Chapter 4: Aristotle and Advocacy

Modern Analogs & Application

Aristotle produced an amazing philosophy of music education, but it was stillborn. Nonetheless, it is particularly impressive from today's perspective not only because it anticipates so many recent advances in our knowledge of how the brain works, but more importantly because of the support it gives to music and arts education today at a time when they are, once again, the objects of skepticism in some areas of American politics and education. Ironically, it is Aristotle's understanding of the function of music as conducive to character and virtue that now proves to be the most potentially important and influential part of his philosophy of music education. Three elements of the concept stand out as particularly important: the concept of the sympathetic acquisition of ethical characteristics, the role of habituation in this process, and the resulting potential benefits to the individual and society. Reframed in the following modern terms, recent research has gone far toward supporting Aristotle except on two points: the precise nature and effect of the affects produced (which Aristotle thought were mere representations of real ones) and the exclusivity of music in producing them. On the whole, modern research tends to increase the viability of his philosophy for application today.

The crucial, central point for an evaluation of Aristotle's validity and relevance to music education today is his concept that music creates affects that are "so similar" to real ones as to be able to produce the same ethical effects in the soul, *psychē*,[1] as real ones. Aristotle's formulation is wrong to a degree in this regard, modern neuroscience has proven that the affects (experiences of emotions) produced by music are not merely "very similar" (1340a18) to real ones but are entirely as real and so as productive of all the same emotional affects as any other emotional experiences.[2] Further, the evidence

[1] Of course today *psyche* is a primitive concept of what we would call "mind," the intangible processes of thinking, remembering, emotions, sensing, perceiving, etc., hence psychology.

[2] The literature on this is quite extensive, and I cannot pretend to digest the primary research documents directly; rather, I depend on secondary literature whose authors are better able to do so. Those works that I have found most helpful are: William Forde Thompson, *Music, Thought, and Feeling: Understanding the Psychology of Music*

indicates that this is also true for the visual arts and, by reasonable extension, seems applicable to those emotions produced by all artistic experiences. The work with modern fMRI scanning has completely disproven the old theory that music or any art produces emotions only by conventional association.[3] There is also substantial evidence that this emotional effect is cross-cultural, even when entirely newly composed works are used as the test materials.[4] Further, the emotions stimulated are not limited only to those basic ones that Aristotle mentions, such as love, hate and the opposites.[5] This very brief survey of the evidence in support of music and emotional response is sufficient in itself to indicate its potential, but it also begs the question of whether these emotional responses do or can have any positive and lasting effect.

Many decades of empirical evidence from the recognized field of music therapy provide support for Aristotle's theory that music possesses a long-term beneficial psychological effect, but it is not necessary to rely on music therapy alone as support. Modern arguments for the psychological benefits of the arts are at least as old as that of John Dewey, whose *Art as Experience* is devoted to an exploration of the issue. While this philosopher turned education theorist clearly knew of Aristotle's thinking on music education, he provided little more specific to it than concurring support for the present interpretation of one of its central elements.

> "Thus [Aristotle] declares that music is the *most* representative of all the arts. . . . He meant that music reproduces by means of sounds the affections, the emotional expressions, that are produced by martial, sad, triumphant, sexually orgasmic, objects

(New York: Oxford University, 2009); and especially digests of reports on research found as chapters in Juslin and Sloboda, *Handbook*.

[3] Of several sources of information on this subject, the most succinct coverage is offered by: Stefan Koelsch, Walter A. Siebel and Thomas Fritz, "Functional neuroimaging," in Juslin and Sloboda, *Handbook*, 314, 332. The article also provides an extensive five-page bibliography of primary research in the field.

[4] Thompson, *Music,* 144, 149; Isabelle Peretz, "Towards a neurobiology of musical emotions," in Juslin and Sloboda, *Handbook*, 99-126, especially 101; John. A. Sloboda and Patrik. N. Juslin, "At the Interface between the Inner and Outer World: Psychological Perspectives," in Juslin and Sloboda, *Handbook,* 82.

[5] Koelsch et al. "Functional Neuroimaging," 314.

and scenes. Representation in the sense of expression covers all the qualities and values of any possible esthetic experience."[6]

Somewhat more recently Robert Witkin has formulated a similar position, that the arts, including the non-literary and non-discursive ones, are means by which the individual interprets and assimilates the experience of reality in the effort to engage with and adapt to the external world and so develop emotional well-being. Music, he observes, is the most abstract of all the arts, and perhaps not coincidentally is the one that he deals with least successfully.[7] Both these efforts, though thought provoking and logical formulations, remain theoretical. Fortunately for the present purpose, psychology and neuroscience have yet more to say on the subject.

As stated above, research has established that music produces true and fully effective emotions that include basic ones and some beyond the basic; it also supports his argument that these emotions have positive effects for the individual in the areas: (1) of judgment, (2) in what would today be called emotional health, and (3) that the effects can be habituated. Antonio Damasio's seminal work with brain-damaged patients, who because of the damage lost the ability to feel emotions, has firmly established that emotions play a critical role in sound judgment and decision making.[8] This concurs with Aristotle's position that music, through the affects it produces, plays a critical role in developing judgment and making proper decisions—how to take both leisure and activity correctly and loving and hating, as Aristotle said, but also far beyond that according to current research.

---

[6] John Dewey, *Art as Experience* (1934; repr., New York: Perigee, 1980), 230. Dewey's description seems almost to cross over into the understanding of conventional association with his reference to "objects and scenes," but I do not believe that is his intention. It was certainly not the intention of Aristotle.

[7] Robert. W. Witkin, *The Intelligence of Feeling* (London: Heinemann, 1974).

