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The Voice

The Voice



Change

The Voice

The Voice

VOICE OF THE EDITOR

Mary Sandage, PhD, CCC-SLP

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CHANGES IN VOICE AND SPEECH

BY MARY SANDAGE, PHD, CCC-SLP

As the cicadas buzz in the late summer air, I am reminded of the pending seasonal change to fall. This issue of The Voice Foundation Newsletter is about changes to voice and speech that may have a dramatic, positive influence on quality of life and the effectiveness with which individuals can function in their world. The changes in voice, accent, speech, and language that will be described in this issue are generally conducted with a healthy larynx with maintenance of vocal health in mind. For this issue, vocal changes will span transgender voice and accent modification. Successful vocal and speech changes may require the skill sets of the speech-language pathologist,

singing teacher, acting voice teacher, and laryngologist.

Transgender voice goals may span both speaking and singing voice. **Christie Block**, a well-regarded transgender voice specialist in New York City starts off the issue with a general discussion of transgender voice and provides a valuable perspective for the careful consideration of the individual that is being treated – femininity does not mean the same to each person who identifies as female.

While transgender speaking voice is better described in the literature and there are an increasing number of training opportunities through which to learn

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Voice of the Editor



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about transgender speaking voice, our knowledge and skills in the area of transgender singing voice are less well described. **Loraine Sims**, Associate Professor and Vocal Studies Division Chair at Louisiana State University, summarizes her experience

training singing voice in the transgender population, pointing out that singing voice dysphoria is not a given with all transgender singers and we need to reconsider our singing voice classification system to be more inclusive.

Kate Devore, owner of Total Voice, Inc. in Chicago, moves effortlessly between the worlds

of theatre voice and speech-language pathology. In our final piece, she describes how the interprofessional nature of her career trajectory makes her particularly well suited to work with accent modification.

I hope you find these three contributions and their authors as inspiring as I do.



VOICE CARE FOR THE TRANSGENDER SPEAKER

BY CHRISTIE BLOCK, MA, MS, CCC-SLP

The growth of transgender voice is an exciting and important development for clinicians and clients alike. Voice specialists broaden their services with rewarding experiences as clients gain critical access to care. But access to what kind of care? Sufficient work in this area demands a very specific set of clinical and cultural skills. Because the needs of the transgender community are complex and have historically been misunderstood by the medical establishment and society at large, developing these skills requires a strong clinical background, solid commitment, and heart.

Clinical competence. The Standards of Care, Version 7, of the World Association for Transgender Health (WPATH) (Coleman et al., 2011) specifies that in order to assist a client in achieving voice and communication patterns that are congruent with their gender identity, the voice clinician should care-

fully assess and treat all aspects of gendered voice, speech, and language that are troublesome to the client. This involves pitch, resonance, intonation, vocal quality, loudness level, articulation, phrasing, word choice, communication style, non-speech vocalizations, and non-verbal communication. Since phonosurgery only addresses pitch and often results in complications or insufficient outcomes, the behavioral voice clinician is the primary provider for assessment, treatment, treatment coordination with a possible team of providers, and rehabilitation if dysphonia exists or phonosurgery applies. This is especially true for the client who understandably wants a quick surgical fix and needs to make an informed decision. It is the behavioral clinician who can fully educate the client regarding overall prognosis and the need to learn how to 'play the instrument' appropriately with or without change in anatomy.

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The Voice of the Speech-Language Pathologist

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In general, when training a client to speak in a more feminine or masculine way, I have personally relied on thinking outside the box in order to find and facilitate the right combination of speaking patterns for that particular client. But teaching those technical skills is worthless without the cultural understanding it takes to help the client integrate those skills with their sense of self and into their daily communication. In fact, I have personally discovered, particularly as a cisgender clinician, that the non-technical aspect of training has been the most critical part of my development as a transgender speaking voice specialist in helping my clients achieve vocal satisfaction.

Cultural competence. Understanding where the client is coming from and what gendered communication they need starts with a fundamental awareness of common issues in the transgender community. This includes knowledge about gender dysphoria (the distress that results from the mismatch of the body with gender identity), voice dysphoria (the distress specific to the voice), gender expression (how a person shows gender in their looks and actions), transphobia, and related problems such as lack of support.

