

InFormant, Vol. 2, Issue 4

Kristen Sullivan, Editor

Paul Patinka, Assistant Editor

President's Welcome

It is a beautiful time to join in a leadership role in PAVA. I thank you for entrusting me with it. I am delighted by the impressive, and frankly heart-warming initiatives that are underway in this unique organization. Science is a driving, foundational force in PAVA, aimed at Voice in all its glory and all its challenges. And yet we go so far beyond the ivory tower in our work in diversity, intra- and interdisciplinary collaborations, and cross-border cross-fertilizations seen from the most global to the most local levels.

A question has recently been raised about what makes PAVA special, potentially different from other voice organizations. The Board is currently in discussion about this very question, which we will soon bring to the membership for input as a platform for growth. Many specific topics will arise, I am sure, as we move towards development of our next Strategic Plan, due for renewal in 2022. In the meantime, a few observations are already in order. One of the things that makes PAVA stand out for me are its many offerings throughout the year that benefit members and the public at large. Equally important are questions of process: PAVA is truly a membership-driven entity. I am frankly blown away by the ideas, the debates, and the discussions entertained among our ranks about what is truly important in voice. I am equally impressed by how this volunteer organization has taken so many matters to heart and has acted on them in concrete ways, including musical offerings of so many origins and the highly impressive work on the PAVA-recognized vocologist initiative. Many have entertained questions of interdisciplinary voice specialization, but few have developed such a detailed and well-vetted process to get there. Kudos to the many PAVAns who have worked across a period of years to this end, now in beta testing. A personal hope is that we can continue to increase the diversity of our membership for the benefit of many individuals who are not yet part of our ranks, and moreover helping to expand all of our horizons in voice. Another hope is that we can add increased emphasis on the actor's voice, which has multifold ramifications. Finally, I hope we will continue to find ways to use voice to benefit the community in service beyond our own doors.

I look forward to personal and collective conversations with you. You are truly special. The power of your passion for voice is palpable. Voice truly unites while it also challenges. Wishing you a wonderful fall season. We will be in touch soon.

Kittie Verdolini Abbott

Science and Research

Research Poster Follow-Ups

The 2021 Virtual PAVA Symposium showcased an abundance of new research projects and ideas. This InFormant issue will feature updates on a few of the initiatives that were presented as research posters. We hope you will enjoy revisiting these areas of research and hearing about their next steps. After all, we all know research is a process.

Melissa Treinkman (she/her/hers)

My name is Melissa Treinkman and I am currently teaching voice at the University of Southern California and Loyola Marymount University. I conducted a survey study of 278 singers to investigate the use of focus of attention in voice training. The vast majority of motor learning studies investigating focus of attention have found that an external focus of attention (focusing on the effect of a movement) results in enhanced performance and learning, compared to an internal focus of attention (focusing on the body movement itself). [1,2] The objective of my research was to discern if the high incidence of internal focus of attention instruction that has been reported in the realm of athletics training is replicated in voice training. [3,4,5] The results of my study indicate that voice teachers use both external and internal attentional focus directives in the voice studio, with a preference for external focus (50.83% of the responses were categorized as external focus and 39.42% were categorized as internal focus). Given the robust body of literature supporting the use of external focus, it is noteworthy that external focus may be used more often than internal focus in voice training. More research investigating the effects of various foci of attention on performance and learning outcomes has very important implications for all who train the voice.

[1] Wulf G, Lewthwaite R. Optimizing Performance Through Intrinsic Motivation and Attention for Learning: The OPTIMAL theory of motor learning. *Psychon Bull Rev.* 2016;23:1382–1414.

[2] Wulf G. Attentional focus and motor learning: A review of 15 years. *Int Rev Sport Exerc Psychol.* 2013;6:77–104.

[3] Atkins R. Effects of focus of attention on tone production in trained singers. *J Res Music Educ.* 2017;64:421–434.

[4] Mornell A, Wulf, G. Adopting an External Focus of Attention Enhances Musical Performance. *J Res Music Educ.* 2019;66:375-391.