[8] Antonio. R. Damasio, *Descartes' Error: Emotion, Reason, and the Human Brain* (New York: G. P. Putnam, 1994). More recently David Gelernter, a computer scientist deeply interested in the brain-mind problem, has touched on the value of emotions in decision making and correct perception, even at times superior to rational thought. David Gelernter, *The Tides of Mind* (New York: Liveright Publishing, 2016), 70, 116-118, 121-122, 154.

Damasio's work has had a profound effect on psychology and provided a major source of support for the work of Daniel Goleman and what the latter calls "emotional intelligence," but there is also other supporting evidence.[9] Goleman's work, now extended through several books, is essentially a digest and compilation of the research relating to the effects of emotions in the individual's life and for the individual's well-being. In one book Goleman deals with the research surrounding the now (hopefully) defunct concept that proper parenting seeks to shield the child from all forms of stress.[10] Research has determined that such "helicopter" parents actually are doing exactly the wrong thing, they are disabling their children emotionally by arresting or reducing their development of emotional "resilience," the ability to handle emotion and function in stressful situations. In this connection, it is amusingly comforting to learn that such proper stimuli include (reasonably) "scary movies;" likewise, there is also evidence in support specifically of the effect of frightening, happy, and sad music.[11]

Related support also comes from widely disparate fields as to the development of the emotional life for a mentally healthy individual. Evidence of a disturbing nature is recent research that children who are deprived of the emotional stimulus of face-to-face interaction and eye contact, because of the near-ubiquitous use of social media and texting for communication, show significant reduction in the development of empathy, the critical skill for healthy human interactions of all kinds.[12] Interesting related research comes from the psychological field of dream study, but the findings are still too

[9] Daniel Goleman, *Emotional Intelligence* (New York: Bantam Books, 1994).
[10] Daniel Goleman, *Social Intelligence: The New Science of Human Relationships* (New York: Bantam Books, 2006), chapter 12 in general and especially 182-186.
[11] Thompson, *Music,* 175; Sloboda and Juslin, "At the interface," 88; Koelsch et al., "Functional neuroimaging," 332.
[12] Sherry Turkle, *Reclaiming Conversation: The Power of Talk in a Digital Age* (New York: Penguin Books, 2015), 5-7. This is only a point of entry into Turkle's findings; allusions to the problem are spread consistently through the book. Readers will best consult the index under "empathy"—better yet read the entire book. Tara Bennett-Goleman, *Emotional Alchemy: How the Mind can Heal the Heart* (New York: Harmony Books, 2001), 168 offers a further, very interesting and impressive but brief account of her own experience of the power of empathy. Gelernter, himself an internationally recognized computer scientist emphatically asserts the same, *Tides of Mind*, 236.

preliminary to suggest more than support for a similar, real effect of emotions in dreams.[13] The relevant evidence comes from a widespread range of study, but the position of music as one source of induced emotions for beneficial emotional development and health appears to be adequately demonstrated for the present purpose, though further research is both desirable and necessary. This leaves only Aristotle's function of habituation, *ethismos*, for consideration.

The process of inducing behaviors through habituation has become so well accepted as to constitute an almost embarrassing commonplace, now appearing in everything from pop-psychology, to self-help, to leadership literature.[14] Goleman deals with it on a higher level than most of the lay literature in another of his books.[15] In essence, the evidence has become overwhelming that behaviors and emotional responses of all kinds can be "practiced" artificially until neural pathways are established that make them natural and real. This is precisely what Aristotle said, that the actions of a virtue are practiced in advance of possessing the virtue until the habituation of the actions produces the virtue (*EN* 1103a31-32). As Goleman says, "People thereby literally rewire their brains."[16] Perhaps no more need be said on the current attitude toward habituation than the remarks of Davidson, Jackson and Kalin on this feature of the brain's "plasticity." "Research on plasticity has revealed new information about and realistic hope for ways to shape the circuitry of emotion to promote increased well-being and positive

---

[13] *Encyclopedia of Sleep and Dreams*, s.v. "Threat Simulation Theory," by Antti Revonsuo. Robert Stickgold, Dana Whidbee, Beth Schirmer, Vipul Patel and J. Allan Hobson, "Visual Discrimination Task Improvement: A Multi-Step Process occurring During Sleep," *Journal of Cognitive Neuroscience* 12, no.2 (2000), 246-254; Erin J. Wamsley, Karen Perry, Ina Dionlagic, Laura Babkes Reaven and Robert Stickgold, "Cognitive Replay of Visuomotor Learning at Sleep Onset: Temporal Dynamics and Relationship to Task Performance," *Sleep* 33, no.1 (2010), 59-68; R. Stickgold, J. A. Hobson, R. Fossse and M. Fosse, "Sleep, Learning, and Dreams: Off-Line Memory Reprocessing," *Sleep* 294, no.5544 (2001), 1052-1057, http://www.jstor.org/stable/3084947.

[14] A recent visit to the local bookstore's "Self-Help" section found twenty-two books on the "Changing Habits" shelf, with several more on the "cognitive science" shelf. Nine explicitly referred to habituation or rewiring the brain. The remainder all allude to "practicing" the desired new habit, emotional response, until it becomes a natural one, which is the same thing.

[15] Goleman, *Primal Leadership*, 152-158, especially 157.

[16] Goleman, *Primal Leadership*, 156.

affect."[17] In effect, neuroscience is no longer wondering whether habituation exists but is engaged in developing increasingly refined means of achieving positive results by utilizing it.

Finally, it should be noted that Aristotle also anticipated the proper sequence for music education. Education in music can potentially make individuals better through habituating positive ethical characteristics conducive to virtue, and better individuals make a better society through development of civic virtue; this is something with which Plato's Socrates would agree—you cannot make society better until you first make individuals better.

Summary of Evidence from Neuroscience & Psychology

To sum up this inquiry into modern support for Aristotle's psychology of music, it serves the purpose to repeat the appropriate section from Chapter 1.

