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PREFACE

The Missouri Journal of Research in Music Education, published as a Bulletin of the State Department of Education, is devoted to the needs and interests of the school and college music teachers of Missouri and the nation. This issue, Volume II, Number 1, is the sixth to appear in as many years.

The members of the Editorial Committee are grateful to those readers who have written suggestions concerning the content of past issues and request that criticisms and suggestions, always welcome and never unheeded, again be sent to the Editor concerning the content of this issue. We strive for a reasonable balance between music theory, history, philosophy or aesthetics, and pedagogy. It is difficult to judge how successful we are without reader response.

The contributions of M. O. Johnson and Don Anderson, continuations of articles published in Volume I, Number 5, are especially pertinent to the immediately practical concerns of school music teachers. Mr. Anderson's article also suggests the increasing interest of the Missouri Music Educator's Association in the sponsorship of and involvement in "action research."

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Copies of this journal are obtainable without charge from the Missouri State Department of Education. —The Editor.

ACTION RESEARCH PROJECT

PROGRESS REPORT

Donald Anderson

Brentwood Public Schools

The Missouri Editorial Committee and the Action Research Committee met on May 12, 1967 to consider the project applications for 1967-68 that had been received.

Members of the committee were pleased with the types and number of projects received and gave favorable review to projects.

"Student As Teacher" was submitted by Herbert Duncan, Normandy School District. Mr. Duncan said his project is to determine if capable high school students could help teach elementary and junior high school students.

Mrs. June Barton, Clayton School District, submitted "Programmed Listening Material for the Upper Level Elementary Children." The purpose of her project is to provide opportunities for children to listen on their own, but with direction students will be allowed to move at their own rate of speed, to reinforce hearing concepts, and to aid in verbalizing.

Mary Lee Burnett and Glenda Brisco of Ladue School District submitted "Allied Arts in the Fifth and Sixth Grades." The purpose

of this project is to show the relationship of music and art and the characteristics they have in common.

Deanna Marshall of Eldon School District submitted a tape test, "Fun With Music," which is to see if a test can be made an enjoyable and valid evaluation tool.

Jerry McLain from Weaubleau School District submitted "Source of Motivation of Music Students in the Public Schools." Mr. McLain would like to discover how students are motivated to take music courses in the public schools with a view to improving and augmenting these sources of motivation and improving the quality and status of public music education.

The Action Research Project Committee is requesting that two progress reports be made during the year and that a final report be submitted May 1, 1968.

TENSION AND MOTION AS FACTORS IN EXPRESSIVE CONDUCTING

Joseph A. Labuta

Central Methodist College

Every conductor should be vitally concerned with the expression or meaning of the music he is performing. He is the interpreter, the recreative musician, who must assimilate the work of the composer and present it through his musicians to the listening audience. According to Bruno Walter, the conductor has the responsibility of communicating the music strongly and convincingly in a meaningful and feelingful performance.[1] However, relatively little bibliography is available to the neophyte conductor concerning interpretation and expression, although the mechanical and technical aspects of conducting are thoroughly covered in the literature. The nature of musical expression is investigated in this paper in order to delineate pervasive principles of interpretation relevant to instrumental conducting.

Theory

Musicians have long known, or instinctively felt, that intensity and movement are central to musical meaning, expression and interpretation. Such master teachers as Lussy, Matthay, Christiani, and more recently, VanderCook have attempted to codify specific principles of expression.[2] Their resulting rules are stated in terms of "progression" or "movement," and "emphasis," "spacing" or "accentuation" of "exceptional" or "unexpected" notes.

The phenomenon of tension in music has been a frequent subject of contemporary essays and treatises in the disciplines of aesthetics, psychology of music, and music education, also. Theories of expression structured upon music's tensional properties have been posited by several scholars in these various fields of learning.[3] Although it is untenable logically to arbitrate the many viewpoints

expressed by these writers, an eclectic approach yields a comprehensive theory of pragmatic value to the conductor. In general, this theory states that music is significant or expressive because the forms of music are similar to the forms of human feeling. The rationale may be interpreted as follows: All that we experience is accompanied by some degree of feeling. Also, the pattern or structure of human feeling is cyclic, fluctuating between tension and the resolution of tension. Put in the simplest terms, we all have our ups and downs, frustrations and successes, disappointments and windfalls, good days and bad days.

Similarly, music can be defined as perceived tonal movement through patterns of tensions and resolutions. Or, to paraphrase Hanslick, music presents forms of intensity to release in tonal motion. These patterns are isomorphic to the life of human feeling. Thus, music's movement through patterns of intensity and release is expressive of the movement of man's experience through actual psychological and physiological tensions and resolutions. Movement-repose, rise-fall, struggle-fulfillment, tension-resolution are antithetical terms used to describe what happens in both music and life.

Expressive Elements

The conductor must be aware that any element of music that contributes to its tension and motion is expressive. His job is to emphasize subtly these elements in his interpretation.

More specifically, musical constancy defines the style or mood of a composition. This includes steady tempo, stable dynamic level, unchanging tonality and mode, standard or expected harmonic progression, consistent texture, etc. However, the conductor must attend to the fluctuations and nuances found within the more pervasive style or mood framework. These structural elements give rise to the undulating tonal tensions of musical expression:

Fluctuations of pitch
- tonal-melodic stress and direction
- the rise-fall of the normal melodic curve

Fluctuations of tempo
- rubato and agogics
- accelerando
- ritardando

Fluctuations of tonality
- modulation
- chromaticism

Degree of dissonance to consonance
- harmonic tensions

Movement to cadence
- harmonic progression
- slight tempo variation
- agogic accentuation

Dynamic accentuation

Gradual dynamic change (nuance)
follows normal rise-fall melodic curve
crescendo-dimenuendo

Changes in texture and instrumentation

The dramatic situation is developed and intensified by inhibition, thwarting of the expected, deviation from the norm and ambiguous or structurally undefined passages. The standard devices of development are also intensifying, e.g., imitation, fragmentation, free counterpoint, motivic sequences, modulation, dissonance, and contrast.

While it is necessary to capture the pervasive mood framework by correct tempo, dynamic level, etc., the evolving developmental character of the music must receive most attention if expressive performance is to be realized. The conductor guides and controls the musical line through patterns of tension and resolutions, shaping tempo and phrase, and in general responding to the expressive elements and structure listed above.