[5] Yamada M, Diekfuss JA, Raisbeck, LD. Motor Behavior Literature Fails to Translate: A Preliminary Investigation into Coaching and Focus of Attention in Recreational Distance Runners. *Int J Exerc Sci.* 2020;13:789-801.

Kristen Murdaugh (she/her/hers), Master of Music (MM), PhD Candidate (PhDc)

Hello PAVA members! I'm Kristen Murdaugh, born and raised in South Carolina, USA, transplanted to Boston, and now transplanted to Vienna, Austria, where I'm completing my PhD in voice science at the University for Music and Performing Arts Vienna, working as a pre-doc assistant for the University Mozarteum Salzburg, running a private voice studio, and continuing to sing whenever possible. My PhD research is focused on examining correlations between the acoustical and physiological aspects of chiaroscuro – the balance of bright/light (chiaro) and dark (scuro) in a sung tone, described by Richard Miller as the “cultivated artistic sound of the highly trained professional singing voice.” [1] This four-part study aims to investigate what exactly is being altered or modified physiologically to create chiaroscuro as a Gestalt principle as well as chiaro and scuro individually, and where exactly these tone qualities exist within the spectrum of the radiated sound wave, with an end goal of establishing an understanding as to the physiological/muscular maneuvers singers need to perform in order to strengthen or diminish the percept of chiaroscuro in their voice, adding crucial – and currently missing – information to the emerging field of evidence-based voice pedagogy. Currently, the first-part of the study – a perceptual experiment in which 12 experienced voice pedagogues rated the effect of four sound modification classes (overall sound level, global frequency shifts of formant frequencies, spectral slope shifts, and singer's formant cluster level) via their perception of chiaroscuro as a Gestalt principle (task 1) and chiaro and scuro individually (task 2) within each presented sound sample – has been completed with results showing that perceptual ratings for task 1 and task 2 varied drastically from participant to participant, with correlations and trends in the data being largely indeterminable, with the exception of global frequency shifts of formant frequencies for both tasks and negative spectral slope shifts for task 1.

Smaller global frequency shifts of formant frequencies, essentially mimicking a longer vocal tract and more closely spaced formants, were rated by participants to correlate to more perceived scuro and somewhat to more perceived chiaroscuro; whereas larger global frequency shifts of formant frequencies, essentially mimicking a shorter vocal tract and less closely spaced formants, were rated to correlate to more perceived chiaro. Negative spectral slope shifts, meaning a less abrupt roll off of energy in the harmonics in the frequency domain of the sample, were rated to correlate somewhat to more perceived chiaroscuro. It can be theorized, within the context of the limitations of this pilot study and its data set, that singing voice pedagogues have drastically varying perceptual definitions of chiaro, scuro, and chiaroscuro as a whole, highlighting the importance of further chiaroscuro related research. To learn more about the first-part of the study, I invite you to watch the presentation given at this year's PAVA Symposium, and if you are interested in discussing the research and its next steps further, please do not hesitate to contact me at kristen.murdaugh@gmail.com.

[1] Richard Miller. "Transcripts of the Eleventh Symposium: Care of the Professional Voice". New York: The Voice Foundation Annual Symposium, 1983.

Marcelo Saldías (he/him/his) SLP PhD Student (Doctoral Program in Vocology, Tampere University, Finland)