General psychology of music—music alters the soul. [Re-expressed in modern terms—substantial evidence supports]

1. Music produces affects that develop characteristics in the soul of an ethical nature. [Ethical in that they improve judgment, promote emotional health and have a positive effect on behavior—substantial evidence supports]
2. These mimetic affects are so similar to real affects that they produce the same experiences by sympathy. [With the correction that the emotions produced by music are not "similar to" but are fully true, real, and valid—substantial evidence supports]
3. Music's effect can result in habituation of these positive characteristics. [Substantial evidence supports.]
4. This improves the character and develops good judgment. [Current research tends to support]

[17] Richard. J. Davidson, Daren. C. Jackson, and Ned. H. Kalin, "Emotion, Plasticity, Context and Regulation: Perspectives from Affective Neuroscience," *Psychological Bulletin* 126, no. 6 (2000), 904. For those interested in personally pursuing the issue further in the scientific literature, the article includes an extensive bibliography.

It must be stated emphatically that the present analysis of Aristotle's philosophy of music education does not intend to communicate that this interpretation of modern research is identical to Aristotle's understanding. Aristotle, of course, knew nothing of fMRI technology and neural networks! Rather, it is an interpretation of the elements of his philosophy in terms of distinct analogs resulting from recent research in psychology and neuroscience. The argument here is that Aristotle clearly seemed to be "onto something," and modern research is increasingly discovering and defining what that "something" is. It is at this point that Ludwik Fleck's seminal work on the epistemological development of scientific facts becomes relevant for interpreting and reevaluating Aristotle's philosophy of music education.

Aristotle and Ludwik Fleck's Epistemology of Scientific Fact

Significant support for the possible modern reinterpretation of Aristotle's psychology of music and emotion, and so also for his philosophy of music education, comes from an unexpected and authoritative quarter, Ludwik Fleck's theory of the epistemological origin and development of scientific facts.[18] Fleck's book first appeared in 1935 and went virtually unnoticed for the next forty years. In 1979 it was translated into English and in 1980 received a new German edition as well. From that time it has been in continuous print in both languages, has grown in influence within the scientific community, and has become a staple of the required reading in scientific education. Like all those who break new intellectual ground, Aristotle is a good example, Fleck found it necessary to create a new vocabulary for his ideas, which makes his work forbidding to an appreciable degree both in English and in the German original. For the present purpose, however, it is not necessary to enter into a thorough, in-depth account of the work's terminology, though his concept of a cultural-historical "thought-collective," and

[18] Ludwik Fleck, *Genesis and Development of a Scientific Fact*, trans. Fred Bradley and Thaddeus Trenn, ed. Thaddeus Trenn and Robert K. Merton (Chicago: University of Chicago Press, 1979). The original title was *Entstehung und Entwicklung einer wissenschaftlichen Tatsache*. I am greatly indebted to Dr. John Barthell, provost of the University of Central Oklahoma, who after reading an earlier version of a portion of this work sent me a copy of Fleck's book with the recommendation to read it.

its "thought-style" are central.[19] As Fleck uses the concepts in his analyses they result in something like a group that shares a largely unconscious complex of assumptions, values and ideas about what constitutes valid knowledge, its epistemology, which formulation will not seem wholly alien to those familiar with E. B. Tylor's *Primitive Culture* and its concept of an unconsciously inherited complex of cultural values.[20] Fleck also specifically clarifies that the same concepts and process apply beyond the sciences to the humanities as well.[21] The importance and relevance of Fleck's contribution to the present purpose lies in two main concepts that are relatively easily accessible independently.

The first of these concepts is that many scientific "facts" arise from a kind of "hazy idea" and develop into a prescientific form, which he calls a "proto-idea" or "pre-idea," as formed by a style of thought in a specific cultural-historical context, which proto-idea is suitable and adequate for serving its own context but can develop further into a modern scientific fact as that context changes. As he says, "in the development of ideas, primitive pre-ideas often lead continuously to modern scientific concepts" and "probably only very few completely new concepts are formed without any relation whatsoever to earlier thought styles."[22] It is worth stating in some detail the main illustration of the process to which Fleck the bacteriologist directed his attention, the development of the origin of the idea of the disease syphilis and its diagnosis. By way of comparison, the reader will probably conclude that the argument

[19] Fleck's own definition of thought-collective is "a community of persons mutually exchanging ideas or maintaining intellectual interaction." But, the thought-collective is the implicit carrier of a "thought-style" that characterizes it, which he defines as "the readiness for directed perception and appropriate assimilation of what has been perceived." Fleck, *Genesis,* 39, 142.

[20] The editors of the English translation point out the fluidity of Fleck's own use of the concepts, Fleck, *Genesis,* 159. E. B. Tylor, *Primitive Culture*, 2 vols. (London: John Murray, 1920), first published in 1871. A more recent descendant from it is the work of the cultural anthropologist Edward. T. Hall, *Beyond Culture* (Garden City, NY: Anchor Books, 1976). The common theme of all, including Fleck, is that epistemological decisions about the nature of knowledge and the means of determining it are made on the basis of largely or wholly unconscious assumptions.

[21] Fleck, *Genesis,* 42.

[22] Fleck, *Genesis,* 100. The term "thought-style" for this purpose can be taken simply as a way of thinking that prepares an individual within a group sharing a cultural-historical context to draw certain conclusions.

for reevaluation of Aristotle's ideas on music education are not at all far-fetched and far less complicated.

