Why Music Education is no longer about Music

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On the Nature of Music

There are three important characteristics of music, which I think most people would agree with.

1. Music is for the ear. We do not eat music, nor smell music, nor see music.

   In our modern age we call what we see on paper, "music," but it is not. What is on paper is in part a symbol of music, but it is a symbol of only the grammar of music. There are no symbols on the paper for feeling or emotions, which is the real role of music.

2. Music exists only in live performance before a listener. A recording is not music. The recording bears the same relationship to music as does a photograph to a real person.

3. The purpose of music is to understand and communicate emotions. While everyone understood this for thousands of years, it became clear with the modern clinical findings on our bicameral brain. The right brain, where the experimental and personal emotions lie, is mute.[1] It cannot make a sentence. The left brain, a depository of secondary data, includes language, but when it comes to talking about music or writing about music, as is clearly also true with the emotions of love, the left brain is tasked with writing about something it knows nothing about. Thus the importance of music—a language of feeling which can be heard and understood by all.

In addition there are genetic parts of music which are as old as man. All philologists believe that "music" was present before speech, in the form of simple emotions expressed through vowel like sounds, much like the sounds a dog makes today. This is the reason that we find these right hemisphere of the brain five vowel sounds as an inherent part of every language on earth, for they are as old as man. No progress toward a syntactical language was possible until the creation of consonants. Even then, this had no impact on music until the age of notation, as the reader will see below.

All three of the above characteristics of music must have been clear and present for as long as there was some form of music, perhaps a million years if one considers the voice and also how easy it is to construct a flute like instrument from a bone or a piece of bamboo and percussion sounds from various objects such as turtle shells. It is quite interesting to note that a flute made from a bone which is dated thousands of years in age has holes made which form a diatonic

[1] Continuing research since Dr. Sperry's Nobel Prize winning research on split-brain patients may have caused some lack of confidence in some readers, for it demonstrates more and more the complex cross wiring in the three trillion cells of our brain. However, the basic fact of the bicameral brain remains clear: the left side designed for data and the right side for personal experiential understanding.

scale. This documents another natural part of music, so old that it must have long ago passed into the genetic nature of man. These holes reflect the overtone structure, a natural law of physics, which was already in place as long as any creature had ears to hear.

I first began to give serious thought to these very ancient characteristics of music during 1966 when my wife, Giselle, and I were presenting recitals throughout South America in cooperation with the US State Department. Arriving in La Paz, Bolivia, we were advised to take a week or so to acclimate ourselves to the altitude, the airport being at 14,000 feet! Sure enough, it was at first very difficult to inhale enough air to perform Strauss, Hindemith, etc. While waiting we were, of course, constantly entertained in the South American tradition and in the course of this I was often advised to go downtown to a new coffee house to hear native musicians from the high Andes. I was told the owner went out periodically by helicopter and captured native musicians and brought them back to play in his coffee shop. After a few days in La Paz, of course, these natives made a 5,000 year leap in civilization and so the owner would let them go and return to the high Andes to find some more.

When I finally went to hear these musicians, having refused for some time on principle, I was treated to an amazing performance. These musicians were as musical as musicians anywhere, with technical display equivalent to any modern player. It was very musical! What really struck me, however, was that I was in the presence of a very rare opportunity, an opportunity to hear musicians who had never heard of nor seen music notation. They understood music, and learned music only by ear. If I were to show them a page of my Strauss *Concerto,* they would not have recognized that what they saw had anything to do with what they were doing. They would have simply thought they were seeing a piece of paper with symbols of some foreign language. Which is, of course, what music notation is.

This experience caused me to recall for how many generations there was important music making before notation. The great musical traditions of ancient Greece were made without notation.[2] At the time of Plato there were not even names for the individual notes. Before that we have the Egyptian period from which Greek traditions came, Plato himself having studied there at length. There on the famous tomb-paintings we see musicians playing all kinds of functional performances and also some concerts in private homes, but there was no notation. There are conductors pictured, but what they are doing is in question.[3]

It seems clear that in ancient Egypt music education, without the benefit of notation, was organized and protected against change by the government. Plato says this established music education had been in place for 10,000 years. This would take us back to the period of the cave paintings of Spain and France and, in fact, we know musical instruments have been found in some of those caves.

It is particularly important to understand that just because there was no notation it did not mean there was no knowledge. In fact, without written notation and written educational materials these early musicians probably had one advantage over us in that they were more closely attuned to Nature.

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[2] The twenty or so fragments of so-called ancient Greek notation which one finds online and elsewhere actually comes from the very last period, the "Roman Period," of ancient Greece. It represents the first century BC and the first century AD and has nothing to do with the Golden Period of ancient Greece.

[3] A German scholar, Hans Hickmann, has made an attempt to read pitches in the conductor's hand motions. See *Musikgeschichte in Bildern, Ägypten,* Leipzig, 1961, p. 86. The hieroglyphs for the conductor are an arm and the one for "to sing," thus "the singing arm." Nice!

On the Physiology of Listening to Music

Jean Philippe Rameau (1683–1764), the first to understand the "theory" of music in a modern sense, was particularly interested in this subject. In fact, he complained,

> In music the ear obeys only Nature. It takes account of neither measure nor range. Instinct alone leads it.[4]

While today listening to music, apart from the anatomy of the ear, has its focus on learned data, hearing chords, rhythm, form, etc. But Rameau was thinking of something more fundamental, what Nature contributes. Do we have built into us through genetics certain physiological constructs which influence how we hear music?

What Rameau observed was that a person who is asked to sing a random note, will always sing a note in the middle of his register. Further, when asked to sing some other note, he will never sing a half-step, but rather, as is also the case if asked to improvise, sing an "ever ascending common chord made up of the overtones."

After twenty-five years, Rameau was still amazed at what he had noticed. He mentions that these kinds of relationships between sounds were known to the ancient philosophers, and discussed much by them, but that every "reason they were able to advance for them evaporated like a wisp of smoke." "Why," he asks, "has it never occurred to anyone to seek the reason why, despite ourselves, we should be compelled to prefer certain intervals to others, especially after the first sound?"

Rameau clearly seems to have been under the impression that this preference in choice of intervals was dictated by Nature somehow. Indeed, there are some researchers today, notably Diana Deutsch at the University of California, San Diego, who believe that perhaps we all have an innate built in overtone series. After millions of years of the influence of the overtone series upon all living creatures, one cannot discount this possibility. Are we made in some key?[5]

My wife, Giselle, a certified music therapist who did professional work in hospitals in Los Angeles, shared with me a discovery which she came upon through experimentation which does seem to suggest some internal tuning system. I urge the reader to try this with another person. First demonstrate this initial step and then ask the person to speak a short syllable "Lu" at a good medium-strong dynamic level. Then ask the person to do the same thing but with a slightly longer sound (about like a dotted quarter-note, which you can demonstrate to the person by holding your fingers about an inch apart before their face). Finally, ask the person to do the same thing but with a long sustained sound. If you listen very carefully you will now hear an added instability as the brain appears to "tune" the longer pitch! But tune to what? As you will find this happens with everyone you experiment with, it does suggest to me that there is some internal pitch template. Once when I was guest conducting in Korea, Giselle at the same time gave a pre-natal lecture to a group of 400 nurses at a training hospital. I asked her in advance to try this experiment with the large group. What I heard was really astounding. A room in which a random sound quickly became octaves and perfect fifths!

What happens here is a confirmation of something noticed in Dr. Sperry's early work with split-brain patients. It appeared that, given the separate character of the separate hemispheres of the brain, when a problem was posed by placing a card with a question before the person, both hemispheres began a kind of race to solve the problem and the side best equipped to do so always won the race. In the case of a simple math question, the left hemisphere continued

[4] *Observations sur notre instinct pour la musique et sur son principe* (1734).

