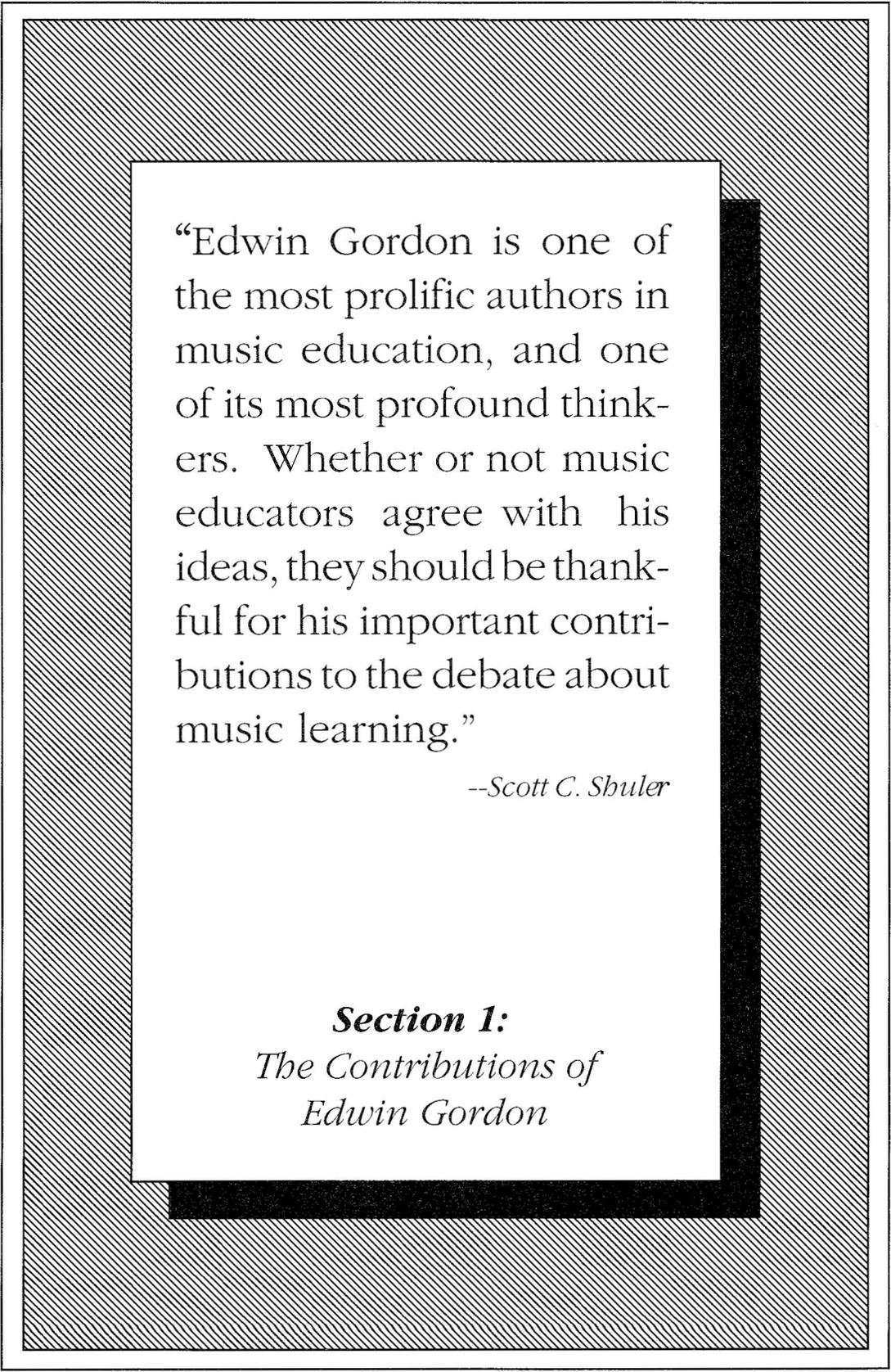


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“Edwin Gordon is one of the most prolific authors in music education, and one of its most profound thinkers. Whether or not music educators agree with his ideas, they should be thankful for his important contributions to the debate about music learning.”

--Scott C. Shuler

Section 1:
*The Contributions of
Edwin Gordon*

Gordon on Gordon

By Edwin E. Gordon

Temple University

When asked to write a brief professional biography emphasizing the major influences in my life, my inclination was to decline. It was not my sort of writing. Rather than say no, however, I gave it a try. Much to my amazement, I began to enjoy recalling those persons, events, and professional opportunities and struggles that contributed to my current thinking. I hope the following account serves well the intended purpose.