Yet as soon as a few common threads are recognized, a myriad of variations prove that there is no one transgender narrative. Not everyone transitions or transitions fully. Not everyone

wants voice change. Not everyone who wants voice change is feminine-identified. For example, some trans men need training for pitch or other voice parameters in addition to or instead of pitch lowering from testosterone. Other people, who

identify as gender non-binary or non-conforming, are challenging our traditional perceptions of gender. The voice clinician must be prepared to help anyone along the gender spectrum, never assuming, and always being sensitive to each person's specific identity, needs, goals, pronoun, and ways of discussing their experiences.

Focusing explicitly on the needs of the individual client also allows the clinician to avoid blanket stereotyping. They apply their

knowledge of research about speech and voice norms of cisgender people and expected gender roles in communication to the client's specific linguistic, social, professional, and cultural contexts. Additional factors may also shape gender perception in communication, such as socioeconomic status, social role, professional role, regional dialect, age, ethnicity, and power differences between the sexes. To illustrate, a trans woman may need a more direct communication style if she works in finance but a more elaborative style if she is a teacher. She will not benefit from being taught to always be elaborative *because that's the way women talk*. Instead, the question should be "how can she be recognized and treated respectfully as a woman while meeting the communicative expectations of the situation?"

"She will not benefit from being taught to always be elaborative, because *that's the way women talk*.

Instead, the question should be "how can she be recognized and treated respectfully as a woman, while meeting the communicative expectations of the situation"

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Only with an understanding of common transgender issues and the ability to identify and teach a range of technical, context-specific skills for the individual client can the voice clinician then help the client embrace and use their skills, juggling any mental, logistical, or societal factors that may hinder progress. The client may be dissociative or hypersensitive to their voice and changes in their voice, evoking concerns about sounding unnatural or taking a risk to use their new voice skills with others. However, a feeling of unnaturalness is more often due to neurologic processing of new habits. The client may also not accept their best possible voice out of a need for perfection or out of fear of not being accepted by others. On the contrary, the client's modified voice is almost always more functional than they think it is. How does the clinician bring the client's heart in line with their head? Some strategies that I have found useful include: 1) recordings that document voice progress, 2) discussions about risk-taking, neurologic processing, and acceptance, 3) positive reminders, and 4) short interactive tasks in and outside the office to ease the client into real communicative situations, such as asking the office receptionist a question or saying good morning to their partner. Obviously, good overall counseling skills are ex-

tremely useful for addressing these problems or other feelings about voice that are influenced by stressors, depression, anxiety, etc. Ultimately, the provider's objective is to positively influence the client's overall resilience and self-determination. The question I like to leave my clients with is "now that you have a voice, what do you want to say?"

On the road to understanding. It is safe to assume that many voice specialists who are interested in this area have had very little exposure to the community but have excellent clinical knowledge to bring to the table. If you fit into that category, consider meeting with a trans person, taking a training for voice clinicians, attending a WPATH symposium or community conference, or reading existing research or community literature. It's that cultural knowledge that will improve your already exceptional skill set to the level of care that trans people deserve.

References

- Adler, R., Hirsch, S., & Pickering, J. (in press). *Voice and communication therapy for the transgender/gender diverse client: A comprehensive clinical guide, 3rd edition*. San Diego, CA: Plural Publishing.
- Azul, D. (2015). On the varied and complex factors affecting gender diverse people's vocal situations: Implications for clinical practice. *Perspectives on Voice and Voice Disorders*, 25, 75-86.
- Block, C. (2014). Finding our





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voices, literally. In Erickson-Schroth, L. (Ed.) *Trans Bodies Trans Selves*. New York, NY: Oxford University Press.

Coleman, E., Bockting, W., Botzer, M., Cohen-Kettenis, P., DeCuypere, G., Feldman, J. Zucker, K. (2011). Standards of care for the health of transsexual, transgender, and gender nonconforming people, version 7. *International Journal of Transgenderism*, 13, 165-232.

Davies, S., Papp, V., & Antoni, C. (2015). Voice and communication for gender non-conforming individuals: Giving voice to the person inside. *International Journal of Transgenderism*, 16(3), 117-159.