There were two earliest explanations, proto-ideas, of the sudden origin, or at least sudden recognition, of venereal diseases, among which syphilis was associated, both of which explanations emerged during the late fifteenth century. The first was astrological, that a certain malign planetary alignment had produced an environment adverse to humans, taking the form of the disease. The second was religious, Judeo-Christian in origin, God was punishing humanity for its sinfulness. Both of these were at the earliest time linked to the independent "hazy idea" that disease in general was somehow produced by "tainted blood," that somehow a vitiating change had taken place in the blood of those who were ill.[23] Further, the astrological influence was naturally related to the long tradition of ancient and medieval medicine in which the bodily humors could be affected by "cosmic" influences and so produce disease.[24] From the convergence of these astrological and religious proto-ideas with the generalized hazy idea of disease as resulting from a change in blood, there arose long afterward the movement toward the scientific formulation of the idea that syphilis could be understood from an examination of the blood of those with the disease, and so directed research into the disease through examination of the blood. Fleck argues that, from these proto-ideas, a process of development over successive cultural-historical contexts ultimately led to the discovery of the serological process for identifying those with syphilis by means of blood samples.[25] Fleck's analysis of the example of syphilis is convincing and he also adduces several other instances more familiar to today.[26]

To restate Fleck's theory briefly, a proto-idea arises in a specific cultural-historical context from mythic, metaphysical, empirical observation or other processes, often first as what he calls a "hazy

[23] Fleck, *Genesis*, 11.
[24] Nancy G. Siraisi, *Medieval and Early Renaissance Medicine* (Chicago: Chicago University Press, 1990), 110-112. A vestige of this tradition survives today in horoscopy. This idea clearly is related to Pythagoreanism.
[25] In fact, Fleck also attributes the creation of the discipline of serology to the process. Fleck, *Genesis*, 14.
[26] Fleck, *Genesis*, 24.

idea." Some of these hazy or proto-ideas, not all, are productive and set a direction for successive development through other cultural-historical contexts, ultimately to emerge in a succession of increasingly refined scientifically formulated "facts" suitable to their specific cultural-historical context. Aristotle's own proto-idea of the psychological function of music education seems now ripe for such an epistemological "updating."

Fleck's second concept relevant here is that in this process of development there is a mutual interplay between the esoteric circle of scientific knowledge and the common "popular" knowledge of the exoteric circle of "more or less educated amateurs," the lay-public.[27] Though there is no direct relation between the exoteric circle and the special knowledge of the esoteric circle except as mediated by the members of the latter, "[the members of the esoteric circle] are more or less dependent, whether consciously or subconsciously, upon 'public opinion,' that is, upon the opinion of the exoteric circle,"[28] a process illustrated by no less than Aristotle himself.[29] The heart of the matter is that every scientist is also a member of a larger cultural-historical context on whose popular knowledge and opinions that scientist depends for most common thinking and concepts, "[scientists] use, each within his own discipline, concepts derived from their own fund of popular knowledge. They build up their specialized sciences around these concepts" including "items of popular knowledge from other fields."[30] Further, "*Certainty, simplicity, vividness originate in popular knowledge* [italics in original text]. That is where the expert obtains his faith in this triad of the ideal of knowledge. Therein lies the general

[27] Fleck, *Genesis*, 105, 111. By "popular" Fleck does not at all mean the equivalent of our modern popular or "pop" culture. He describes this "more or less well educated" individual as resulting from some kind of formal "textbook" learning, though as he describes the level of education it is clear that the spectrum of the level of knowledge is quite wide. Inferring from his somewhat sketchy examples, and reading somewhat between the lines, as well as judging from textual examples of the apparently higher standards of general scientific education common today, it seems reasonable to conclude that anyone today who has completed the typical basic high school science curriculum with a 3.0 GPA would fall comfortably within his definition. A casual reader of *Scientific American* would certainly be at the high end.

[28] Fleck, *Genesis*, 105.

[29] "Making and acting are different (about these things we trust in the exoteric reasoning)," *EN* 1140a2-3, author's translation. In fact, Aristotle says acting, *praxis*, is a function of a virtue.

[30] Fleck, *Genesis,* 112.

epistemological significance of popular science."[31] Fleck thus cogently argues for healthy, ongoing interaction in a continuum of a particular social, cultural and historical context.[32] This position opens the means of fruitful communication between the expert and laity, by the recognition of their common historical and intellectual heritage.

These two factors are immediately applicable to the current argument concerning Aristotle's philosophy of music education and the psychology it is founded on. In Fleck's terms, the "popular" knowledge of early Greek times possessed a "hazy idea," of the effects of music on an individual's emotional life. The myth of Orpheus and his power over animate nature through music is such a hazy idea in Greek culture that could well have provided the impetus for earlier Greek philosophers', such as Damon and Pythagoras, development of the concept of affective music, of which Plato and Aristotle were clearly aware.[33] Aristotle took up this hazy idea and formulated his psychology of music and emotion into a proto-idea based on some observation but largely on his deductive conception of faculty psychology. His proto-idea survived dormant over the centuries, largely unknown by those outside a certain esoteric circle, whereas the hazy idea persisted continuously in popular culture down through the ages. In the present day, advances in neuroscience tend to reinforce the validity of the hazy idea to such an extent that Aristotle's proto-idea now possesses the potential for development into a full scientific formulation in the current cultural-historical context. As Fleck notes, the act of cognition in one cultural-historical context depends not only on the two factors of the subjective-knower and the object-to-be-known but also on the third factor of the existing fund of knowledge in that particular context. This fund of knowledge influences the method of cognition, and cognition reciprocally

[31] Fleck, *Genesis*, 115.
[32] Fleck, *Genesis,* 118.
[33] This remains of these philosophers ideas have been meticulously reconstructed by Wallace, *Reconstructing Damon.* A similar hazy idea existed in Hebrew culture as represented by the story of the power of David's harp playing to calm the madness of King Saul.

"enlarges, renews and gives fresh meaning to what is already known" often as only a previous hazy or proto-idea.[34]

At one time the distance between the psychology of emotion and the "hazy idea" of the empirically emotional potential of music seemed separated by a considerable chasm bridged only tentatively, perhaps, by the field of music therapy. Fleck observes that the greater the difference between two styles of thought the greater the inhibition to communication of ideas.[35] This chasm, however, has been significantly reduced in the last generation by such work as that of Damasio and others on emotional psychology as well as by advances in neuroscience. The present argument can be seen as an attempted communication from the popular exoteric circle back to the esoteric circle, such as Fleck describes, in order to draw attention to Aristotle's proto-idea for such further enlargement, renewal and revitalized meaning as is already developing, fortuitously, in the esoteric circles of neuroscience and psychology.