Einstein wrote, "Science without religion is lame, religion without science is blind." The following analogy, which bears on the music learning process, seems appropriate to this issue: "Aural comprehension without understanding is lame, theoretical understanding without aural comprehension is blind," or better yet, "deaf."

I know I would not have been able to explain with precision the import of that analogy in 1942 when I was a boy about to turn 15. Nonetheless, I would like to believe that at that tender age I had at least some insight into the nature and implications of the problems associated with music education which the analogy suggests. I had begun to take lessons on the string bass during that time, and I came face to face with the realization that all was not well with me and music. I remember thinking that I was learning how to play the bass in the same way that one might be taught to use a typewriter designed for a language that one did not understand. The instruction that I received might have been offered in a trade school. It was not appropriate for a highly motivated young fellow who was beginning to find excitement and challenges in music. Certainly I was disappointed with the instruction that I was being given.

True, in a short period of time I had become capable of playing in a pick-up band

around town. I could read notation and I was developing the technical facility for translating what I was reading to the bass, but other than that, what I was being taught seemed pointless. I should have been satisfied because I was learning well what I was being taught to do. I was bothered, however, because I could not comprehend the sound that was coming from the instrument. I had little awareness of the intonation, tempo, tonality, and meter of the music I was performing, let alone its implied harmony, style, or form.

“I should have been satisfied because I was learning well what I was being taught to do. I was bothered, however, because I could not comprehend the sound that came from the instrument.”

I was not taught to consider whether the tone quality that I was extracting from the instrument was characteristic or even acceptable. My situation was not unlike that of my friends who were at the same time taking lessons on other instruments with different teachers, or that of many students of all ages who are taking lessons today.

I must digress for a moment to tell you what happened to me when I was a typical 9-year-old boy in the fourth grade who was not blessed with a favorable musical environment in the home. To the best of my memory, no one in my family sang to or with me, suggested that I respond to music, or guided me in listening to music. The music instruction that was offered in the first three

grades at school was a combination of what was called music appreciation (we listened often to “In the Hall of the Mountain King”) and occasional performances, during which class singing served to accompany the assembly-hall piano.

In the fourth grade, instruction by a music specialist was initiated. Each child was directed to come to the front and sing “The Battle Hymn of the Republic” in solo as the teacher played the piano. I have no idea of the key that she had us sing in, but I strained and soon ceased in my attempt to comply. Thereupon I, joining a few other boys, was labeled a blackbird. The remainder of the children, the bluebirds, were the singers, and we blackbirds were the nonsingers, always assigned to the back of the room during music instruction. When the bluebirds sang, the blackbirds were instructed to be quiet and listen so that we might learn how to sing. When the class sang in public, the blackbirds were told to move their mouths but not to make any sounds. That continued through eighth grade. The memory of my frustration still lingers, because I knew, even then, how much I wanted to express that part of me that was musical.

Development of a Young Musician

Back to the high school days: My bass teacher told my father after about a dozen lessons that he had no more to teach me. He suggested that a teacher be found for me in New York City, only 35 miles away. Although the new teacher was highly recommended, the lessons were more of the same. I was losing interest in playing the bass, and as I think back on it, I really did not know why. The teacher suggested that I might take a jazz lesson along with my regular lesson each week. That rekindled my interest, and I was subsequently introduced to Sid Weiss, the legendary bass player who at that time was with Benny Goodman, and before that had played with Artie Shaw.

My lessons with Sid were more like excursions than lessons, and my education in music began to take shape. Each of us, with bass in hand and without notation, would play together and back and forth. It became clear that I was to think (more about that word and its relationship to audiation later)

about what I was going to play before I played it. I “laid down” contrapuntal lines to an on-going melody, the line establishing an intimate relationship to the chord progressions of mostly Gershwin tunes. I learned how to become a bass player who is felt and not heard. The rule, as Joseph Campbell would say, was to follow my bliss, using intuition. My apprenticeship with Sid, which continues to influence my understanding of ideal pedagogical procedures, lasted until I was drafted into the Army upon graduation from high school in 1945.

As I recall, eight weeks of basic training were required in the Army. Things went all right for me until I found myself on the rifle range, and it became painfully obvious that using the same finger to trigger a rifle and to play pizzicato was not in my best interest as a rising young musician. I proved to be a menace to anyone within the vicinity of the target I was aiming at. I was quickly shuffled off to the 302 Army Band, with the provision that I teach myself how to play the tuba and be assigned a military occupation status number. Many off-hours were spent each day jamming with the fine musicians in the band. After 18 months, I was discharged and entered the Eastman School of Music as a string bass player in 1947.

