers' aims is to make the work more widely applicable by extending understandings and interpretations of meanings formed within the study to encompass a much wider cultural context, in this case beyond the specific singing studio to a more general theory on singing teaching.

Perhaps, most importantly, ethnographic research also has the practical outcome or potential of creating a working relationship between the researchers and the groups being observed. It facilitates or promotes the practical application of research directly into the learning environment, precisely because these theories and concepts are generated in a naturalistic setting with feed back and input form teachers and students. Particularly during the writing stages, there are opportunities for sharing and reflection through which a close collaboration can develop. By encouraging teachers and students to comment on the material the researchers may open a space for dialogue between the two.

> The reportage/analysis thus becomes an element in a communicative process, able to be presented to those it most closely concerned and then possibly recast in the light of their responses. [20]

Thus ethnographic research seems particularly well suited to the role of investigation of the nature of teaching and learning within the singing studio. By mirroring, through descriptive analysis, the events which take place in the singing studio it allows teachers to see their own practices through new eyes. The primary purpose of the research is then to become an effective tool to assist both the teacher and the learner and should

> Support the practical judgement of teachers and increase their capacity to reflect systematically upon the complex situation they confront. It should provide a means by which the teacher's own understanding of her classroom and the way the students learn could be enhanced. [21]

Endnotes

1 Geertz, Clifford. (1974). *The Interpretation of Cultures.* Basic Books, New York p. 23

2 Taylor,P. (1990). Thoughts on Narrative, Positivism and Ethnography. *National association for Drama in Education,* Autumn, pp. 2–5, p. 3

3 Callaghan, Jean. (1997). *The Relationship between Scientific Understandings of Voice and Current Practice in the Teaching of Singing in Australia.* Unpublished doctoral dissertation, University of Western Sydney.

4 Ibid, p. 157.

5 Ibid, p. 152.

6 It would be seen that the ethnographic model does provide to some extent a way of attacking this problem.

7 Arnold, Roslyn. The Role of Empathy in Teaching and Learning. *The Education Network.* No 14, pp. 14–24 p. 18

8 McAuley, G. (1995). "Drama Theatre, Performance: the changing research paradigm". *Creative Investigations; Redefining Research in the Arts and Humanities — Papers from the 1995 Symposium of The Australian Academy of the Humanities* ed. Mahony Stoljar. pp 47–61 p 47

9 Peshkin, A. (1993). The goodness of Qualitative Research. *Educational Researcher,* Vol 22 (2) pp. 24–30, p. 23

10 There are some examples of qualitative research that have been undertaken in the singing studio but these remain in the minority. See Callaghan, op. cit.

Zeller, E. (1994). Vocal pedagogy in the United States; Interviews with Exemplary Teachers of Applied Voice. *Journal of Research in*

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Levasseur, S. (1995). Nonverbal Communication in the Applied Voice Studio. *Journal of Research in Singing,* Vol XVIII (2) pp. 3–48

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12 Fortier, Mark. (1997). *Theory/Theatre: an introduction.* Routledge, London. p. 29

13 Hammersley, M. & Atkinson, P. (1983). *Ethnography; Principles in Practice.* Tavistock, London.

14 Bruyn, S.T. (1966). *The human perspective in sociology: the methodology of participant observation.* Prentice Hall, New Jersey. p. 12

15 Hammersley, op. cit. p. 2

16 Ibid, p. 25.

17 Burns, R.B. (1990). *Introduction to Research Methods.* Longman, Sydney. P. 272

18 Geertz, C. op. cit. p. 6

19 See, for example, Hines' collection of interviews with great singers

Hines, Jerome. (1982). *Great Singers on Great Singing.* Proscenium Publishers, New York.

20 McAuley, G. (1998). Towards an Ethnography of Rehearsal. *New Theatre Quarterley, Vol XIV (53). P.p 7–85.* p. 78.

21 *Donelan, Kate. (1991) Windows on the Drama Classroom: a collaborative, ethnographic approach to research.* Drama in Education; the State of the Art. Educational Drama Association, Sydney. p 84

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Towards a Clearer Understanding of Breathing for Singing

Annie Hoepper

Breath management is partly determined by the singer's concept of what takes place physiologically during the inhalation-exhalation cycle. The singer ought not to base a method of 'support' on incorrect information regarding the physical processes involved in singing. (Miller, 1986).

With this statement, Miller has underlined the essential need for pedagogical ideas in singing to be both fundamentally grounded in, and communicated alongside, relevant and accurate descriptions of the physical processes involved. In support of Miller's statement this discussion of breath management for singing presents factual explanation of the body's respiratory structure and mechanism under the headings of its major parameters. At the conclusion of each these descriptions, pedagogical ideas pertaining to the information is introduced. The teacher needs to know the facts: the student needs to acquire the same.

The basic parameters I have adopted — posture, respiration (inspiration and expiration) and subglottic pressure — are borrowed from Meribeth Bunch's model for explaining breathing for singing.[1] Bunch's model lends a logical structure to any consideration of this topic. Discussion is prefaced by a brief, general description of breathing and its function relating to singing, with the aim of clarifying for me and my potential students a more contextualised concept of breath management.

Breathing for Life and Singing

In everyday life, breathing is an involuntary act. Its primary function is to provide the body with oxygen, a life-sustaining element. The body has an *air pump mechanism*,[2] which creates an airflow into and out of the lungs, extracting oxygen and releasing carbon dioxide. (See Figure A).

Breathing for singing, therefore, is a secondary function of this mechanism and, because of its peculiar requirements, is a voluntary act. In involuntary, or *quiet breathing*,[4] the brain sends a message to the diaphragm to contract, enlarging the thorax (the part of the torso which contains the organs of breathing), which pulls on and enlarges the lungs, causing a drop in pressure of the air in the lungs in relation to the atmospheric air; air is consequently sucked in. On expiration, the diaphragm relaxes, and the lungs and chest wall recoil.

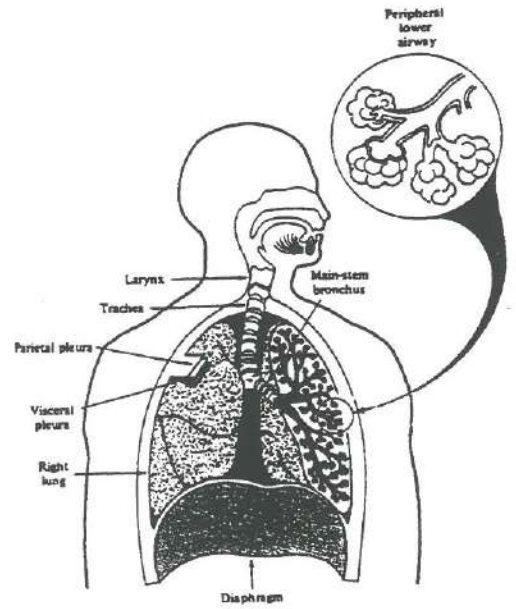

Figure II-5-4: Front view of the major structures of the pulmonary system. [A small section of the double-walled pleural lining is cut away from the right lung. The left lung is sliced obliquely to reveal the lower airway, a small segment of which is shown greatly magnified.] Reprinted with permission by Singular Publishing, Inc., San Diego: Hixon and Collaborators (©1987), *Respiratory Function in Speech and Song*.]

FIGURE A

Diagram illustrating major structures of the pulmonary system. [3]

Proctor states: *It is immediately apparent that gross alterations in the pattern of quiet breathing are necessary for phonation...these variances from ordinary breathing are more pronounced in singing than in speaking.* [5] In singing, we are required to breathe when the music dictates, sustain breath over a relatively extended period of time, take quick breaths when required, and monitor breath pressure (or subglottic pressure). Because of these demands on our breath mechanism, breathing for singing must therefore be a voluntary act.