Concluding Statement

In the first chapter of his *Manual of the Boston Academy of Music* Lowell Mason lists, at length, some reasons for including music education, particularly vocal music, in the school curriculum.[36] In summary these include:

1. It is a skill of which children are nearly universally capable.
2. It ought to be cultivated as a duty because of its high value in Christian devotion.
3. It improves the voice for speaking and reading.
4. It is conducive to good health.

[34] Fleck, *Genesis,* 38.
[35] Fleck, *Genesis,* 109.
[36] Lowell Mason, *Manual of the Boston Academy of Music* (Boston: Carter, Hendee & Co., 1834), 11-22.

5. In its elevated form it is the handmade of virtue and piety through softening the feelings and provides youth with a knowledge of texts that are conducive to parental obedience and faithfulness to God.
6. It promotes social order and happiness in the family.
7. It develops intellectual discipline as do arithmetic, reading, and speaking.
8. It is almost the only branch of education that cultivates the feelings.

Mason's list is useful and interesting for comparison with Aristotle's philosophy.

1. Aristotle makes no statement regarding the universal potential for music, though he does say it affects both the common and lower classes and the upper classes.
2. Presumably Aristotle would agree that all children should be educated in music, if he lived in a time of universal public education. He does advocate that all upper class boys receive music education.
3. He makes no comment as to its value for speaking and reading, but he might well have approved of singing as vocal training in rhetoric.
4. He makes no comment as to its value for physical health, though he says that it is useful to keep boys busy.
5. Music in congregational worship is an anachronism in Aristotle's time.
6. Aristotle would agree that training in music is good for social order, which is why he has considered it so extensively in the *Politics.*
7. Aristotle would agree to some extent, for he makes a fleeting statement that musical study tends to improve performance in other studies.
8. It is more difficult to evaluate what Aristotle's opinion would be concerning the cultivation of feelings, as Mason expresses it. Mason's description is vague, though he specifically contrasts emotional development with intellectual and argues that the former is more important,

especially for happiness in life. Aristotle's position is more sophisticated: music is conducive to developing the emotional experiences necessary for the creation of the intellectual virtue of good judgment; thus, for Mason emotional development is an end in itself, but for Aristotle it is a means to an end that is both intellectual and moral and so related to "happiness."

Mason's list is also interesting for a comparison with today's arguments for advocacy of music education. Music therapy as a field has long advocated music for its beneficial therapeutic effect on the emotional health of the individual, whereas public education without rejecting that argument has tended to see music education as an indirect benefit in service to other education objectives, such as mathematics and language skills, which would have been only very secondary to Aristotle. As so often discussed in the literature, it is uncertain in which direction this benefit works. Aristotle would have had much more sympathy with the apparent subject of Edgar's book.[37] Of a different kind entirely is public music advocacy, which focuses on economic impact and the "quality of life" benefits of "enriching" residents' lives and making the community more attractive to business and higher income individuals. Of these different agendas, Aristotle would be more nearly, but not entirely, consistent with music therapy and "emotional learning," as similarly with Mason' eighth purpose.

This raises another point of comparison, the vicious circle already mentioned in the first chapter and again in the third, specifically, how music education in Athens linked itself too intimately in a subordinate position to other education purposes that rendered it of only secondary concern, such as is arguably the case today with music in regard to other academic goals. When social and political changes occurred, music education had to struggle to redefine itself, and when it couldn't do so it disappeared. This Athenian example is not an isolated one in history but only one instance in a kind of recurring cycle of its own. Other examples might come from the Carolingian period of the ninth century, when Louis the Pious, Charlemagne's son and successor, redirected monastic schools to the sole benefit of the

[37] Edgar, *Social Emotional Learning.*

monastery's own oblates and initiates. This effectively ended the common practice of accepting external, lay students and so excluded them both from the major source of education in general and from virtually the sole source of music education. This process was extended under the tenth-century Cluniac reforms and the reforms in Italy of Peter Damian in the eleventh century, both of which sought a reinvigoration of monastic life through a rigorous exclusion of secular elements, such as external students in their schools. A similar example is that found in Lanfranc's actions upon becoming archbishop of Canterbury in 1070. Influenced by the continental monastic reforms, he divested the cathedral of any interest in its parish school, presenting the school to the community. As the town's people became involved in the school's control, it led ultimately to a transformation similar to that in Athens; medieval English businessmen wanted their boys educated in practical skills like mathematics, accounting, and reading and saw no relevance in the "priestly" music skills, judging the time devoted to developing them as a waste. This resulted in the atrophy of music education to the simple rote singing of a few songs in classes. Similarly, during the English Reformation the Chantry Acts of 1545 and 1547 under Henry VIII and Edward VI specifically targeted the chantries' music instruction as a seedbed of crypto-papistry.