[5] After listening to my rehearsals and a concert in a sixteenth-century hall in Graz, Austria, one time, I came to the conclusion that the room itself was in E-flat major.

to function while the right hemisphere actually shut down, the brain waves went into a state of rest.

In Giselle's discovery, when the syllable "Lu" is pronounced in short duration the brain concludes this is language and the left hemisphere is posed to continue. But when the syllable is extended to a longer tone, the brain seems to say, "Oh, this must be music," and the right hemisphere then tunes that given pitch to some other pitch of its own.

Another experiment in the physiology of how we hear music in the brain is one I discovered which the reader can experiment with by himself. I had been studying and thinking about some evidence that in early music what we call the "staccato dot" over a note did not refer at all to the length of the note, as we are taught, but rather was intended to call for the smallest of the kinds of accents. It is in fact representative of Giselle's discovery, but going in the opposite direction. Sing the syllable "Lu" as sustained quarter-notes at a tempo of about quarter-note = 60. You will notice that when you sing slow sustained notes in this way the ear seems to concentrate on the last half of the note. Now do the same thing, but sing these quarter-notes as the staccato we learned in school, that is the note's length is reduced by one-half. Of course the reduction must be taken off the back half of the note because if it were taken off the front half it would change the rhythm. Now you will hear that in singing "Lu" as resultant eighth-notes at the same tempo the brain will now focus on the front of the note, not the back side. Furthermore you will hear the effect of an accent on the initial sound and nothing you can do will prevent you from hearing this accent. You can say to yourself I will purposely sing "Lu" in such a way that there is no accent, but you will still hear one!

Again, when the tone is long the right hemisphere must hear it as music. But when the sound is short, the left hemisphere concludes it must be language and then the left hemisphere concentrates on the initial consonant, the essential role of the left hemisphere in the development of language, one of the properties of that hemisphere. It is this focus of the left hemisphere on the initial consonant which produces the illusion of an accent. And thus, as the earlier composers must have discovered, to create a small accent you add the staccato dot.

The purpose of this introductory section has been to remind us of what Rameau concluded, as quoted above,

> In music the ear obeys only Nature. It takes account of neither measure nor range. Instinct alone leads it.

There was a very long period when Music was understood by musicians and listeners alike as being something which was Natural, part of Nature. Before the advent of musical notation there could be no other conclusion.

But the creation of musical notation changed everything. For the first time the eye became part of the preparation of music. More important, Music, which had hitherto been a verb, now became a noun!

How Western Notation Changed our Perception of Music

The music notation system the Western World uses today was created by Roman Church mathematicians during the late Middle Ages. It is very important to understand the Church perspective which produced this notation which forever changed the very concept of what Music is.

With the victory of the Roman Church over the Roman Empire in the 4th–5th centuries, the Church set out to recreate the Roman citizen. Foremost among the Church's goals was the elimination of Emotion from the lives of the new faithful, for in their view the Emotions were

the first step toward sin. The Church Fathers repeatedly warned against going to the theater, to music events and sporting events because of the presence of Emotions. St. Basil even contended that a good Christian should not even laugh, because laughter is a form of Emotion.

As part of this effort to recreate the Roman citizen, the Church closed schools and attempted to destroy the books of the Pagans (Plato, Aristotle, etc.). When schools were reopened there was strong pressure from some Churchmen to include Music, which had been so much a part of the education of the ancient world. But Music is a vehicle for the communication of Emotions! The official solution to this conundrum was to make Music part of mathematics! Music, the Church Fathers said, was the part of arithmetic that you can hear! This kind of reasoning must have had little resonance even among the Church officials for by the 6th century a new strategy was set forth. Music was now divided into two categories: the Speculative and the Practical. The Church said, We will teach the Speculative (theory, mathematics-based composition, criticism, etc.) and we will leave the Practical (performance) to be learned from the musicians out in the street. This became the format of higher education in music for several centuries and some readers will perhaps perceive the echoes of this philosophy in university music departments even today.

The growing size of the Church by the late middle ages began to create a need for the faster production of boys (ladies not allowed) who could sing in the choir; rote learning was proving too slow. The Western notation we now use was first created in order to teach these boys to read music faster. The notation was created by Church servants who may have been involved in music, but were first and foremost mathematicians. Hence we have an arithmetical notational system: two of these is the same as one of those, etc. It is clear that the Church, still very much concerned with the Emotions, laid down an order that there be no symbols for feeling or the Emotions. And so today, 1,000 years later, we have not a single symbol whatsoever for feelings or emotion, even though that is the very purpose of music!

Our notational system for music is able to notate only the grammar of music, not music itself. There is no music on the page, as Mahler was careful to point out, "The important part of music is not found in the notes." Let us restate that: the notational system can only document grammar, but grammar is not music! Since the very nature of music grammar is conceptual, the eye now becomes the critical central point in the learning of music, not the ear. This leads to very significant problems in music education.

1. In making grammar (a rational musical language) the focal point of music education, the left hemisphere now becomes important for the first time in the history of mankind. As a consequence, the very purpose of music is lost for there is nothing about grammar which communicates feelings and emotions.

2. The student of music education inevitably begins to think of music as something for the eye. Indeed, it intrudes upon our very language, as we say, "Now, watch the intonation at letter B," while it is *hearing* the intonation at letter B which matters. The fundamental issue here is that our five senses tend to occupy our mind only one at a time; they do not ordinarily work together. Thus the eye, by far the most dominant of our senses, tends to shut down the ear thus destroying the very foundation of music.

   Aside from shutting down the ear, a considerable confusion arises. We now begin to have three forms of a score. In the case of the conductor there is one on his music stand that he reads with his *eyes,* one in the room (which can be quite different from the one he sees) that he hears with his *ears* and one in his mind which is the result of his study. One can witness this confusion by watching any conductor in rehearsal. If his head is up and he is conducting while looking at the ensemble he will have adequate facial expression, supplied by the right hemisphere of his brain. But when he looks down at the score for

some reason while the ensemble continues to play you will invariably notice an *immediate* loss of *all* facial expression, because the eye is now concerned with left hemisphere data. The face is the only major part of the body that either hemisphere can operate, thus this striking illustration, a window into his brain function.

3. The new emphasis of left hemisphere teaching of music, together with its dependence on language and not music, leads to the creation of artificial new descriptions of music. This includes entirely useless forms of knowledge, such as the way we teach forms in the typical "Form and Analysis" class. The teacher will go to the blackboard and in the center, at the top, he writes, "Sonata." Under this he draws a bracket with three new columns which are entitled "Exposition," "Development" and "Recapitulation." Underneath the first column he now makes a new list, "first theme, episode, second theme and closing theme," etc. It looks like someone's family tree.

   I call this "useless information" because never again will either the player, composer or listener ever use this information. No one ever stands at the side of a barn, so to speak, to perceive the form of a composition. If form is to have an informational value it must be presented in a way that the student perceives it as if he were standing at the left side of the blackboard looking though to the right side, that is perceive the music from the beginning to the end. One will never use the information about the sonata form as it is taught unless one sometime teaches a class in "Form and Analysis"!

4. The teaching of harmony is much the same. Chords are written on the blackboard (for the eye) and described in numerical language. I doubt you will ever hear an instructor in a beginning harmony class use the word "pain," but that is the kind of thing chords describe. In fact, during my school days harmony was taught for the eye, but tested for the ear. No wonder it was difficult.

I would propose that there is nothing which the eye and the left hemisphere sees which has anything at all to do with real music, even though all of this becomes the subject of musical analysis in education. Deryck Cooke, in his wonderful book, *The Language of Music,* finds it most strange that Music is the *only* art form in which we analyze the grammar and not the content.