Aerodynamic balance training: a semi-occluded vocal tract exercises-based experience. Breath support is a controversial concept. [1,2,3] In general terms, breath support has been related to an “optimal” increase and management of the subglottic pressure due to the abdominal and rib cage muscles activation. [1] Herbst (2017), has resumed the discussion, proposing a physiological model of “support” has been made, in which the three main subsystems of voice production interact. Hence, support would no longer be limited to the activity of the breathing system exclusively. Semi-occluded vocal tract exercises (SOVTEs) are widely used in the voice pedagogy field to balance breathing, phonation, and resonance for singing. [4] Since SOVTEs are related to subglottic pressure increase (due to the aerodynamic resistance they generate), [5,6,7] breath support should be considered as an interactive phenomenon to promote a balanced voice production during the practice of SOVTEs. Then, an optimal aerodynamic force for singing would be possible to achieve, matching the vocal needs of the singers. To date, the research on breath support is diverse, including several training exercises and scientific perspectives to study this phenomenon. However, there are no studies that have addressed the effect of breath support training in voice production from an interactive perspective. Hence, we are carrying on a study on breath support techniques (including SOVTEs) with CCM singers to understand the aerodynamic balance and vocal economy that these types of exercises generate. At the 2021 Virtually PAVA Symposium, I presented a proposal on how to work with SOVTEs considering some strategies that might contribute to aerodynamic balance for CCM singers.

- [1] Desjardins, M. & Bonilha, H.S. (2020). The impact of respiratory exercises on voice outcomes: A systematic review of literature. *Journal of Voice*, 34(4), 648.E1-648.E39. doi: 10.1016/j.jvoice.2019.01.011
- [2] Herbst, C.T. (2017). A review of singing voice subsystem interactions-toward an extended physiological model of "Support". *Journal of Voice*, 31(2), 249.e13-249. e19. doi: 10.1016/j.jvoice.2016.07.019
- [3] Salomoni, S., van den Hoorn, W., & Hodges, P. (2016). Breathing and singing: objective characterization of breathing patterns in classical singers. *PLoS One*, 11(5), e0155084. doi:10.1371/ journal.pone.0155084
- [4] Bele, I.V. (2005). Artificially lengthened and constricted vocal tract in vocal training methods. *Logopedics Phoniatrics Vocology*, 30(1), 34-40. doi: 10.1080/14015430510006677
- [5] Amarante Andrade, P., Wistbacka, G., Larsson, H., Södersten, M., Hammarberg, B., Simberg, S., Švec, J.G, & Granqvist, S. (2016). The Flow and Pressure Relationships in Different Tubes Commonly Used for Semi-occluded Vocal Tract Exercises. *Journal of Voice*, 30(1), 36–41. doi:10.1016/j.jvoice.2015.02.004
- [6] Maxfield, L., Titze, I., Hunter, E., & Kapsner-Smith, M. (2015). Intraoral pressures produced by thirteen semi-occluded vocal tract gestures. *Logopedics Phoniatrics Vocology*, 40(2), 86-92. doi:10.3109/14015439.2014.913074
- [7] Titze, I.R., Laukkanen, A.M., Finnegan, E.M., & Jaiswal, S. (2002). Raising lung pressure and pitch in vocal warm-ups: the use of flow-resistant straws. *Journal of Singing*, 58, 329-338.

Invitation to Submit for Future InFormant Issues

The PAVA Communications Director and Committee would like to formally extend an invitation to our membership for future InFormant participation. If you have an area of research, or “hands on” issue or idea to share, please reach out to us using this form so that we may consider your contribution for future issues.

2021 Virtually PAVA Symposium Feedback

The Symposium Committee is hard at work planning next year's symposium, and we need your help! Please help us to understand what modality and dates work best for our community.

We invite previous symposium attendees and all PAVA members (even if you did not attend the symposium) to offer feedback to help us plan for next year by taking the survey found [here](#).

Getting Personal

To learn more about our cross-disciplinary interests, InFormant editors will be interviewing various PAVA members so we can all learn a little more about the diverse fascinations housed in our organization. This past September, Paul Patinka had the honor of interviewing Vanne Merino, who dreams of building an open and accessible institute for voice care and growth in Mexico. Condensed answers from the conversation are below, and a full video and transcript are on our website [here](#).

1) Can you tell us a little about some projects you are currently working on or recently finished?

I have two primary projects that I am working on. One has to do with formants and acoustics, and how they work in the Spanish language. Because, in Spanish, we do have these vowel modifications, so I'm developing exercises vocalizes that suits the necessity of not making vowel modifications for Spanish lyrics and try to adapt the lyrics and the melodies of Mexican songs through vocalizations that can help the singer to achieve the same acoustic and resonance results. The second is a book that I hope to finish this year about voice pedagogy in Spanish because we don't have very much information in Spanish. Everything is in English because, well, all the research is in American institutes, universities, and that stuff.