An understanding of the special requirements of breathing for singing can help students to embrace the importance of striving for effective breath management. It can also dispel any assumptions that breathing can't be 'taught' and should just be 'natural'. Emmons states that, compared to involuntary breathing, *breathing for singing is another matter. Conscious control diminishes the spontaneity with which you breathe, but it must be learned.*[6] When this conscious control is practised to the degree that it becomes unconscious, then it approaches a sense of the 'natural'. As Bunch states, *The greater the skill of the performer in singing and speech, the more vital the role of conscious control of the mechanism of breathing while efficient patterns of activity are being established, and once established the good habits become unconscious.*[7]

Posture

Correct body alignment is inextricably linked with efficient breath management. Thurman et al write, Your breathing muscles are attached to your skeletal frame. If your skeletal frame is out of balance or alignment to some degree, or if it is moved with some restriction, then your body cannot do skilled breathing coordination with peak efficiency. [8] It is perhaps useful to discuss some of the ways in which a misaligned body posture can affect breath management, with the aim of heightening awareness of these areas for the student singer. An effective entry into this topic is to analyse two 'extreme' postural positions which can be considered 'opposites', but which are equally faulty in their alignment.

The first is characterised in the Alexander technique as *the downward pull*.[9] In this posture, the chin juts forward, the head tilts back, the muscles in the neck are shortened and the shoulders round forward. The natural curves of the spine become compressed and exaggerated, causing the sternum to collapse and the ribs to be forced together. In this position, freedom of the larynx is compromised, due to excessive tension on the extrinsic laryngeal muscles, and this disturbs the balance between the function of the larynx and the breathing, negatively influencing subglottal pressure, or the constant breath stream. In addition, the diaphragm and the intercostals, muscles intrinsic to effective breath management, are not able to function properly. [10] (see Figure B).

The second example of faulty alignment can be considered a gross overcorrection of the first. Its misconceived 'upward' pull involves locked knees, a pelvis tilted back, chest thrust forward, shoulders raised tensely with the head thrust backward. Again, these misalignments prevent efficient breath management, with abdominal muscles tensed by the action of the knees and pelvis and movement of larynx and pharynx interfered with and restricted. [12] (See Figure C).

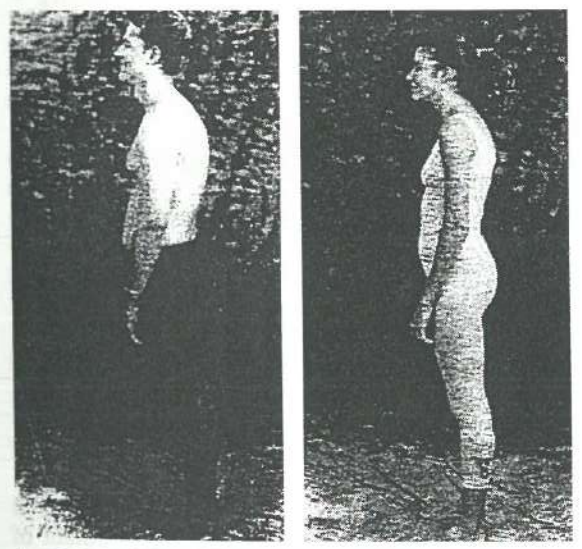

FIGURE B

Picture illustrating first example of faulty alignment. [11]

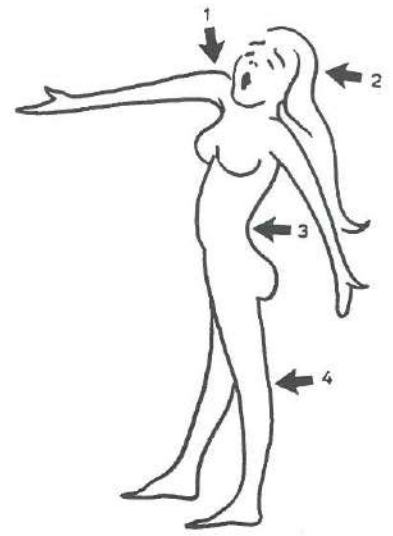

FIGURE C

Picture illustrating second example of faulty alignment. [13]

Optimum body posture for singing avoids both of these extremes and is instead characterised by an alignment profile that maintains the natural contours of the spine. In terms of efficient breathing, perhaps the most important postural principles include the maintenance of a relatively high sternum position, on top of which the head-neck sits with a feeling of length in the spine and with ears basically aligned

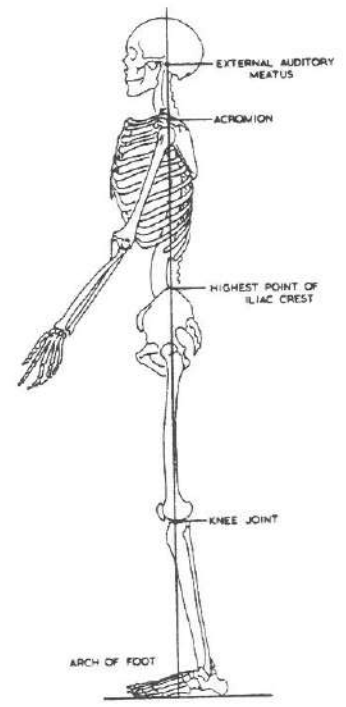

FIGURE D

Correct skeletal alignment. [15]

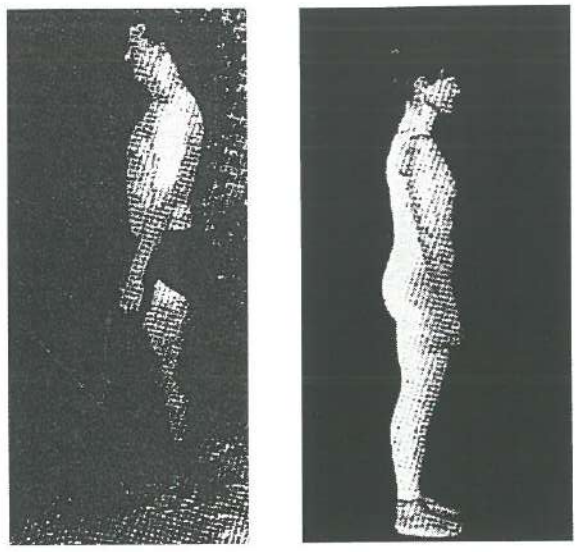

FIGURE E

Examples of optimal alignment. [16]

with shoulders. At rest, the abdominal muscles are relaxed (but not distended), the knees are soft, and a straight, vertical line can be imagined, running from the ear, down through the highest point of the pelvis, the knee joint and the arch of the foot. [14] (See Figure D and E).

This high sternum position, and its maintenance throughout the breath cycle, are central to the appoggio technique, described by Miller as *support ..... appoggio is a system for combining and balancing muscles and organs of the trunk and neck, controlling their relationships to the supraglottal resonators, so that no exaggerated function of any one of them upsets the whole.* [17] An understanding of this principle, which has great historical integrity, is very useful to the student singer, and the pedagogical ideas presented below all aim towards its realisation.

Pedagogical ideas on Posture for Breathing

- Miller offers practical suggestions for achieving the 'noble' posture of inspiration. One of these is to raise the arms above the head then lower them, retaining the high sternum position that raising them achieved. The chest should be able to be raised higher by thrusting the chest upwards, otherwise it is too high, but if it sinks at any point in respiration, its initial position was not high enough. [18]
- Imaging can be helpful in creating appropriate lengthening of the spine. Imagine that a piece of string is attached to the top of the head, about in line with the ears (this is in keeping with the imaginary line running down the skeleton). Attached to this string is a helium balloon, which is gently lifting the head and giving the spine a sense of lightness and lengthening.
- The image of a stationary skewer through the head, above the ears, is also useful in keeping the head and neck aligned, as it evokes the concept of the head having mobility within its plane of alignment — i.e., on the axis of the skewer — avoiding both rigidity and extraneous movement of the head and neck . A kinaesthetic reminder of this image is to use the index fingers on either side of the head as the 'skewer'. [19]
- Thurman et.al. suggest that 'trying out' faulty alignment can be beneficial. They ask the student to try two examples of faulty alignment, basically the same as those described previously, and attempt to sing. [20] Recall of the difficulties these postures pose for singing should provide a stronger sense of postural awareness.
- In a recent lecture, a visiting speech pathologist suggested good alignment could be encouraged by 'sitting' up against a wall, with the spine in full contact with the wall's surface. [21] This technique, in a modified version, is also in Bunch's repertoire of postural improvement. She suggests standing with head, shoulders, buttocks and heels in contact with the wall, while *imagining that the body is growing freely up the wall so that the posture is dynamic rather than static.* [22]

Respiration: Inspiration and Expiration

As has been previously discussed, the respiration process, encompassing inspiration and expiration, has special requirements for singing. An understanding of the optimal function of this process for singing, especially the muscular involvement, is imperative to avoiding false notions of 'support', which Miller points out is a concern with some young singers.