> If man is ever to fulfill the mission he undertook at the very start—when he first began to philosophize, as a Greek, and evolved the slogan, "Know thyself"—he will have to understand his unconscious self; and the most articulate language of the unconscious is music. But we as musicians, instead of trying to understand this language, preach the virtues of refusing to consider it a language at all; when we should be attempting, as literary critics do, to expound and interpret the great masterpieces of our art for the benefit of humanity at large, we concern ourselves more and more with parochial affairs—technical analyses and musicological *minutiae*—and pride ourselves on our detached, de-humanized approach.[6]

[6]Deryck Cooke, *The Language of Music* (Oxford: Oxford University Press, 1959), x.

Early American Music Education

Early music education in America, as in Europe, was often for functional purposes, in particular for the needs of church music or civic celebrations. But at the same time there were small schools, or even just private teaching, by artists, where the focus was on art music, the highest form of aesthetic music.[7] I am thinking of the music schools founded by Schumann and Mendelssohn and the numerous private students of Chopin and Liszt.

After World War I, when Germany found itself in desperate economic conditions, many German musicians came to the US to teach. Piano and violin students became very numerous and their study was accompanied by national magazines, such as the *Etude,* which carried articles by artists on the interpretation of specific pieces of repertoire. These old articles make wonderful reading today, in our world of the *MENC Journal,* which in my opinion appears to exist primarily for the purpose of commercial sales pitches.

These foreign artists brought to our shores an ancient tradition of individual music education consisting of the pure, non-functional, level, and I am a beneficiary of this tradition. My mother went to college in the 1920s at Philips University, a very small private school located in a very small village in the middle of nowhere, Enid, Oklahoma. A Dutch violinist, by the name of Dyksterhuius, and a pianist who had studied in Leipzig lived in Enid and taught at this small college. I might add that I find it amazing that international tours of important European artists included Enid. My mother heard recitals by Galli-Curci, Mme. Schuman-Heink, Anna Pavlowa and a piano recital by Percy Grainger!

As I was growing up my mother always carried a large load of private piano students which she taught in the home. To the students she passed on the fundamental goal of her European teachers, to interpret the emotions of the music. Her word for this was "expression," which also clarifies that it was the feelings of the student with which she was concerned, not so much the interpretation of some former artist. Her students would play their little instructional pieces and she would lean in toward them and plea "more expression!"

I am reminded of a private piano teacher in Moorpark, CA, a former graduate student of mine, Joan Thompson. She also taught in her home, small children sitting at an upright piano. On the wall above the piano she had hung a collection of photographs which she had collected from magazines. They were all faces, one smiling, one laughing, one sad, one crying, etc. Her little student would play his instructional pieces and when finished Joan would stand up and point to a picture. "Now play it again so it sounds like this face," she would request. And it was amazing, and most informative to me, how immediately and accurately the little interpretations would change. It certainly demonstrated to me how effective right hemisphere private education can be at any age.

I should also add that the early part of the 20th century was an era of radio and included many Classical concerts. The weekly concerts by the NBC Symphony with Toscanini were regularly listened to by entire families gathered in the living room around a small radio. Let us not overlook the significance of this: exposure of the finest music, to ordinary listeners *by ear!*

This was also the period of the national music contests, which played a basic role in the expansion of public schools. Unfortunately they also began a certain regimentation in instrumentation and the emphasis of left hemisphere values, which will be discussed below.

[7] The subject of aesthetics is entirely untaught in American schools today. I recommend my brief discussion, found in the first two chapters of my *Essays on Performance Practice* (Austin: Whitwell Publishing, 2013).

American Music Education Panics

On October 4, 1957, an event occurred which changed the world: the launching of Sputnik I, the first man-made satellite, by the Soviet Union. You could see this object with the naked eye after dark and a radio signal allowed everyone to hear it beeping. I can vividly recall the nationwide hysteria this caused, coming as it did during some of the darkest days of the Cold War. The average American was at a loss of words, "We won the war, we invented the automobile, the airplane, the radio, telephones, movies … how could someone else do this?" Not all of the foregoing was true, of course, but nevertheless it set the stage for widespread fear. People imagined Russia bombing us from the sky while we were defenseless.

The immediate result in America was a demand for more money for science and mathematics. I remember my music education teachers at Michigan at that moment immediately fearful that this sudden change in national priorities would result in the loss of national support for music education.

The music educators' response was a movement to change the direction of music education, to make music more a part of the core curriculum. A wonderful goal, especially if they could emphasize the right hemisphere education that music education brings to society which nothing else does. But in an echo of the panic of the Church 1,000 years earlier, the choice they made was to destroy the very nature of music education. Moving in the opposite direction, literally from right hemisphere to left hemisphere of the brain, a movement began to make music more like other academic subjects, emphasizing the study of composition, music theory, music literature and the Conceptual Approach to Music Education became the rage. Needless to say, textbook publishers were delighted for waves and waves of new books could be sold.

Another even more fundamental change of direction caused by the panic of the music education establishment was the question of accountability. How can you establish validity of any art in the right hemisphere, where every thing must be judged on an individual basis? The immediate response, as the reader will see below, was to move music education into the domain of the left hemisphere, a world completely foreign to any art form but a move they hoped would align themselves with math and science.

So broad was this atmosphere of educational panic that other intellectuals beyond music educators began holding conferences. In 1959 the American Council of Learned Societies and the American Musicological Society formed committees to improve music education. Nothing much was accomplished by either effort.

At this time the National Science Foundation set up a meeting in New York City to see if something could be done to help music education in the public schools. The NSF had no funds to support such a study, so the US Office of Education came forward with a large grant to sponsor a Yale Seminar on Music Education in 1963.

The purpose of the Yale Seminar was to analyze school music and to propose improvements. The Seminar, held for twelve days in June and July, 1963, had its emphasis on musicality, stimulating creativity, composition and performance. Performance activities should be balanced among all groups and repertoire should be more contemporary, including jazz and non-Western music. The most interesting thing about this seminar of concerned intellectuals, composers, musicologists and critics was that no music educators were invited to participate! The Yale Seminar did not produce any tangible results, but it did gain publicity and put the emphasis on *music itself*, rather than being occupied with teaching methods as an end result.

With respect to the fundamental changes in music education in the second half of the twentieth century, the most important seminar was one which followed the Yale Seminar. The birth of this one, the Tanglewood Symposium of 1967, was frankly due to pure anger. The music education professionals were angered by the Yale Seminar, that they were not invited to participate

in and that recommendations for altering the nature of music education were being proposed by composers and musicologists and not by music educators. In order to distance themselves as much as possible they named their conference a Symposium,[8] rather than a Seminar. It was with this Tanglewood Symposium that the Music Educators National Conference (MENC) began to become the spokesmen for American music education in general, whereas previously it had been an organization concerned primarily with the elementary school level and teachers of general music education.[9]

Following the Tanglewood Symposium, the MENC began a long series of hosting further commissions and seminars, each resulting in formal objectives and goals. For the reader's background I will list the most important of these below, including the declarations of the 1967 Symposium itself. Before listing these, however, I want to beg the reader's careful attention in looking at each of these and to ask himself the question, "Is this really about *Music*?" or "Is this really about the bureaucracy of music education?" Or, "Are the education authorities more concerned about politics?"

The reader's answers to these questions will perhaps help him understand the decline of MENC itself, the decline of quality music education in the schools and the dramatic changes in the quality and use of music itself in our society. The MENC conferences are a case in point. I recall attending them in the 1950s when there was a strong emphasis on performance. Today you go, you see a clinic in the schedule for "Aids in Tuning" and go attend expecting some fine artist will have valuable advice. But when you find the room, there is no fine musician there but rather a salesman for a publishing company. I would like to ask the permanent staff of the MENC what the word "Music" in their title means.