Christie Block, MA, MS, CCC-SLP is a clinical voice pathologist and owner of New York Speech & Voice Lab in New York City. She has over 25 years of professional experience in linguistics, ESL, and speech pathology. Her practice is primarily devoted to voice and communication training and rehabilitation for transgender and gender non-conforming speakers. She is a contributing writer and active speaker of transgender voice, and she trains other clinicians in the

specialty. Some include: *Trans Bodies Trans Selves*, *SIG3 Perspectives*, *Speech-Language Pathology Casebook*, *Voice and Communication Therapy for the Transgender/Gender Diverse Client*, ASHA, Philadelphia Trans Wellness Conference, Voice Foundation Symposium, Working Group on Gender, and the World Professional Association for Transgender Health.

Is there a **Transgender Voice Pedagogy?**

Taking the Gender Out of Voice Classification

After writing several articles and presenting many times about teaching transgender singers, I have come to the conclusion that some singing teachers are still hesitant to believe that they are qualified to work with this population. Certainly, sensitivity training and learning a transgender vocabulary that is positive and affirming will help you and your student communicate. **You need to learn the terms, use the correct pronouns and names, and come to terms with your own lack of comfort with all things transgender.** You are teaching people, not voices. There are transgender and non-binary people, but is there a transgender voice? Well, certainly not just one! There are as many kinds of transgender voices as there are kinds of voices in any population. I recently interviewed Lucia Lucas, a trans feminine opera singer who

has a successful career in Germany as a *heldenbariton*. She said: "...it's not like you have... soprano and mezzo soprano (while holding up one hand) and then you have tenor and bass (while holding up the other hand) and then you have this third category (smiling and gesturing with both hands in the middle) that all these voices fit into...no, not at all!"

Lucia suggested a simplification for voice teachers to consider is that there are voices that have been lowered by testosterone and those that have not. Some voices have been changed after puberty and are individuals that were assigned female at birth (AFAB). Teaching these individuals means learning what happens to the singing and speaking voice of these individuals. There are now several resources for teachers to

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The Voice of the Vocal Pedagogue

TAKING THE GENDER OUT, CONTINUED

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come to an understanding of the voice changes that occur. However, once the voice has stabilized, teaching this type of singer is not really different than teaching any tenor or baritone. I interviewed Holden Madagame, an assigned female at birth (AFAB) trans masculine opera singer making a career in Germany as a tenor after testosterone therapy who confirmed this. He is proving that a voice dropped with testosterone in adulthood can be a viable professional instrument.

There are other voices that have been lowered by testosterone that belong to individuals who were assigned male at birth (AMAB) but who now present as feminine. These transgender women may choose to continue to sing with their natural tenor or baritone voices but some may wish to feminize the voice for singing and speech. As a singing teacher, you have the task of seeing if there is a path to whatever the individual has as a singing goal. If singing in the soprano, mezzo soprano, or




contralto range is the goal, there are vocal exercises that can help these individuals develop their voices in those ranges. Descending, sliding “oo” exercises from the most comfortable high note in a head voice (Mode 2) production can be successful. Lucia Lucas suggested that we should use the term head voice instead of falsetto for this type of voice production for a transgender woman because they are generally not seeking a tone that is associated with falsetto if they want the label of mezzo soprano or contralto, for example. Remember that some transitions to this voice production are more successful than others, and your job as the teacher may mean giving a gentle dose of reality to the singer and helping them to define their goals within their

potential.

When considering a transgender woman who continues to sing with her natural baritone or tenor voice, do we really need the label *female baritone* or *female tenor*? If a transgender man is still singing with his natural mezzo soprano voice because he has chosen not to take testosterone, do we need to label him *male mezzo soprano*? I say no. Lucia Lucas is making an unconventional choice to continue to sing with her baritone voice, but it is the same voice that she has been singing with for many years. Since the estrogen therapy that she is currently taking has no effect on her voice that was changed at puberty by testosterone, she remains a baritone. Training and working in her career have allowed her to be suc-

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TAKING THE GENDER OUT, CONTINUED



cessful. We cannot give credit for that success to her being transgender or having anything to do with the medical journey she has been taking for a while now.

I have been making the case for taking the gender out of voice classification at several conferences recently, because we are making it too complicated for competitions and auditions. When considering non-binary individuals, a binary gender designation is impossible for them. There are also cisgender individuals who sing outside the expected ranges for their gender. We all know of those cisgender women who sing tenor in their choirs for example. We have long accepted coun-

tertenors without a gender designation. We do not call them male countertenors. However, there might be transgender women or a non-binary person who was AFAB and has taken testosterone who now wants to sound like a countertenor and choose that label rather than mezzo soprano. I think we can assume that classifying voices by timbre and range without gender would be less cumbersome and certainly more inclusive. We are also limiting our ideas about what voices can do. If we begin by assuming these limitations, our expectations may not be serving all our students well.

