

Milena Petrović

THE IMPORTANCE OF VOWELS IN MUSIC EDUCATION*

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The Importance of Vowels in Music Education is an interdisciplinary monograph by Dr. Milena Petrović, associate professor in the Faculty of Music at the University of Arts, Belgrade, one of the few experts in the region interlinking studies of music and language. The book was originally published in 2017 by the International Music Education Research Centre (iMerc) of the Department of Culture, Communication and Media and Institute of Education at University College London. This was an admirable achievement, since the institution in question is one of the main academic venues pursuing studies of music education in the world, co-directed by Professor Graham Welch and Dr. Evangelos Himonides, leading authorities in music education and well-known names in the world of music and language cognition in general.

The book contains six chapters providing an introduction to the study of vowels in singing. Given the author's academic background, the text assumes a primarily musicological perspective, yet it manages to provide a good balance between the approaches in linguistics and music cognition. This is always a commendable feat in interdisciplinary projects. One notices this fine equilibrium immediately in chapter one, where acoustic features of vowels are addressed from a developmental standpoint. Due consideration is given to phonetic problems, such as the relative salience of particular formants for the perception of vowels, but also to primarily "musical" acoustic properties, such as the presence of the full overtone series, which arguably makes vowels the most musical of speech sounds. Timbre, articulation and duration are specifically considered as factors influencing vowel perception.

The second chapter swerves from formal phonetic and musico-structural problems to the domain which the author calls "phonosemantics". It starts with the hypothesis, which is originally Darwinian and thus well-known, though sometimes also contested in the music-and-language cognition literature, that speech originated from musicality, i.e. from

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proto-affective vocalizations in the dawn of civilization. The author uses this thesis to speculate on connections between “vowel phonology” and semantics, in the vein of modern studies in cognitive linguistics, in which form is always paired with (some level of) meaning. The position M. Petrović takes seems supportive of what some authors have labeled the “onomatopoeic” and, less controversially, “image-schematic” properties of music, in the sense that phonemes themselves can carry some signification, as there is a “natural correspondence” between the acoustic properties of vowels and percepts from the world of experience. Thus, in relation to some well known phenomena in cognitive psychology, such as the Bouba-Kiki effect, the author contends, for instance, that the presence of /i/ tends to refer to a small entity, while the prevalence of /o/ denotes larger objects. This is likely due to embodied reasons, such as the size of the opening in the mouth cavity during the production of these sounds.

Chapter three further speculates on the development of the first vowels, yet from a historical, rather than developmental perspective. The central claim is that these speech sounds played a decisive role in language evolution, but also likely in the evolution of singing as we know it today. This segment of the book, therefore, draws parallels between language typology, physiological constraints, facial and brain anatomy, and genetic factors. An interesting connection is made with genetic hypotheses in linguistics, namely in the specification that the well-known FOXP2 gene, much quoted in the literature as responsible for aspects of grammatical development, may play an important part in song-acquisition in birds. Drawing on these insights, the author then puts forward a hypothesis on the correlation between the number of vowels in a language and the number of discrete tones in the typical musical scale used by speakers of that language.

Chapter four, entitled “*Vowel systems and musical scales and intervals*” discusses symmetry and roundness as potential phonological universals, while at the same time it introduces the affinity towards a tonal center and the presence of intervals as most likely music universals. Thus, in Serbian, syllables typically carry stress on vowels, which can be musically easily transposed. In music education, pitches are often fixated by correlating frequencies with words beginning with appropriate syllables in the solmization system, as is the case in the famous hymn *Ut queant laxis* by Guido d’Arezzo. The author however again takes the phonosemantic perspective to broaden this thesis, speculating that the pitch (frequency) correlates not only with the particular vowel, but also with the timbre and corresponding emotion it evokes.

Precisely, chapter five, “*Vowels and absolute pitch*” discusses the importance of frequencies in speech and music. M. Petrović provides an overview of theories on the origins of absolute pitch, taking a position that the existence of tone languages is major evidence that music and language share an evolutionary line, since, as it is well known, in these languages pitches determine meanings by and large. In the aforementioned chapter the author also discusses the musically always relevant question of the frequency of the pitch standard (Kammerton) as against a person’s inborn or acquired absolute pitch. She also stresses the important correlation between the number of pitches in the overtone series, properties of vowels, absolute pitch and emotions in music.

The final chapter, “*Vowels and emotions*” introduces an interesting idea that vowels are the “minimum units of emotion” in speech. The likely reason behind the importance of vowels for emotions, the author proposes, lies in the fact that facial muscles are responsible for the articulation of these vowels. The level of tension of these muscles, in turn, reflects particular emotional states, and therefrom the connection. The author also

discusses the possibility that vowels reflect particular emotions since they carry stress. Finally, she wonders whether stressed syllables, which to an extent always carry (proto-) musical properties, such as duration, intonation, tempo, or intensity, carry some meaning. Finally, less controversial topics related to music and emotion – such as theses that pitch *sequencing* (intervallic movement), harmonic progressions and melodic contours induce musical affect – are also discussed.

This very interesting monograph provides an excellent introduction to studying vowels in music education, enriching the well-known data from the literature with a number of the author's (sometimes daring, but certainly thought-provoking) original proposals. As such, it will have a "double" audience: on the one hand, it may be useful to people of diverse backgrounds only partly interested in music, such as linguists pursuing theoretical problems in phonology or semantics, philosophers of mind, cognitive psychologists or literary theorists; on the other, it should serve as fine inspiration for music psychologists, musicologists, music theorists, composers, and finally practitioners of music pedagogy. The author offers an admirable breadth of scope, quotes relevant literature, presents ideas using a very clear style, in a successful effort to attract the interest of readers from various backgrounds. As one of very few relevant pieces in our part of the world in the small discipline of "musicolinguistics", Prof. Petrović's monograph represents valuable work that will certainly find its way to readers.