In order to illustrate the importance of the reader contemplating these various goals and objectives, let me take one of these projects as an example. This is the Ford Foundation's funding of one of the Contemporary Music Project's programs, the Young Composers Project in which real composers spent periods of time in a particular school and in many cases actually composing a work for the students of that school. Laudable as this project was, it was not *ipso facto* "music education." I remind the reader of the definitions at the beginning of this paper: "music" means only "live performance before a listener" and that the purpose of music is the understanding of and ability to communicate feelings and emotions, and thus must be of the right hemisphere domain. Having the composer present is not in and of itself, therefore, music education. Having the composer talk to the students about his approach to composition, his use of harmony, etc. is not music education, it is educational information about the grammar of music. It is exactly the same as would be the case if your interest were in the study of *Hamlet,* but you were given only lectures on the grammar used by Shakespeare. The composer producing a new work for the school is not music education, it is simply a gift. However, if the composer sits down with the students and asks them to think about and discuss what they were feeling as a direct response to some portion of the composition, or speaks of the specific emotions he was trying to communicate and have the students discuss whether they did or did not feel this communication, then we have entered the realm of *music* education.

With my caution to the reader to consider for himself the relationship of real music education and the various goals and educational objectives of the various studies of the second half of the twentieth century, I will return now to the 1967 Tanglewood Symposium. The immediate result of this Tanglewood Symposium was "The Tanglewood Declaration," written by Allen

[8]Considering the consternation of these worthy educators, one wonders if their choice of the word "Symposium" reflected to any degree the ancient original Greek meaning of "a drinking party."

[9]A distinguished senior music education professor at a major university pointed out to me "that the MENC was preceded by another group of elementary and general music teachers, the NEA (the old one before it became a union) which tried to stamp out marching bands, band contests and jazz education to mention only a few."

Britton, from the University of Michigan faculty, Arnold Broido, the head of Theodore Presser Music Publishers, and Charles Gary, executive secretary of MENC. In their preface they call for music to be a core part of the school curriculum because of music's "contribution to the art of living, the building of personal identity, and nurturing creativity." Then a fine comment about the arts in general,

> The arts afford a continuity with the aesthetic tradition in man's history. Music and other fine arts, largely non-verbal in nature, reach close to the social, psychological and physiological roots of man in his search for identity and self-realization.

The three authors then tell us, "Music educators at Tanglewood agreed on the following:"

1. Music serves best when its integrity as an art is maintained.
2. Music of all periods, styles, forms and cultures belongs in the curriculum. The musical repertory should be expanded to involve music of our time in its rich variety, including currently popular teenage music and avant-garde music, American folk music and the music of other cultures.
3. Schools and colleges should provide adequate time for music in programs ranging from preschool through adult or continuing education.
4. Instruction in the arts should be a general and important part of education in the senior high school.
5. Developments in educational technology, educational television, programmed instruction, and computer-assisted instruction should be applied to music study and research.
6. Greater emphasis should be placed on helping the individual student to fulfil his needs, goals and potentials.
7. The music education profession must contribute its skills, proficiencies, and insights toward assisting in the solution of urgent social problems as in the "inner city" or other areas with culturally deprived individuals.
8. Programs of teacher education must be expanded and improved to provide music teachers who are specially equipped to teach high school courses in the history and literature of music, courses in the humanities and related arts, as well as teachers equipped to work with the very young, with adults, with disadvantaged, and with emotionally disturbed.

Well you don't see the word "performance" there so I, at least, have to wonder where "music" fit into their thinking. To me this sounds not so much a comment on what music education should be as it does a kind of survey of the cultural needs of the nation.

I also want to make a personal observation here. These Tanglewood "Declarations," as well as the following thirty-five goals and objectives which were a result of various committee reports at the Symposium, do not reflect at all what I personally heard at the time. I vividly recall that the strongest feeling among the delegates, indeed the very goal of many of them, was a desire to minimize the importance of performance in music education. The specific rallying cry was the "peak experience," which meant the school concert. By this they meant music education should not be centered and have meaning in a two-hour "grand moment," but rather in the day by day learning experience. This was, in my opinion, the focal point of the main response by the post-Sputnik panic in music education. Conductors like Revelli, Fennell and James Nielson moved with great celebrity through the nation giving wonderful concerts. But

what about the thousands of other music teachers who could not be great conductors, nor even thought of themselves as artists? What is left for them; how do they fit in? They can *talk* about Music and the MENC symbolically awarded them accountability for it.

After all the committee reports were condensed, Paul Lehman, an old school friend of mine and future president of MENC, drafted the proposed "MENC goals and objectives." These thirty-five objectives were approved officially by MENC in October, 1970. Again, I beg the reader to consider if these reflect actual concern for the nature and quality of music education for the child, or if this is just a left hemisphere talking to other left hemispheres.

1. Lead in efforts to develop programs of music instruction challenging to all students, whatever their sociocultural condition, and directed toward the needs of citizens in a pluralist society.
2. Lead in the development of programs of study that correlate performing, creating, and listening to music and encompass a diversity of musical behaviors.
3. Assist teachers in the identification of musical behaviors relevant to the needs of their students.
4. Advance the teaching of music of all periods, styles, forms and cultures.
5. Promote the development of instructional programs in aesthetic education.
6. Advocate the expansion of music education to include preschool children.
7. Lead in efforts to ensure that every school system requires music from kindergarten through grade six and for a minimum of two years beyond that level.
8. Lead in efforts to ensure that every secondary school offers an array of music courses to meet of all youth.
9. Promote challenging courses in music for the general college student.
10. Advocate the expansion of music education for adults both in and out of school.
11. Develop standards to ensure that all music instruction is provided by teachers well prepared in music.
12. Encourage the improvement and continuous updating of preservice and inservice education programs for all persons who teach music programs and in the certification of music teachers.
13. Expand its programs to secure greater involvement and commitment of student members.
14. Assist graduate schools in developing curricula especially designed for the preparation of teachers.
15. Develop and recommend accreditation criteria for the use of recognized agencies in the approval of school and college music.
16. Support the expansion of teacher education programs to include specializations designed to meet current needs.
17. Assume leadership in the application of significant new developments in curriculum, teaching-learning techniques and technology, instructional and staffing patterns, evaluation, and related topics to every area and level of music teaching.

18. Assume leadership in the development of resources for music teaching and learning.
19. Cooperate in the development of exemplary models of desirable programs and practices in the teaching of music.
20. Encourage maximum use of community music resources to enhance educational programs.
21. Lead in efforts to ensure that every school system allocates sufficient staff, time, and funds to support a comprehensive and excellent music program.
22. Provide advisory assistance where music programs are threatened by legislative, administrative, or other action.
23. Conduct public relations programs to build community support for music education.
24. Promote the conduct of research and research-related activities in music education.
25. Disseminate news of research in order that research findings may be applied promptly and effectively.
26. Determine the most urgent needs for information in music education.
27. Gather and disseminate information about music and education.
28. Encourage other organizations, agencies, and communications media to gather and disseminate information about music and education.
29. Initiate efforts to establish information retrieval systems in music and education, and to develop databases for subsequent incorporation into such systems.
30. Pursue effective working relationships with organizations and groups having mutual interests.
31. Strengthen the relationships between the conference and its federated, associated, and auxiliary organizations.
32. Establish procedures for its organizational program planning and policy.
33. Seek to expand its membership to include all persons who, in any capacity, teach music.
34. Periodically evaluate the effectiveness of its policies and programs.
35. Ensure systematic interaction with its membership concerning the goals and objectives of the conference.

During the subsequent ten years the MENC, through a variety of publications, attempted to act on these thirty-five objectives. A spokesman, however, admitted that "some were not attainable because many factors are beyond the control of MENC."

MENC played a new role in 1954 when it began the process of professional philosophical introspection by appointing its Commission on Basic Concepts, which represented music education, psychology, sociology and philosophy.

