# THE BRITISH VOICE ASSOCIATION BLAA COMMUNICATION OF THE BRITISH VOICE ASSOCIATION UNDER 12: ISSUE 3 - SPRING 2012

Featured in this issue: **'VOICE & THE BRAIN'** and 6th VOICE CLINICS FORUM

THE BRITISH VOICE

# www.britishvoiceassociation.org.uk

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# The President's Letter

#### By Tom Harris MA, FRCS, Hon. FRCSLT

The new BVA year 2012 started with a flourish on 15th January when the Educational Working Party put on 'Voice and the Brain'. This event explored new territory for the BVA and was a sell out. Although there was disappointment that Katie Overy was unwell and unable to join us, John Rubin stepped in to give a terrific, comprehensive overview of neurology in a user-friendly way that allowed the audience to become familiar with the terms and topics referred to later on in the day. Our particular thanks go to Jenevora Williams who was responsible for the main organisation of the day - anyone who missed it will be able to get a flavour of the day by reading the review that appears later in the Newsletter. We hope this is a topic we might revisit and extend in future years.

The Fundamentals of the Singing Voice also started on the 15th January and is now well underway. The course is run jointly with the City Lit under the expert hand of Linda Hutchison and is now in its fifth year. Those interested in attending in 2013 should take a look at the City Lit website for further information about the course. Sunday 25th March sees another study day, this time on the ageing voice entitled 'Weak, Wobbly or Working? The Multidisciplinary Management of the Ageing Voice.' In response to requests from our membership that we do things outside London, this study day will be held in Manchester at the Royal Northern College of Music. We have, however, considered those who might want to travel up from London and the late start of 11.30am should allow enough travel time - the first train of the day appears to get in at just before 10am and we are told that the RNCM, who are kindly hosting the day, is apparently within walking distance from the station.

Sunday 20th May sees our Acoustics Study Day which promises to be informative and practical. It will be held at Baden Powell House in London and the programme is now available on the website for anyone interested in attending. During the day the short-listed finalists for the Van Lawrence Prize will present their papers to the judges and delegates and the winning paper will be chosen. This year there have been 14 applications for the Van Lawrence Prize and I am delighted to say the papers all look to be of a very high standard. Since the BVA started its life as The Voice Research Society, I am particularly excited that we do, at last, appear to be fulfilling our early ambitions by encouraging research into voice. Negotiations are underway with the editors of LPV to see whether papers that do not make the final three might still be possible to publish, so that the membership have a chance to see the variety of topics and approaches that have been received this year. We hope the Van Lawrence Prize will continue to stimulate others to explore the rewarding world of research in time for 2014.

Sunday 1st July is an important date for your diaries as it is the date of the *AGM*. Information will be sent to you in May about any vacancies that will arise on Council as some of the present members complete their terms of office. This gives you, or someone you feel would really like to help the BVA move forward, a chance to come onto



Tom Harris

Council and help shape the Association, so that it will continue to thrive in the future. Being on Council is a responsibility, but not a terribly arduous one. The people you are working with are friendly, enthusiastic and fun and there are only six meetings a year that you need to attend. You also have the chance to join one of our working parties if you are interested in developing and planning any particular aspect of our work. Recent years have seen many knowledgeable and forward thinking Council members who have put forward ideas and suggestions that have helped the Association update its profile and outlook. It is thanks to them that the website has been updated and that we are now on Twitter and Facebook. If you have good ideas about how to keep the BVA meeting its charitable aims and the needs of its membership, now is your chance. Please respond to our Call for Nominations.

The AGM will precede the study day 'From Pathology to Performance' and more information about this can be found in this Newsletter and on the BVA website. Meanwhile, the Education Working Party are hard at work planning further meetings in September and November, so keep an eye on the Events page of the website.

### April brings the new financial year and the membership renewal reminders will be going out.

While I am very aware that times are hard financially, please keep in mind that the BVA depends entirely on your subscriptions and the courses that we run for our very existence. These are our only reliable sources of income. The benefits of membership are considerable when you stop to think. The courses we run are designed to meet many of the CPD / CME needs of our membership, who range across a number of different professions and are run at affordable prices compared with many other institutions. Membership also entitles you to 2 copies a year of *LPV*, which is a well respected academic journal whose subscription would cost you significantly more than your membership fee. So, please bear all this in mind and don't forget to renew your membership.

### EDITORIAL EDITORIAL EDITORIAL EDITORIAL EDITORIAL EDITORIAL EDITORIAL EDITORIAL EDITORIAL EDITORIAL

In contrast to the Razzamatazz of the last issue which featured Rock and Pop, we focus on more cerebral matters in this edition. Jeffrey Davis and Ghislaine Morgan give excellent and detailed reports on the well-attended and highly informative Study Day: Voice and the Brain. This theme is continued with reviews of two newly published books: Bio-Guided Music Therapy and Voicework in Music Therapy.

