

Introduction to ACT 17.1

Brent C. Talbot
Gettysburg College

New technologies change our knowledge and perception of our world. They alter the very ways in which we interact, communicate, and make meaning of our world—transforming the essence of what we mean by *knowledge, truth, and justice*. From the stone blade to the combine harvester, the printing press to the internet, the gramophone to the mp3, or the erhu to the iPad, technologies evolve within socio-cultural contexts as responses to shifting needs and/or encounters among humans and their surrounding environments. They alter deeply embedded habits of mind that in turn give way to creating culture and helping communities define and make sense of what the world is—how to perceive the order of things, how to predict and anticipate, how to consider what is necessary, what is *real*.

In his book *Technopoly*, Neil Postman (1993) uses the “seemingly harmless practice” of assigning grades to illustrate how technology creates new conceptions of what is real and, in the process, how technology undermines older conceptions of reality (12). Postman reminds us that the first instance of grading students’ papers occurred at Cambridge University in 1792 at the suggestion of a tutor named William Farish who postulated that if a quantitative value could be assigned to the quality of a thought, then a number could also be given to the “qualities of mercy, love, hate, beauty, creativity, intelligence, even sanity itself” (13). This became a major step, among others, towards constructing a mathematical concept of reality;

and it has led us in education and in many other fields to believe that without numbers we cannot construct, acquire, express, or measure knowledge.

Assigning numerical grades has become such common practice in our lives as teachers that many of us may find it difficult to imagine the practice of grading to be an actual tool or technology. Postman points out the peculiarity of the entire endeavor and how it has changed our worldview:

When we use such a technology to judge someone's behavior, we have done something peculiar . . . If it makes sense to us, that is because our minds have been conditioned by the technology of numbers so that we see the world differently than [those of the past]. Our understanding of what is real is different. Which is another way of saying that embedded in every tool is an ideological bias, a predisposition to construct the world as one thing rather than another, to value one thing over another, to amplify one sense or skill or attitude more loudly than another. (1993, 13)

This is what Marx meant when he said:

Technology discloses man's mode of dealing with nature, the process of production by which he sustains his life and thereby also lays bare the mode of formation of his social relations (*Capital* Vol.1, Ch. 15, footnote 4).

Or to use an old adage, "To a man with a hammer, everything looks like a nail." Something easily extended to the technology that has shaped the field of music education: To a music teacher with a musical score, every student looks like a Western-notation reading musician. Begging the pressing questions of our time: Who is being left out of our musical imaginary? Whose interests are being advanced; whose are not?

As Postman (1993) warns, such prejudices are not always apparent at the start of a technology's journey, "which is why no one can safely conspire to be a winner in technological change" (14). He uses the invention of the mechanical clock to illustrate this point, explaining to the reader that the mechanical clock was developed in the twelfth and thirteenth centuries by Benedictine monks to provide regularity to the routines of the monasteries. The bells of the monastery were rung to signal the canonical hours and the mechanical clock was the technology that provided precision to these rituals of devotion. What the monks and others did not recognize was that the clock, as Postman explains, "was a means not merely of keeping track of hours but also of synchronizing and controlling the actions of men" (14). In the fourteenth century, this technology moved out of the monastery

into the surrounding area, bringing a regularity to the life of the worker and merchant and ultimately contributing to the formation of standardized forms of production and the ideological foundations of capitalism. Who would have imagined whose interests and what world-view would ultimately be advanced by an invention originally aimed at assisting devotional practices? We do not have to look far to ask similar questions about technology in our current context. Who would have imagined whose interests and what world-view would ultimately be advanced by the invention of Facebook and its use in our elections? ... of the gun and school shootings? ... of correctional facilities and the new Jim Crow? ... of ...?