Expressive Analysis

Score analysis is needed at this point since structure is the key to valid interpretation. The analysis is not the type, however, that is usually required for a *Form and Analysis* class assignment. Yet, knowledge of music theory is utilized fully. The conductor must locate cadences to identify phrases; analyze phrase types to determine appropriate phrase movement; identify the large formal design; locate points of emphasis and climaxes; perceive the dynamic plan of the work and subtle shadings; discern germinal ideas and their development; analyze types of harmonic progression and tensional uses of dissonance.

The analytical approach, then, should emphasize the dynamic, evolving, expressive function of the musical structure, rather than the static formal characteristics of external design.[4]

Expressive Conducting

Expressive conducting involves modifications so slight that in most cases they are not consciously noticed by the listener, but only "felt." Phrase climaxes are pointed up by emphasizing the stress or climax notes and by the smaller give and take of the tempo and dynamic shadings. Phrases are moved to cadential points of repose in a "push on" or "hanging" movement depending upon the position of the climax notes. Intensity is generated toward them and released to the phrase ending.

The larger musical structure is composed of progressions of phrases that move toward a final cadential goal. Each phrase builds up tension which is released or partially released at the successive less terminal cadential points. The process is cumulative. Each phrase has meaning in itself, as described above, but it also points

forward and relates backward musically. As a result the conductor must concern himself equally with the modifications of dynamics, tempo, and accentuation of both the smaller and the larger architectonic levels. As in the phrase, accelerandos and ritardandos are frequently used in larger sections to give an even freer expression. Also, sequential building toward a sectional climax and its subsequent falling away can be equated to smaller phrase structure.

In general, interpretation of the complete composition involves locating important cadential points, and moving the ongoing musical line through to these points while emphasizing relationships, deviations, contrasts and climaxes by modifications of tempo, stress and dynamics, whether they are indicated by the composer or not.

Conducting and Feeling

The conductor is expected to conduct expressively and feelingfully — not mechanically. This has little to do, however, with the way he as a conductor feels. It has everything to do with the feeling the conductor brings from the score — the expression implied in the notes. He must respond to the expressive elements and structure. This response is feelingful in the sense of motion or kinaesthesis, rather than emotion as it is usually connoted. The feeling is perceived in the music itself, or more specifically in the musical score as it is read or remembered if it has been memorized previously. The conductor also "feels with" the music as he conducts it. That is, the feeling he perceives in the music symbols is expressed through him, through his inner physiological system as well as his conducting gestures. This inner feeling reinforces his outer gestures and makes them expressively convincing.

For example, in a melody the tonal tendencies, stresses and inhibitions are felt as muscular pulls or strains. Each tendency seems to demand an adjustment of the musculature. Similarly rhythmic stresses as normal beat accents or larger rhythmic groupings are bodily felt.[5] Dissonance, too, is felt as muscular tension, and the resolution of dissonance as muscular relaxation. These disturbances are psychological as well as physiological.

Thus, feelings are aroused by the music. Tendencies, stresses, inhibitions and ambignities of the musical line are literally felt by the conductor. They are felt as muscular and visceral tensions, yet are not really emotions. The conductor must use physical gestures of the hand and body to convey to his group the expression or feeling that he perceives in — or more accurately, feels with — the score.

Conclusion

The conductor's technique includes anticipating and exemplifying the movement and tensions of the composition's expressive form as presented by the musical symbols in the score, by means of the most meaningful and concise gestures possible for him.

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PROGRAMMED INSTRUCTION
and
MUSIC EDUCATION

Robert J. Hutcheson, Jr.

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INTRODUCTION

In 1966, a survey undertaken by Leonard Dallin[1] revealed that 107 out of the 444 college level music departments who responded were currently using programmed materials in music. In addition, 163 reported they planned to adopt such a mode of instruction.

Another report[2] showed the change between 1954 (when teaching machines received a new impetus) and 1962 (when the report was written). From a situation in which virtually no teaching machines or programmed materials were commercially available, eight years of research had produced over 80 teaching machines and almost 300 programs for educational curricula. The major productive efforts given to the interests of music education and resulting in published programs actually began approximately two or three years before the report was written.

William McBride,[3] in the foreword to one of the presently available programmed music texts, stresses the debt programmed instruction owes to traditional methods:

> The concept of programmed instruction, which has begun to permeate American education at all levels, is not new, but rather a precise organization of some of the best approaches to learning that successful teachers have used for many years. What is both new and highly encouraging is the increasing desire on the part of some music educators, as well as teachers in other fields, to reexamine methods and materials in terms of primary objectives. The application of programmed instruction to the teaching of music is a step both logical and productive, which is among those factors helping to form some exciting new directions for music education in this country.

Thorndike[4] foresaw, or at least hoped for, such a development as early as 1912:

> If, by a miracle of mechanical ingenuity, a book could be so arranged that only to him who had done what was directed on page one would page two become visible, and so on, much that now requires personal instruction could be managed by print . . . A human being should not be wasted in doing what forty sheets of paper or two phonographs can do. Just because personal teaching is precious and can do what books and apparatus can not, it should be saved for its peculiar work. The best teacher uses books and appli-

ances as well as his own insight, sympathy, and magnetism.

As we will see in discussing what has been done in the field and what many predict will occur, our present knowledge is by no means completely systematic, and many basic issues are in a stage of debate and experiment. In spite of its date, the following quotation seems especially true in reference to applications made by music educators.

> Programming refers to the arrangement of material to be learned in the order of presentation which will tend to provide a maximum rate of acquisition and retention. It is still an infant art and there is much research work to be done before programming can be considered a science.[5]

But, simply because our experience with the new tool is so limited, much of what has been written and done is highly significant. We will endeavor to present some of this work.

PROGRAMMED LEARNING

Historical Introduction:

The Socratic dialogues of ancient Greece point toward future developments in spite of some essential differences. "Sons of aristocrats and slaves were led step by easy step through statements that constructed enthymemes and syllogisms, getting cues from leading questions, giving responses in a permissive atmosphere, and gaining immediate feedback."[6] Jerome Bruner's famous dictum that "any subject matter can be taught to anybody at any age in some form that is honest" was anticipated in the Socratic dialogue as a method of arriving at truth. Programmed learning applies both the tutorial (Socratic) method of teaching by questions and the Cartesian method of breaking course materials down into small pieces arranged in an hierarchic order. The method differs fundamentally from the expository lecture techniques at the heart of audiovisual instruction *via* sound film, television, etc.

Information about some non-programmed devices also survives. H. Chard[7] was granted a patent by the U.S. Patent Office in 1809 for a reading teaching device. A device to teach spelling was developed and patented by Halcyon Skinner in 1866. B. F. Skinner has called this the first real teaching machine. Maria Montessori patented a device in 1914 to train the sense of touch. Foltz[8] refers to a device designed to teach a proper trigger squeeze to U.S. Army recruits (1918) as the first truly mechanical self-instructional device put to widespread use.