Next, we come to the gritty questions faced by Voice Clinics throughout the UK "in a cash-strapped NHS." However, the

reports from the 6th Voice Clinic Forum by Sara Caldwell and Sadie Khwaja focus on positive outcomes.

Our President, Tom Harris, looks back and forth to what is proving to be an eventful year for the BVA and Sara Harris reminds us that World Voice Day is almost upon us, so feel free to send reports of events and photographs for the website and newsletter.

*Lynne Wayman, Editor* lynne@lynnewaymanvoicecentre.com

# **VOICE** AND THE BRAIN

Sunday 15th January 2012 Park Crescent Conference Centre, 229 Great Portland Street, London W1W 5PN

### Report and review by: Jeffrey Davies

The brain controls our consciousness and our physical selves. Understanding its complexities and what can go wrong are major goals in science. Four papers were presented on aspects of voice and the brain, shedding light on this intriguing area of research. The talks were very informative and I have tried therefore to encapsulate some of their content and implications.

John Rubin (Consultant ENT Surgeon at the RNTNE Hospital) opened with "The Neurology of Voice Disorders: a Clinical Primer" He began with an excellent introduction to the basics of brain anatomy and structure of neurones, explaining how neurone cells link via synapses, and that neurotransmitters (such as dopamine and serotonin) aid electric signals across synaptic gaps. With about 100 billion interconnecting neurones per brain, there are an almost infinite number of signal pathways. Connections are not fixed but can change: brains have plasticity.

Several areas of the brain are involved in voicing. The left hemisphere (mainly temporal lobe) deals with language, speech perception and hearing, the frontal area with speech planning; the midbrain is involved in emotions and the brain stem in breathing and swallowing. Within the left temporal lobe region are the small Broca's area and Wernicke's area. The former instructs the motor cortex for speech articulation, the latter "lights up" (indicating activity) in radioisotope-enhanced tomography (e.g. PET scans) when consonants are heard. Speech and singing need coordination of all these areas.

The basics of the central and autonomic nervous systems were also discussed, followed by a succinct survey of neurophysiologic disorders including types of voice, speech and language disorders. Hypoadduction of the vocal folds was given as a specific example of a neurophysiologic disorder (voice soft and breathy), in which bowing can be evident post stroke, brain trauma or in Parkinson's disease. Hypoadduction is also indicated in superior laryngeal nerve damage causing unilateral vocal fold paralysis. It was emphasised that "management of neurological voice disorders should be holistic" and a multidisciplinary team is needed comprising a speech therapist, a surgeon, a neurologist,



(above) John Rothwell, (below) Jenevora Williams



and neurophysiologist (and perhaps a singing teacher or voice coach?), not forgetting that some disorders are psychogenic. David Reby (Senior Lecturer in Psychology at the University of



(above) David Reby, (below) Sophie Scott



Sussex) presented a talk on "Expression of Gender in the Human Voice: is there a sex code?" which was an enjoyable and interesting journey from the sexual calls of red deer through evolutionary origins to the biological bases of vocal sexual dimorphism. Are there parallels between the way deer modulate their roars, bellows, and some other non-verbal vocalisations, and how humans use voice changes in communication? Female deer prefer a voice quality that implies the calling male is strong, large and dominant. Males of many animal species have voices with a relatively low F0 (fundamental frequency or "pitch") and low resonances (formant frequencies). Formant frequency is proportional to the vocal tract length, whereas F0 is inversely proportional to vocal fold length. Males generally have larger larynges, and longer vocal folds and vocal tract. The female brain perceives their sound as desirable and advantageous. These traits are therefore selected in evolution.

Human females were asked to rate the attractiveness of recorded male voices, with PSOLA software used to change the pitch. The lower-pitched were preferred. Conversely, males rated females with higher-pitched voices as being most attractive, a perceived association with femininity. (Why are many young females attracted to male pop singers with high-pitched, even rather effeminate falsetto voices I wonder?). Before puberty, body size, vocal apparatus and F0 are similar in boys and girls, yet boys have lower formant frequencies. Girls asked to mimic boys' voices or adults lower the larynx (lengthening the vocal tract) and round the lips and mouth cavity, changing the shape of the acoustic space. Boys imitating a girlish voice raise the larynx and form a smile, decreasing the length of the vocal tract and again changing the space. They do this instinctively. This is also the means by which male actors portray females or gays. "We can control the gender of our voice".

F0 does not correlate well with body size in humans: a small man can have a low-pitched voice (or some tenors are tall). However, a size correlation is still expected. A low, sonorous voice is perceived by the brain as being that of a large, perhaps dominant person. A higher-pitched voice with higher formants is interpreted as being that of a smaller less threatening person. Do we then subconsciously vary the pitch and quality of our voices to encode status, mood or feelings in verbal communication or exclamation of emotional sounds? How does the brain process and perceive speec and non-verbal sounds?