TAKING THE GENDER OUT, CONTINUED

We should keep in mind that there is no right or wrong way to be cisgender, transgender or non-binary. Your gender identity has nothing to do with how you present yourself to the world, or your sexual orientation. Then there can be no right or wrong way to decide with what voice you would like to sing. Removing the binary gender designation in voice classifications will allow all voices to be categorized regardless of gender identity or gender presentation. As voice teachers, when presented with any voice, we find solutions to make the voice production free and easy and use all we know about respiration, phonation, resonance, articulation, cognition, and perception to guide our students. However, we still have work to do to make this singing world all-inclusive.



The interview with Lucia Lucas and Loraine Sims can be seen at: <https://youtu.be/YcDsVGXtnl8>
Ibid.

There are several resources now available in addition to *Voice and Communication Therapy for the Transgender/Transsexual Client: A Comprehensive Clinical Guide* by Adler, Hirsch, and Mordaunt. Loraine Sims's article in the March/April 2017 NATS Journal, "Teaching Lucas: A Transgender Student's Vocal Journey from Soprano to Tenor", the Key of T website, <https://keyoft.com/>, managed by Ari Agha, a transgender amateur singer and research lead, and the book by Liz Jackson Hearn and Brian Kremer, *The Singing Teacher's Guide to Transgender Voices* are a few examples.

The interview with Holden Madagame and Loraine Sims can be seen at: <https://youtu.be/uja29wsuq-c>.

LORAIN SIMS, DMA, is Associate Professor/Vocal Studies Division Chair at Louisiana State University in Baton Rouge. Recent performances include "Comedy in Song: Humorous Art Songs in English" for the 2016 National NATS Conference and for the 2017 ICVT in Stockholm, Sweden. Professional activities include a pre-conference workshop, "Teaching Outside the Gender Binary: Working with Transgender and Non-Binary Singers" for the 2018 National NATS Conference in Las Vegas and a workshop, "What the Fach? Voice Dysphoria in the Transgender and Genderqueer Singer" for the Voice Foundation's 2018 Annual Symposium: Care of the Professional Voice in Philadelphia. Other presentations include "Training Transgender Singers for Opera Performance: Gender Bending Beyond the Pants Role" for the 2017 NOA Conference, "Teaching Lucas: A Transgender Student's Vocal Journey from Soprano to Tenor" at the 2017 ICVT, the 2016 National NOA/NATS conference, the 2016 National MTNA Conference, and the 2016 National NATS Convention, and "Training the Terrible Tongue!" for the 2014 Chicago NATS Chapter, and the 2012 National NATS Conference. Upcoming presentations include a session at the national ACDA Conference in Kansas City in 2019, "Honoring and Validating Transgender Singers in a Choral Context II: Healthy Vocal Pedagogy for Transgender Singers." Dr. Sims is a past Southern Region Governor of NATS as well as a member of NOA and MTNA. She enjoys giving master classes and her students have been winners in national and regional competitions.



WHAT DIALECT COACHING TAUGHT ME ABOUT ACCENT MODIFICATION

BY KATE DEVORE, MA, CCC-SLP

I am both a theatre voice/speech/dialect coach and a speech-language pathologist specializing in voice and professional speakers. I started my training as an actor. In my undergrad voice and speech classes I learned basic anatomy and physiology of speech production. I learned about the articulators and how they moved. I learned narrow transcription and used diacritics to notate dialects and accents. I learned how each phoneme is created and the terminology to describe it. My training was largely based on Edith Skinner's phonetic system, which differs slightly from IPA, but has the same bones. I learned to listen to many accents and dialects, and analyze the myriad of ways they differ from a Neutral American accent. Then I had the privilege of becoming my mentor's teaching assistant, and I got to *teach* all those things, thus deepening my knowledge and understanding. I learned to teach people to understand the differences between their own speech and the target dialect, and how to create those

differences. I became a competent but inexperienced voice, speech, and dialect coach.

Through a strange twist of fate, I ended up going to grad school for speech pathology, with the sole intention of enhancing my toolbox for working with actors and other professional voice users. In the middle of my first year, I was offered the opportunity to work with a private client in need of accent modification work.