Sidney L. Pressey, of Ohio State University, is generally credited with developing practical machines that could teach as well as test. He presented his famous paper at the Washington, D.C. meeting of the American Psychological Association in the 1920's. Pressey's versions were multiple choice test program devices. They immediately informed the student of the correctness or incorrectness of an answer. In case of an error, the question remained, the error was tallied on a counter, and the student made another try. Pressey's faith that the devices and programs were capable of producing

changes in the effectiveness of instruction was not blessed with a receptive audience and he dropped all his work on such projects by 1932 and did not resume the work for decades. B. Frederick Skinner (of Harvard's Psychological Laboratories) has attributed the lack of much public interest to "cultural inertia." June Lewis (Barton)[9] adds:

> Psychologists have speculated that Pressey's theory was disregarded for several reasons. One reason was an economic one. No one in the education field felt any great concern for making teaching more efficient. In the 1920's, teaching was not an expensive process, and to the contrary, provided many persons, no matter how poorly qualified, with "positions." A second reason was that no fundamental learning principles really existed at that time.

Pressey was ignored until 1954 when B. F. Skinner, a psychologist, proposed a similar theory.[10] Skinner stressed that the science of learning is now in existence and that learning laws exist and should be applied to education.

What is Programmed Instruction:

Although lists of the characteristics of successfully-programmed instructional materials usually are limited to three or four principle concepts, the following list is longer and takes into consideration subdivisions of concepts and the contributions of many writers. Successful programmed instruction involves the following:

1. The material to be learned should be presented in a *logical series* of steps. Programmers find that, in their own teaching, they leave very much to the students, omit essential steps, and neglect relevant points. The responses students make to a program may reveal ambiguities and gaps that demand major revision, especially if one tries to guarantee a correct response at every step. Unless the programmer is extremely competent, he will probably learn many things about his subject and will learn how incomplete his knowledge of behavioral changes and the learning process really is.
2. Material to be learned should be organized and presented in the form of numerous, small, logical, and graduated *steps* (or *frames*) leading from the known to the unknown. The student has to focus his attention on a limited amount of material at one time. Pipe[11] says that "programs often look like fragments interspersed with questions." He admits the possibility of generating a program with this technique and that someone may actually learn from such a program "since students will persist in thinking, no matter how they are abused." The most desirable size of steps is debated by learning theorists. Small steps were at first thought most desirable. Edgar Dale[12] writes that the mere changing of step size or the number of steps is not an adequate solution. Offering a small or large spoonful of the same material is sometimes thought to take into account

individual differences. Dale suggests that steps be as large as the learner is able to understand and thereby implies that he is advocating a rather complex "branching" type of program.

3. A *response* (written or unwritten) should be elicited from the student to each (or at least most) of the frames. Continuous and active student response is required at moments when student interest and curiosity are at a peak. There is some disagreement about whether the student response should be overt or covert. Skinner advocates the constructed response, necessarily an overt response, because the student is forced to think more and learns more rapidly than were he to choose from a series of alternate (multiple choice) answers. The program is more a teacher than a tester in this operation in demanding positive effort. In addition, the constructed response reinforces only correct responses and offers no opportunity for an incorrect response to be learned. Barnes[13] quotes Krumboltz and Weisman[14] who assert that conclusive evidence is available indicating that more learning takes place when subjects are required to make overt responses. On the other hand, Susan Meyer Markle[15] favors covert responding and states that research studies have found them adequate and far less time-consuming than writing out a response. Covert responses are, simply stated, *thinking* the response. An overt response may take the form of any externalized responding action such as checking an answer, pressing a key, or constructing a response Skinner-fashion.

4. The student should be *immediately informed* (*feedback*) of the accuracy or inaccuracy of his response to each question. Garner[16] mentions that an error-rate of 5-10% is regarded as acceptable and that, if an error does occur, the fault is the programmer's, not the student's, and indicates the necessity of a revision. Garner obviously favors programs that are as error-free as possible so that the student is almost always correct. Reinforcement of correct answers is provided as well as correction in the case of erroneous answers—theoretically when student interest is at the highest. Foltz tells us that various studies show that optimum learning conditions result when a correct response is reinforced one-tenth to one-half second after it is made. The longer the time interval, the less the average amount retained. Step-organization, required response, and immediate feedback have been said to constitute the learning cycle,[17] a cycle repeated many times during the program. The response the student makes will either allow him to continue to the next step in the program immediately (in a Skinnerian, or *linear,* program) or will refer him to more advanced material, review work, or an explannation of an error (in a Crowder,[18] or *branching,* program). One programmed music text[19] prefaces its program with a reference to its view of error-rate: "Learning should be fun. However, in the early stages of

learning a subject, students make many mistakes. As a result, they often conclude that they do not like the subject. They would be more correct to conclude that they do not like to make errors."

5. A hoped-for corollary of the response the student makes is that *active student involvement* is insured in a manner not possible in a lecture approach or any unindividualized approach. Foltz[20] says that a survey of classroom teaching showed that the average student is actively engaged or interested in classroom activity only 20 percent of the time. Programmed materials, by requiring continuous active response, hopefully overcome passivity and inertia on the part of the student.
6. The self-instructional nature of programed materials should permit the student to determine or follow his *own learning pace*. He can move as rapidly or as slowly as his comprehension level and interest require or permit. An infinitely patient tutor is assured the slow learner and an untiring teacher is provided the learner who wishes to continue the lesson for a long period of time. Inhibitions on effective teacher-classroom instruction lie in the variables of time limitation, student numbers, and different individual learning rates. Programmed instruction attempts to aid in the assimilation and retention of knowledge by overcoming such blocking factors.

These seem to be the most frequent characteristics cited in reference to programed materials at the present stages of development. We might also add the following points for a fuller understanding of the subject:

7. Machine operation should be almost completely *self-contained* so that a minimum of the student's attention involves pure manipulation of the operational process of the machine.
8. Skinner[21] writes, "The purpose of a teaching machine can be simply stated: to teach rapidly, thoroughly and expeditiously a large part of what we now teach slowly, incompletely and with wasted effort on the part of both student and teacher."
9. Feedback data allows designing *improvements* and making *revisions* from experience. The sequence the student goes through is carefully graded and has to some extent been demonstrated to produce learning.