Sophie Scott (Professor of Cognitive Neuroscience, UCL) spoke on "Voices on the brain: the neural processing of the human voice" expertly and with lucidity. The brain has to deal with hearing speech and making complex sounds using the muscles of articulation, larynx and breathing, thus involving motor action. The cortex has to process and co-ordinate this. Using functional imaging (f-MRI) such as PET scanning, active areas of the brain light up. The left hemisphere houses the hearing area, but listening involves a temporal lobe area on the right hemisphere. Much of speech is processed on the left, but changes of pitch, the musically of the voice, are mainly a right side function. Speech exhibits a "start-stop" pattern on waveform spectra. Non-speech noises in start-stop rhythms with pitch variation can sound like speech and might be processed like speech but involving the right hemisphere more. In real speech, language and syntax would be left side functions. The two hemispheres are driven by different information.

Non-speech emotional sounds are part of communication, and can even be contagious. Laughter is an example, but worry, fear, excitement and many feelings can be conveyed. "Words are not the only things we say". It was demonstrated that the audience could hear the difference between real laughter and artificial laughter. The brain can distinguish between genuine emotional sound and imposed emotion (actors and singers take note).

The musical and emotional elements in speech decrease, resulting in plainer, automated vocal sound when hindered by noise or delayed auditory feedback. In moments of perceptual difficulty, auditory areas of the brain are recruited to aid speech. We instinctively modify our voices according to background noise, where we are, who is there, the mood or the situation. In controlled voice change by an actor or impressionist, f-MRI lights up a site close to Broca's area. Impressionists imagine what the imitated subject looks like, adding gestures and facial expression, so visual and motor areas light up. Actors try to "feel" the character, so multiple brain areas (speech, hearing, vision, body movement, emotion) are active.

Exercises and practice (acting, music, sports) can strengthen or modify brain areas for better performance. In cases of dysfunction, therapy can enable re-learning of muscle movements by manipulation and exercises even after the controlling site on the motor strip is damaged. How might this be studied and how does it work?

John Rothwell (Professor of Human Neurophysiology at UCL) gave a concise and entertaining presentation on "Brain plasticity: learning, training and therapy". At birth, the brain is not wired up for functions required later. Connections between neurones are made as the infant sees, hears and learns about sounds and faces. In the cortex, "spines" (small extensions from neurones) develop, linking with others via synapses. With learning and training, more connections are made. He reported evidence from experiments with a mouse learning a food-acquiring task, but using a genetically modified animal expressing a fluorescent protein transgene, enabling developing spikes to be microscopically observed and counted. There was more gain than loss of connections over time: helpful ones remain but the less useful are lost. "The task becomes more effective for less effort".

Another approach involves repetitive brain stimulations. In humans, transcranial magnetic stimulation (TMS) and transcranial direct current stimulation (TDCS) have been investigated. With TMS, repetitive pulses of magnetic field are generated from a hand-held source placed externally. A striking demonstration was given in which the source was held approximately above the armhand region on the left cortex, causing the arm to twitch and flex.

Experimental evidence suggests that TMS stimulates and strengthens new neurone connections and task performance becomes quicker and easier. Could TMS influence learning and training (musical instruments and singing?), and can it (or TDCS) be used in rehabilitation and therapies which also involve retraining and muscular tasks, for instance, speech therapy with stroke patients?

If some muscles of the face are stimulated experimentally while the subject is speaking, speech is interrupted. Muscles twitching by stimulation cannot be used for normal speech. This "speech arrest" may involve Broca's area on the left hemisphere. Curiously, such interruption is not positive in singing. Is this because with music, the right hemisphere is more involved? (Is this significant in using singing as therapy?).

This meeting was of a high standard, well presented and accessible for the 140 delegates, most of who were singing teachers and SLTs, with quite a number of voice coaches and students. As organiser Jenevora Williams said in closing, "We seem to have raised many more questions", and that is a good sign in science. This is clearly an exiting field of fundamental and applied research. May we have more such meetings.

#### Ghislaine Morgan reports from the Singing Teacher's point of view:

It is always a privilege to attend a BVA conference for the wealth of knowledge that is apparent both on and off the podium and the stimulating discussions that consequently take place amongst colleagues; the Voice and the Brain day in January provided both. I had a particular interest in attending, having a fascination with students' individual needs and different ways of learning which has been further stimulated by encounters with Educational Kinesiology or Brain Gym.

As a singer and singing teacher, it was a disappointment that Katie Overy, Senior Lecturer in Music Psychology at Edinburgh University, was ill and unable to attend, as her lecture giving an overview of the neural basis of singing promised to be most relevant; hopefully she will be invited to present her paper at a future conference. Fortunately, John Rubin, Senior Lecturer at University College, London and Lead Clinician in Voice and Swallowing Disorders, National Hospital for Neurosurgery, gallantly stepped in at extremely short notice and spoke on the Neurology of Voice Disorders. Of particular interest were his comments about vocal hyperfunction vs hypofunction and its relationship sometimes with such illnesses as Parkinson's disease and Huntington's; it became apparent that simple neurological evaluation in a teaching studio with the help, for example, of playful coordination exercises might be useful. A lively conversation took place during the coffee break about planning future sessions with John to help singing teachers and voice coaches recognise when a student's problem might indicate the need for a referral for in depth neurological examination.