The most spectacular example is from the Lutheran Reformation. Luther saw scripture and music as the two most powerful forces for creating the new kind of spiritual society he envisioned, and so mandated music education in all the Lutheran Latin Schools, still for boys only. Unfortunately, he chose to make his vision serve two masters and also used the schoolboys for service in the church choirs, for which the duties were so continuous and time-consuming that parents, town leaders, and other teachers all eventually made common cause in opposition. In this case, the operation of the cycle was almost in reverse, Luther tried to constrain existing societal values to embrace a music education uncongenial to them. The result was that Luther's vision of music education had all but collapsed within

a few decades; by the end of the sixteenth century it had virtually reverted to the specialized education of advanced choristers.[38]

It is also arguable that the shift in American music education in the late nineteenth century suffered at least a partial instance of this vicious cycle. Education came under the influence of modernity and its ultimate faith that the means of producing an improved society was by subjecting all the human environment, physical and social, to the solutions offered by technology and science, including purportedly scientific managerial and bureaucratic expertise, a prime example of which was the work of the "efficiency" expert, Frederick Winslow Taylor. Toward this end the curriculum came to emphasize such subjects whose results could be evaluated quantifiably, such as science and math. In this new atmosphere vocal music and chorus came to be viewed skeptically, and the solution for music was to move, at least partially, to music appreciation, in which quantities of information could be communicated and tested, superficially making music look more like a "technology." Once again, society changed and music education could not cope, as argued here, because it had not formulated an independent philosophy with a demonstrable, direct, and important impact on the individual and an indirect one on society. Clearly this is a historical event with resonances today.

The basic principles of Aristotle's philosophy of music education fill the needs of an argument for music advocacy completely. Music provides experience for emotional growth and health and for the development of improved judgment. The individual resulting from this training is a more stable and productive member of society. A side-effect, not the major purpose, of this process for general education is that it produces students who engage better in other academic subjects.[39] The results of modern research go far toward a vindication of Aristotle's remarkably creative and intuitive though pre-

[38] For a fuller account see Sion M. Honea "Nicolaus Listenius's *Musica* (1537) and the Development of Music Pedagogy," *Journal of Historical Research in Music Education* vol.40, no.1 (2018): 19, 31-32.
[39] As previously noted, this is a rather startling anticipation of the predominant but far weaker current argument for music advocacy, that music improves performance in other subjects. Aristotle's remark is found at 1341a20-21.

scientific thinking on the subject. This does not, however, mean that the work is complete or that Aristotle's philosophy could simply be used "as-is;" there are still aspects that require further research and support as well as significant modification for today, but at present this would seem to leave Aristotle's philosophy of music education as, at the least, a valid and useful model. In fact, consistent with Fleck's theory, the "hazy idea" that was the basis of Aristotle's proto-idea for the philosophy of music education has already undergone further development in at least two different cultural-historical contexts. Using Fleck's terminology, Martin Luther developed it in a theological "thought-style" as a proto-idea in the "thought-collective" of the Protestant Reformation, interpreting music as a manifestation of the divine, the practice of which could raise the individual's spiritual nature and thereby elevate society as a whole; unfortunately for music education Luther "adulterated" his purpose with a secondary utilitarian objective, filling the church choirs cheaply. In the late twentieth century the hazy idea emerged again in a new "thought-style" and "thought-collective" in music education as the El Sistema movement that is dedicated to youth development and social change through music.[40]

The intersection of music with neuroscience and psychology in cooperation toward a common goal of understanding and promoting the mental health of the individual for a more stable society is not, according to Fleck's view, necessarily an epistemologically far-fetched one. He observes that sometimes widely different ways of thinking can cooperate productively on a problem.[41] The transformation of Aristotle's proto-idea into a scientific one consistent with modern modes of thought now seems plausible, given the direction of research in neuroscience and psychology. If this ideal is realized it would arguably provide music and arts education with the strongest foundation for advocacy that they

[40] "El Sistema's overarching goal is 'to rescue children' from the multiple dangers of poverty . . . hopelessness and low self-esteem that can lead to gang membership, drugs, and violence. . . . music can save lives, can rescue children, and can be a potent vehicle for social reform and the fight against the perils of childhood poverty." Tricia Tunstall, *Changing Lives: Gustavo Dudamel, El Sistema, and the Transformative Power of Music* (New York: W. W. Norton, 2012, x.

[41] Fleck, *Genesis,* 110.

have ever possessed. More importantly, such education would benefit both individuals and society. Given the increasingly frequent tragedies that we witness in our schools and society, the idea of creating more emotionally healthy individuals for a more stable society does not seem an inconsequential objective for cooperative research.

Glossary

Anapausis—repose, rest, relaxation, recreation

Aretē—goodness or excellence of any kind; [that quality that makes something suitable to perform its intended purpose]. In Aristotelian psychology it is a characteristic, *hexis*, produced by habituation and directed toward activity, *praxis*.

Ascholeō—engage, occupy

Chrēmatismos—doing business for one's own gain, money-making

Diagōgē—passing of life or time, way of life, worthwhile pastime

Dynamai—to be able, capable

Dynamis—power, ability. In Aristotelian psychology it is a capacity or aptitude to undergo experience.

Eleutherios—acting like a freeman; free-spirited; fit for a freeman, [= Latin, *liberalis*]

Eleutheros—free, fit for a freeman

Enthousiasmos—inspiration, enthusiasm, frenzy

Enthousiastikos—inspired

Episēma—device, mark, indication

Ergon—works, deeds

Ēthikos—moral; showing moral character

Ethismos—accustoming, habituation; pl. habits, usages

Ethizō—(active) to accustom; (passive) to be or become accustomed; be used to

Ēthos—custom, usage; disposition, character, esp. moral character

Eudaimonia—prosperity, good fortune, true happiness

Harmonia—method of stringing, musical scale, mode, a fitting/fastening/or joining together

Hēdonē—pleasure, enjoyment

Hexis—condition, state; habit, acquired habit of acting. In Aristotelian psychology it is good or stable state in regard to a virtue as habituated by experience.

Kalos—beautiful; good (in use); honorable, noble (in moral character)

Logos—word(s); speech, language; story; reason, explanation

Mathēsis—learning (as distinct from *paideia*, education/upbringing)

Melōidia—singing, chant; choral song

Melopoiia—making of a poem or music; music theory

Melos—song, phrase, strain; music to which a song is set, melody

Metechō—to participate in (esp. Plato), to share in (esp. Aristotle)

Mimēsis—imitation, reproduction, representation

Mousikē—any art over which the Muses presided, esp. poetry sung to music. [Aristotle makes clear that his use of the term means both instrumental and vocal music.]