   > With conventional textbook and lecture procedures, it is impossible for the writer or teacher to assess accurately at what point the student makes errors or "loses the point." Programmed presentations, however, have been evaluated experimentally. This course has been through a series of thorough revisions on the basis of responses actually made by the students. In this way, ambiguous statements and instructions have been removed and additional examples have been added to difficult portions . . . [22]

10. Individual differences should be provided for. We will discuss

this point later, especially in reference to the "types" of programs.

11. The teacher is afforded the *class time* to do all the things he previously could not find time for. Most of his class time can be devoted to idea and concept teaching, leaving drill processes to the machine and the student's time. Of course, as knowledge of programming develops, we might assume that highly sophisticated materials might be presented in programmed format.
12. Each student has a *master teacher* at his disposal. This, of course, assumes the existence of a relatively perfect program.
13. Several *phases* of the instructional procedure may be *integrated.* For example, review items may be injected throughout the material to provide reinforcement of previously learned material at various intervals.
14. A good program assumes an adequate *philosophy of education* and an understanding of the learning process. James McClellan[23] forcibly communicates this idea:

> Programing gives us control over the content and processes of learning. It, therefore, requires us to think more deeply and cogently than ever before on basic educational questions: What are we trying to teach? Is it really worth teaching? To some? To all? What activities other than pure instruction should we include in a total school program? Etc. Programing doesn't commit us to a philosphy of education; it forces us to build one.

Preparation of the Program:

Although program preparation is not our primary concern, we will take a brief look at the subject. Obviously, if care is taken to construct a useful program, substantially more time will be consumed than would be the case in writing a textbook of a more conventional nature. Norman Crowder [24] has estimated that it usually takes between 100 to 150 hours to program adequately the material covered in an hour lecture.

Philip Lewis[25] provides an orderly outline of program preparation:

> Establish definite educational objectives for the unit or course.
>
> Identify the body of content, the skills to be developed or the processes to be involved in achieving the objectives.
>
> Divide the content area into learning *increments* (small bits of information or instruction, each of which can be easily mastered by the learner). The increments are also called *frames.*
>
> Arrange the increments in a learning sequence (simple to complex, concrete to abstract).
>
> Insert *cues* and *prompts* in the sequence where these are deemed necessary to assist the learner.

Insert review increments as the program progresses to keep the learner refreshed on materials learned earlier.

Provide a challenge for the learner to accompany every increment. This may be a question to answer, a problem to solve, or an operation to be performed.

Arrange for the learner to have immediate knowledge of results of his response to the question or problem before he begins the next increment.

In concluding this summary, we shall quote from Gilbert's[26] (associated with Educational Design of Alabama) outline of item types:

1) Lead-in Items neither give new information nor require the rehearsal of old skills. Almost a synonym for thematic prompts, their function is to orient the student to a problem and prepare him for new information.
2) Augmenting Items are items that supply new information to a student but do not require him to make an relevant response. Response required in such items may usually be of a kind that will help insure the student's careful reading of the item.
3) Interlocking Items are items that require a student to review established skills while new information is presented.
4) Rote Review Items present a problem identical to one earlier presented. Various studies show that there is little value in repeating items that have been answered once or twice correctly. It is here that the value of branching becomes obvious.
5) Restated Review Items require the rehearsal of a skill where the problem is restated in a different syntactical arrangement.
6) Delayed Review Items allow for the further practice distributed in time. They will differ from other items only in the time of presentation.
7) Fading Items are items that not only require the student to review what has been presented to him, but also have information withdrawn from item to item.
8) Generalizing Items present a verbal statement pointing to a common characteristic of several specific problems already presented to the student.
9) Specifying Items are items which exemplify a general rule in a specific case.
10) Dovetailing Items require the student to make separate responses to separate stimuli that otherwise become confused.

Types of Programs:

Though there are several types of programming techniques, two have dominated the scene and have received most of the attention. The Skinnerian (or "linear") program is one in which all the subjects follow the frames step by step, skipping none, and follow the

same order or sequence of frames. This form of programing, an elaboration of Thorndike's "law of effect," takes as its point of departure the attitude that the learner has had no previous experience with the subject at hand. Some difficulty is therefore experienced in determining where to begin the program.

The strongest opposition to Skinner's programming methods is led by Norman Crowder of the Western Design Division of U.S. Industries (Sidney L. Pressey also appears to disagree with Skinner in this respect). Crowder has written about the programing form he advocates. His format is termed the "branching" or "intrinsic" approach. The design employs larger learning increments and multiple-choice answers. The alternate answers (besides the correct answer) are planned to take into account logical misinterpretations of the questions. They are not supposed to "trap" the learner, but to point out the area or areas where review or clarification is needed. We will look at sample answer frames from the Reese text cited below later. Crowder believes that merely confirming student responses by presenting the correct answer is not sufficient and that explanations are very important to the learning process. The student is told why he is correct or incorrect in a Crowder program.

The dispute over format is not at all settled, and Carlsen[27] compared the performance of subjects in a linear programing technique with a branching programming technique in a constructed-response program and found no significant difference in their performance as a function of programing technique.

Teacher Versus Machine:

Arguments against teaching machines on robotistic grounds have generally been abandoned since the teacher's functions of highest value are not assumed by the machine. Lewis Eigen[28] points out that if a teacher is able to be replaced by a machine, he needs replacing. Should the classroom be reorganized to allow machine and teacher to work together, a larger number of thoroughly trained teachers will be needed than ever before. Good teachers will have to write and revise effective programs and know how and where they will personally reach beyond them. Foltz[29] says, "individual instruction will really begin where the program ends by saying 'now go and see the teacher.'"

Though many proponents of programmed learning believe that the program and classroom instruction should dovetail and complement one another, others feel the program should operate almost entirely independently of instruction on the teacher's part. The teacher, in this case, would use his time for individual conferences with the students. Generally speaking, however, to put the teacher and machine in competition is to assume they are doing, or should be doing, exactly the same job. One should attempt rather to seek a unified total program of education in which the teacher uses all the available means (including the program) in the best combination to achieve teaching and learning goals most effectively. This is the challenge put to the teacher.

Dissertations:

In a summary of research work in programmed instruction in relation to music education, Carlsen[30] remarks that Charles Spohn's doctoral dissertation does not really qualify as a programmed instruction study since the feedback in the project offered somewhat delayed information regarding the accuracy of the student response. The results of the study, however, "did show the value of structured outside preparation over unstructured outside preparation, and the feasibility of providing this preparation by means of tape recorded material."

Carlsen[31] mentions that none of the studies he cites "conclusively supported the feasibility of using programed instruction as a means of developing aural comprehension, although the Spohn study and the Oberlin report (which we will examine later) provided sufficient information to hypothesize such a possibility."