The liveliest and most charismatic speaker of the day displayed such enthusiasm for her topic that it was infectious. Sophie Scott, Professor of Cognitive Neuroscience at UCL, shared her fascination with the neural processing of the human voice. Her linguistic clarity was much appreciated by the non-scientists amongst us as she explained the different functions of the left and right hemispheres of the brain, and showed MRI scans to indicate the brain's preference to respond to and empathise more with positive emotions than those of fear or disgust. Experiments testing the audio and physical feedback necessary whilst talking or impersonating others proved entertaining viewing. Interestingly, it became obvious that little research seems to have been done on brain activity whilst singing, something perhaps members of the BVA could volunteer to help rectify.

The afternoons are always difficult on such days, when a hearty lunch seems to leave the body needing a siesta (!), but John Rothwell, Professor of Neurophysiology at UCL, continued with a talk on brain plasticity and its implications for learning and rehabilitation. Transcranial Brain Stimulation, a new technique for stimulating pre-selected parts of the brain with a powerful magnet was demonstrated; the resulting change of brain connections which can produce, for example, involuntary disruption of speech or spasmodic movements promises to provide insights into new therapies for voice disorders following strokes.

David Reby, Senior Lecturer in Psychology at Sussex University, rounded the day off by sharing early findings about sexual dimorphisms, his study groups being deer. Consistent findings about a certain relationship of the length of the vocal tract, and the vocal formant being necessary for success as a male or a female in a species, was compared with the development of the human voice to maturity, and its perceived appropriateness as being one sex or the other. Impersonation of the other sex indeed involves lengthening or shorting the larynx and a changing of the formant before the brain starts entertaining a difference.

Congratulations on overall a thought provoking day in a great venue, with one proviso. Since the BVA represents so many disciplines to do with voice, it might be helpful to better reflect the breadth of the needs of its membership by presenting information in a greater variety of ways. Also, at future conferences, maybe a member engaged in the performing arts or the educational world could be invited to help our assimilation of new ideas by stimulating the brain with movement or voice work in between presentations.

# Roz Comins adds some comments for discussion...

It was an impressive array of able speakers who delivered detailed knowledge effectively to a large audience, with fine documentation. (What a gracious and precise presentation with apt analogies from John Rubin at nearly no notice!) I did make some notes, but the speed of information was fast. Then I considered my interest. There are amazing studies being made and with my very limited professional knowledge of the brain, it became difficult to select how I could link this new knowledge with what little I know. There was a great deal of detail from deeply informed speakers. I think I was possibly looking for some small relevance to illuminate the practical work I still do on the voice. I am intrigued by the plasticity of the brain, and that is relevant to what I do. A recent conference on classroom acoustics emphasised a key need: the importance of being able to hear, so that listening can take place, then the brain can process thought. So relevant in learning and often overlooked.

At the Study Day, I gained some fascinating insights into the growing knowledge of the specific sensitivity of specific parts of the brain: I experienced "seeing" the changes in the brain of a mouse when it has learnt: then have "seen" a lecturer stimulate his brain so his arm on the other side instantly moved, learnt that the male red deer in the rutting season have explored and learnt to lower the larynx for greater success. As I look through the papers I have, I am sure more will come together but I think I

found this fine occasion gave me far more than I was able to manage. But, I am glad to say, I was pleased to be there.



(above) John Rubin, (below) Questions, (bottom) Rapt audience





# WHERE NEXT FOR THE MULTIDISCIPLINARY VOICE CLINIC?

# THE 6th VOICE CLINICS FORUM

#### Report by Sara Caldwell

Nearly 50 BVA members from around the UK, representing ENT surgeons and medics, speech and language therapists (SLTs) and singing professionals gathered on a somewhat dull morning in South Manchester for the 6th Voice Clinics Forum. In contrast to the weather outside, we were warmly welcomed by our host, Sue Jones (University Hospital of South Manchester).

The opening presentation was a thought-provoking overview from Professor Paul Carding (University of Newcastle and Freeman University Hospital, Newcastle, UK) of the current challenges facing Voice Clinics in the UK. Professor Carding shared observations made during a recent exercise making the health economic case for a fictional voice clinic. He concluded from this experience that, while professionals who work in the multidisciplinary Voice Clinic feel strongly that it represents the most efficient and effective model to ensure a high standard of care for voice patients, objective outcome and health economic data were scarce. He suggested that the 'Voice Clinic' perhaps had an image problem, being perceived as only serving professional voice users rather than an integral part of the management of all voice patients. He proposed that the term 'Voice Clinic Services' might better describe what Voice Clinic teams offer. He posed two final questions to the audience: "Are we doing enough as a group to make the case for Voice Clinic Services and are those of us who are in a position of strength doing enough to provide evidence?"

Three voice clinic teams (see below) presented an overview of their services, the challenges faced and responses developed. Managing capacity, referrals and patient expectations were common themes as was the loss of service elements in recent times and the importance of collecting relevant outcome data. Sue Jones, presenting for South Manchester, also highlighted the challenge of developing skills in voice disorders among the next generation of ENT doctors and SLTs.

