A Music Educator's Guide to Saving the Planet

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by Daniel J. Shevock and Vincent C. Bates

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Abstract: As music educators, we always teach much more than the musical concepts and skills outlined in music curriculum standards. In this article, we discuss how music teachers can address what we believe is the most pressing issue of our time: environmental degradation. We first outline some specifics of ecological literacy in music education. This will include discussion of some songs that could form the center of a music curriculum for increasing ecological literacy. Next, we discuss cultivating ecological literacy using local musical practices and sounds of nature. Finally, we share an example of soundscape pedagogy aimed at increasing awareness of and propensities to care for the natural environment and ecological diversity. These components, singing, songwriting, and soundscape composition, are recommended as part of an overall creative pedagogical approach.

Keywords: general music, teaching issues, ecology, environmental issues, ecomusicology, soundscape studies

Rainful rain, sun and rain,
Find my way in nature's chain;
Tune my body and my brain
To the music from the land.
—from "The Garden Song"
by David Mallett, 1975

The beloved piece "The Garden Song"[1] provides a space for conversations about the place and impact of human actions relative to the natural environment. What is meant by "nature's chain," how can one "tune" their body or brain, and what might the songwriter be referring to as "the music from the land"? By singing and playing songs such as this with our students, we can experience together the sonic, cultural, and social aspects of the music and also much more: We can open spaces for students to encounter and explore what it means

Photo of Daniel J. Shevock and his son Penny, taken by his wife Mercedes A. Boggs.

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Photo of Vincent C. Bates.

to live in harmony with local places, developing skills and dispositions they may need throughout their lives in facing an increasing number of ecological crises.[2]

As music educators, we always teach much more than the musical concepts and skills outlined in music curriculum standards. Our general demeanor, interactions with students, repertoire choices, instructional approaches, and classroom organization all send enduring messages about what we esteem and how we see the world. Whether intentional or not, music education plays an important role in the general education of students.

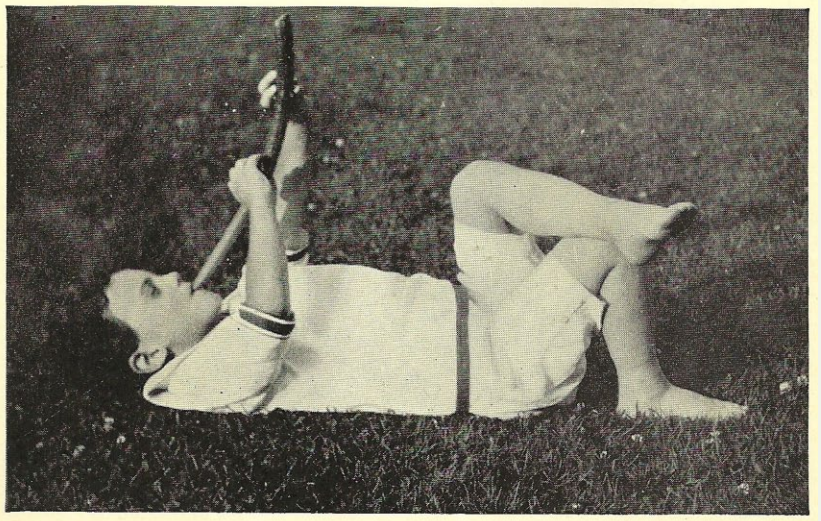
Music teachers who are socially and environmentally conscious, given ample reflection and planning, can positively influence thinking about some of the world's most challenging dilemmas.[3] In this article, we discuss how music teachers might address what we believe is the most pressing issue of our time: environmental degradation. This belief is in harmony with a recent United Nations Environment Policy Statement, describing the year 2017 as "a tale of people and nature, like no other in our history . . . a story about just how much damage and how much good humanity can do for this planet and for each other, depending on the political, professional and personal choices that we make."[4]

This idea of teaching for an interconnected understanding of music and nature might seem novel to some teachers, but there *is* historical precedent. In particular, Satis Coleman (1878–1961), a well-known music educator during the early 1900s, used "nature's musics" extensively[5] (see Figure 1).[6] Her music education philosophy reflected other educational approaches of the time, such as Anna Botsford Comstock's Nature Study Movement[7] and the work of Maria Montessori, who wrote, "There must be provision for the child to have contact with nature; to understand and appreciate the order, the harmony and the beauty of nature."[8] Coleman's approach included recognizing that birds teach songs to their young,[9] a practice reinforced by more recent scientific research. Birdsongs served as inspiration for her young students' improvisations