2) What about vocalization fascinates or inspires you the most?

It's a very wide answer. I think the first important and challenging scenario that I found, it's those students that all their life told them, you can't sing. And they have 34 years with this knowledge that "I can't sing, I can't sing" and with one exercise, "oh, I can do that, oh, I can shape that, oh, I didn't know I have flageolet, I didn't know I can do whistle voice" with one exercise and through vocalizations.

3) What excites you about being a member of PAVA? How does PAVA fit into your overall career trajectory or goals?

Well, first of all, the possibility of meeting all the vocology fathers. And to learn from them and share with them, it's amazing. To be able to talk about my research in person, I had the opportunity to work with Verdolini Abbott prior in this year. She was doing this educational video of their voice therapy and the chance to know her and to see. How she's in person, how she's devoted to her work, and it's really a dream come true.

4) Do you have a mentor in your field whose work you look up to? Who is it and why?

I have a lot. The one person that was a pillar of all the things that are developing in my career right now, it's Kari Ragan. I had the opportunity to take practicum for voice teachers. She opened my eyes to this new world and showed that it's easy to connect with all these people, but we have this fear. I don't know, maybe we are intimidated. She gave me all the things I needed in that moment of my career. Verdolini Abbot was a lovely person, I learned so much about her. Kathryn Green is another great teacher and mentor. And of course, David Mayer, I would love to go to his lab and make a laryngeal model with him.

5) If you had unlimited resources and a year of vacation, what is something fun you would like to do with that time?

My wife says that I'm a workaholic nerd. I agree. But if I had unlimited resources and a sabbatical year, I would put all my effort to build a center, a facility where we can combine a medical section with laryngologists and SLP's with the certifications for voice teachers to do classes not quite as a university, but a center when we're all together. And if we're talking about a perfect scenario where money isn't important, everybody has this income, payment, regular payments. You need to come to get a strobe? You can get it. And you need voice therapy? You need to do it. You need voice lessons here. You can do it then. It would be great to have all the instruments and all the personnel needed for these kinds of facilities.

Opinion

The InFormant team welcomes opinion pieces from our membership. These pieces do not reflect the opinions of the Board of Directors or PAVA as an organization, but serve as a platform for members to share their ideas about vocology. If you have something you would like to share in InFormant, please contact the Communications Director at communications@pavavocology.org for more information.

An Appeal For Political Neutrality In PAVA

Ingo R. Titze, USA; Marco Guzman, Chile; Mara Behlau, Brazil; Carlos Manzano, Mexico; Ana Flavia Zuim, USA and Brazil; Aramat Arnheim, Israel

Vocalizing, texting, and body language are our primary modes of communication. We share thoughts, feelings, instructions, and many items of information on a daily basis. Obviously, this includes our likes and dislikes, and often our deepest passions. Some of these likes and dislikes have political undertones in today's societal structures. To gain acceptance and support from voters, political parties use social and ecological issues to structure their platforms. These include race, gender, sex, climate change, religion, globalism, ethnicity, freedom of speech, rights of self-protection, equity across population sectors, and many other social and economic aspirations. Unfortunately, while individuals in any society can come to reasonable agreements and compromises on many of these issues, political parties generally do not; they seek power and control with uncompromised ideologies.

PAVA is a scientific and practice-oriented association with colleagues from all over the world that have different perspectives in life, with social and cultural unique problems. As members of the Pan American Vocology Association, we are determined to provide everyone who wishes to use their voice to express their views and opinions in the best way possible. We are professionally committed to helping people learn how to speak, sing, and shout, but not what to speak, sing, and shout. Some may argue that the two are not separable, that some speeches and songs are so emotionally and contextually loaded that you cannot teach the how apart from the what. Professional actors and singers would disagree with that statement. They can portray a villain without being one, or advocate on stage the exact opposite of what they actually believe.