Inspiration

When correct body alignment is in place, effective inspiration 'sets up' an effective expiration. Drawing in the desired amount of air quickly and inconspicuously whilst avoiding unnecessary tension, yet engaging the appropriate musculature, are the primary aims of efficient inspiration. [23]

The most important muscles involved in inspiration are those of the diaphragm and the intercostals as they are the 'prime movers' which enlarge the dimensions of the thorax and thus expand the lungs.[24]

The diaphragm is an organ composed of muscles and sinews which forms a partition between the chest cavity and the abdominal cavity, and it is considered the main muscle of inspiration. Upon contraction, the dome shape pulls down on the central tendon and the vertical dimension of the lungs and of the chest cavity are increased.

The intercostal muscles are short external and internal muscles located between the ribs. On inspiration, contraction of the intercostal muscles elevates the rib cage and increases the dimensions of the thoracic cavity. (See Figure F).

The ribs involved in this activity, however, should not include ribs 1 to 5, as 'excessive movement of these ribs during inspiration is detrimental to singing ... it usually involves the action of neck muscles which pull up the upper two ribs and sternum to which they are attached." [26] This undesirable upper rib and sternum movement during inspiration is described by Thurman et al as 'ceiling breathing', the type of breathing which occurs when you have been engaging in vigorous physical activity. [27] Instead of this type of inspiratory activity, 'mid-section' breathing is recommended, whereby a combination of lowering the floor and expanding the walls of the thoracic cavity is employed: in other words, engaging the diaphragm and the intercostals as the main inspiratory muscles. (See Figure G).

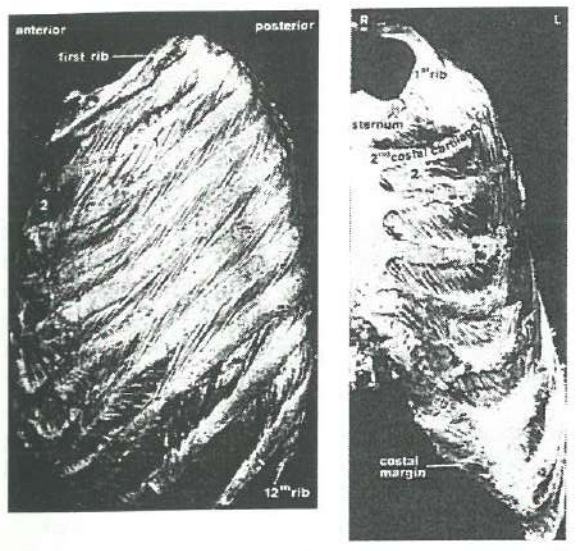

FIGURE F

The intercostal muscles: anterior and posterior views. [25]

Pedagogical Ideas on Inspiration

- Shirlee Emmons uses the verbal cues, *Up!, Sideways!, Stay Up*! for efficient inspiration. In simple terms, she is referring to the initial raising of the sternum, the engagement of mid-section activity, and the subsequent maintenance of this position. [29]
- The sensation of the air hitting a 'cold-spot' in the back of the throat is a useful tool for sensing a relaxed and widely opened vocal tract, which offers low resistance to the incoming air. [30] This indication of a deep and 'open' breath should also be able to substitute a student's desire to 'hear' the breath rushing in by creating audible inspiration. The intake of breath should be silent, otherwise some form of constriction is present. [31]
- The image of 'filling up' with air from the abdomen up can help to avoid 'ceiling breathing' and, instead, encourage mid-section breathing. [32]
- As a certain, relatively high, level of energy is required for rapid and deep inspiration, images such as inhaling on a gesture of pleasant surprise or drawing the breath through the eyes can help to energise the body and mind for the ensuing breathing process. However, as has been previously stated, it is important to combine imagery such as this with factual description of the processes involved.
- The late Australian tenor, Donald Smith, used to suggest imagining the body to be like an expanding barrel when inhaling. The value in this image is that it encourages a three-dimensional concept of the body's movement, which can avoid tensions associated with concentrating on the one plane of movement (e.g., the sideways movement of the ribs) or one particular muscle group in the body. [33]

Expiration and Subglottic Pressure

One of the chief aesthetic aims of 'classical' singing is the 'legato line'. This even, flowing, continuous flow of vocal tone is achieved through effective management of expiration and, in turn, subglottic pressure (the pressure below the glottis or vocal folds). As Thurman et al state, *A balanced, steady-state pressurization of air in your lungs creates a steady airflow through your vocal folds, and that creates steady ripple-waves in the surface layers of vocal fold tissues...During skilled singing, there is a continuous, core of breathflow that creates a continuous core of soundflow.* [34] To achieve this, the rapid relaxation or ascent of the diaphragm which occurs upon 'quiet' expiration must be slowed, to allow a sustained, constant flow of breath, rather than a short, sudden release.

In the appoggio technique, this is primarily achieved through maintenance of the inspiratory posture, described above, throughout expiration. [35] When this inspiratory posture, with a relatively high sternum, ribcage greatly expanded and diaphragm at its lowest position, is consciously attempted to be maintained (some movement away from this posture is inevitable at the conclusion of expiration), muscles of the thorax and the abdominal wall (the traverse abdominus, the internal oblique, the external oblique and, to a less extent, the rectus abdomi-

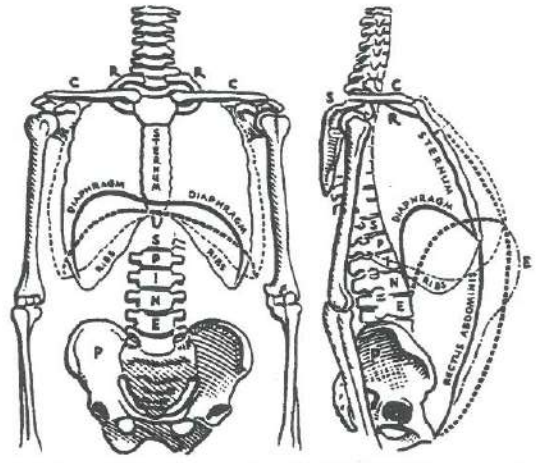

Figure II-5-2: Illustration of combined "floor" and "wall" breathing (midsection breathing) from (A-left) front view and (B-right) side view. C=clavicle; E=epigastrium; P=pelvis; R=first rib; S=scapula. Solid lines = position of organs at completion of forced exhalation; dashed lines = maximum inhalation; dot/dash line in (B) = illustrates simultaneous engagement of both diaphragm and lower abdominals producing a bulge in epigastrium region. [From Vennard, *Singing: The Mechanism and Technic*. Copyright © 1968 by Carl Fischer, Inc., New York.]

FIGURE G

Diagram of 'mid-section' breathing. [28]

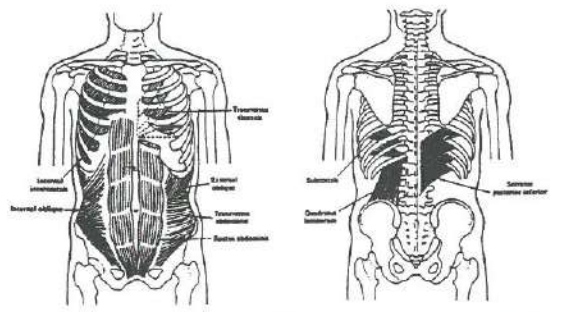

FIGURE H
Diagram showing muscles of exhalation. [37]

nus) exert a *concerted action on diaphragmatic movement*, [36] slowing its ascent. (see Figure H).