Two important points should be noted from Carlsen's [32] study:

1. It can be concluded that in situations comparable to the experimental one, melodic dictation can be more effectively taught by programmed instruction than by the tradditional teacher-classroom approach.
2. Of particular interest is the fact that tests for critical differences revealed that the differences occurred with complex concepts, and only with the control group. This would indicate that melodic dictation taught by programmed instruction is almost as effective with complex aural perception concepts as it is with basic ones, whereas a definite lack of effectiveness (significant beyond the 1 per cent level) is observed in the teaching of complex concepts by the teacher.

In another article, Carlsen[33] summarizes significant parts of his own and others' doctoral dissertations:

> Research by Carlsen, [34] Daniels, [35] and Kanable[36] shows that the ability to relate symbol and sound can also be developed within a musical context. Carlsen has programmed materials for melodic perception combining both the heuristic and the mathetical approach to concept development and to sequencing . . . The fact that this contextual approach is effective is substantiated by a study which indicated that complex concepts were taught nearly as effectively as simpler ones. Such is usually not the case in a classroom situation.
>
> Daniels also used verbal cues as a mediational process in the training of harmonic dictation within a musical context . . . Results showed the training method to be effective.
>
> Kanable has shown sight singing ability to be effectively developed by means of programmed instruction. Using a tape recorder which operated similarly to those found in most language laboratories, students compared their sight

singing performance with a model performance. No student in the study indicated any difficulty in making the aural comparison, and the results in terms of training gains would indicate that the comparison technique for feedback was an effective one. Kanable has approached the problem of creativity to some extent in her program by requiring the student in certain frames to "compose" part of the melody, the composed part to fit with the remainder of the melody which would be heard on the tape.

Virginia Reese has programmed an interesting text on musical form (dealing especially with smaller formal units). She states that technical training in the field of music is a prerequisite for approaching the text. This includes generally at least two years of college level music theory. A fundamental working knowledge of musical terms and notation was also presupposed. The text is an example of a "scrambled" program, so that pages are not read consecutively. Because of the lively manner of wording corrections and commendations to the student, and because the branching allows for a certain degree of individualization, the experience of reading the text is an enjoyable one, at least for one who is sufficiently motivated to undertake the study of form (quite a controversial study to attempt to program!). This is not to say that this text is unsuccessful or that programming somewhat controversial elements is impossible, but should point out that most of the textbooks so far published have usually stayed within the realm of elementary theory, and probably wisely so, both because these pioneer experiments within the area of musical research offer enough difficulties in themselves, and especially since music programming to date generally uses only the most primitive and most sales-oriented equipment.

The correctional frames in the Reese text exemplify what Foltz[37] has called "aversive reinforcement." The first of the three examples cited below is an example of such reinforcement. The other two examples illustrate other modes of frame information.

YOUR ANSWER: Exact repetition.

No, no! Exact repetition requires the exact restatement of notes on the same pitches previously used . . . [38]

YOUR ANSWER: A melodic figure may be identified by the occurrence of a long note or a rest.

This is indeed a correct statement, but you were to select the false statement — remember? This is rather sneaky in turning the tables after several questions in which you were to choose the *correct* statement. But I thought this might make you alert and avoid a coffee break. However, since you landed on this page, perhaps you should take five. Then, return to page 36 for another try. Okay?[39]

YOUR ANSWER: Fifth of the I chord in the soprano, movement of the accompaniment continues, and one preliminary tone or pickup occurs on the last half of second beat of measure four.

> Excellent! You are moving through more and more minute analyses with fine spirit.[40]

Barnes[41] tells us that his study was concerned specifically with only those learnings in the meaning and function of music symbols. This is the meaning of his usage of the terms "fundamentals of music" and "music fundamentals." His programmed text was based on a variation of the linear technique in that a set of "criterion questions" is placed at the beginning of each of the sections in the book. Were a subject able to answer the criterion questions correctly, he would not be required to complete the section. Barnes[42] reached several conclusions of interest.

> The programmed instruction, as developed and used in this study, did appear to provide for more effective learning than that learning occurring in a similar situation without the ancillary use of programmed instruction, as measured by the amount of information retained.

Furthermore, the subjects responded favorably to an opinionnaire that the material (as an ancillary learning experience) offered a good way to help students learn this kind of material. Approximately 86% indicated their desire to work with additional programed material which would deal with other aspects of the course. And, lastly:

> The results of the study suggest that there is no apparent relationship between the musical background and college achievement level of the subjects and the effectiveness of learning through the ancillary use of programed instruction.[43]

Theodore Ashford[44] developed a constructed-response type of programmed text. Fundamentals of music theory were presented and chiefly included the content of the first portion of the freshman music theory course offered at the Northwestern University School of Music. He found that the programed instruction subjects performed significantly better than teacher-classroom subjects and the former required less time to learn the material. Although the experimental group forgot a significant amount of material, further examination revealed that, of the two experimental sections, the amount of material retained in one experimental section was considerably greater than that of the second. Other variables seemed to have affected the results. Ashford concluded that his results implied that "the combination of programmed instruction and teacher-classroom methods may be implemental in solving the problems of teaching theory caused by the increasing amount of subject material resulting from contemporary developments."

In his doctoral dissertation, Ashford states his conclusions and results as follows:

> *Conclusion No.* 1. Programmed Instruction in the fundamentals of music theory is at least as effective as a teacher-classroom method in preparing subjects to perform on an examination administered immediately after the instructional period.[45]

Conclusion No. 2. Programmed instruction in the fundamentals of music theory requires less time than a teacher-classroom method in preparing subjects to perform on an examination administered immediately after the instructional period.[46]

Conclusion No. 3. Programmed instruction in the fundamentals of music theory allows each subject to learn at his own pace without significantly affecting his performance in immediate recall.[47]

Conclusion No. 4. Programmed instruction in the fundamentals of music theory is at least as effective as a teacher-classroom method in preparing subjects to perform on an examination administered eight weeks after the end of the instructional period, providing that instruction in the same discipline is continued during the time lapse.[48]

Conclusion No. 5. Programmed instruction in the fundamentals of music theory is not detrimental to subsequent non-programmed learning of more advanced material in the same discipline.[49]

RESULTS:

1. There was no significant difference between the experimental and control groups on a pre-test before the beginning of the instructional period.
2. There was a significant difference between the post-test scores of the two groups in favor of the experimental group.
3. There was a significant difference between improvement scores of subjects in favor of the experimental group.
4. There was a significant difference between the time scores of subjects in favor of the experimental group.
5. There was a significant difference between the improvement scores of subjects scoring below the mean on the pre-test in favor of the experimental group.
6. There was a significant difference between immediate and delayed recall scores of experimental subjects in favor of immediate recall.
7. There was no significant difference between immediate and delayed recall scores of control subjects.
8. There was no significant difference between retention scores of experimental and control subjects.
9. There was a significant difference between delayed recall scores of subjects in favor of the experimental group.
10. There was no significant difference between departmental final music scores of experimental and control subjects.