FIGURE 1

Children Playing Outside on Homemade Instruments

16. Triton-Shell Trumpeters



17. A Lazy Oboe Player

and compositions on homemade instruments, often made of materials found in nature.[10]

We feel that the revival of a nature-infused, interdisciplinary approach to teaching and learning music outlined in this article is more urgent today than it was nearly a century ago.[11] We considered placing our title, "A Music Educator's Guide to Saving the Planet," in quotation marks (tongue-in-cheek) because we are well aware of the problems inherent in privileged organisms working to "save" others. Plus, one music teacher or even a large group of music teachers will not be able to single-handedly save the planet. However, the title also contains a challenge: We think we ought to do something, and we certainly can do much more than we are doing now.

Ecological Literacy

In this article, *ecology* means simply what most people, including conservationist Rachel Carson and countless other scientists, understand the word to mean: the web of life[12]—referring to both human and nonhuman life. Ecological literacy has been defined as "reflection and action for positive transformation of humanity in regard to the ecological crises we face."[13] Sharing both a local and a global focus, an ecologically literate citizenry lives well in local places and understands global issues. For optimal impact in countering ecological devastation, ecological literacy should be embedded throughout the school curriculum. Environmentalist David W. Orr explains:

> By failing to include ecological perspectives in any number of subjects, students are taught that ecology is unimportant for history, politics, economics, society, and so forth. And through television [and a whole new array of media] they learn that the earth is theirs for the taking. The result is a generation of ecological yahoos without a clue why the color of water in their rivers is related to their food supply, or why storms are becoming more severe as the planet warms. The same persons as adults will create businesses, vote, have families, and above all, consume.[14]

This necessarily includes music, which provides its own distinctive ways to understand and explore ecological issues. Because musicians have long been on the forefront of responding to ecological crises, there are many songs that can be and are currently being used in music classrooms to address eco-literacy, adapted for classroom use as appropriate. David Mallet's "Garden Song," for example, can draw attention to food-miles (how much oil is required to bring food to our plates), community building, and the spiritually uplifting nature of working the soil. Appropriate for the elementary general music classroom and more overt in its approach, Tom Chapin's "Good Garbage" discusses biodegradable trash: "bad garbage grows, and grows, and grows!" The Mother Goose Club (a preschool educational website: https://www.mothergooseclub.com/) song "Earth Is Our Home" can be used to discuss our place in the natural environment as our home. For secondary general music classrooms, Yusuf Islam's "Where Do the Children Play" can evoke conversations about construction, development, and fossil fuel use. Ziggy Marley's "Dragonfly" asks the bee and the dragonfly how they survive "with the environment going down the drain." Jamiroquai's "Emergency on Planet Earth" links environmental, class, and race issues: "And a little boy in a hungry land is just a picture in the news." An old satirical song by Tom Lehrer, "Pollution," uses humor to challenge air and water pollution. Similarly, in "Mercy, Mercy Me," Marvin Gaye asks us, "Where did all the blue skies go?" and draws our attention to mercury in fishes, radiation, and overpopulation. The "Songs for Standing Rock" series provides many appropriate songs, many composed by Native American artists, that can connect the classroom to a current environmental issue.[15] Also appropriate for the elementary classroom, Pete Seeger's classic "God Bless the Grass," available at Smithsonian Folkways (https://folkways.si.edu/) provides a metaphor for fighting against industrial development in small ways every day: "God bless the grass that's gentle and low. Its roots they are deep, and its will is to grow." Similarly, music education, which could be considered a "gentle and low" field, can help guide our society toward better ways of living. These songs are just the tip of the iceberg when it comes to songs that can be used in a music class. In addition to folk and popular songs, choral composers like Alberto Grau and Ēriks Ešenvalds and band composers like David Maslanka compose music rooted in ecological themes. Daniel has collected a more extensive list of music, research, and teaching ideas on his web page: https://eco-literate.com.