Pedagogical Ideas on Expiration and Subglottic Pressure

- Many exercises exist which help to get the student in touch with their steady, continuous airflow or 'breath connection'. [38] One of these is the combined lip and tongue trill on scales or other vocalises which is *easy on the vocal folds, but gets the respiratory system going full steam.* [39] This exercise helps to fine-tune the balance between breathflow and phonation, as the vocalist must 'budget' the pressures of the lips, tongue and vocal folds appropriately to keep them vibrating.[40]
- The 'lick and blow' method to check for steady, sustained expiration can be useful: lick the finger and, while singing a phrase, the finger should feel the coolness of the breath throughout. [41]
- The ideas of 'drinking in' the sound while sustaining a phrase, and singing on the 'gesture of inhalation'[42] help to maintain an open vocal tract, allowing breath to flow freely without unnecessary constriction .
- It can be a helpful tool for students to focus their kinaesthetic concept of the 'legato' in the muscles of abdominal wall. The maintenance of 'legato' can be felt by placing thumbs firmly into waistband throughout an efficiently sung phrase. This takes focus away from 'creating' legato in the throat and, can thus help to reduce tensions that may be compensating for under-energised breathing. Similarly, 'feeling' like the source of the crescendo, the marcato and other expressive vocal effects is in this mid-section movement can take stress away from the throat, while maintaining breath connection. As Thurman et. al state, *Midsection activity is the engine of such expressive qualities.* [43]
- If a student has tension in breath management, perhaps in the abdominal or pelvis region, or in the upper body, this may well be 'holding' and preventing effective breathflow. Exercises such as singing while imagining swinging a 'hula-hoop' or while engaging an easy, natural swinging of arms in the air, can create a sense of 'movement' in the body which can help to release these tensions and 'move' the airflow. [44]

Conclusion

Breathing 'support' is a co-ordinated process. 'Supporting' phonation with appropriate breath pressure is a multi-faceted and dynamic process, not a one-dimensional act of 'doing' something as the word may imply. Perhaps we should all adopt the more appropriate term breath coordination rather than the traditional 'breath support'. As has been revealed through this discussion, breath coordination involves delicate physical balances, the understanding of which are essential to an ongoing commitment to effective breath management and beautiful expressive singing.

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CASE STUDIES — a CALL for PAPERS

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A Case Study

Tim Collins

This is a case study of a young singer whose progress through adolescence was logged by the singing teacher across five years of singing lessons. It is reflective of the boy's general maturation as much as his vocal development, from 13 to 18 years of age. It includes very personal facts about the boy's social and emotional health, all of which bear directly on his vocal condition. Because of the intensely private nature of this journal, the student has been given a pseudonym and no places have been identified..

Preamble

Ben arrived at the Performing Arts College after several years in a rural boarding school. At the boarding school, he had been a member of the chapel choir and demonstrated a strong interest in singing. For reasons unexplainable and unclear to me, he had developed a phobia-like problem with school attendance and the change of school was recommended to give him the opportunity to address this problem by removing all pressure through voluntary attendance (beginning with only one day a week).

I recognise that when I begin to teach someone to sing, I am in touch with not just the physical but also the emotional and spiritual dimensions of the student. So it is relevant to record the history of this young man's psycho-emotional status.

Throughout his schooling, Ben had been observed to have significant learning difficulties as a result of poor concentration, restlessness and below average motor co-ordination. There seemed to be considerable debate as to whether he could be diagnosed with Attention Deficit (Hyperactivity) Disorder. Ben was unware that he had any special problem and was a courteous, pleasant young man. He appeared to adjust to his new school positively. He was excited about his involvement in such a performance focused environment and after six months displayed significant increased confidence and was attending school five days a week. He was well liked by both staff and his peers although his delayed emotional development often presented as childish, naïve behaviour.

As the years passed, Ben continues to display a level of naivete in his placid or even passive manner. He seemed almost unaware of the pubescent changes to his body and maintained his naïve and immature approach to thought processes and conversation. This was also evident in his singing - in the manner in which he interpreted musical and dramatic expression. When he was sixteen, he was diagnosed with epilepsy, after suffering a series of fits both at home and at school. As a result, he became depressed, fearful and confused. The symptoms were managed and, with the support of his family and the compassionate school community, he regained his confidence once more.

By the time Ben had turned 17, he was in the 'double time elective music course' majoring in vocal performance. He had developed a degree of self esteem which enabled him to recognise his practical talent for singing and give him a love of performing which was not debilitated by nerves. However, he felt that his ability was not always recognised, affording him the opportunities that other students (often more experienced and innately talented) seemed to be given. He was keen to perform in 'out of school' activities, thus providing a non-competitive opportunity to prove to himself his worth as a singer. So between 1995 and 1999, he participated in AO's children's chorus, Australian Youth Choir as a paid casual tenor, a minor principle role in a suburban HMS Pinafore as well as solos in a major school concert. Despite his epilepsy disrupting his academic schedule on a number of occasions, Ben took these interruptions lightly. His personal agenda was to do the best he could without imposing intrinsic pressure on himself. This strategy lead to a commendable result in his practical vocal exam which, in turn, supported his developing physical and social confidence. Ben began to display a greater enthusiasm and a positive attitude to his impending young adulthood.

Ben is now 18 and, in this final year at high school, he plans to audition for a fulltime diploma course in vocal performance. His success with singing has enhanced his life skills, given him a sense of personal worth and hope for the future, whatever it may hold.

Physical Profile

Ben was of average height for a thirteen year old but was overweight and quite unfit. Initially this did not seem to affect vocal production. His skeletal frame was broad — skull, shoulders and hips — together with a large rib cage and comparatively shortened

distance between the base of the ribs and the pelvic girdle. Ben's characteristic thick build suggested the physique of a tenor, a prediction which has begun to take form. At sixteen, Ben was put under the supervision of a dietician and lost more than 20 kilos. His voice was not adversely affected. In fact, increased physical activity and careful dieting resulted in more energy and responsiveness, a greater pride in his appearance and a pronounced increase in self-confidence.

Despite the diagnosis of epilepsy and the initial set-backs that resulted, physical factors were brought into balance and the student now faces his final year of high school with a positive health pattern. Ben now participates in cross country running, is fit, trim and exudes a vitality that enhances his movement and expression. Through all the physical changes, Ben's voice has remained remarkably constant, with robust, clear and bright tonal qualities.

Learning Development

At the beginning of our time as student and teacher, Ben demonstrated below average reading skills for his age. However, once learnt, the lyrics of a song were not a problem. If he particularly enjoyed a song, it was easier to instruct him both technically and expressively. During the first three years, Ben did not allow technical exercises to extent beyond ten minutes or so before asking to sing his songs. When I now reflect on this situation, I find that I willingly gave in to Ben's request, believing that his enjoyment of the lesson and his love of singing was paramount.

Despite my belief that this approach best reinforced Ben's growing self esteem, I realised that correction of faults was important to his continuing improvement and maintaining his level of performance compared to his peers. I decided to persist with questions and instructions with the expectation that slowly change would happen and enable more complex problems to be tackled. Some lessons were conducted when Ben seemed unwell, restless or unfocussed, so I applied some pressure of expectation that, surprisingly, increased his determination to succeed and increased his capacity to learn. The lessons just prior to performances and class assessments were always more productive and Ben showed encouraging progress as a young singer.

Learning has become easier for him over the years. He is able to integrate technical and expressive demands with ease, all this reflecting growing self confidence and unfailing support from his parents and the school community. Academically, he may still struggle, but without carrying false hopes, he is setting out to achieve to the best of his ability as a public performer.