The GI Bill saw me through the initial years at Eastman. When my money was depleted, I headed for New York City, looking for work. I was hired by Gene Krupa to join his band. It was an auspicious experience. I learned more from him about rhythm than from anyone else before or since. The basis of my theory of rhythm as developed today is rooted in the genius of Gene Krupa. I like to believe that I have given his concept of rhythm a research base and academic credibility, and that as far as I am able, have made practical use of it in every music curriculum that I have developed and published. I regret that he did not live long enough to be able to tell me whether he approved of my interpretation and logical extension of his ideas. Krupa’s big and small beats, fundamental to rhythm, became for me macro and micro beats.

Upon leaving the Krupa orchestra, I returned to Eastman and earned Bachelor’s and Master’s degrees in 1952 and 1953.

Returning to New York City to play commercially brought about another significant period in my life through an introduction to Philip Sklar, then the principal bassist of the NBC Symphony. I studied with him, and for the first time learned to cope with the instrument I so dearly love. Sklar was such a fine teacher that I learned more about pedagogy from him than about music. Because I think he knew my tonal aptitude was not high enough to fully comprehend the extent of his musicianship and what he might try to teach me, we spent a great deal of time analyzing the learning process. Although he continually complimented me on my intellect rather than on my musical mind, in his patient and uncompromising way he brought out my best musicianship.

Moreover, Philip Sklar was the first person to ask me to sing since those fourth grade days. Not only did I sing what I played, but also I danced what I played. Today, Sklar's ideas underlie all of the pedagogical principles of my work. Those who are familiar with music learning theory can see the basis for the most important levels of the discrimination type of skill learning sequence, the aural/oral and partial synthesis levels.

Learning About Teaching

It was Sklar's suggestion that I attend Ohio University in Athens to pursue a second Master's degree, in education, to qualify as a certified music teacher. After I graduated and taught briefly in the public schools, I was offered a fellowship by the University of Iowa. I completed the Ph.D. in 1958 and remained there for 14 years as a member of the faculty. My professorship called for teaching a variety of music education courses and provided opportunities to teach general music and instrumental music at the elementary and secondary levels in the university laboratory schools.

During the Iowa years, I became infatuated with the possibilities of objective research in what was then referred to as the psychology of music, and what I now more appropriately call music learning theory. Though the familiarity I gained with the pioneering work of Carl E. Seashore became a major influence in my life, it was my mentor, Albert N. Hieronymous, to whom credit must be given

for whatever success I have achieved in educational measurement, particularly in the measurement of music aptitudes. Like that of Philip Sklar, the value of Hieronymous's guidance cannot be overestimated. I was indeed most fortunate to be in the right place at the right time and have the opportunity to study and work with those two caring and knowledgeable persons.

As a young assistant professor at Iowa, I initiated my research in music learning theory. What I saw in the laboratory schools I had seen in the past in other schools. Teachers were so busy teaching that they had no time and seemed to have no desire to consider the role of learning. I wanted to gather information on how we learn when we learn music, or, in current terminology, how audiation is developed and sustained. Unlike my colleagues, I had little interest in techniques, that is, in how to teach. I needed to know what should be learned, when it should be learned, and why it should be learned.

In a short time it became apparent that without the knowledge of how to adapt instruction to the individual musical differences among students, any type of sequential instruction, and especially that based upon music learning theory, would yield less than optimum results. Thus my research in music learning theory was immediately side-tracked, and I was forced to embark upon the study of the nature, development, and measurement of music aptitudes.

Research in Music Aptitude

The first spate of research in music aptitudes, which culminated in the publication of the *Musical Aptitude Profile* and associated longitudinal and cross-sectional validity studies, lasted almost ten years. Somewhat more mature, and with data to guide me, in the late 1960s I was ready again to begin research in music learning theory, the need for which became increasingly apparent as I prepared the manuscript of *The Psychology of Music Teaching* during my final months at the University of Iowa. That book, I believe, was the first of its type in the discipline to give a detailed account of music learning theory. It is outdated now, but it is still an accurate statement of my thinking at that

time. Its sequel is *Learning Sequences in Music: Skill, Content, and Patterns*, which is now in its fifth edition.

In 1972, I accepted a position at the State University of New York at Buffalo, where I remained for seven years. As a professor of music, I taught and held an administrative post in music education. Nonetheless, I had sufficient time to develop the Ph.D. program in music education as well as to establish the firm foundations of music learning theory through continuous research and teaching. "Audiation" found its modest beginnings as a coined word in a footnote in 1976. (Audiation is to music what thinking is to language.) Before that time, valid music aptitude tests could be used only with students who were in the fourth grade and above. During the Buffalo years I was able to research the differences between stabilized and developmental music aptitudes. Even the "Great Blizzard of '77" came to my assistance in affording time and isolation during which the *Primary Measures of Music Audiation* were designed for children in kindergarten through grade three. This was followed by extensive validation and standardization procedures. The *Intermediate Measures of Music Audiation* were published three years after leaving SUNY-Buffalo.