The publication of *Foundations and Principles of Music Education* (1959) by Charles Leonhard and Robert House provided the framework for the development of an aesthetic philosophy of music, encouraging music educators to teach music for its own value, rather than for its extra-musical, or ancillary, benefits. Some must have found this rather old-fashioned!

During the 1950s and 1960s the Orff and Kodály methods from Europe began to appear, according to one spokesman, "because they were consonant with conceptual learning principles."[10] I can say from personal experience in Europe that this description would have been a great surprise to Orff, whose system taught pure music-making for a considerable time before children were even introduced to notation.

MENC cosponsored the Ann Arbor Symposium from 1978 to 1980 to explore the relationship between research in behavioral psychology and in music education psychology.

These kinds of massive efforts by MENC continued and include the emphasis on National Standards familiar to most people today.

I am confident the reader can see from the foregoing, that MENC took Music, the dominant voice of the experiential right hemisphere of our brain and deliberately turned it into a left hemisphere conceptual description of music in an effort to gain accountability in the post-Sputnik educational world. But Music, both as I define it, and as clinical research has established, has nothing at all to do with the left hemisphere of the brain, except for notation. Neither, in fact, can the left hemisphere form conceptual language to describe the experiential nature of Music in the right hemisphere. The left hemisphere can only form conceptual language to describe things about the grammar of music.

There is also the point of view that MENC, for all its efforts, has had little impact on music education because it is not an organization that can make things happen or change so much as do individuals.

There is another point of view. In an era where school children want music, to hear music, to make music and to perform music, MENC has discouraged this and attempted to replace it with left hemisphere literary concepts which are of very little interest to school children. And so today the children go home and teach themselves to play instruments, to sing and to compose.

Finally, one cannot honestly evaluate the results of the shift to conceptual music teaching made by the 1967 Tanglewood Symposium without considering the following facts:

> During the 1970s the participation of high school students in music courses declined from 25.1 to 21.6 percent, and fell even more during the 1980s. [*The American School Board Journal*, December, 1988, p. 15]
>
> A 1985 survey by the National Endowment for the Arts found:
>
> 61% of adults do not attend one cultural event per year.
>
> 80% of adults have never had a music appreciation course, yet
>
> 25% [57 million!!] of adults played an instrument
>
> A 1991 Report of the National Commission on Music Education (Reston: MENC, 1991) found:
>
> In student-teacher ratio in music, South Dakota ranked best at 151:1 and California last at 1,535:1
>
> Only 15% of California music classes were taught by a qualified music teacher.

The MENC itself has seen its fortunes fall dramatically in recent years. No longer does MENC sponsor divisional conferences or a national conference per se. I know influential music education professionals who believe MENC cannot long survive.

Perhaps, then, it is time to take a closer look at the price have we paid for turning the performance of music in the schools into conceptual data.

[10] Michael L. Mark.

What is the Price we have Paid for Creating Conceptual Music Education?

> *Nothing is more futile than theorizing about music.*
> Heinrich Heine, 1837

> *Nothing is more difficult than to speak about music.*
> Saint-Saëns, 1903

A Loss of Credibility

When the professional music educators of MENC elected to minimize the teaching of music through performance and replace it with Conceptual Music Education, they unwittingly violated physiological processes of the mind which should be at the very foundations of human education. First, moving from the Natural organizational characteristics of the right hemisphere and going to that of the left hemisphere, meant moving from the experiential understanding of the *individual* to the left hemisphere where everything which is stored there is the experience of *someone else.* The student is told that two plus two is four and he must memorize that as a fact, but not from the findings of his own experience. The implication of this is that the information of the left hemisphere must be true. It then follows that the music educator falls into the trap of saying things which are simply not true.

For example, by having the student memorize the rules of the grammar of music the student is led to understand that these rules are what produces successful music. But this is not true. As Voltaire once pointed out, "Lully and the very worst composers both worked by the same rules."[11] And Mahler added,

> It is a peculiarity of the interpretation of works of art that the rational element in them is almost never their true reality.[12]

The music educator's very nomenclature becomes an illusion.

> We say we are teaching rhythm, but we are teaching arithmetic and it is no wonder the student has difficulty *feeling* rhythm when it is taught for the eye.
>
> We say we are teaching music when we teach harmony, but we are actually teaching how to read and understand a graphic foreign language. Harmony is not music.
>
> All universities have a course in music history, but few teach the course as a music course. For example in music history Baroque music is not a product of the Baroque Era, rather the Baroque Era is the result of Baroque music.

Speaking of the confusion in language, what do we mean by "music education" with respect to the instrumental rehearsal? One frequently observes a school instrumental rehearsal which proceeds as follows. The ensemble begins to play. They stop and the conductor speaks about what he hears. The ensemble begins to play, they stop and the conductor talks; play, talk, play, talk, etc. It seems most curious to me that all of what we teach this conductor about his role as a music educator is focused *only* on the intervals where there is *no music.*

The studies of the individual musician in the university are centered in technique. At the end of each semester he must perform for the faculty, which usually hold an adjudication form

[11] Voltaire, Letter to Père Porée, 1730.
[12] Alma Mahler, *Gustav Mahler* (New York: Viking Press, 1969), 32.

with places for comments on left hemisphere grammar, such as tone, technique, rhythm, etc. But Plato said that the test of a music student was whether he could move the emotions of the listener. Imagine if this were the sole criteria for the semester juries. How would it change instruction? How would it change the attitude of the student toward his instrument if he found that it was primarily a vehicle to express himself?

Accountability becomes Conformation

Even more unsettling to me about the music educators moving music education from the right hemisphere of the brain to the left hemisphere in order to create their new design of Conceptual Music Education is that in the world of the left hemisphere *conformity is the rule.* There can be no individuality in the left hemisphere. Two plus two is, and must be, the same for everyone on earth. Now accountability must lie with the perfect unanimity of the group and not the individual.

Let take as an illustration the high school band contest, usually called a "festival" to disguise the fact that there are winners and losers. First, in order to have an adjudication contest there must be total agreement among teachers and adjudicators on exactly what is to be adjudicated. Since individual reactions to musicality by the adjudicators is not permissible, and usually a caption such as "Was it musical?" is never found on the adjudication form, the factors to be adjudicated are therefore only matters of musical technique and grammar, such as tone, intonation, technical accuracy, etc. Even the conductor must strictly conform to the left hemisphere data of the adjudication sheet; he is not free to engage his own musical judgment, through *rubato* for example. Most detrimental to music education of all is the fact that quality of the repertoire performed does not matter. It is not what you perform, but how you perform.

The important bottom line is that the contest is one in which only matters capable of adjudication by the left hemisphere of the adjudicator are judged while the actual event pertains only to his right hemisphere. There is one more little secret credibility issue here. Anyone who has ever adjudicated one of the contests and hears 15 or 20 bands one after the other quickly realizes that he is not grading the band, as the results testify, but he is really judging the conductor.

Though individuals create the performance, the grade is only a group grade. Thus the aim of individual instruction is lost and everything is focused on the conformity of the group. Over a number of years this has caused the emphasis to be on the activity, not the musical education of the individual.

Conceptual Education opens the door for Commercial Influence

If music education were entirely centered in the right hemisphere of the brain, except for some basic teaching aids, there would be no commercial interest in this form of education. The commercial industry requires the characteristics of the left hemisphere to sell and the large numbers achieved by conformity to earn profits.

Does the commercial world influence music education? Obtain a copy of the MENC *Journal* and look through it. The ads will tell you more about the state of music education than the articles.

Conceptual Music Education has caused a loss of Public Support

Administrators and parents of participating young musicians are equipped by Nature, by genetic aspects of music given them at birth, to judge whether a musical performance is good or bad. And what should particularly engage the attention of the school conductor is the fact that

there seems to be no middle ground in this decision. No adult has ever said, "It was almost a good concert."

The music education profession does not help save the day because the administrator and the parent know nothing about the grammar of music, nor would they care if they did.