As music educators, we have no choice but to be in the world with our students. To imagine making music without technology is difficult. Everything in our music making and learning environment is a form of technology, from the instruments to the music stand, the chairs, baton, notation, acoustic paneling, risers, scores, the smartboard, iPads, keyboards, stereo equipment, even the concept of equal temperament tuning. Music is technology and it shapes our very being as musician, learner, and teacher. Thus, it is vital as educators that we continually question the ways in which technologies impact us as beings in the world and the ways they may shape or subjugate us as learner, teacher, and performer. As Roger Mantie (2017) charges:

To imagine ‘technology-free’ music making is to fundamentally misunderstand that we are unavoidably technological beings. Homo faber brought forth Homo technologicus in very short order. Our professional and ethical obligations must thus involve transcending naïve efforts aimed at mere competence with technology and music technology and should strive to engender critical engagement that sees students continually evaluating if and how various technologies can help them live richer and more rewarding lives in and through music... Just because something is possible does not make it desirable or appropriate. Conversely, failing to provide our students with critical tools that might allow them to better negotiate different the modalities of musicality made possible by various technologies would seem to make us professionally negligent as educators. (26)

Scholarship on technology and music education is maturing. The *Journal of Music, Technology and Education* now sustains three to four issues per year. The first and second MENC Handbooks (Colwell 1992, Colwell and Richardson 2002) include small sections on technology and the *Oxford Handbook of Music Education* (McPherson and Welch 2012) presents two related parts focusing on technology and new media. The “Musicianship” series from GIA Publications includes sections on the application and use of technology for band, orchestra, choir, and

general music. Two newer compilations: the *Routledge Companion to Music, Technology, and Education* (King, Himonides, and Ruthmann 2017) covers the applications of music, technology, and education across the broad landscape of music performance, creation, and research; while the *Oxford Handbook of Technology and Music Education* (Ruthmann and Mantie 2017) critically situates technology in relation to music education from a variety of perspectives: historical, philosophical, sociocultural, pedagogical, commercial, musical, economic, and policy. And there is an abundance of academic scholarship on technology and music education found among professional journals in music education; however, we must set this scholarship against the influence of commercial interests ever present in our field.

In order to tease out some of the tensions and discourses surrounding technology and music education, I conceptualized an issue that sought to critically situate technology in relation to music education from philosophical, sociocultural, pedagogical perspectives—soliciting essays from a diversity of authors based on their potential to contribute in ways less likely to be assembled in other volumes on technology. I began by inviting authors to respond in some way to Action Ideal VIII by the MayDay Group:

VIII. We commit to understanding the wide range of possibilities and the limitations that technology and media offer music and music learning.

Technologically mediated musical experiences are eclipsing live face-to-face interactive musicing as the means by which music students directly engage with music in daily life. The widespread use and remarkable capabilities of technology and media devices are affecting mandates made by governments, arts organizations, and educators about how music instruction is conceptualized, defined, and delivered. Given the global scope of this issue, we commit to keeping a critical and hopeful eye on both the emerging benefits and the potential harm stemming from the pervasive role of and access to media and technology platforms in 21st century global-industrial culture.

- a. Given the pervasive use of digital technology and communication, how do we integrate alternatives; for example, acoustic, live, hands-on, face-to-face, and culturally situated interactive music making, as an essential component of human cooperation and community?
- b. How can we ensure that the ease of access to video clips and sound bites do not replace the more complex and challenging encounters with living culture-bearers found in our communities?

- c. How can we use contemporary media and technology to empower people to assert their own local and personal identities, and to critically resist the onslaught of global marketing and branding aimed at their particular demographic?
- d. How can we further the development of music-related open educational resources? What innovative and locally sustainable initiatives can we develop that would allow greater musical collaboration across cultural and political boundaries at the community level without undue reliance on corporate interests?

What emerged was a diversity of perspectives on technology and music education in terms of geographical location (Canada, Kenya, the United Kingdom, and the United States of America), gender (four of the five authors are female), and theory (post-digital, technical rationalization, digilogue, indigenous media, and bi-contextuality). The overall aim is to provide a place to stimulate and present contrasting perspectives and conversational voices rather than reinforce traditional narratives and prevailing discourses.