In addition, the following results pertaining to the experimental group and to programmed instruction in general were obtained:

11. There was no significant correlation between the number of frames missed in the programmed text and improvement scores.

12. There was a significant and negative correlation between time per improvement and improvement scores.
13. There was no significant correlation between the number of frames missed in the programmed texts and retention scores.
14. There was no significant correlation between time per improvement and retention scores.[50]

Research Studies and Reports:

Carlsen[51] has written about measures for learning and argues that vague terms such as understanding, appreciation, or knowledge are not at all the best way to discuss learning. Rather, operational terms in reference to the behavior appropriate to that learning (such as writing, playing, or aurally identifying) should be used. There is obviously no way of getting inside the student's mind to evaluate his understanding, and one must necessarily rely on observation of the student's behavior (playing a bassoon, writing music from dictation, aurally identifying a passacaglia) for an estimation of learning. This is not to deny the thought process nor to say that there is nothing covert occurring in the learning process, but it does place the emphasis on observable evidence as the best current measure for learning. "If this be true, *learning* can be defined as the development or modification of behaviors associated with the learning objectives."[52] We will take this up again at the end of this paper.

Bernard Fischer[53] has done work in applications of programmed learning to string teaching. He advocates rote procedures as advantageous and explains that the student repeatedly attempts to reproduce stimuli made up of sound patterns and physical movements (imitation). After intelligent repetition, absorption and retention occur. This Mr. Fischer calls learning.

While a graduate student at Washington University in St. Louis, June Lewis [Barton][54] experimented with a program for sixth graders which dealt with stylistic characteristics of music of the Classical period. Among her purposes were, "To provide opportunities for children to listen on their own, but with direction of purpose. To aid the child in verabilizing about musical selections he has heard."

Spohn and Poland have found that the greatest learning gains in perceiving tone groups were obtained when both aural and visual components were present. There are two ways in which this combination could occur: 1) tone groups were heard (aural), and responses were written (visual) or 2) tone groups were notated (visual), and responses were sung (aural). This would seem to support Hargiss'[55] findings, quoted by Carlsen, concerning multisensory involvement (a standard underlying concept in language teaching as well as a traditional emphasis in both sight singing and dictation in music). Spohn and Poland[56] also report that "learning procedures most closely associated with the learning task will produce the superior training results."

Smith, Hammar, and Ray[57] (at Kalamazoo College) developed

aural perception materials to replace classroom instruction in ear training. The authors suggest in the instructions that the student anticipate the taped sound or sing the tone groups in retrograde, and they encourage the students to "find *any* ways of using the tapes that will help you achieve the goals."

Carlsen[58] also mentions studies of Sherman (testing the hypothesis that atonal organization will transfer to perception ability with tonally organized materials), Kaderavek (using contextual materials to develop aural perception with undergraduate music students), and Sherburn.

The research and experimentation that is being done today ranges from the construction of a "homemade" program sheet by Robert C. Jones (of the Southeastern Missouri State College music faculty) in which part of the sheet folds over and conceals the answers until the student is ready to check his answers, to a multi-tape experiment at Peabody College (developed by Gilbert Trythall) that presently utilizes no written text. RCA Quickload Tape Cartridges are used for convenience in playback and storage. The present number 15-30 minute tapes is over one hundred.

Published Programed Music Texts:

Carlsen's *Melodic Perception*[59] text sets out to develop in the learner an ability to: "(1) Write in accurate musical notation melodies which are played on diffeernt melodic instruments; (2) recognize when, and in what way, the printed music differs from that which is played; and (3) identify a performing instrument when it is playing a solo melody or rhythmic line."

Guidelines for practice in sight singing are also provided by this course of study. Prerequisites for effective use of the book are knowledge of major key signatures through five sharps and flats, the ability to read treble and bass clefs, and knowledge of rhythmic note values. Experience in playing a musical instrument or singing are also presupposed as well as the ability to write musical symbols legibly and accurately (although Carlsen says the latter can be developed quickly by perceptive learners).

There are 570 frames in the text and construction follows the linear approach so that frames should be followed only in the sequence presented. The text has been both criticized and praised for initially presenting rhythmic and melodic material separately. Kraft[60] complains that the student takes down complete melodies in less than half of the exercises and that two measures are counted aloud on the tapes before the melodies are played. He argues that the problem of transfer from this program to a situation with fewer built-in cues (such as the classroom and concert hall) may not occur. Nevertheless, the text-tape combination seems to have won the respect of many educators and students if only for its usefulness as an aural aid in developing melodic and rhythmic dictation skills.

Harder's text[61] contains 1,003 frames and is linearly conceived. No aural examples are provided though the author emphasizes the importance of hearing the items. Obviously, this would presuppose

either some performing knowledge on the learner's part or the assistance of someone who could play the examples. The text deals with fundamentals such as the notation of pitch, classification of time, note and rest values, basic scales, major and minor scales, key signatures, and intervals and triads. Carlsen[62] points out that Harder has included material not always found in a fundamentals text (namely, instruction in basic principles of acoustics, the overtone series, and construction of scales in the church modes).

There are 498 frames in the Andrews and Wardian text (also linear) which is prepared for the elementary classroom teacher. The foreword[63] to the instructor proposes the purpose of giving elementary school teachers a *practical* knowledge of music for use in the classroom. The basic philosophy is stated as follows: "The classroom teacher should acquire the necessary knowledge and skills of music by using the same general learning procedures as the children he will teach." Wardian also states that "This book is not intended to be a total self-instructor. In each of the classes involved, however, the professor found that *significantly less class time was used for drilling on the fundamentals of music and that significantly more class time was available for singing, rhythmic practice, and the teaching of piano and other classroom instruments.*"[64] Carlsen points out that the materials presented to be played at a piano keyboard cannot be checked by feedback. He does not mean this to be an indictment of the text, however, and refers[65] to Hargiss' statement that the ". . . ability to perceive tonal relationships . . . is most easily and rapidly developed when hearing, sight, and touch are employed together, the senses reinforcing one another." The authors include songs typically found in books used by the children the classroom teachers will ultimately be teaching.