Vocal Development

I am familiar with the stages and phases of child voice development as set out in Kenneth Phillips book *Teaching Kids to Sing* . I am not convinced that this table is applicable to Australian children. In my experience, young voices, in the majority, do not conform to the stages of range and quality described. Reflecting on Ben's progress, I have observed a slow but steady metamorphosis of vocal characteristics, without any sudden voice change or break. Both Phillips and Miller agree that this type of voice change usually herald sthe adult tenor. Along with registration events, timbre, range and anatomical endowment, Ben shows the hallmarks of developing into a tenor as the voice grows to fuller maturity.

Table 1 shows a fascinating record of how this voice changed across time. It is based on a summary of events showing the voice range based on scales and exercises performed at the beginning of each lesson. Note how the upper range of the changed voice began high, descended and then re-ascended.

Repertoire and Pedagogy

My priority in my initial approach to teaching this student was to find repertoire through which he could gain both enjoyment and the basis of a good healthy technique. As with many thirteen year olds, Ben liked music theatre repertoire, Disney ballads and comic or character songs. We came to an agreement that I would choose from his nominated preferences but he would then allow me to spend some time focusing on technical points in the songs as they arose. It was clear to me that singing was an important part of Ben's life and I didn't want to jeopardise this state by being too 'technical too often'. He would always let me know when he was losing focus and I took the cue to change tack.

I used descent and ascent patterning for exercises each weekly lesson, specifically descending scales as well as agility and sostenuto exercises. I never found the time spent doing 'warm ups' a problem but too long on these exercises and Ben would be asking for a song! Ben's intonation was a problem initially — I made the assumption that lack of register co-ordination and inadequate breath pressure lay behind the problem, rather than there being a basic aural deficiency. His tuning and pitching

TABLE 1

PITCH RANGE / TIMBRE & VOCAL CHARACTERISTICS	AGE
g – g_2 (a) 'fullest bloom' period of boy treble. A robust & rich sound	1995: 13yrs →
f - eb_2 (f) Lower register becoming more adult chest sound + thicker head voice	1996: 13 + 10months →
d – c_2 (d) Chest voice sound becoming more predominant but head voice still legitimate	1997: 14 + 6 months →
c – f_1 (g) Head voice gone. Falsetto above f_1 (g) Upper register developing but voice prefers middle register	1997: 14 + 10 months →
bb - g_1 (ab) More settled quality in upper register. Upper register head voice developing.	1998: 15 + 6 months →
a - $f\#_1$ (g) Voice has become thicker and darker throughout compass	1999: 17yrs – 18yrs
ab - g_1 (ab) Voice has maintained depth, but greater ease and more flexible and brighter head voice. Second passaggio ($f\#_1$)	2000: 18 + 4 months →

slowly improved with a more co-ordinated technique. Nasality was also an early problem. I would demonstrate directing the sound into the mouth and Ben was able to immitate and alter the sound temporarily. Assuming that his problem was a velar port inefficiency, I used [k] and [g] to encourage better closure of the naso pharynx. He responded to the different sensation of the sound. I recognise that my own teaching has developed parallel with this student's years of tuition with me. My enthusiasm for teaching has been ignited anew by reading the work of Richard Miller. Ben in particular has responded very positively to my own enthusiasm and preparedness to experiment. He is now able to practise the concepts of onset, breath to phonation and appoggio breath management, as well as the development of voce media and head voice. Taping a video of his lesson has been invaluable for Ben, who is now much more aware of his visual expression and how he is co-ordinating his body for the 'act of singing'.

In Conclusion

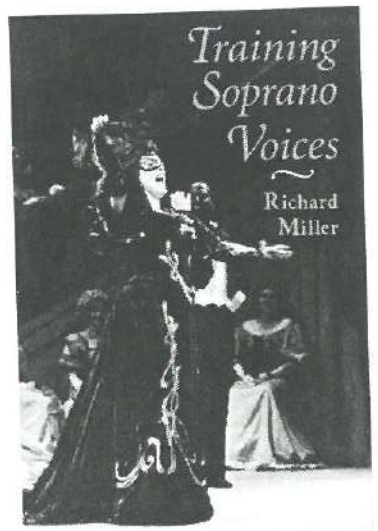
Ben faces the end of this year and the audition for tertiary entrance with a good basis to his technique and his enthusiasm for singing still intact. I can reflect on his case and draw some generalisations about my teaching and specifically about what we know about teaching adolescent voices. My teaching load of up to seventy individual half hour lessons every week has given me a wealth of research data for a closer look at this age group. When I recently returned to read my copy of William Vennard's text — *Singing: the mechanism and technic* — I realised that, despite consolidating my general knowledge about voice, I was not finding any specifics about these 8-18 year olds. I have developed a growing interest in vocal acoustics and physiology which I hope will inform the growing bank of data from my teaching experience. Again, my experience confirms this saying from the Talmud:

> I have learned much from my teachers,
> More from my colleagues than from my teachers,
> And more from my students than from all of them.

Thanks Ben!

Timothy Collins was trained at the St. Stephens Cathedral in Brisbane and commenced singing lessons with Greg Massingham from age 11. At 16, he was the only vocalist to be accepted into the inaugural year of the Queensland Conservatorium Music School under the tutelage of Professor Janet Delpratt. Tim graduated from the Queensland Conservatorium of Music with a B.Mus. His ability as a performer has been rewarded with numerous prizes, both during his student years and subsequently. Across a decade or so, Tim has had extensive opportunity to perform high profile solo work both nationally and internationally. In 1986 he commenced his teaching career, parallel to his performing, at State Primary and Secondary schools as both a private singing teacher and group teacher. Since 1993, Tim has been teaching singing at McDonald Performing Arts College as well as Sydney Grammar School and S.C.E.G.G.S., Darlinghurst. Pupils from his busy practice have included winners of Entrance scholarships to Sydney Conservatorium, Royal Northern College of Music, Manchester and The Julliard School of Music. Students also include Mo Award and Manhattan Cabaret Award Winners many children and teenagers who have gained principal and chorus roles for professional musicals and the Opera Australia Children's Chorus. He is presently preparing to commence a Masters' Degree focussing on applied vocal pedagogy for young singers from a private singing teacher's perspective.

Audio and Visual



Training Soprano Voices

Miller, Richard (2000). Oxford University Press, New York, USA

This writer has had a major impact on the direction of voice teaching all over the world. Although he regularly presents workshops throughout the US and in many other countries including Australia, Richard Miller's legacy to the singing community will be in the printed word. Through a mounting number of books, he demonstrates a scholarship and clarity of reason that both informs and inspires those of us who are in the business of training voices. His most notable contribution to vocal pedagogy came in 1986 with the publication of The Structure of Singing, although this was not his first and certainly not the last.

So this year, I eagerly took delivery of my copy of Training Soprano Voices. Its name suggest that it is a sequel for Training Tenor Voices. Miller was impelled to write this initial text as a tenor himself, endeavouring to identify the unique problems and the subsequent solutions associated with the tenor voice. The book on 'sopranos' was motivated by the knowledge that most of the singing teachers in the world spend more time teaching sopranos than any other voice type. So I, a soprano teaching many sopranos, was anxious to read Professor Miller's thoughts on the topic.

The thirteen chapters of the book deal with topics in an order that suggests thoughtful prioritising:

1. Categories of the Female Voice
2. Registration Events in female Voices
3. Making a Beginning
4. Breath Energy in Singing
5. The Agility Factor
6. Resonance in Soprano Voices: Supraglottic considerations
7. Nasal Consonants as Assists in resonance balancing
8. Nonnasal Consonants as Assists in the Adjustment of the Resonance Tract
9. The Sostenuto Factor
10. Soprano Vocal Registration and Vowel modification
11. Accomplishing Dynamic Control
12. The Daily Regimen
13. The Wedding of Emotion and Skill

I suspect Professor Miller would be the first to admit that there is nothing new under the sun, so if you are looking for a novel or newly created approach to your teaching you will be disappointed. This book does not come in the form of a bag of tricks: the strength of this text is its specificity. In identifying the basic technical requirements for any singer, he points the finger at the soprano, and unashamedly grounds his work in the historic practices of the international Italian school. From the soprano opera and song repertoire he gives extracts — a phrase, a cadenza, a lied, to be used as technical skill builders. He delineates the internationally accepted soprano voice categories and offers practical advice for the vocal development of these voices — from the soubrette, the soubrette and dramatic coloratura through to the dramatic and cross-Fach (Zwischenfachsän-gerin). In fact, he acknowledges that within this one category called soprano, there is large group of very distinct voice types with different needs for growth and development.