Songwriting provides yet another venue for fostering ecological literacy, especially when integrated with other curriculum areas. In fact, the process of creating original songs about nature, ecology, and sustainability naturally crosses over into other content areas such as science and social studies. Consequently, much can be gained through integrated collaborations between music teachers and other specialists or generalists working together to help students explore sustainability through song.[16] The songs that students write can include songs-that-teach—a traditional art form that involves matching curricular information to familiar melodies. One classic is the "Water Cycle Song," sung to the tune of "She'll Be Comin' 'Round the Mountain":

> Water travels in a cycle, yes it does (yes it does!)
>
> Water travels in a cycle, yes it does (yes it does!)
>
> It goes up as evaporation, forms clouds as condensation
>
> Then comes down as precipitation, yes it does (yes it does!)[17]

Furthermore, the process of collaboration and integration can in itself send a powerful message: Everything is connected in a cyclical manner—plants,

animals, people, soil. This brings to mind music education philosopher Estelle Jorgensen's discussion of the Gaia hypothesis as it relates to music education: "Among the various statements of this worldview, the Gaia hypothesis posits that all things on planet earth comprise part of an interconnected dynamic system in delicate balance, where the whole transcends the sum of its parts."[18] This includes interconnectedness between subjects in school, between school and outside-of-school contexts, and between human and nonhuman musics.

Finally, it is integral in fostering eco-literacy to allow students ample time for critical reflection and discussion. This type of reflexive thought and communication is an essential element in two of the four artistic processes outlined in the National Core Arts Standards—Responding and Connecting.[19] To address the entire core, then, music teachers must pose open-ended questions to encourage critical thought about a range of issues, which could easily include connections to the natural environment and sustainability. Such questions can lead students to recognize how diverse species and entities—birds, whales, trees, rivers—musick for their own reasons, fulfilling their own vital needs.[20] While we certainly cannot hear whale song with a whale's ear or with its more advanced limbic system (a mammal's emotional center), we can at least listen, humbly, in our own human way. In considerations such as these, music teachers might turn to the growing field of ecomusicology for further information, inspiration, and guidance.[21]

Music in Place

Throughout human history, families and communities have consistently and sustainably passed music from generation to generation without large social institutions and associations dedicated specifically to music education. The modern period of music education (since the early nineteenth century) has corresponded with (1) an unprecedented loss of many traditional cultures, including musical cultures;[22] (2) a mass de-commoning of the planet's physical and musical commons;[23] and (3) some of the worst ecological crises the Earth has ever faced. Aware that correlation does not mean causation, we still wonder in what ways music education might be complicit within an environmentally destructive consumer society and how music educators could resist—opening opportunities to work in more ecologically sustainable ways.

Shared musical practices have been passed on in local communities around the world to assert culturally specific ways of living in balance with natural ecologies cultivated intergenerationally for centuries and millennia, especially in non-Western, nonindustrialized cultures.[24] For instance, African studies professor Clemente Abrokwaa notes that in many traditional African musics, the natural environment influences "the development and use of musical instruments, dance forms, and song texts."[25] He shares an Ashanti song that shows the ecological connection of people and the environment and warns against foolish self-/environmental destruction:

> The wise one sees himself in the Earth.
>
> The wise one sees himself in the Sky above.
>
> The Wise one sees himself in the Air.
>
> The Wise one sees himself in the River.
>
> The Wise one sees himself in the Plant.
>
> The Wise one sees himself in the Animal.
>
> He plays with his great-great-grand children.
>
> The Fool sees himself in nothing, except himself.
>
> He goes to sleep early![26]

This deep level of eco-literacy, reflected musically, can run counter to unreflective economic "development." American music education, in some instances, seems to have been caught up in development discourse: developing ever stronger rationales, curriculum standards and guides, professional credentials, "proven" methodologies, and a steady stream of empirical studies. Some may believe that it is a rather large jump to implicate music education in ecological degradation, but Venezuelan journalist Attilio Lafontant Di Niscia has done exactly that, noting the negative ecological impact music education markets can have on the global South through the felling of tonewoods for stringed instrument production.[27] The U.S. Environmental Protection Agency recommends using certified sustainably harvested wood, locally harvested wood, and recycled and reclaimed wood products whenever possible.[28] Rather than potentially being part of the ecological problem, music educators can join with other groups of people around the world who are working to counter such exploitation. Indian scholar and environmental activist Vandana Shiva has observed, "In contrast to viewing the planet as private property, movements are defending, on a local and global level, the planet as commons."[29] These are the high aims but ones we can realize.[30]