#### Voice Clinic Teams – Meeting the challenge

NOTTINGHAM VOICE DISORDERS SERVICE

 Julian McGlashan (Laryngologist and Head and Neck Surgeon) and Katherine Behenna (Specialist SLT)
LEWISHAM VOICE CLINIC

 Tony Aymat (Voice Specialist/Otologist) and Sara Harris (Specialist SLT - for Rehab Awad, Specialist SLT)
SPEECH, VOICE AND SWALLOWING SERVICES, SOUTH MANCHESTER

 Sue Jones (Specialist SLT), Phil Jones (Consultant ENT Surgeon) and Dane Chalfin (Vocal Rehabilitation Coach)



Professor Paul Carding



#### Dane Chalfin

The 'Choose and Book' system was highlighted by all three services as an example of the law of unintended consequences – giving GPs and patients more apparent choice has resulted in longer pathways to optimum care for many voice patients due to 'the wrong patients ending up in the wrong clinics'. Nottingham Voice Disorders Service has addressed the issue of managing capacity and correctly directing the patient pathway by setting up a weekly SLT- led clinic to triage patients booked in via the hospital ENT department, an approach which has translated into self-rated patient benefit, monetary savings, reductions in staff time and shorter waiting times. South Manchester have a voice clinic and liaises with the health professionals working in clinic. There was general agreement that this was key to the efficient running of the clinic.

To general approbation, the Lewisham Voice Clinic presented a simple spreadsheet database recording demographic data and pre and post-operative outcome measures that is updated in real time following a patient consultation.

The importance of clear boundaries, role definition and competencies within the multidisciplinary team was also highlighted. Dane Chalfin (University Hospital of South



The panel (left to right) Dane Chalfin, Sue Jones, Julian McGlashan, Professor Paul Carding, Tony Aymat, Sara Harris and Phil Jones.

Manchester) described how he works as a vocal rehabilitation coach with professional voice users who come through the South Manchester Service. He emphasised the importance of distinguishing between vocal rehabilitation and the teaching of singing technique, ensuring that vocal coaches work under the supervision of the laryngologist and specialist SLT in the team.

The presentations were followed by a lively panel discussion with questions from the audience only curtailed by the arrival of lunch. The discussion was not without a practical outcome. Panel Chair, John Rubin (Royal National Throat, Nose and Ear Hospital, London) asked a final question: "What can we do to generate relevant data to present to commissioners in the NHS to justify the multidisciplinary Voice Clinic Service?" and requested that the BVA Executive Committee produce a list of specific recommendations for presentation at the next Voice Clinics Forum.

Fed and watered after an ample buffet lunch, we returned for the afternoon session and were treated to a pot-pourri of presentations.

John Rubin updated us on the newly formed British Laryngological Association by way of a brief history lesson and outlined the vision for how the new organisation will work alongside the BVA.



Tony Aymat

Representatives from the major equipment manufacturers (who had generously sponsored the meeting) presented the latest developments in laryngeal imaging in a session chaired by Phil Jones (University Hospital of South Manchester). The sharpness of the images produced by a high-speed camera drew gasps of admiration – but sadly it will be a while before such technology is routinely available in the UK.

Last, but by no means least, we listened to a highly informative, interesting and clear explanation of objective measures of voice from Julian McGlashan (Queen's Medical Centre, Nottingham University Hospitals). Julian showed how these measures could be practically applied in the clinic pre- and post-therapy to document change in vocal function in addition to patient and therapist rating.

To conclude, thanks were expressed to presenters and delegates alike – with a special presentation to Jackie Ellis and Kristine Carroll-Porczynski for pulling the day together and looking after us all.

Sara Caldwell is a newly qualified speech and language therapist and occasional singer and teacher based in Cheshire.



Phil Jones

### Sadie Khwaja, ENT Specialist Registrar shares her thoughts on the 6th Voice Clinic Forum

The day began with a gloomy picture, defining what a Voice Clinic was and its role at present and its future in a cash- strapped NHS given by Professor Paul Carding, Newcastle University & Freeman University Hospital.

Then several Voice Clinics throughout the UK shared their experiences highlighting the similarities and differences of how they were meeting the new challenges of a NHS demanding quality, innovation and productivity with an increasing independent role for the speech therapist. During the Panel discussion, we



Julian McGlashan with manufacturers



John Rubin and Sue Jones

# BECOME A DIRECTOR OF THE BVA

# HAVE YOU THOUGHT OF BECOMING A DIRECTOR OF THE BVA?

The BVA's Annual General Meeting will take place on 1st July 2012 at Baden Powell House Conference Centre, London. At that meeting, some new directors will be elected to serve on the Council and to act as Trustees. A Call for Nominations will be mailed to all BVA members in early May.

Do you know of someone who might make a good

were asked to think of a more apt name for the work done in a Voice Clinic and how much treatment should singers receive on the NHS?