Like all of Richard Miller's material, this book again exhibits the firm belief in a systematic approach to voice building. As we have come to expect, he uses accurate physiological knowledge and descriptors to show how the singer must establish the necessary physical efficiency to produce the optimum vocal quality. In turn, good technique becomes the vehicle for dramatic and musical expression. Each chapter, while never losing sight of the performance goal, addresses the details of technique specific to the soprano, her physical instrument and her repertoire. There is probably one point to make about the level at which this text is aimed. The repertoire extracts are those which a serious tertiary level and pre-professional singer would require, rather than the 19-year-old soubrette who is learning singing from you because she wants to sing in church. However if specific examples don't apply, the principles surely do, and it behoves the creative teacher to find matching examples from more relevant material for their students.

I found the whole book a fascinating read, and as I read, I gained confidence in the realisation that Professor Miller has taught me well on other occasions. Chapters Two — Registration Events ...and Four — Breath Energy... were surely positioned among the opening topics because of their fundamental importance in all voice development. Miller has not merely produced a rewrite of his previous work, but endeavours to explain afresh universal precepts and pedagogical approaches in a contemporary context. If you are still uncertain about appoggio, or the importance of a clean, balanced 'onset', Chapter 4 will surely help. He addresses, whenever relevant, misconceptions and teaching practices that are counter-productive, always giving the physiological reason why it is so e.g., the undesirable image of the diaphragm as a piston, or inserting a fist into the mouth as a way to reduce laryngeal tension which merely creates (undesirable) tongue and throat tension. Making a Beginning (Chapter 3) gives definitive guidelines for when it is appropriate to start a young singer on formal lessons, and describes the subsequent careful approach needed.

The chapters addressing resonance balancing, the use of consonants and vowels both within articulation and as technical tools for greater freedom are full of 'hands on' advice. Throughout the book, there are examples of what and when is appropriate for the young lyric voice or the soubrette coloratura and what should be delayed in the building of the young dramatic soprano.

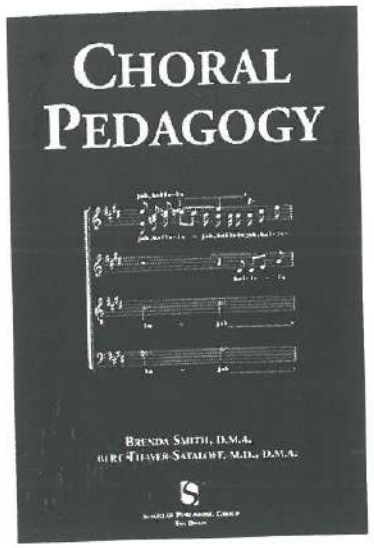
The placing of Accomplishing Dynamic Control towards the end is a message in itself — Miller begins this chapter with

It is destructive for most young sopranos during early training to attempt the full range of dynamic subtlety that an accomplished artist has learned to deliver.

And although the book closes with an informative appendix on matters concerning female vocal health, the closing words of wisdom found in Chapter 13 — The Wedding of Emotion and Skill — are an inspirational appeal. Professor Miller reminds us that the fusion of technical freedom and skill, acquired through systematic instruction and practise will free the imagination to find the highest artistic expression in performance. And isn't that what it's really all about?

Adele Nisbet

If you know of any new texts, recordings or compositions that you think the readers of this journal would be interested in, we would love to hear from you. Write to the Editor.



Choral Pedagogy

Brenda Smith & Robert Thayer Sataloff

This book is the collaborative work of a choral musician (Smith) and a professor of Otolaryngology (Sataloff) with specialist chapters by other authors. It aims to provide an 'outline for practical vocal education of the choral conductor' (Preface p. viii) The book is indeed an outline — it is broad in scope but lacking in depth in any area. This lack of depth, particularly in the final section which deals with a vocal approach to choral music, is a weakness in a book of many strengths.

The first of four sections within the book is An Introduction — Chapters 1 & 2 — focusing on the joys and benefit of choral singing. This seems somewhat unnecessary in a book written for choral directors, who are the first to believe in and champion the merits of choir membership.

The second section — Chapter 3 to Chapter 7 — on Vocal Health and Pedagogy contains some very interesting chapters on the medical care of voice disorders, seating problems of vocalists and an historical overview of vocal pedagogy (contributed by Richard Miller). These chapters contain up to the minute information on diagnoses and treatment of common and rare disorders (with very clear photos of problems such as nodules) and psoitive suggestions for optimum seating for singers. They are easy to read and the material sufficiently startling to convince any choral conductor reading the book of the vast (overwhelming?) responsibility he/she holds for the vocal health of his/her choristers.

The chapter on The Anatomy and Physiology of the voice is disappointing. This is an area not immediately accessible to a reader with little medical or scientific training, yet the scientific facts are presented with little expansion of detail or clarification of key points. The authors, however, have included a large number of clearly labelled diagrams to assist their text in this chapter. Some terms such as *larynx* are defined both within the text and within the glossary at the back of the book, but *pharynx* is defined nowhere. There are inconsistent expectations of language levels throughout the chapter. The word *tactile* (p. 22) for example, a word in common usage, is defined in the text while *precentral gyrus* (p. 22) is not.

The inclusion of the chapter on Performing Arts Medicine, with sections such as *dance medicine* and *respiratory dysfunction in wind instrumentalists* offers passing relevance for the choral conductor. This chapter could easily have been omitted in favour of an expanded final section on The Vocal Approach to Choral Music — Chapters 8 to 12. Despite its brevity, the final section is excellent. Clearly written and well structured, these chapters offer a summary, a 'how to' guide for basic choral problems, including how to:

- Classify a voice
- Produce a blended sound
- Place the singers in a choir
- Promote legato singing
- Train martellato singing
- Improve choral diction
- Improve choral training

The exercises suggested are practical and largely taken from *Voice Building for Choirs* BY Ehmann & Haasemann, but here again, the brevity of the section is frustrating. A detailed discussion of the principles underlying the suggested exercises would enable the choral conductors to more readily initiate additional exercises.

Each chapter concludes with Study Questions and References, and a Bibliography, Glossary of Terms and Index conclude this 200 page book.

Given its limitations, this book represents a good starting point for choral conductors wanting to increase their knowledge of vocal pedgagogy both to guard against endangering the vocal health of the choristers and to improve the quality of the sound of their choir. For the final section alone, this book can be highly recommended.

Lois Cavahagh

Esther Rofe Songbook. For voice and accompaniment

Available from the Australian Music Centre

Esther Rofe was born in 1904 and died earlier this year. This volume of thirteen songs, recently published by The Australian Music Centre this year, is a noteworthy addition to vocal repertoire, and contains works written between 1936 and 1998. All of the songs are accessible and do not pose any difficulties in terms of vocal range, complexity of rhythm or difficult intervals.

The Five Songs of Walter de la Mare are all short pieces and possibly best performed as a set rather than individually. They are not demanding musically, are largely tonal and not discordant. Accompaniments are simple but attractive. Some of the poetry seems, by modern standards, a little naive, as in the final song Hi which opens with "Hi handsome hunting man, Fire your little gun." The texts explore masculine themes predominantly, and the songs would be suitable for a young male singer with a flair for characterisation.

Included in the volume are a higher key version of Wild are the Waves (range E-flat 4 to G-sharp 5) and As I Went to the Well-Head (D-flat 4 to F5), both from the Five Songs of Walter de la Mare. The latter song features a similar melodic line as the original version, but is substantial enough to be performed alone.