One possible solution was suggested by music educator Julia Eklund Koza, who pointed out that it doesn't have to cost much, if anything, to teach and learn music.[31] Nor do music teaching and learning require a lot of waste. We ask, "In what ways do ordinary, everyday people choose to engage in music?" At an elementary level, we can draw from a vast repertoire of traditional and popular songs and singing games, available for free online, in library books, and in people's memories. At secondary levels, we might focus on popular music, lead sheets and tablature, songwriting, and social instruments such as the guitar and ukulele—all of which have a greater propensity for lifelong engagement than many of our large ensemble and staff notation–based offerings. This also calls for renewed interest in music participation within homes and local communities, reintegrating music education

within common, traditional, everyday contexts. As music teachers adapt their practices to local needs, individual music programs might become less standardized and more diverse, thereby enhancing possibilities for meeting the needs of more students now and long term. Finally, as philosopher Roger Scruton has noted, increased emphasis on and care for home and local communities can have significant positive impacts for the natural environments found there.[32]

Perhaps one of the greatest resources we have available to us is the natural soundscape.[33] Influences on composers from Beethoven to Emily Doolittle, nonhuman life and natural processes such as winds and waves provide life-sustaining and free musical sounds for experience and analysis. American composer Pauline Oliveros recognized her childhood soundscape was formative: "I grew up in a time when there existed a very rich and dense soundscape of insects, birds and animals in Houston Texas in the 1930s. . . . Now in the 21st century, that soundscape is considerably thinned out by asphalt, concrete pavements and building developments."[34] Composer Toru Takemitsu recognized that many musics are intimately tied to place—including Australian Aboriginal musics (which he studied) and Japanese traditional musics—and that some instruments were designed to sound like nonhuman musicians such as cicadas.[35]

Canadian composer R. Murray Schafer, who coined the term *soundscape*, saw important duties for music educators: "Behold the new orchestra: the sonic universe! . . . New studies are needed in the curriculum and they will carry us far out into the shifting contours of interdisciplinary knowledge."[36] Affirming Oliveros's recognition that the soundscape is degrading, Schafer connects that degradation to the Industrial Revolution. Nonetheless, in the densest cities, parks provide havens for nonhuman musicians, so a simple field trip, a walk to the community park, can provide many soundscape experiences.[37]

A sunny day. Bridget takes her students outside, where they are greeted by the chirps of house sparrows—an invasive species of bird that dominates the soundscape—the complicated phrases of finches, and the sharp shouts of blue jays. All of this is layered above the slow crescendo-stop of the yearly cicadas. A squirrel creates a rhythmic accompaniment, calling from an oak, and the low rumble of the highway is ever-present. These nonhuman musicians make music *for* mating, for warning, and for joy. The first week of school, Bridget understands her duty as a music teacher as opening her students' ears to musics of all kinds. If only her classroom were silent—an air-conditioning unit rumbles incessantly—maybe she could agree to locking her children away from nature's music. After a summer of play, whether conscious of it or not, ecopsychologists would say her students benefited from the natural sounds.[38] Nature improves our well-being.

Bridget asks her students to close their eyes and open themselves to the sounds of nature. She directs them to allow their arms to move, to flow with nature's orchestra as if they were the conductor of the grand, diverse, unrepeatable symphony. After listening and moving with the soundscape, she asks the students to open their eyes and talk about the musics they heard. Which nonhuman musicians do you share your home with? Is Bridget saving the planet or just saving a period of time, an instant of humanity away from the institutional walls and multiple-choice testing? Not knowing the answer, she feels better anyway.