Richard Wagner, who in addition to having been one of our great composers, was a philosopher, was a great intellectual and a keen observer of music education. His concerns were similar to several of the above, including the relationship with the public, and he addressed them in comments which some may find most familiar today.

> That the acceptance of the empty for the sound is cretinising everything we possess in the way of schools, tuition, academies and so on, by ruining the most natural feelings and misguiding the faculties of the rising generation, we may take as punishment for the sloth and lethargy we so much love. But that we should pay for all this, and have nothing left when we come to our senses, this, to be frank, is abominable![13]

Putting Music back into Music Education

> The notion that you can educate a child musically by any other means whatsoever except than of having beautiful music finely performed within its hearing, is a notion which I feel constrained to denounce.
> *George Bernard Shaw.* Music in London, *1890–1894*
>
> Nothing is more futile than theorizing about music.
> No doubt there are laws, mathematically strict laws,
> but these laws are not music; they are only its conditions …
> The essence of music is revelation; it does not admit of exact reckoning.
> *Heinrich Heine,* Letters on the French Stage, *1837*

By putting music back into Music Education, we mean performance and a return to the ages old practice of identifying Music with the right hemisphere of the brain. Of course it has only been recent clinical brain research which has identified the location, but all earlier philosophers, writers of all kinds, teachers and musicians, whether they used words like feeling, heart, instinct or intuition, all agreed that the essence and purpose of Music had nothing to do with conceptual data.

I believe it is important here to offer readers some reassurance about the right hemisphere. Early philosophers always said that Reason should rule man. Although they had no medical knowledge of the bicameral brain, nor the fact that the hemispheres control opposite sides of the body, this ancient dogma has been reflected by writers who speak in favor of the right hand (Reason and the left hemisphere) and with prejudice towards the left hand. The favored one sits at the right hand of the king; one denounces the left-handed compliments, etc. In fact, it is astonishing how frequently this appears in the literature of the past 2,000 years. The notion takes on even more weight when found in religious books. Consider the following:

> A wise man's heart inclines him toward the right,
> But a fool's heart toward the left.
> *Ecclesiastes 10:2*

In the Book of John, 21:14, Jesus finds his Disciples fishing all night on the left side of the boat, but having caught nothing. "Cast your net on the right side of the boat," says Jesus, "and

[13] Richard Wagner, "On Poetry and Composition," in *Richard Wagner's Prose Works,* translated by William Ashton Ellis (New York: Broude Brothers, 1966), VI, 147.

you will find some." They do and suddenly there are so many fish they could not haul in the nets. And who would not be alarmed by reading in Matthew 25:31–46,

> When the Son of man comes in his glory, and all the angels with him, then he will sit on his glorious throne … Then the King will say to those at his right hand, "Come, O blessed of my Father, inherit the kingdom prepared for you from the foundation of the world …"
>
> Then he will say to those at his left hand, "Depart from me, you cursed, into the eternal fire prepared for the devil and his angels."

I would suppose this ancient prejudice was somehow connected to the simple fact that the great majority of people are right-handed. But modern clinical research has found more. In trials the left hemisphere, the only side that can talk or write, attempts by various actions to imply that it does not even know the right hemisphere exists, or that it is wrong. One can see how it follows that the educational world for the most part only educates half a brain; we are all sent into the world as half-wits.

Well, let's be honest, we all know we are not inclined to follow Reason; we follow our feelings. If you are looking for a used car you can do hours of research, and have the salesman follow you down the line of cars, but suddenly you find, "I want that one!" and all the research is for nothing. Recent clinical brain research has now confirmed that in fact all major decisions are made by our emotions which determine our choices and not left hemisphere rational data. This is true whether we are buying a car, a house or choosing a wife.

And the fact that we make important decisions in the right hemisphere, even though it cannot speak[14] or write, documents how important it is to the *individual* life. And the left hemisphere, don't forget, contains only other people's opinions. So let us have no fear about engaging in music education in the right hemisphere of the brain—it is Natural.

The Unique Educational Opportunities in the Right Hemisphere

Because the right hemisphere is the side which deals with personal experience, consider the following four educational opportunities not available in left brain traditional education.

1. It is in the right hemisphere that we can experience the goal often mentioned by earlier philosophers of education regarding the opportunity of our being in touch with great minds. This is particularly true of Music more than other fields. When studying geometry one does not feel in touch with Euclid. But in playing a Beethoven sonata one can feel very connected with the composer. One cannot dismiss the opportunity in such a case for important insights. It is here that the issue of performing high quality repertoire becomes important. Philosophers since the ancient Greek Period, as well as great composers, have emphasized exposing the student to only the highest quality music. Aristophanes (450–366 BC), in his play, *The Clouds*, writes of the education of boys to be professional lyre players,

[14] Because the *corpus callosum* which connects the two hemispheres for the purpose of sending information back and forth is not fully connected until age 6 or 7, the right hemisphere contains some vocabulary of a child, but it cannot make a sentence. For a child injured in the left hemisphere language region it is this depository of right hemisphere words which is the basis of attempts to help the child recover speech. Once when I was lecturing on this subject at a university in Hawaii, a neurosurgeon told me that when he has such a child the first thing he tells the parents is that in the remainder of this child's life there must be no music, neither playing nor listening! For music is dominant in the right hemisphere that it would tend to prevent the language process from taking hold.

Their lyres were strung
Not to ignoble melodies, for they were taught
A loftier key.

Robert Schumann wrote,

> No children can be brought to healthy manhood on candy and pastry. Spiritual like bodily nourishment must be solid. The masters have provided it; cleave to them.

The point is worthy of consideration. If your school children are going to be exposed to the minds of other men, do you want to offer them some violent rapper?

2. In the same way, the right hemisphere helps the student become aware of the universality of time. The student discovers that the emotions of happy or sad were the same for Mozart as for himself.

3. The experiential nature of the right hemisphere permits the student a connection with great men and events of the past. The student performing the original band composition, *Siegessinfonie* by Beethoven, can feel a real connection with Beethoven and Napoleon. Historical writings addressed to the left hemisphere of the brain will always seem like distant data to the modern student.

4. It is in the right hemisphere where the student can learn and understand performance styles and idioms of earlier periods. This is what Wagner meant, in his plans for a music school in Munich, when he contended,

> The invisible bond, uniting the various branches of study, will always have to be performance.[15]

Following are several characteristic features of the right hemisphere which are uniquely different from the left hemisphere. I believe there is significant opportunity here for a creative music teacher to discover and create rich experiences for his students.

1. The right hemisphere finds a special joy in going backward in time. It is here that we are so moved to see an old town we have seen in many years, or an old friend's face after some long time (his name we may forget, for as language it is stored in a different computer—the left hemisphere).

   It is this special location of enjoyment which gives us satisfaction in hearing a *recapitulation* or *da capo*, "here we are back home again." It seems obvious as well that this was the origin of these so-called architectural forms, such as ABA, beginning in the Baroque.

   There is nothing whatsoever like this in the left hemisphere. We would find no enjoyment when coming to the end of a novel to read, "go back and read the first five chapters." And numbers consist in a linear progression which begins 1, 2, 3, 4 and never ever returns to 1.

2. The right hemisphere also has certain properties, unique unto itself, which govern our perceptions of Time. Everyone, if you stop to think about it, knows that the experience of Time can be quite different from clock Time. One familiar example lies in the fact that it seems to contain "software" for condensing Time, so that today seems longer to us than all of the previous month in our memory. This feature has been known for a very long

[15] "A Music School for Munich," in *Richard Wagner's Prose Works* (New York: Broude, 1966), IV, 197.

time and it is the reason why we do not take repeats in the *da capo* of the minuet form, for example. After having heard this music with repeats, by the time the *da capo* comes this material will have shrunk in our memory to about half its original perceived length. So a performance now without repeats *seems* to us to balance what we remember of the original, which with repeats was actually twice as long.