An afternoon presentation was given on emerging 3D technology and chip tip technology but the highlight for me was high-speed imaging which posed the question: in an environment where technologies are evolving at a pace, which are the white elephants and which will enhance our practice?

The final talk of the day was a session of 'double maths' on objective measures of voice. It was a tour de force on everything that one would want to know on the subject delivered by Mr Julian McGlashan, Laryngologist and Head & Neck Surgeon, Nottingham University Hospitals.



BVA President Tom Harris talks to manufacturers



Julian McGlashan and Katherine Behenna

director/trustee of the BVA? Are you such a person? If so, look out for the Call for Nominations paperwork to be sent to you in May and submit a name.

A director and trustee must be a member of the BVA and must have:

- enthusiasm for the multidisciplinary work of the BVA
- a commitment to devote time and effort to the BVA
- a willingness to speak up
- acceptance of the responsibilities of trusteeship
- an ability to work effectively as a member of a team

Reasonable expenses for attending Council and Working Party meetings are reimbursed for directors who live outside London.

### VOICEWORK IN MUSIC THERAPY

Edited by Felicity Baker and Sylka Uhlig ISBN 978-1-84905-165-1

#### Reviewed by Marianne Bos-Clark, SLT

In this book, the editors bring together a collection of methods and research chapters to inform current music therapy practice and drive future research in the field. Though its target audience is the international community of music therapists, there is a lot in here to fascinate speech and language therapists, voice teachers and singing teachers.

The book presents a variety of work from 14 music therapy experts from across the globe. It is divided into four sections and the chapters describe vocal intervention based on psychotherapy as well as voice work in medical and rehabilitation settings.

For those unversed in music therapy, like me, Part I provides a comprehensive introduction and historical overview. Parts II and III describe structured and free approaches to Voicework. Interventions are well described and chapters can stand-alone as they are individually

### BIO-GUIDED MUSIC THERAPY

Eric B. Miller (2011) ISBN 9781849058445

#### Reviewed by Dr Denise Borland

This delightful book outlines bio-guided music therapy protocols and their effects on stress, ADHD, aging issues, addictions and pain. This is a 21st Century music therapy and despite its use of monitoring equipment, this therapy appears to remain a humanistic approach and the protocols in use seem client centred.

Miller offers a sound theoretical framework and gives insight into his field. The book is aimed at students and practitioners of music therapy, biofeedback practitioners, social workers, psychologists and healing arts professionals. Further to this, those with an interest in research, musicians, teachers and a host of associated professions would learn about the trials and tribulations of introducing new theory and research and building its legitimacy.

This book is a 'crash course' in understanding the advancements in biological data collection and its feedback to the client all within the framework of music therapy. It was a compelling read and I learnt things along the way as Miller referenced. Part IV brings all of the chapters of the book together in a comparative analysis, identifying clinical contexts, purpose of voice work and theoretical framework. The editors conclude with a proposed model of Voicework for clinicians and researchers.

It is difficult to do justice to the variety of Voicework presented in the chapters, ranging from Esther Thane's account of 'Vocal-led relaxation for children with Autism Spectrum Disorders' and Sylka Uhlig's 'Rap and singing for the emotional and cognitive development of at-risk children', to 'Improvised Voicework with a woman with Parkinson's Disease' by Satomi Kondo to Voicework in hospice care and with imminently dying patients (by Susan Summers and Cheryl Dileo, respectively).

Of particular interest are the six chapters describing voice intervention (singing, intonation etc) with patients with dementia and neurological impairments, such as aphasia, apraxia and dysarthria, as a result of a stroke, spinal cord injury, traumatic brain injury or Parkinson's disease. These chapters are of obvious interest and relevance to those of us working (and singing) within the areas of

set up the framework and history to the subject, clearly and succinctly. I also learnt a lot about brainwaves. I respected his clarity and recognition that this may be new information for the reader. It was interesting and well delivered. With my frame of reference, I wondered why we needed so much gadgetry to offer feedback with monitors and computers. However, I saw the strength in aural and imagery feedback for building awareness of internalised processes. To externalise and make sense made sense.

The book does not shy away from the difficulties Music Therapy has faced regarding assessment focus and tools and the developments that have been made in this area. The clear accounts of bio-guided music therapy in action were fascinating. For this reader, they strengthened the argument for this work and its clearly beneficial results for some clients, whilst still paying attention to those it may not suit. It further showed, with graphs and case studies, clear shifts for the clients who took to this work. The feedback from the clients was brief, however it was extremely persuasive.

For those with an interest in how the body works, current theories and advances in music as a healing modality and

#### Foreword by Diane Austin EDITED BY FELICITY BAKER AND SYLKA UHLIG

# Voicework in Music Therapy



dementia, respiration and neurorehabiliation, and link in with current work and research evidence.

To me, reading this book has been a powerful reminder of the therapeutic nature of the work we do and of the multifaceted nature of the field of voice as a whole.



developments in the field of education this book is for you. I strongly recommend it to those with an interest in music as a healing modality.