Notes

1. See a performance of "The Garden Song" by composer David Mallett at https://www.youtube.com/watch?v=2m0LewjkO4s. We consider this piece a folk song because it fits within the genre of American folk music that grew out of the folk revival of the 1960s.
2. A Google News search of *ecological crisis* at the time of writing this article (in April 2018) shows news articles addressing nitrogen pollution, fossil fuel exploration, plastic waste, penguin species collapse, clean air, water, and food in Appalachia, as well as attempts to address the various crises via stories, through science, peace, compassion, and democracy and through the hip-hop song "Earthbound."
3. Daniel J. Shevock, *Eco-Literate Music Pedagogy* (New York: Routledge, 2017); Luke W. Windsor, "Nature and Culture, Noise and Music: Perception and Action," in *Current Directions in Ecomusicology: Music, Culture, Nature* (New York: Routledge, 2016): 163–75; and Vincent C. Bates, "Music Education Unplugged," *Action, Criticism, and Theory for Music Education* 12, no. 2 (2013): 75–90.
4. Erick Solheim, "2017 Policy Statement," UN Environment, https://www.unenvironment.org/news-and-stories/speech/2017-policy-statement.
5. Sheila C. Boston, "Satis N. Coleman (1878–1961): Her Career in Music Education" (PhD diss., University of Maryland, College Park, 1992); and Daniel J. Shevock, "Satis Coleman—A Spiritual Philosophy for Music Education," *Music Educators Journal* 102, no. 1 (2015): 56–61. Notably, Coleman published thirty-three books with major publishers between the 1910s and 1940s and is in the NAfME Hall of Fame.
6. Satis N. Coleman, *Creative Music for Children* (New York: G. P. Putnam's Sons, 1922).
7. Anna B. Comstock, *Handbook of Nature Study* (Ithaca, NY: Comstock Publishing, 1911), Kindle version.
8. See https://www.montessorinature.com/benefits-nature-learning/.
9. Coleman, *Creative Music*, 19–20.
10. Daniel J. Shevock, "Satis Coleman's Environmental Philosophy: An

Intellectual History" (paper presented at the NAfME Music Research and Teacher Education National Conference, Atlanta, GA, March 2018), https://www.academia.edu/36156107/Satis_Colemans_Environmental_Philosophy_An_Intellectual_History.