The Two Songs of William Blake for mezzo-soprano and flute lie mostly within the tradition of the English art song. Their musical characteristics display many of the rhythmic and melodic patterns reminiscent of English folk song and utilised by Ralph Vaughan-Williams (one of Miss Rofe's teachers in the 1930s). The Lily is the more challenging of the two songs, written with comparatively modern melodic shapes and more demanding in terms of pitching ability. The range of the songs is from E4 to F5. Unfortunately, the conservative nature of the English poetry borders on the saccharine, and possibly restricts these songs to younger performers.

The Winds of Change was written in response to the devastation and trauma of Cyclone Tracy in 1976. This song is conventionally attractive with a moderate range (D4 to E5) The words were written by the composer.

Curtain is the first of three lengthy works for baritone and piano. Curtain seems the strongest song in the volume and is well-constructed. The accompaniment is rhythmically arresting and the melodic line well-shaped. The thick texture of the accompaniment demands a robust baritone voice, capable of a wide dynamic range. The song lies within a comfortable baritone range of C3 to E-flat4.

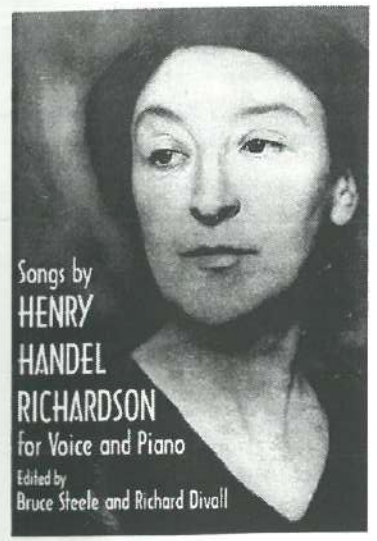
Spiritual is the longest and most substantial work in the volume and is the latest composition, written in 1996, again to the composer's own text. It is an extended solo work and explores the middle and upper range of the baritone voice. The singer must be able to sustain long note values up to and including D4. The song affects in part, the style of a negro spiritual. However, it is rather sectional in structure, and the somewhat disparate style of the sections creates an overall lack of musical cohesion, posing challenges to the performers.

The Tired Man completes the album and is the third substantial work for baritone and piano. This piece is similar to a Victorian ballad and is more like a recitation which the composer has turned into a song. The melodic material is perhaps not as memorable nor as strong as earlier songs. It requires a baritone with personality and a flair for characterisation to successfully colour and communicate the text.

Apart from the popular Dinah's Song, I was previously unfamiliar with Esther Rofe's compositions for voice. This has provided a welcome opportunity to become acquainted with more of this composer's work. Miss Rofe clearly had the ability to write an attractive melodic line supported by effective accompaniment. The only aspect which detracts from several of the songs, is the choice and quality of texts and the comparatively naïve way in which words have been set.

This volume will provide fresh material for those wishing to expand their knowledge of Australian song. It is also a welcome addition to Australian repertoire for young and/or less developed singers.

Margaret Schindler



Songs by Henry Handel Richardson for Voice and Piano

Edited by Bruce Steele and Richard Divall (2000). Sydney: Currency Press.

Australian art songs are still an unknown country, even to many Australian singers. How often are the published songs of Fritz Hart, Margaret Sutherland or Peggy Glanville-Hicks heard in recitals? And what of contemporary composers such as Nigel Butterley, or Ross Edwards, or a host of younger Australian composers whose songs are available through the Australian Music Centre Song recitals themselves are relatively rare, kept alive by the admirable work of Lieder societies and of rarer high profile events.

Given this state of affairs, it is wonderful that composers are still drawn to the medium of song, and that publishers support their being made available. Art songs are part of the musical mapping of a nation's life. Both performers and listeners need to know what was and is being written, to what texts, and to what musical purpose.

To that end, the Currency Press edition of selected songs of Henry Handel Richardson (1870–1946) provides an interesting perspective on a creative double life. Richardson's public life was as a novelist (Maurice Guest, The Getting of Wisdom), but her training was as a pianist and composer. She studied both at the Conservatorium in Leipzig from 1889 until 1892, and composition with Ludwig Thuille in Munich.

Despite having written songs from her school days until the end of her life, Richardson seems to have seen her compositional output as a private matter. Editors Bruce Steele and Richard Divall point out that her reluctance to agree to either publication or performance of her songs during her lifetime is balanced by the likelihood that "she thought sufficiently highly of them to ensure their survival and even have them prepared for a collection."

This collection of twenty songs represents the editors' choice of an output of over one hundred songs, of which fifty-nine are extant in some form. It is divided equally between songs in English and songs in German and Danish, the latter mostly pre-World War I. The texts for the English songs are drawn from poets such as Chesterton, de la Mare, Thomas Hardy and Shakespeare.

Sources of German texts include the Minnesinger Walter von der Wogelweide, poets Goethe and Heller, and collections such as Das Knaben Wunderhorn. The Danish text is a setting of Jens Peter Jacobsen's Lad Vaaren komme (Let Spring Come). Steele and Divall point out that Richardson was greatly influenced by Jacobsen's writing and was responsible for translating some of his work.

What are the songs like? The songs with English texts are strongly rooted in folk song (especially The Rolling English Road, The King's Men) and Victorian music hall style (Budmouth Dears, Mandalay). Much less droll are songs such as Susannah Fry, Dregs and Regret Not Me in which poetic references to death evince more subtle vocal lines and variations of tempo and dynamic. The setting of Shakespeare's Come Away, Death seems to refer to lute song, with its arpeggiated chords and slight rhythmic irregularities.

Richardson's German songs, too, often refer to folk styles. Charlotte and Schusters Abendlied share a boisterous humour, aided by touches of musical wit: Charlotte's cheeky text ends with a musical question-mark (an unresolved seventh) and Schusters Abendlied makes use of registral change in both voice and piano to differentiate between narrative and aside. Wenn ich scheiden muss has an 18th century feel to its crisp rhythms and unpretentious accompaniment pattern. Christkindlein's Wiegenlied is chorale-like, with a strophic structure and gentle harmonic play between the minor and major modes.

The final song of the collection is the Jacobsen setting, Lad Vaaren komme (Let Spring Come). This text confirms Richardson's tendency to choose sunny subjects with a dark twist: it concludes by musing that "My heart has neither bloom nor flower" in quasi recitative style, and asking "What's that to me?"

Who will sing these songs? Richardson's songs are in some ways ideal for student singers, since they are in general short and to the point. Vocal lines are tonal, with few disjunct leaps or rhythmic complexities. Their accompaniments are simple, mostly chordal, and apart from some small harmonic quirks, quite predictable. A significant number of the songs, however, are notable for the width of vocal range required: Erster Verlust ranges from A3 to E5; Lad Vaaren komme covers two octaves from B3 to B5.

Professional singers may well see possible recital groupings in this collection. The editors point out that some songs may be more suited to male voices, and that some transposition may be desirable. With exceptions, the collection caters to medium voice types.

This edition is clearly set out and well-documented. The preface, performance note, introduction and notes on the songs are all useful to the performer. The presence of German texts without translations is not so helpful, although the provision of some translations by Richardson herself is interesting. It would be sensible to provide some guidelines for the pronunciation of the Danish test: singers are used to International Phonetic Alphabet, and a transcription as an addendum would add to the edition.

Are these great songs? If we remember that in the period from the 1890s to 1943 (represented in the collection) Debussy, Ravel and Richard Strauss were writing art songs, then Richardson's songs are not great. If we look at the songs as a piece of cultural heritage, or as the private musical expressions of a woman of literary talent, it is possible to see in them much more merit and considerable charm.

Rowena Cowley

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anats
AUSTRALIAN NATIONAL ASSOCIATION OF TEACHERS OF SINGING

Objectives of the Association

From the Constitution

(a) To encourage the highest standards in the vocal art of singing and of ethical principles in the teaching of singing and to promote vocal education and research at all levels, both for the enrichment of the general public and for the professional advancement, development and interest of the talented.

(b) To maintain a register of teachers of singing deemed to be qualified in terms of Clause 12.