Miller acknowledges that as technology advances more will be added to bioguided music therapy and our understanding about it will develop.

I enjoyed the ride this book took me on. I look forward to hearing more in the future.

### 'I SEE A VOICE' PRACTICAL ACOUSTICS FOR SPEECH AND SINGING

#### Sunday 20th May 2012

Baden Powell House Conference Centre 65-67 Queens Gate, London SW7 5JS

### David Howard, Professor of Electronic Engineering, York University:

The way in which the ear processes incoming voice signals will be explored and it will be noted that some of its characteristics are not necessarily obvious. Example sounds will be presented by way of quick listening tests to illustrate some of the key features in terms of how, for example, we hear pitch, loudness and timbre and how there are parts of the input that we never hear at all. The implications for hearing voices will be explored.

David M Howard is Head of the Department of Electronics at the University of York where he also leads research in the Audio Laboratory. His teaching is mainly to music technology students and his main research areas are the analysis and synthesis of singing, speech and music. Key research topics of interest at the moment are intonation in unaccompanied singing, computers and iPads in voice training and natural voice synthesis. David has spent time as an EPSRC Senior Media Fellow committed to popularising science and he presented for the BBC4-TV programmes Castrato and Voice. He will appear on The Hidden Talent Show on Channel 4 in 2012 using science in the context of singing. David conducts the Vale of York Voices, who sing evensong in York Minster once a month.

#### Christian Herbst, Postdoctoral Researcher at the Bioacoustics Laboratory, Department of Cognitive Biology, University of Vienna:

When analyzing the human voice as an acoustical system, it can be deconstructed into three parts: the power source (i.e. the lungs); the sound source (i.e. the larynx); and the sound modifiers (i.e. the vocal tract). In this presentation, the basic physical and physiological mechanisms of sound modification through the vocal tract are discussed. After introducing periodic vibration, harmonic series and the sound spectrum, the acoustic filter function of the vocal tract, facilitated by formants, is explained. The concept of formant tuning is established and two example applications thereof (female and male singing voice) are portrayed.

Christian T. Herbst, born 1970, is an Austrian biophysicist and voice pedagogue. He graduated from the University Mozarteum Salzburg. He worked as a voice teacher for the Salzburg Cathedral Boys Choir, the Federal Music School of Salzburg, and the Tölzer Knabenchor, Munich. Since 2009, Christian Herbst is a member of the Laboratory of Bioacoustics, Department of Cognitive Biology, University of Vienna.

The scientific work of Christian Herbst is concerned with sound production in mammals with a special focus on the physiology of the singing voice. He has published several papers on laryngeal configurations and electroglottography. As of February 2012, he is defending his doctoral dissertation "Investigation of glottal configurations in singing" at the Department of Biophysics, University of Olomouc.

# Stephen Robertson, Head of Vocal Performance, Royal Conservatoire of Scotland:

Over the last twenty years, singing voice research has benefited from the developments in computer technology. Equipment which at one time was either non-existent, or far too expensive and complex for use in the singing studio, has become easily accessible. Research has also established clearly and repeatedly that skilled alignment of formants and harmonics has important consequences for the classical singing voice. This practical demonstration will show how such knowledge and equipment can be used to supplement conventional singing teaching, helping to use objective clear information which guides resonance and registration strategies.

Stephen Robertson is a vocal pedagogue, who is much in demand both nationally and internationally. In the USA, he has been a regular giver of masterclasses and lectures at the University of Indiana singing workshops. He frequently gives presentations on aspects of vocal technique for both singers and pedagogues. As Head of Vocal Performance at the Royal Conservatoire of Scotland, he brings to the post the multidisciplinary skills of singer, teacher and voice researcher and a clear vision for the future training of young singers.

Stephen studied Music at the University of Oxford and singing with Marjorie Thomas and David Johnston of the Royal Academy of Music. He sang at Bayreuth, Frankfurt, and the Salzburg Osterfestspiele where he was invited to join the music staff. He taught at the Royal Northern College of Music in Manchester for six years and has been teaching at The Royal Conservatoire of Scotland (formerly the Royal Scottish Academy of Music and Drama) for eleven years. Stephen's students have sung at many of the world's leading opera houses, including Covent Garden, La Scala, Le Chatelet, Netherlands Opera, Vlaamse Opera, Canadian National Opera, Norwegian National Opera, Strasbourg, Wiesbaden, English National, Glyndebourne, Opera North and others. In addition to his teaching, Stephen is actively involved in singing voice research, especially in the area of the male passaggio. In August 2012, he was an invited speaker at the international Physiology and Acoustics of Singing conference in Stockholm. Stephen is currently conducting a six year research project which is analysing the efficacy of new technology and research information in the teaching studio.