Another example of the right hemisphere's governance of our perception of Time is the ability to see, with all relationships intact in the mind, a long movement of music at one time from the beginning measure to the end, a skill almost never required in normal daily life.[16] I was privileged to witness a remarkable demonstration of this one week during the time I was studying with Eugene Ormandy. The Philadelphia Orchestra at that time had a very strict time limit for the number of minutes which limited the duration of a concert. I can no longer recall the exact time, something like an hour and a half, which included time between movements, etc., but not the time musicians were warming up on the stage before the first down beat. If the time limit were exceeded, then very large financial results were imposed by the union. Among other things, it meant that usually the orchestra could not play encores. To control this factor Ormandy kept a notebook in which the assistant conductor entered the durations of performance time for everything the orchestra played, live or in recording sessions. So, when the conductor was planning the repertoire for the season he had at hand a pretty good indication of which compositions could be grouped together on a particular concert without exceeding the allowed time limit.[17]

There came a concert when, due to the orchestra's arrangements with Columbia Artists, they were to have a violin soloist for the Mendelssohn Concerto. The performance duration of the familiar concerto was predictable and so Ormandy decided to combine it with the *Fourth Symphony* of Bruckner. Each day, all week, I was fascinated to hear Ormandy create a beautiful interpretation of the Bruckner, the kind of repertoire he was best at. The violin soloist appeared only at the last rehearsal, a Friday morning before the first concert of that weekend on Friday afternoon. It was a lady from Siberia, unknown to anyone, and she appeared on stage, shook hands with Ormandy and they began, there obviously having had been no prior discussion between conductor and soloist. To the utter amazement of us all, she played a very slow interpretation, so slow one wondered if she had never heard any other interpretation. The concert time limit was obviously endangered!

After having performed the entire concerto, Ormandy gave the orchestra a break and came down into the hall where I was sitting with the assistant conductor, Bill Smith. Ormandy asked, "How much over is it?" Smith replied, "Five minutes, maestro. What are you going to do?" Ormandy thought for several moments and then said, "I will take five minutes off the Bruckner." One can imagine, my being young and idealistic, how stunned I was to hear this. I remained to hear that Friday afternoon concert and sitting in Ormandy's box with my score and a stop-watch I was anxious to hear where he would "speed up" to make a shorter performance time. The amazing thing was, considering I knew in advance what was going to happen and had been present all week at rehearsals, I could at no time feel that anything had changed! Ormandy was able to take off such very small elements of

[16] The great pianist, Arthur Rubenstein, also had a broad knowledge of orchestral repertoire and would sometimes for enjoyment sit down and "turn on" in his head a performance of a favorite symphony. He spoke once of an occasion at home in Paris, when he sat down to "hear" a performance of a Brahms symphony. Shortly after the first movement began the phone rang and Rubenstein rose and walked over to answer the phone. When he returned to his seat and closed his eyes he found that he was now in the third movement!

[17] The year I was present, the manager at the beginning of the season passed out a calendar to each member of the orchestra. But this was not a current calendar, it was one for three years in the future which gave the length, starting time, location and repertoire for every rehearsal and concert of that season.

time spread over an hour long time-frame that nothing seemed faster. The orchestra, who of course knew none of this, I am sure also did not notice.

It was for me evidence of the rarest of all gifts which the greatest artists have, to be able to see in their mind a work so perfectly over a long time span that all of the internal relationships were in perfect perspective. It was at the same time, of course, a demonstration of the right hemisphere's unique perception of Time.

3. The right hemisphere also is its own judge of perception of many things. Suppose you are conducting a very large honor band which has fifteen tubas, but one piccolo. You will in some places seem to need even more bass, but that one piccolo player is always so loud that it is very distracting. The acoustical engineer comes along with his left hemisphere decibel measuring machine and says, "But I can prove to you that the fifteen tubas create more sound than the one piccolo player!" We say, "go away and leave us alone!"

4. It should also be noted that the right hemisphere has its own appreciation of humor. An example of purely left brain humor would be one based on language, such as a pun. I might also mention that Mozart would sometimes make humorous notations in his autograph scores, intended only for the player and not the listeners. There is the first movement of one of his piano concerti where, at the end of the exposition section, instead of the expected large bracket indicating a repeat, Mozart instead drew several faces in profile, each looking to the viewer's left, as if the figure were looking back to the beginning.

   As in the case of left hemisphere humor, the right hemisphere also includes humor only for those with musical knowledge as well as for the general audience. An example of the latter might be the famous unexpected loud chord in Haydn's "Surprise" Symphony. Another example is found in Haydn's Symphony Nr. 60, where, in the final movement, the orchestra suddenly stops playing and begins to retune, including a slow rise in a unison violin pitch reflecting the tightening of the tuning knob. Having done this, the music continues.

   An example of right hemisphere humor which requires some previous musical knowledge is the "minuet" movement of Tchaikovsky's *Sixth Symphony.* Here, while carefully preserving the minuet form of the Classical Period, Tchaikovsky writes beautiful sweeping waltz style music characteristic of his own time. But one can dance neither the minuet nor the waltz to this music for it is in the meter of 5/4!

   A final point which seems to me related here is the fact that in ordinary speech the words of the left hemisphere are strictly as in a dictionary, they have a recognized meaning and correct pronunciation but they carry no expression. It is the right hemisphere which adds the emotional character to the left hemisphere speech which actually gives it a specific meaning. For example, if you say the words, "I love you," in an absolutely flat tone, it means nothing, it is just words. But, according as to whether you emotionally emphasise either the first or third word, a dramatic difference in response will return to you! This the *corpus callosum* does for us, even though the hemispheres remain separate. Musical speech is the reverse. All music is created in the right hemisphere of the composer, but in order to communicate it to another musician (since the right hemisphere is mute) he must turn it into the musical grammar of the left hemisphere. And there is the difficulty in composition. The left hemisphere grammar is no more naturally conducive to expressing music than it is in expressing love.

When it comes to the teacher or conductor thinking about creating right hemisphere experiences in education for his students, there are two general modes which condition both the performance of the teaching strategies and their success.

The first was explained by Wagner in the analogy of a magnet, to which one can attach further pieces of iron and the magnetism continues to stream ahead unabated. Imagine a fine performance on stage by an orchestra of Tchaikovsky's *Sixth Symphony.* Let us say, for example, that what is created on stage at some moment is the sum of the emotions of sadness of the composer, the players and the conductor. But, Wagner suggests, what leaves the stage and goes out into the audience is only the quintessence of the emotion, a kind of pure epitome of the emotion of sadness. When this reaches the listeners, perhaps 2,000 of them, this quintessence of sadness enters the ears of each listener but is then sifted through the experiential right hemisphere of each listener, where it is transformed or translated into an individual understanding of sadness based on that individual's own personal experience with sadness. We then have 2,000 *different* understandings of the emotion sadness, even though all 2,000 persons are familiar with the left hemisphere, dictionary definition of sadness.

This is the source of the great power of music over man, for music communicates both in general and on an individual basis. In music education it means we can still have ensembles and activities but still educate the individual, presuming the necessary conditions and values are in place.

The second mode or condition which is crucial to right hemisphere music education is to find ways to block the influence of the left hemisphere. Especially to prevent the eye, our most dominant sense, from taking over, as it were. But also we want to attempt to block all previous left hemisphere language-type definitions which would tend to intrude. By far the most intrusive obstacle in this regard is the notation itself. The notation of a dotted eighth-note followed by a sixteenth note is a very fixed and final fact of the left hemisphere, no more variable than any other arithmetic formula. But in thinking of music, the right hemisphere wants to consider this symbol in a hundred variations according to tempo, character of the music, meter, etc. We want the right hemisphere to be free to feel what the composer felt without being intimidated by the left hemisphere dogma. To say it another way, we want to see behind and beyond the notation.