(c) To provide a means for all members to meet together regularly on a National, State, Territory or regional basis.

(d) To provide regular communication to members through journals, newsletters, magazines or any other means deemed appropriate.

(e) To encourage teachers of singing to achieve excellence in their profession through the provision of scholarships and awards.

Code of Ethics

This Code of Ethics is established by **ANATS** so that its members may understand more clearly their duties and obligations, exemplifying them to other teachers, to their students and to the public. The intention is that vocal art may be advanced, that the dignity and honour of the profession may be upheld, its standard maintained and usefulness extended. Adherence to this Code will promote cooperation, understanding and good fellowship among Members.

Therefore, it is the duty of all teachers, especially Members of the Association, to be governed by the Principles underlying this Code, namely:

We as Members believe that ...

- It is unprofessional and unethical for teachers to make any false claims regarding themselves or their students.
- It is unethical and unprofessional for teachers, by misleading statements or false promises, to induce a student to study singing in the hope of a career, if the student's talent does not warrant it.
- It is unethical to advertise in a manner that may deceive or mislead prospective students by promises of professional appearances or guarantees of favourable contacts.
- While it is admissible that free tuition may be given by teachers, the advertising of free scholarships and free tuition constitutes unfair competition with teachers who do not endeavour to increase student intake by such methods.
- Teachers may accept any student for the purpose of cultural development of the singing or speaking voice, and may encourage study for those who need or desire breath control, poise, diction and projection of the voice.
- To insure impartial diagnosis and honest opinion in voice trials, the student should be requested not to disclose the names of present and/or former teachers.
- It is unethical to criticise adversely the work of fellow teachers, unless such statements can be substantiated with proof.
- It is unethical, either by inducements, innuendos, insinuations, or other acts, to proselytise students of other teachers.
- It is unethical to exploit as one's own the results of another teacher's instruction or to allow one's students to do so. Further, it is unethical to claim as a student one having studied less than one year with the teacher making the claim, except where there has been no previous voice training.
- It is unethical for a Member to make a contract with a student demanding more than the actual price of lessons, with or without interest as mutually agreed upon. No contract shall be made on the basis of a percentage of the student's future potential earnings, nor shall teachers accept any fee for aid in securing an engagement for a student.
- For mutual benefit, and at the discretion of Members, names of students who have left a Member and failed to meet their instruction fees, should be reported to the Association which shall maintain a list available for consultation by Members. If a Member learns from any other source than an applicant for lessons has not fulfilled a financial obligation to another Member, it is unethical to accept the student until these obligations have been satisfactorily adjusted.
- It is unethical for teachers to offer less than the best instruction of which they are capable to students under their tutelage. The moral and financial obligation of teachers is to give students the instruction, the attention and the full amount of time agreed upon.
- It is unethical for a teacher to be an adjudicator of a contest in which his/her students are competing.

(This Code of Ethics has been adapted from the NATS Code of Ethics, by kind permission of the National Association of Teachers of Singing, United States.)

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AUSTRALIAN NATIONAL ASSOCIATION OF TEACHERS OF SINGING

An Invitation to Membership

If after reading the ANATS CODE OF ETHICS, you find yourself in accord with its principles, you are cordially invited to renew or make application for membership in the Australian National Association of Teachers of Singing.

Please:

- read the Application Form carefully and in its entirety before completing it;
- ensure you are able to substantiate your category if required to do so;
- obtain endorsement from two financial members of ANATS, who will act as proposer and seconder. If there is a problem with this because of your location or lack of information, please notify ANATS and we will be able to help you;
- send completed form with cheque/money order to ANATS.

This entitles you to a year's subscription to ANATS publications including an update on coming events, keeping you in touch with all that is happening in voice teaching in Australia.

Membership Categories

Full Member applies to singing teachers who have been engaged in the teaching of vocal technique for more than three years.

Joint Member applies to a professional partnership of no more than two people.

Professional Associate applies to allied professions — speech therapist, laryngologist, voice and language tutor, repetiteur/coach, professional singer, accompanist, conductor, producer or any professional person whose employment is in harmony with the teaching of singing.

Student Member applies to teachers of singing with less than three years' teaching experience, student singing teachers, students of singing teachers, amateur/semi-professional singers, student repetiteur/accompanist or any person not fully employed in the musical profession or still receiving tuition in their chosen field allied to the teaching of singing.

Friends (Publications only) any person who would like to support the objectives of the Association and who does not qualify for admission under any of the above categories.

Corporate Member available to schools, music schools, and choirs, offers full ANATS entitlements for employees.

Application for Membership

Title .....First name/s .....Surname .....

Address .....Postcode .....

Fax .....E Mail .....

Age: Under 20 ❑ 20-45 ❑ 45+ ❑

Professional Qualifications .....

Categories of Membership and Fees

Full members	$70	*Students*	$40
Professional Associates	$70	*Friends (Publications Only)*	$40
Joint members	$100	*Corporate*	$130

Your membership of ANATS requires your understanding and observance of the Code of Ethics of the Association. Your signature below, and that of an established ANATS member, indicates your acceptance of this provision. A sponsor's signature is not required for Friends and Publications Only categories.

Applicant's signature .....Sponsor's signature* .....

*Must be a full financial member of ANATS

Enclosed Membership Fee .....Date .....

Which Chapter do you wish to join .....

Please return this form* completed to: The Treasurer, ANATS, Private Bag No 1, Darlinghurst NSW 2010

*or a photocopy

SERVING THE ART OF SINGING

Australian Voice

Australian Voice is the official journal of The Australian National Association of Teachers of Singing (ANATS). At present it is published as one volume annually.

The purpose of the publication is to provide a medium for presentation and dissemination of original articles and research papers on all topics related to voice. It seeks to be international and non-partisan in encouraging discussion and debate on a wide range of subjects and methodologies.

Research papers and original articles are invited from practitioners in all relevant fields on topics related to voice — voice science, and physiology, vocal pedagogy, performance practice and style, music literature, and repertoire. Contributions to *Australian Voice* should fall into one of the following four categories.

1. Refereed articles

   Scholarly articles are sought and subjected to a blind review process. Article lengths may be 1500–3000 words (short), 3000–5000 words (medium) or more than 5000 words (long).

   The remaining three contribution categories have been established in recognition of the nature and history of voice development. Articles can be of any length, though a range of 500 to 2000 words is recommended. They will not be subjected to the blind review process.

2. Case studies

   Teachers and clinicians are invited to contribute to this forum for first-hand accounts of practitioners' experiences. Such experiences might document a number of similar case or highlight an unusual instance. Papers should include an outline of the case or cases, reference to relevant pedagogical or clinical experience and/or literature, and a detailed discussion of the approaches and options available. This forum is intended to encourage sharing of the wisdom that only comes with hands-on experience. Authors are reminded to ensure that subject confidentiality is maintained.

3. Student papers

   Students enrolled in speech pathology, singing, speech and drama or related fields — as postgraduate, undergraduate or single subject studies — are invited to submit papers written during the course of their studies. Students whose papers are chosen for publication will win a year's membership of ANATS or of AVA. Chosen papers may be refereed at the student's request. Students are the practitioners of the future, and it is both a responsibility and a privilege to foster their development, encouraging them to participate fully in their chosen profession. The Editorial Board would urge all lecturers and teachers to encourage their students to participate.

4. Practical experiences

   This forum encourages contributions from teachers with good practical ideas straight from their teaching studios, performers who have discovered interesting and helpful strategies through personal experience, and speech pathologists and ENTs who have strong thoughts on a particular subject. All are invited to present thoughts, opinions, helpful hints, to open debate and share experiences and ideas with colleagues.

All contributions should follow the editorial style detailed in the *Publication Manual of the American Psychological Association.* Authors are requested to use notes at the end of the article rather than footnotes on each page and to include a brief biography with the article. The editorial style used in the current issue of the journal presents a model.

In the first instance, contributions should be submitted as two hard copies printed on A4, double-spaced with 2.5cm margins and forwarded to the following address by 30 April 2000:

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