In this Issue

Paul Louth begins by addressing behaviorism in music education and its possible connections to a kind of technicist thinking, first described by Herbert Marcuse, that ritualizes concepts and reduces them to a series of brute operations or behaviors. Labeled *technological rationalization* by early critical theorists, Louth argues that the mindset has potentially negative repercussions for education in general and music education specifically. He discusses the paradox of how we must grapple with increasing pressure to move toward a collapsed view of music's various and conflicting aesthetic and artistic meanings in our constant quest for curricular legitimacy in this era of objectives-based instruction.

Recognizing the legitimacy of new and varied forms of musicianship, and acknowledging the ways in which our subject area continues to grow in its range of practices and necessary literacies, **Leah Kardos** argues that strategies can be developed to support a "music student experience that is cohesive, inclusive, hybridized, meaningful and useful." In her essay, Kardos shares some observations and reflections from her experiences teaching undergraduate music and

music technology degrees in the UK. She introduces readers to the term *post-digital* and puts forth the idea that *postdigital* music aesthetics reflect an emergent sensibility in contemporary music cultures that represents an opportunity for music educators to reconfigure and strengthen their pedagogical approaches.

Ann Clements explores multiple definitions of the term *postdigital* from the disciplines of music, visual art and design, architecture, business, marketing, media and film studies, and education. She suggests that the use of the term *postdigital* draws attention to the changing relationship between digital technology and human social and artistic practices, reflecting a paradigm shift in these fields. Clements argues that this shift has implications for the future practice of K-12 music education including the impact of digital cleanliness and ease of production, the growing hybridity of digital and traditional music making, and the influence of digital technology on human artistic practice.

Emily Achieng' Akuno introduces us to the term *digilogue* which describes a merger of modern electronic media and technology with indigenous, community-based resources and technology. She explains how Kenya's children experience two forms of technology and media as they access and interact with information: The indigenous technology and media that are derived from their cultural surrounding and modern electronic technology and media that are readily available thanks to social platforms and media of mass communication. Nowhere is this mix of indigenous and modern technology more evident than in music practice. Diverse music genres integrate elements of indigenous music practices with modern resources and processes. This merger of technologies is also evident in music teaching and learning practices. Akuno's article examines the presence and types of technology, its use in music practice, and its application for music teaching and learning. It calls for the integration of relevant, accessible and creativity-enhancing technology in teaching and learning so that music education can lead to the intellectual development of learners.

Janice Waldron's essay rounds out the issue with some critical reflections related to Action Ideal VIII of the MayDay Group. This includes critiquing beliefs embedded in the questions of the Action Ideal that no longer hold true and

are based on a presumptive fallacy. She discusses this in relation to the impact that corporate power on the Web has and continues to have on music making, and by extension, music learning in the 21st century. Waldron charges that because music educators play a key role in shaping students' future musical lives and/or careers, we have an obligation to help students develop a critical awareness of how corporate power impacts the musical choices and decisions we make both now and in the future.

In Closing

While it is likely that readers will select articles from this issue that are most relevant to their own scholarship, the issue is set up to be read in its entirety – with each paper flowing nicely into the next. My hope is that you will enjoy reading this issue as much as I have enjoyed working on putting it together with the authors. The collective perspectives represented may help us all understand a bit better how technologies change our knowledge and perception of the world and the various implications this has on music education.

About the Author

Brent C. Talbot is an associate professor and coordinator of music education at the Sunderman Conservatory of Music at Gettysburg College. He is the artistic director of the Gettysburg Children's Choir and the founding director of Gamelan Gita Semara, an instrumental ensemble that performs concerts of contemporary and traditional music from Bali, Indonesia. Brent is the author of *Gending Rare: Children's Songs and Games from Bali* (GIA, 2017) and editor of *Marginalized Voices in Music Education* (Routledge, 2018). His research examines power, discourse, and issues of justice in varied settings for music learning around the globe. Brent has served as associate editor of *Action, Criticism and Theory for Music Education* since 2014 and is the colloquium coordinator for the *MayDay Group*. For more information go to his website www.brentctalbot.com.

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