The practice of learning to see beyond the notation is famously illustrated by an Indian Sufi parable.

> A student was walking through the village of his teacher and saw him on his hands and knees, looking for something in the grass.
>
> The student, of course, stopped and asked, "Master what are you looking for in the grass?"
>
> The teacher answered, "I have lost my house key and I am trying to find it. Please help me look for it."
>
> The student thus got on his hands and knees and began looking, but soon he decided that there was no key there at all, that this was some kind of lesson which the teacher wanted to illustrate. So the student said, "OK, Master, where actually did you lose your key?"
>
> "I lost the key in my house somewhere," said the teacher.
>
> "Well," the student asked, "why are we out here looking in the grass?"
>
> "Because," said the teacher, "there is more light out here!"

In terms of "finding more light" and blocking out the notation, there is no technique more successful than memorization and this is why all singers, pianists and most conductors memorize their scores. By memorization we do not mean memorizing the notation, note for note, but rather memorizing the music. By way of example, if we ask, "Do you know Sousa's *Stars and Stripes Forever March*?" You would answer, "Yes." And that is an honest answer, even though it does not suggest that you could write out from memory the second alto saxophone part. It is in this meaning that the old Austrian conducting teacher, Paul Fuchs, quite correctly pointed

out that whether you elect to use a score in performance or not is not important, but you *must* memorize the music![18]

It is in this regard that any kind of teaching you can do without books, or conducting without talking also helps to block the left hemisphere. The sixteenth-century Flemish theorist and teacher at Wittenberg, Adrian Coclico, reported that his own teacher, one of our greatest composers in history, taught and rehearsed without books.

> My teacher, Josquin des Près, never rehearsed or wrote out any musical procedures, yet in a short time made perfect musicians, since he did not hold his students back in long and frivolous precepts, but taught precepts in a few words at the same time as singing through exercise and practice.[19]

I would be remiss at this point if I did not give some examples of my own right hemisphere teaching strategies. I have, for example, in circumstances where the comment is appropriate and the state of rehearsal perfection permits, said to an ensemble, "You are playing this beautifully in all respects, but somehow I don't hear enough *pain* in your performance." Then, without further comment, I would repeat the passage and the reformation of the interpretation would be most remarkable. The students can add something like this if only asked and the results are beyond description—and, of course, more musical. And how long, how many minutes of rehearsal time, would it have taken to achieve this by talking, by attempting to describe in words what I had asked for?

Sometimes where you have, let us say, a long unison flute melody which, given the state of our notation limitations, has very few hints for turning these notes into a beautiful melody, I will say, "This needs to be more expressive, please add anything you want in the way of melodic accents, crescendo, diminuendi, etc." The remarkable thing that always happens is that the flute section will then perform this passage exactly as you would have wanted it had you taken thirty minutes to have them mark all kinds of things note by note on paper.

It can also be valuable to ask from time to time a rhetorical question regarding some non-notational element. "Should this have more of a sense of joy?" But do not invite actual answers, allow each student to look into himself for the answer.

Having instrumentalists sing in rehearsal is a valuable approach to creating greater emotions, as most conductors know. Once I was attending an ABA meeting being held in Virginia in a high school building. There was an announcement that the school's band was beginning rehearsal and they would appreciate it if anyone wanted to come and listen. Assuming no one else would, as turned out to be the case, I went. There I saw a very large high school band, everyone in Sunday best suits, ties, fancy dresses, sitting very erect in perfect posture on their chairs and looking very serious. Around the back of the room were a number of parents who apparently assumed this was an important event. When I entered the room they were playing the familiar march, *Colonel Bogey,* by Kenneth Alford, but in a completely flat, expressionless unmusical manner, although, like their clothes, every detail was in place. The conductor then handed me the baton and asked if I would rehearse the band. "Pleased to, of course." As is always the case in these circumstances the regular conductor left to make phone calls or something assuming he had, after his long experience, nothing more to learn. So, after he had left, I laid the baton on the stand and told the kids, to their astonishment, "you all know this music, why don't we just sing

[18] In conducting workshops I teach this form of memorization which I learned while a student in Vienna. It is actually a highly effective means of speeding up score study which in turn helps the student to understand what is important in a score and what is merely grammar. Unfortunately a longer discussion is not possible within the limits of this paper. I might observe that the writing of this paper marks the 50th anniversary of my first publication in a national journal, an article recommending conducting without scores in a 1964 issue of *The Instrumentalist.*

[19] Adrian Coclico, *Musical Compendium* [1545], trans. Albert Seay (Colorado Springs: Colorado College Music Press, 1973), 16.

it to any syllable you wish?" They then immediately, without further comment, began singing the most robust and enthusiastic performance. It was very musical. Then I told them, "just play it like that." Which they then did, with me conducting. Upon hearing this, the conductor came running back believing the Chicago Symphony had perhaps taken the seats because of the beautiful performance. He was amazed, he assumed I had some secret rehearsal technique he had missed. He questioned me at length for the secret, he even looked to see if I had substituted my baton, but I just congratulated him on his band. The lesson here is that singing comes from within the body and is naturally very expressive. It is the act of putting a clarinet in the hands of the student, making the music now outside of the body, which somehow blocks his natural musical instincts.

I must mention here the Cooke book, *The Language of Music,* which I referred to above. This is the only great book I know which takes fragments of melodic lines and associates them with specific feelings or subjective characteristics. In each case he gives examples from 400 years of music by important composers who wrote melodic fragments which communicated exactly as he has indicated. Cooke was a great musician himself and the research he provides here on the right hemisphere nature of melody is remarkable.

The final characteristic of right hemisphere music making I wish to mention has to do with the subject of aesthetics, a branch of philosophy founded by Aristotle. Think of an occasion (in the past since movies seem to be disappearing) when you went to some epic entertainment film with lots of action. You were completely involved, you laughed, you cried but when the lights were turned on you left with your friends and immediately began talking about work, other friends and activities, etc. This Aristotle called an entertainment event.

On some other occasion you go to a film which is so moving it seems to get inside you. It ends and you wished they would leave the hall dark for another ten minutes so you can regain your composure. You leave with your friends and no one says a word to each other. The impression can last for days. Aristotle calls this an aesthetic event. The significance between the aesthetic and the entertainment in music is very real. One recalls a comment by Handel, in a letter to Lord Kinnoull after the first performance of his *Messiah,* on 23 March, 1743,

> I should be sorry, my lord, if I have only succeeded in entertaining them; I wished to make them better.

This happens with the child in performing music. Popular music can be vastly entertaining, but it just bounces off the child. He may remember the words, but not the music. But if there is quality music, aesthetic music, it gets inside of the child and there the greatest contribution we can make to society begins to take place. We are the only teachers who can, beginning with important music, enable the child to begin to discover and understand his own personal emotional template. We can help him get to know the other half of himself. No one else in school can do this; society leaves it to the child to learn emotions out in the street.

The reader will see a testimonial to this at the head of this final section, a quotation from Heinrich Heine in which he says "the essence of music is revelation," which means getting to know one's self. Wagner made the same promise, "Music … lets us gaze into the inmost Essence of ourselves …"[20] And this is what Schumann meant when he confided, "Music is to me the perfect expression of the soul."[21]

[20] Ellis, *Wagner's Prose Works,* V, 77.

[21] Letter to his Mother, Leipzig, May 8, 1832.

The importance of returning performance to the central role of music education seems to me evident in this syllogism:

> The central meaning and purpose of Music is found in the right hemisphere.
> The right hemisphere is the half of the brain where the real child as an *individual* is found.
> If the purpose of music is to educate the *individual* child,
> Then music education must be centered in the right hemisphere of the child.

What could be more clear?