I had learned literally nothing in my first semester of intro SLP classes that was in any way applicable to accent modification. I also wanted the job so I thought, well, what CAN I do? I can analyze his speech to determine what phonemes, placement, and prosodic elements differ from a Neutral American accent. That's just like analyzing native speakers of other accents or dialects to teach those dialects to actors. Next, I can demonstrate and explain to him how to use his articulators differently to more closely



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TALKING ABOUT BREATHING... (CONTINUED)

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ly approximate Neutral American. Just like teaching an English speaker to produce the challenging phonemes of, say, a French accent. I can teach him principles of intonation, stress, and rhythm through reading, various listening and repeating tasks, and conversation. Much like cementing an accent for a character in a play. And I can globally help him speak with more clarity and confidence, as we do for actors.

I'm pleased to report that it went well.

There are some additional skills possessed by dialect coaches that are also applicable to practicing accent modification:

We are trained to listen for nuance. Dialect coaches are used to analyzing minutia of many dialects and accents in order to learn them well enough to teach them. Quickly.

Familiarity with teaching other accents gives us flexibility and understanding of articulation

ry behaviors of various speakers. It stands to reason that analyzing and practicing 50 other accents is helpful to my ear, my mouth, and my ability to understand the pathway from one to the other. The more familiar I am with how your mouth moves to sound like you're from London, the easier it is for me to reverse-engineer those movements when someone from London wants to sound American.

While most dialect coaches do not have formal

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TALKING ABOUT BREATHING... (CONTINUED)

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training in motor learning theory or Skinnerian approaches, we are well versed in behavior and its modifications. We come from the world of theatre, which holds advanced knowledge of experiential training and manipulation of human behavior. That said, there is a definite uptick in speech and dialect teachers pursuing advanced education and training in the more scientific aspects of speech and learning.

Finally, dialect coaches possess the fundamental knowledge that learning a new accent is possible, and doesn't involve "losing" your own.

Of course, it's much harder to "fool a native" than an audience listening to an unfamiliar dialect. Most speakers of dialects of English find their theatrical portrayal to be sub-par. Likewise, the average theatre-



goer is more likely to believe an actor's Brooklyn dialect than an Indian person's Neutral American - the bar is simply different on-stage and off. It is also the case that, for the most part, intelligibility trumps authenticity for stage dialects, so we might cheat a little bit. Therefore, for most accent modification clients the goal is usually for the accent to be a non-issue in terms of communication; few feel called to aim for a "perfect" version of Neutral American. While some people (typically actors, in my experi-

ence) are able to sound 100% American, most business clients do not need or want that level of work.

In both fields the common goal remains: for people to listen to *what* you are saying rather than *how* you are saying it. **Just as we don't want a manager's accent to interfere with content delivery in meetings, a performance that is all about an accent, or calls attention to a dialect, is not the end goal.**



Kate DeVore, MA, CCC-SLP, is a theatre voice, speech, and dialect trainer, an SLP specializing in professional voice, and author. She operates Total Voice Inc. in Chicago (www.TotalVoice.net), where she coaches professional voice users ranging from actors to executives. She also coaches professionally, teaches at the School at Steppenwolf and

Columbia College Chicago, and lectures nationally and abroad. She created the self-study eBook, "Accent Modification: Neutral American Dialect", is co-author of "The Voice Book: Caring For, Protecting, and Improving Your Voice", and co-creator of downloadable self-study materials for learning stage accent/dialects available through AccentHelp.com.

VOICE FOUNDATION NEWS

48TH ANNUAL SYMPOSIUM: CARE OF THE PROFESSIONAL VOICE

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Basic Science Tutorials
Presentation Coaching
Accent Modification Coaching

Thursday, May 30

Science Sessions
Quintana Award Lecture

Keynote Speech - Peter Q. Pfordresher,
PhD, Professor of Psychology
University at Buffalo, SUNY

Poster Session**Friday, May 31****Special Session:**

Moderator: Nancy P. Solomon, PhD

Young Laryngologists Study Group

Vocal Workshops

****Voices of Summer Gala******Saturday, June 1**

Medical, SLP Session

Panels**G. Paul Moore Lecture:*****Vocal Master Class***

***Sing Along
with
Grant Uhle***

**Sunday, June 2**

Medical Session

Panels

Voice Pedagogy Session

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