The work on the Clough program[66] was begun as part of an Oberlin College project on programed learning and was supported by a Ford Foundation grant. The text presupposes that the reader knows the names of notes in the treble and bass clefs and the names of keys on the piano keyboard. High school age and older students were the audience intended but "musically and intellectually gifted students of junior high school age" may also undertake the program profitably. The text has been used with a notable degree of success in theory classes for students ranging in age from 10 to 18 under Lewis B. Hilton and assisting teachers at Washington University, St. Louis.

A text by Barnes[67] was developed as part of his doctoral dissertation. "Criterion questions" appear at the start of each chapter. If the student can answer these, he can skip to the next chapter. This is a variation of the linear approach. The content stresses fundamentals much like those in many of the other available texts, and the student audience intended is the prospective elementary classroom teacher. The text is also intended to be used as an aid in a classroom situation, not as a teacher substitute. Neither does the text propose to teach the art of music; only basic information about music is presented. Four to six hours are usually required for the

completion of the text. Many teachers of general music classes at the junior and senior high school level have also used the text. Others who have found the text profitable are "beginning instrumental students in band, orchestra, and piano; students in remedial music-theory classes in college, and by individuals who wish to engage in a home-study program in music."[68]

John Batcheller's text[69] is designed for use at the fifth grade level and has a complementary book of work sheets in which students can record their answers. Its purpose is to introduce the beginner to the fundamentals of music notation. The primary purpose is to teach music reading through active means. The text consists of 1,042 frames. Texts with accompanying workbooks are much more economical to use than those in which the answers are to be written into non-reusable texts.

A linear text by Chakerian is especially attractive in format and presentation and has been tested and successfully used on students ranging in age from 11 through maturity. The fundamental notation system of music is the proposed content (minor scales, minor key signatures, and tempo indications are not included). Qualifying statements[70] are made during the text so that students do not presume that enharmonic tones would sound identical on an instrument using the perfect scale. "The purpose of this course is to prepare the student for beginning musical training."[71] The text is also published in a form usable in a teaching machine which more conveniently displays the frames and gives feedback. An ability to read and follow simple instructions are all the prerequisites demanded for using either form of the text.

When Barnes wrote his doctoral dissertation, only the Chakerian text and one by Batcheller and DuBois had been published in music. The latter was designed to teach the elements of music reading to fourth and fifth grade students at the elementary school level. It was also published in two forms (as a programed text or for use in a teaching machine).

A short program[72] (mimeographed) intended for the third grade (elementary level) is published by Learning Incorporated. It begins by designated notes as "walking," "running," or "skipping" notes and then brings in their proper technical names (quarter, eighth, and quarter-eighth).

Howard[73] is the author of a recent text on fundamentals of music theory that is linearly conceived. Notation, rhythm and meter, scales, intervals, key signatures, and triads, are the material included. Howard does not seem to demand any previous musical knowledge since he includes a diagram of a section of a piano keyboard for the benefit of those who do not know it.

Dallin's text[74] is linear and is written in textbook form with frame-type questions frequently included throughout. As the title indicates, developing music reading abilities is the point at hand. The student's previous knowledge and his interest are the limiting factors in how much he will profit from using the text.

IMPLICATIONS AND POTENTIAL FOR THE FUTURE

What is Needed in Programming:[75]

Aside from experimentation with other content areas in music programs, sound supplementation-coordination for programed texts to fill the need for hearing what is studied and individualized teaching techniques seem to be much needed in the field of programed instruction. Carlsen[76] mentions the first as very worthy of study: "There is need in the subject discipline of music to more clearly ascertain the effectiveness of programed learning as a teaching method, particularly as it involves the non-verbal stimuli of sound."

Although Philip Lewis[77] remarks that programmed instruction is truly individualized from a time (or rate) point of view in allowing the student to proceed at his own rate (which supposedly offers continuous challenge to the learner), others disagree that such individualizing is sufficient. Schramm[78] speaks of a group of studies and concludes:

> The hope has always been that programs would be the magic key to the door of *individualized* instruction — that they would liberate a student from the lockstep of a heterogeneous class, let him move forward at his own best pace and go as far as he can, release teachers from much of the routine of exposition and drill and let them concentrate on smoothing and enriching the progress of individual students. This has been the hope. But these four studies show that it is still far from being completely realized.

With more complicated maneuvering of tape recorders, etc., and especially the use of more complex equipment (e.g. computers), the sound element should at least technically be able to be incorporated successfully in future programs (the Carlsen is the only published programmed text at present that includes recorded sound material as part of the course). The problem of individualized instruction brings in the controversy over linear, branching, and other techniques and demands serious and continued research. The problem becomes more complex as more numerous varieties of musical content are programed. Obviously, elements of musical theory will not be as problematical as, for example, a course in improvization which would presuppose a broad and common background of theoretical training as prerequisite of the students.

What Are Some Potential Ramifications for the Future:

Carlson[79] has emphasized that, in practical application, the most benefit will probably be derived from a program if it is not the sole educative source utilized in a given discipline. Potential job roles it might fulfill include its use as outside preparation material, or for remedial, enrichment, or diagnostic reasons. He concludes that the only limit on its effectiveness is the teacher's imagination in utilizing the material.

Though Margolis does not feel the statement has been proven

or perhaps even that it is demonstrable, Skinner[80] has stated, "Anything that can be verbalized can be taught in a teaching machine." It would seem to be obvious that some degree of verbalizability is necessary before a content can be programed successfully, and the more clearly the content (e.g. even attitudes) is defined in verbal terms, the better will the program function as an educating tool. Dale[81] seems to agree in stating that the greatest development of programed instruction has occurred in those fields of learning where the basic elements are indeed basic, predictable and systematic. Ashford[82] mentions the popularity of the programed instruction tool for teaching factual information. These statements seem to explain the popularity of "fundamentals of music theory" programed texts on the part of programers. "Music theory lends itself especially well to this treatment since the so-called elements of music are specific in nature."[83]

Certain well-defined areas find particular fulfillment in programed form. These include memorization of facts, nomenclature, procedures, and mastering of simple concepts and principles, all of which usually require many hours of teacher time. Foltz[84] remarks how inefficient and wasteful it is "to force teachers to spend so much time on drills, listening to recitation, delivering 'canned' lectures and grading objective examinations." He also includes some motor skills that are normally taught by rote and frequent drill.