11. See "Cultivating 20 Years of Ecoliteracy," https://www.ecoliteracy.org/sites/default/files/Center-for-Ecoliteracy-20yrs.pdf.
12. Rachel Carson, *Silent Spring: The Classic That Launched the Environmental Movement* (Boston: Mariner Books, 2002), 189.
13. Shevock, *Eco-Literate Music*, 8.
14. David W. Orr, *Ecological Literacy: Education and the Transition to a Postmodern World* (Albany: State University of New York Press, 1992), 85–86.
15. https://www.amazon.com/Songs-Standing-Rock-Vol-1/dp/B06XX1S568.
16. Vincent C. Bates, "Sustainable School Music for Poor, White, Rural Students," *Action, Criticism, and Theory for Music Education* 10, no. 2 (2011): 100–27; and Vincent C. Bates, "Toward a Sociology of Music Curriculum Integration," *Action, Criticism, and Theory for Music Education* 15, no. 3 (2016), 8–20; also see Liora Bresler, "The Subservient, Co-Equal, Affective, and Social Integration Styles and Their Implications for the Arts," *Arts, Education, Policy Review* 96, no. 5 (1995): 31–37. Although we don't explicitly use Bresler's model for arts integration (Orr's well-known work provides an alternative theory), it seems clear that designing eco-literate music lessons using each of the subservient, co-equal, affective, and social integration styles can be fruitful, which was explored in Daniel J. Shevock, "The Possibility of Eco-Literate Music Pedagogy," *TOPICS for Music Education Praxis* 2015, no. 1 (2015): 1–23.
17. See https://youtu.be/q70MVYOZXc0.
18. Estelle Jorgensen, *In Search of Music Education* (Urbana: University of Illinois Press, 1997), 3.
19. National Coalition for Core Arts Standards, 2014. National Core Arts Standards. http://www.nationalartsstandards.org/.
20. Shevock, *Eco-Literate Music*, 73.
21. Aaron S. Allen and Kevin Dawe, eds., *Current Directions in Ecomusicology: Music, Culture, Nature* (New York: Routledge, 2016); and Mark Pedelty, *Ecomusicology: Rock, Folk, and the Environment* (Philadelphia: Temple University Press, 2012); also see Annegret Fauser, ed., *Journal of the American Musicological Society* 64, no. 2 (2011), a special issue on ecomusicology.
22. Madhu Suri Prakash and Gustavo Esteva, *Escaping Education: Living as Learning within Grassroots Cultures*, 2nd ed. (New York: Peter Lang, 2008). Prakash and Esteva identify the paradox of education for social justice. "Yet, wherever education advances, homogenization establishes itself. With every advancement of education or the educated, a 'global monoculture spreads like an oil slick over the entire planet.' The five thousand languages that currently survive can be seen as threatened species—in danger of extinction" (p. 7). The authors continue: "While languages are dying and disappearing, the academic industry for the mummification and preservation of 'endangered tongues' continues to boom. . . . In every corner of the world, cultural destruction and decimation follow as communities learn to *take-off* on the education runway" (p. 8). This homogenization process, what Prakash and Esteva refer to as "cultricide," seems to be replicated in musics; as a homogenized few musical genres, those that are economically or educationally reinforced, thrive, the rest are in danger of extinction. Put simply, when my great-grandmother learned music in schools, she stopped teaching her children her Polish folk songs, and intuition leads us to think this is not uncommon in industrial societies; see Daniel J. Shevock, "Music Educated and Uprooted: My Story of Rurality, Whiteness, Musicing, and Teaching," *Action, Criticism, and Theory for Music Education* 15, no. 4 (2016): 30–55.
23. R. Murray Schafer, *The Soundscape: Our Sonic Environment and the Turning of the World* (Destiny Books: Rochester, VT, 1977). Schafer's classic textbook begins with a discussion of noise pollution: "Noise pollution is now a world problem. It would seem that the world soundscape has reached an apex of vulgarity in our time, and many experts have predicted universal deafness as the ultimate consequence unless the problem can be brought quickly under control" (p. 3). See also Pauline Oliveros, *Deep Listening: A Composer's Sound Practice* (New York: iUniverse, 2005), xv: quoted later in this article. For a discussion of the loss of commons generally, also see Gustavo Esteva, "Commoning in the New Society." *Community Development Journal* 49 (2014): i144–i159.
24. C. A. Bowers, "The Cultural Dimensions of Ecological Literacy." *Journal of Environmental Education* 27 no. 2 (1996): 5–10.
25. Clemente K. Abrokwaa, "Indigenous Music Education in Africa," in *What Is Indigenous Knowledge: Voices from the Academy*, ed. L. M. Semali and J. L. Kincheloe (New York: Falmer Press, 1999), 191–207.
26. Ibid., 203.
27. Attilio Lafontant Di Niscia, "Sobre el proceso de adquisición de instrumentos musicales de El Sistema: Hacia una epistemología ecológica en la educación musical," *Revista Internacional de Educación Musical* no. 5 (2017): 157–64.
28. https://www.epa.gov/greenerproducts/identifying-greener-wood-products.
29. Vandana Shiva, *Earth Democracy: Justice, Sustainability and Peace* (Boston: South End Press, 2005), 2.
30. June Boyce-Tillman, "And Still I Wander . . . A Look at Western Music Education through Greek Mythology," *Music Educators Journal* 99, no. 3 (2013): 29–33. She provides a spiritual model for music education where students honor the spirit of their instrument; spirituality may be one way music educators can begin to approach eco-literacy.
31. Julia Eklund Koza, "'Save the Music'? Toward Culturally Relevant, Joyful, and Sustainable School Music," *Philosophy of Music Education Review* 14, no. 1 (2006): 23–38.
32. Roger Scruton, *How to Think Seriously about the Planet: The Case for an Environmental Conservatism* (Oxford, UK: Oxford University Press, 2012), Kindle Edition.
33. Like *landscape*, *soundscape* refers to sonic scenery, often from one viewpoint.
34. Oliveros, *Deep Listening*, xv.
35. Toru Takemitsu, *Confronting Silence: Selected Writings* (Lanham, MD: Scarecrow Press, 1995).
36. R. Murray Schafer, *The New Soundscape* (BMI Canada, 1969), 2–3.
37. Satis N. Coleman, *Your Child's Music* (New York: John Day, 1939). Coleman provides an early example of using nature's sounds to inspire student compositions on homemade instruments.
38. See "The Restorative Powers of Quiet." Ecopsychologist Rebecca Lexa discusses "quiet therapy," spending as little as fifteen minutes in a park. "One of the most pernicious effects of noise pollution is stress response. . . . Sit someplace comfortable, and breathe slow and deep. Close your eyes, and open your ears to the silence." http://www.watershedecotherapy.com/articles/for-everyone/the-restorative-powers-of-quiet/.