Expanding Understanding

In 1979, I became a professor of music at Temple University. I have held the Carl E. Seashore Chair for Research in Music Education since that time. Once again, I designed and established the Ph.D. program in music education, the first to be offered at the Esther Boyer College of Music. Time has been afforded me to engage not only in research but also in writing, traveling, and lecturing. Thus much has been accomplished in the past ten years; perhaps these have been the most productive years of my life. Among the writing of new text books and the revision of others, there has been, with the collaboration of David G. Woods, the publication of *Jump Right In: The Music Curriculum*, and, with Richard F. Grunow, the development of *Jump Right In: The Instrumental Series*.

Music learning theory, as it contrasts with music theory, has reached new levels of refinement. In each of my recent books, there is at least one chapter devoted to ex-

plaining the information currently relating to the types and stages of audiation. Now in my sixth year as the curriculum director and one of the teachers in the Temple University Center City preschool music program, I specialize in teaching 18-month-old children, and soon *Jump Right In: The Preschool Curriculum* will be published.

Two other events, significant of the years at Temple, have been the ten Music Learning Theory summer seminars which are now held across the country, and the establishment of the Gordon Institute for Music Learning, also known as GIML. The institute is a nonprofit organization dedicated to advancing research in music learning theory and music aptitudes, with the ultimate goal of improving music education for teachers, students, and parents.

I have enjoyed a variety of interests in my professional career, but my interest in music aptitudes and the nature and importance of movement and rhythm has not waned. Validity studies of the established music aptitude tests continue, some in conjunction with the *Instrument Timbre Preference Test*. Two new tests have been published: *Audie*, a music aptitude test for 3- and 4-year-old children, and the *Advanced Measures of Music Audiation*, a music aptitude test for college and university students, both music majors and nonmusic majors. Much of what I have been able to accomplish has been made possible through my publisher, Edward Harris of G.I.A. Publishing, Inc., who has been uniquely supportive of my work and whose commitment to music education has been consistently farsighted.

The learning process, particularly as it relates to music and our individual differences, will always fascinate me. As more substantive data are gathered, it is my hope that each person's potential in music not only can be revealed but also can be appropriately nourished by informed and caring parents and professional music educators.

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An Educational Psychologist Considers the Work of Edwin Gordon

Robert L. Hohn

University of Kansas

As someone with little musical aptitude other than the ability to produce strange, rasping noises on the “symphonet” when I was 8, I accepted the request to review Edwin Gordon’s work with considerable trepidation. I was aware of his research in the assessment of musical ability from my doctoral training in the 1960s and additionally recalled a research study of his which had demonstrated the value of possessing information about students’ musical aptitude as an aid to instruction in instrumental performance (Gordon, 1970). Not being a music educator, however, I was fearful that my comments as an outsider would be simplistic or irrelevant and would not do justice to the task.

After having reviewed Gordon’s prolific scholarship of the last 25 years, I now am less concerned. So much of his work meshes so well with topics important to educational psychology that transfer has been relatively easy. Readers may still find some of my comments naïve, but representative of a different orientation that will, I hope, prove valuable.

Trends in Educational Psychology

In order to place Gordon’s work in proper perspective, it is necessary to first describe contemporary educational psychology. The field is extensive and overlaps with a number of different areas that have been included in traditional experimental psychology, e.g., human learning, development, and motivation. As a foundations course in most teacher-training programs, educational psychology has become more applied in recent years as it focuses more specifically on the instructional process.

Anyone who attempts to teach others can benefit from knowledge of educational psychology. For example, a music educator needs to determine the amount of information to present in one training session, and the sequence in which to present it, as well as what material students can master through rehearsal. Music educators, like all other educators, need to define their goals, select criteria for meeting those goals, and assess conditions that will enhance their students’ motivation to master the intended material.

“Gordon’s articles and writings describing the development of his testing instruments have set the standards for determining the psychometric properties of good tests.”

Educational psychology provides a framework for looking at the student, the learning process, and the learning situation. It can be divided into the following areas:

- a) development of the learner in terms of intellectual aptitude, physical maturation, and socio-emotional growth;
- b) principles and theories explaining how individuals learn;
- c) the psychology of teaching methods, including the selection and organization of materials as well as motivating learners and presenting content;
- d) classroom management (preventing and responding to behavior problems, facilitating student cooperation, and allowing students to assume responsibility for their own learning);
- e) measurement and evaluation; and