#### Application forms available from the Events page of the BVA website: www.britishvoiceassociation.org.uk

### THE BVA AGM & SEMINAR: 'FROM PATHOLOGY TO PERFORMANCE'

On Sunday, July 1st 2012 the British Voice Association will be having its Annual General Meeting at Baden Powel House on Queen's Gate in West London. The AGM is an important day for all BVA members when they get the chance to find out how our Association is faring financially in these challenging times and to hear about our successes, difficulties and plans for the future. In the coming months, the membership will be invited to put themselves or others forward as candidates for any vacancies arising on the BVA Council. Becoming a member of Council allows individual BVA members to take an active part in shaping how our Association moves forwards in the future and the injection of "new blood" onto council ensures that we continue to provide high quality courses and study days that meet the learning / updating needs of our very diverse membership. The BVA needs your input.

With the 2012 AGM we offer our Study Day 'From Pathology to Performance'. Performers make up a large proportion of the client group that our membership supports. When performers are unable to

perform because of a voice problem, the risk of losing their main source of income is significantly greater than almost any other group of Professional Voice Users. Moreover, the short term nature of their job contracts often means that they are generally unable to afford any form of employment protection or medical insurance. Thus, in times of vocal trouble, they have only the over-stretched resources of the NHS on which to rely. This study day will look at the some of the challenges performers present and the

journeys they may take while moving from some form of vocal 'pathology' back to successful performance. Our speakers will include Tony Aymat (ENT Surgeon), Rehab Awad (Speech and Language Therapist), Linda Hutchison (Singing Teacher) and Melanie Mehta (Voice Teacher/Speech and Language Therapist).

More information about the programme and application forms will be available shortly from the BVA website Events page: www.britishvoiceassociation.org.uk

# WORLD VOICE DAY 2012

World Voice Day is coming up again on 16th April. This year the BVA have a number of contributions that we hope will help our membership and highlight the importance of voice. We are planning another of our popular voice information leaflets, this time on Vocal Fold (cord) paralysis, its effect and treatment. We hope these leaflets will be a useful downloadable resource for voice clinics and speech therapy clinics. You should receive them in March.

We are also in the process of designing a questionnaire that we hope Speech Therapists and Voice Clinic teams will be prepared to give to their voice patients. The purpose of the questionnaire is to track the various voice patient pathways as they move through the NHS system, from the GP to the general ENT Department and Speech and Language Therapy Department of the Voice Clinic. In this way, we hope to begin to collect national data to support continued funding of our voice clinic services by providing the evidence that patients prefer them and that it is an efficient and cost effective way to treat voice patients. The idea came out of our Voice Clinics Forum which took place in November 2011 and while ambitious and possibly disappointing, what better task for WVD than to support our Voice Patients Services?

2012 is, of course, the year of the London Olympics and our President Elect, Kim Chandler, is organising an



The BVA is on Facebook – search for BritishVoiceAssociation



to celebrate the astonishing feats our vocal folds are capable of and have actually achieved. More information about this fun event and how you can participate will be available soon on our Events page, so look out for it!

event for WVD based

around a 'Vocalympics'

As always, we are hoping our members will want to become involved in highlighting the important of voice and the effects of voice disorders. If you would like ideas, please see the guidelines below and have look at the report of activities that took place in 2011.

Once WVD is over, please send us information, reports and photographs about your events to put up on the website. Hopefully they will inspire others to try things next year. Please send your material to: administrator@ britishvoiceassociation.org.uk

Do remember to take a look at the American WVD site for fresh ideas and to see what they have planned for this year once it is available at www.entnet.org/worldvoiceday.

Finally, for those of you who kindly took part in last year's questionnaire, I have made enquiries and the results are still being analysed. I hope to be able to update you on the findings shortly.

Let's hope we have another successful and fun World Voice Day.



@BVAVoice

# diary dates

#### FUNDAMENTALS OF THE SINGING

VOICE 2 (5 sessions) BVA Course in conjunction with The City Lit, London 22nd April - 20th May 2012 (this is only open to people who have done Fundamentals 1) Fee £168.00. For further information contact linda.hutchison@citylit.ac.uk

#### **ACOUSTICS STUDY DAY: 'I SEE A VOICE' & VAN LAWRENCE AWARD**

Sunday 20th May 2012 Baden Powell House, London. More information when available

Please see our website: www.britishvoiceassociation.org.uk

# Advertising Service

#### Did you know you can advertise to your fellow BVA members?

The BVA has an "advertising@" emailing service that is half price for BVA members at only £75 per mailing (full price of £150 for non-members). Items are subject to approval and go out only one per week, so do plan ahead!

Send your proposed materials to: administrator@britishvoiceassociation.org.uk

### Gift Aid

Are you a UK taxpayer? If so, your BVA membership dues could be worth over £15 more to the BVA if you consent to Gift Aid, at no extra cost to you.

With Gift Aid, we can reclaim the tax that you have already paid on your dues. It's a nice little extra and you need to consent only once to allow the BVA to claim Gift Aid. There are some restrictions (you will need to have paid an amount of income or capital gains tax equal to any tax reclaimed by the BVA).

There will be a box to tick on your 2012-2013 renewal paperwork sent out to each member, so please do consider completing this declaration this year.

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