Paideia—rearing of a child, upbringing, training and teaching, education [This is probably the most difficult of all the terms in this text for English translation. The English word "education" as indicating only formal schooling is wholly inadequate, whereas "upbringing" is closer. The word really means all three elements together "the rearing, training and formal teaching" of a child.]

Paidia—childish play, amusement, game

Paizō—play like a child; play an instrument

Pathos—what happens to a person, what one experiences. In Aristotelian psychology it is an experience or what accompanies pleasure and pain.

Phronēsis—purpose; thought; judgment; practical wisdom, (old translation prudence). In Aristotelian psychology it is the ability to deliberate nobly concerning what is good and advantageous as regards living well. It is directive as regards what one must or must not do. See also *synesis*.

Physis—nature, natural quality, general constitution of something

Politikos—of or relating to citizens; befitting a citizen; civic, civil

Praktikos—fit for or concerned with action, practical

Praxis—doing, transaction, business, action, practice. In Aristotelian psychology it applies to the activity of a virtue.

Psilos—bare, without words (means instrumental music)

Psychē—breath (of life); spirit, soul; mind, organ of thought, judgment, reason

Schēma—form, shape, figure

Scholē—leisure, rest, time for something; that in which leisure is employed

Sēmeion—sign, symbol

Sympathēs—affected by like feelings, sympathetic; exerting mutual influence

Synesis—faculty of comprehension. In Aristotelian psychology it is concerned with the same things as *phronēsis*, things about which one might be perplexed and deliberate. *Phronēsis* is directive as to what one must or must not do, whereas *synesis* is concerned with the actual decision.

Synethizo—accustom, make customary

Synteinō—draw tight, strain; direct to a point; tend towards; in this translation as "conducive to"

Teinō—stretch, strain; aim at, direct towards; tend, refer, belong to

Telos—degree of completion, attainment, achievement, end

Bibliography

Alperson, Philip. "What Should One Expect from a Philosophy of Music Education." *Journal of Aesthetic Education* 25, no.3 (1991): 215-242.

Anderson, Warren D. *Ethos and Education in Greek Music*. Cambridge: Harvard University, 1966.

Aristotle. *Politica*. Edited by W. D. Ross. Oxford: Clarendon Press, 1957.

Aristotle. *Aristotle's Nicomachean Ethics*. Translated by Robert C. Bartlett and Susan D. Collins. Chicago: University of Chicago, 2011.

Aristotle. *De Anima*. Edited by W. D. Ross. Oxford: Clarendon Press, 1956.

Aristotle. *Ethica Nicomachea*. Edited by I. Bywater. Oxford: Clarendon Press, n.d.

Aristotle. *Politics.* Translated by Benjamin Jowett. 1905. Reprint, New York: Barnes & Noble, 2005.

Aristotle. *Politics*. Translated by H. Rackham. 1932. Reprint, Cambridge: Harvard University Press, 1998.

Aristotle. *Politics: Books VII and VIII*. Translated and commentary by Richard Kraut. Oxford: Clarendon Press, 1997.

Aristotle. *Politica.* Edited by Franciscus Susemihl. Leipzig: B. G. Teubner, 1882.

Barcalay, William. *Train Up a Child*. Philadelphia: Westminster Press, 1959.

Barker, Andrew. *Greek Musical Writings*. 2 vols. Cambridge: Cambridge University Press, 1984-1989.

Barker, Andrew. *The Science of Harmonics in Classical Greece.* Cambridge: Cambridge University, 2007.

Bauerlein, Mark. *The Dumbest Generation.* New York: Tarcher/Penguin, 2009.

Beck, Frederick A. G. *Greek Education 450-350 B.C.* New York: Barnes & Noble, 1964.

Bennet-Goleman, Tara. *Emotional Alchemy: How the Mind can Heal the Heart.* New York: Harmony Books, 2001.

Burnet, John. *Aristotle on Education.* Cambridge: Cambridge University, 1967.

Chantraine, Pierre. *Dictionnaire Étymologique de la Langue Grecque.* 2 vols. Paris: Klincksieck, 1984.

Cicero. *Tusculan Disputations.* Translated by J. E. King. Cambridge: Harvard University, 1971.

Damasio, Antonio R. *Descartes' Error: Emotion, Reason, and the Human Brain.* New York: G. P. Putnam's Sons, 1994.

Davidson, Richard J., Daren C. Jackson and Ned H. Kalin. "Emotion, Plasticity, Context, and Regulation: Perspectives From Affective Neuroscience." *Psychological Bulletin* 126, no. 6 (2000): 890-909.

Dewey, John. *Art as Experience.* 1934. Reprint, New York: Perigee, 1980.

Edgar, Scott N. *Music Education and Social Emotional Learning.* Chicago: GIA Publications, 2018.

Encyclopedia of Sleep and Dreams. Santa Barbara, CA: Greenwood Press, 2012.

Everson, Stephen. "Psychology." In *The Cambridge Companion to Aristotle*, edited by Jonathan Barnes, 168-194. Cambridge: Cambridge University, 1995.

Fleck, Ludwik. *Genesis and Development of a Scientific Fact.* Translated by Fred Bradley and Thaddeus Trenn. Edited by Thaddeus Trenn and Robert K. Merton. Chicago: Chicago University Press, 1979.

Gelernter, David. *The Tides of Mind.* New York: Liveright Publishing, 2016.

Goleman, Daniel. *Emotional Intelligence.* New York: Bantam Books, 1997.

Goleman, Daniel. *Primal Leadership.* Cambridge: Harvard Business School, 2004.

Goleman, Daniel. *Social Intelligence.* New York: Bantam Books, 2007.

Grant, Alexander. *The Ethics of Aristotle: Essays and Notes.* 2 vols. London: Longmans, Green, 1874.