We believe that socio-political activism can destroy PAVA. Given that we are an international organization, many social and political issues are not common across countries. We ask members to pay dues and we ask officers to donate their time. We cannot expect them to feel enthusiastic if time and money is spent on issues that are contrary to their views. In the 2017 revised document on Mission, Goals, Values, and Strategic Plan, there are three statements that address PAVA's position:

PAVA encourages diversity in the exploration of human, animal, and simulated vocalization, including various art forms, occupations, cultures, genders, age groups, and races.

PAVA promotes balance in its leadership (President and Board of Directors) across disciplines and geographic locations.

PAVA is deeply involved in social interaction and humanity, but remains neutral in socio-political issues.

We are aware that struggles for higher levels of humanity around the globe are often intertwined with political struggles. We are also aware that the degree to which humanity is emphasized by political parties may not be uniform. However, in the spirit of diversity and respect for minority points of view, it is wise and expedient for PAVA not to take sides on socio-political issues. There are many organizations explicitly designed for activism, but PAVA was not established for this purpose. Therefore, in order for PAVA to advance without borders or barriers, political neutrality is of utmost importance. Our organization should not focus on activities carried out exclusively in the United States. For wider application of good voice use, our energies can be spent on global issues in vocalization.

A voice from the Middle East (one of our authors) offers the opinion that any organization striving for acceptance and mutual learning should maintain political neutrality. It is so easy to limit our minds due to cultural and social differences based on our history or past and what might seem right or wrong. As a Jewish citizen in Israel I have learned to put humanity and listening first, before any political side or argument. The Middle East is dealing with so many conflicts based on religion, faith, emotional trauma and things that cannot be judged, or understood easily. The same goes for interests that are beyond our control, at the commercial or government level or at a personal level. There is never one simple answer or logic in the complexity that surrounds us. We can choose to be friends and teach new ideas or surrender to the simplicity of good versus bad - which usually forces us to choose a side. I see it in my everyday life, it can be due to my local situation, but it actually goes way beyond the boundaries of the Middle East. Compromise, listening, education, accepting that there is not one truth seems to be key for any collaboration. We just founded the Israeli Voice association hoping to have all cultures, genders, religions kept as a personal choice that never interferes with the mutual learning in the voice community. Therefore, politics, in my opinion, though it is found everywhere, should not be a focus of an organization and especially within a community. Nothing should encourage us to choose sides. Choosing sides is similar to building walls. It should be our goal to accept that there are many points of view and we respect all of them, with no ego or principles that block our ability to communicate with respect and support.

We conclude the following. Whereas PAVA, despite its name being PAN AMERICAN, has members and associates from countries beyond the American Continents; and whereas the world is very complex and it isn't easy to understand the diverse realities of our colleagues; and whereas not even in our own countries can we understand the different regional realities, we reason that socio-political neutrality is an essential strategy to keep our group united for common purposes. Considering that PAVA has the development and dissemination of science and practice of vocalization as its primary mission, with diverse perspectives, academic backgrounds, and professional experiences, we recommend that the third statement listed above be made more visible to our membership, perhaps with the following clarification:

"PAVA is deeply involved in social interaction and humanity, but remains neutral in socio-political issues. PAVA does not engage in initiatives that are strongly promoted by one political party, but strongly opposed by another political party, in any country. PAVA also does not engage in initiatives that are not politically consistent across countries served by PAVA".

We rely on the wisdom of members, the Board of Directors, and the Advisory Board to suggest how the concept of "socio-political-neutrality" might be addressed, evaluated, or promoted in PAVA. An easily visible statement on our Website would be an obvious first step. The issue could also be addressed by the Ethics Committee. Another possibility is a voluntary statement by presenters at meetings and conferences regarding political neutrality, similar to conflict of interest statements. Finally, if money is spent or promotions are made on behalf of PAVA to individuals or other organizations, any political activism of these individuals or organizations should be disclosed to PAVA members.