Guthrie, W. K. C. *Aristotle: An Encounter*. Cambridge: Cambridge University, 1981.

Guthrie, W. K. C. *The Earlier Presocratics and the Pythagoreans.* Cambridge: Cambridge University, 1962.

Hall, Edward T. *Beyond Culture.* Garden City, NY: Anchor Books, 1976.

Hicks, Andrew. *Composing the World: Harmony in the Medieval Platonic Cosmos.* New York: Oxford University, 2017.

Honea, Sion M. "Nicolaus Listenius's *Musica* (1537) and the Development of Music Pedagogy." *Journal of Historical Research in Music Education* vol. 40, no.1 (2018): 10-33.

Juslin, Patrik N. and John A. Sloboda. *Handbook of Music and Emotion*. Oxford: Oxford University Press, 2010.

Koelsch, Stefan, Walter A. Siebel, and Thomas Fritz. "Functional Neuroimaging." Chapter 5 in *Handbook of Music and Emotion: Theory, Research, Applications, e*dited by Patrik N. Juslin and John A. Sloboda. Oxford: Oxford University, 2010.

Kilpatrick, William. *Why Johnny Can't Tell Right from Wrong.* New York: Touchstone, 1992.

Kraut, Richard. "Aristotle on Becoming Good: Habituation, Reflection, and Perception." In *Oxford Handbook of Aristotle*, edited by Christopher Shields. Oxford: Oxford University, 2012.

Kraut, Richard. *Politics.* See Aristotle. *Politics: Books VII and VIII*.

Lechner, Matthias. *Erziehung und Bildung in der Griechisch-Römischen Antike*. Munich: Max Hueber, 1933.

Lippman, Edward A. *Musical Thought in Ancient Greece*. New York: Columbia University, 1964.

Marrou, H. I. *A History of Education in Antiquity.* Translated by George Lamb. New York: Sheed and Ward, 1956.

Mason, Lowell. *Manual of the Boston Academy of Music.* Boston: Carter, Hendee & Co., 1834.

McCarthy, Kevin, Elizabeth H. Ondaatje, Laura Zakaras and Arthur Brooks, eds. *Gifts of the Muse: Reframing the Debate about the Benefits of the Arts.* Santa Monica, CA: Rand Corporation, 2004.

Moyer, Ann E. *Musica Scientia: Musical Scholarship in the Italian Renaissance*. Ithaca, NY: Cornell University, 1992.

Newman, W. L. *The Politics of Aristotle*. 4 vols. 1887-1902. Reprint, Oxford: Oxford University, 2000.

Peretz, Isabelle. "Towards a Neurobiology of Musical Emotions." Chapter 5 in *Handbook of Music and Emotion: Theory, Research, Applications,* edited by Patrik N. Juslin and John A. Sloboda. Oxford: Oxford University, 2010.

Regelski, Thomas A. "The Aristotelian Bases of Praxis for Music and Music Education as Praxis." *Philosophy of Music Education Review* 6, no.1 (1988): 22-59.

Sax, Leonard. *The Collapse of Parenting*. New York: Basic Books, 2016.

Sherman, Nancy. *The Fabric of Character: Aristotle's Theory of Virtue.* Oxford: Clarendon Press, 1991.

Siraisi, Nancy G. *Medieval and Early Renaissance Medicine.* Chicago: Chicago University, 1990.

Sloboda, John A. and Patrik N. Juslin. "At the Interface between the Inner and Outer World: Psychological Perspectives." Chapter 4 in *Handbook of Music and Emotion: Theory, Research, Applications,* edited by Patrik N. Juslin and John A. Sloboda. Oxford: Oxford University, 2010.

Stickgold, Robert, Dana Whidbee, Beth Schirmer, Vipul Patel and J. Allan Hobson. "Visual Discrimination Task Improvement: A Multi-Step Process occurring during Sleep." *Journal of Cognitive Neuroscience* 12, no.2 (2000): 246-254.

Stickgold, Robert, J. A. Hobson, R. Fosse and M. Fosse. "Sleep, Learning, and Dreams: Off-Line Memory Reprocessing." *Sleep* 294, no.5544 (2001): 1052-1057, http://www.jstor.org/stable/3084947.

Thompson, William Forde. *Music, Thought, and Feeling: Understanding the Psychology of Music.* New York: Oxford University, 2009.

Tocqueville, Alexis de. *Democracy in America*. 1835-1840. Reprint, New York: Everyman's Library, 1994.

Tunstall, Tricia. *Changing Lives: Gustavo Dudamel, El Sistema, and the Transformative Power of Music.* New York: W. W. Norton, 2012.

Turkle, Sherry. *Reclaiming Conversation: The Power of Talk in a Digital Age*. New York: Penguin Books, 2015.

Tylor, E. B. *Primitive Culture.* 2 vols. London: John Murray, 1920.

Walmsley, Erin J., Karen Perry, Ina Dionlagic, Laura Babkes Reaven and Robert Stickgold. "Cognitive Replay of Visuomotor Learning at Sleep Onset: Temporal Dynamics and Relationship to Task Performance." *Sleep* 33, no.1 (2010): 59-68.

Wallace, Robert W. *Reconstructing Damon: Music, Wisdom Teaching, and Politics in Perikles' Athens*. Oxford: Oxford University, 2015.

Wegner, Max. *Das Musikleben der Griechen.* Berlin: Walter de Gruyter, 1949.

West, M. L. *Ancient Greek Music.* Oxford: Clarendon Press, 1992.

Witkin, Robert W. *The Intelligence of Feeling.* London: Heinemann, 1976.

Zarlino, Gioseffo. *Le Istitutioni Harmoniche.* 1558. Reprint, New York: Broude Brothers, 1965.

Ziebarth, Erich. *Aus dem Griechischen Schulwesen: Eudemos von Milet und Verwandtes*. Leipzig: Teubner, 1914.