Another approach has stressed the cumulative nature of skills that are best programed, skills in which one step leads logically to another (e.g. simple to complex or concrete to abstract). Foltz[85] includes studies such as spelling, French vocabulary, and physics. While most of the programed learning experiences have primarily involved reading for their communication media and while most of the emphasis has been placed on individual self-paced instruction, Dale[86] finds evidence that group instruction through the film (or other) media is also successful.

Ihrke has done work with other machines that gives him a certain area of experience beyond that of many programers. Skinner[87] states that, "Some of the machines also hold the promise of teaching behavior of a kind and subtlety that until now has seemed beyond the reach of explicit teaching methods." Though it is not desirable in all fields, machines could undoubtedly be built which could measure student performance error in rhythm and pitch to a degree too small for human perception. The degree of error measured could be easily adjustable to gear the training to a particular stage of development in a particular student. The machine could be adjusted to demand more precision in response as the student gains proficiency. Ihrke has developed a device that gives "early" and "late" signal light feedback for confirmation purposes. The rhythm trainer circuitry connects both the keyboard and a pre-recorded set of signals on a tape recorder. A sensing device "reads" both the recorded and student performance and activates the correct light in the case of an error. Another possibility is a keyboard that would only sound when the correct key

was played. Maltzman[88] has shown that such a device can also provide for eliminating incorrect responses. Carlsen sees no reason why devices with similar feedback systems could not be fashioned using instruments other than the piano.

Carlsen also mentions the possibility of experimenting with a combination of aural and visual materials with a "performance reading" device in teaching Music Fundamentals, Harmony, Counterpoint, History and Literature, and Form and Analysis. He also mentions teaching instrumentation and scoring and some phases of conducting. "The implication here is that programed instruction may both require and make possible broad curricular changes."[89] With minor electronic keyboard modifications, machines could train students in keyboard harmony. Keys could be set in relation to both pitch and duration and produce tone only when played correctly. Were the machine computer-controlled, more precision could be built in.

Funds presently available to music educators would probably prohibit the extensive use of a centrally-located computer, but such a type of operation has already been used in other subject disciplines. In addition to directly building on to present instruments, "tone sensing" devices (pitch, duration, amplitude) are conceivable and might give immediate and precise feedback of performance behavior results on either instrument or voice. Carlsen[90] concludes on a practical note:

> Gadgetry of these types has exciting potential, but it is important to remember that the gadget is only a tool — it is the program of instruction built into it that shapes the behavior. History will tell us whether these expectations will be realized in the future. Today we should determine what programmed instruction is best capable of doing for us, and then use it accordingly.

Although Ihrke does not expect a machine to teach creativity, he does envision machines teaching a repertoire of precise knowledges and concepts which the student can employ in creative listening, performing, and composing. Perhaps, as more is studied about creativity, a program can allow for the kind of atmosphere necessary to foster creative thinking and acting.

Ihrke speaks eloquently as a musician of the capacities of machine and the limitations of machine. He stresses as most important a constant association with actual musical sound and speaks of the kind of machine we spoke of before in which an instrument or voice transmitted to a machine *via* microphone is criticized or evaluated by that machine *immediately*. Such a situation can in no wise be called robotistic if the student response is as completely musical as Ihrke desires. The student can both hear the sound he produces and be presented with a critique of his performance. He writes:[91]

> In my estimation, automated music training is acceptable only if the student is allowed to identify himself continually with the total musical experience. Reading music notation without inwardly hearing the sound, or performing with-

out previously being aware of the sound, are equally faulty procedures and gradually lead to a sterile contact with music which finally brings the proficiency gain to a complete halt.

Lewis encourages experimenting with tachistoscopic and other projected approaches to teaching machines as well as beginning fingering practice (see Bigham's work cited in the Bibliography). He says, "The creativity inherent in the many facets of music holds great potential for development in this area."[92]

Carlsen mentions that if aural perception programs are adequately developed, rather than replace the teacher, they would increase the shortage of good teachers. The teacher will necessarily have to be more alert and tend to the individual needs of 30 *individuals* rather than the former situation in which he most often taught a *class* of 30 students. Whether a machine can handle a great deal of the individualized training effectively is subject to study. We mentioned before that many feel the most effective use of the program is as an ancillary classroom experience and not as the sole classroom experience.

Many teachers (of keyboard instruments, for example) refer constantly to performance characteristics of Schnabel with a Beethoven Sonata; Valenti with a Scarlatti Sonata; or Tagliavini, Heiller, or Walcha with a Baroque organ composition. It would seem possible to program a keyboard instrument to compare student performance with the "master." Although such does not seem the best procedure to this author (at least not a very many stages of artistic development), as the process of programing becomes more sophisticated and less time-consuming, the individual teacher may be able to program many elements successfully and efficiently that could be used during the student's practice time so that corrections and observations the teacher makes are not inadevertently overlooked and wrong habits learned. The expense, time, and complexity of such a project, however, does not seem to warrant realization in the very near future.

Goldiamond and Pliskoff have written with great technical insight about music education and potential ramifications in the use of teaching machines. A summary from that article is presented because of its insight and consequent significance:

1. *The behaviors involved in music are operants.* The teacher . . . would like to have the child develop an ear for music, so that he can correct himself. Stated otherwise, he would like the consequences (sounds) that the child produces to affect the child the same way that those sounds affect him (another set of consequences), so that the child's musical behaviors are altered or maintained.

Accordingly, a technology whose subject matter is a systematization of the maintenance and modification of behavior by its consequences may be relevant to the practice of teaching music.

2. *Alteration of behavior is a means of developing procedures for training* . . . The child's changing behavior guides the teacher in analyzing what he should do; it develops his teaching skills, that is, it changes his teaching behaviors.

In the experimental analysis of behavior, modification of behavior as the variables are being changed is one of the major investigative tools not only for developing procedues for the alteration of behavior, but for understanding the functional relations between behavior and its enivronment. Accordingly, an experimental approach which has developed systematic ways of modifying behavior may be relevant for music education, one form of modification of behavior.

3. *Alteration of behavior is a means of developing insights into its processes* . . . may also help him understand the child and the nature of the music learning process.

. . . Such alteration is a prime investigative tool for basic research in the experimental analysis of behavior. Accordingly, such an experimental procedure may be useful in developing systematic ways to understand the music education process in the course of the ordinary practice of teaching music.

4. *Learning is an individual process.* It is a single child who learns, and it is a truism that a classroom consists of individual learners. A child who fails is not consoled by the fact that the teaching method used is efficacious for the average child, or produces better average performance than another method, or teacher. Nor are his parents so consoled, nor is the conscientious teacher.

Operant research is characterized by the use of single organisms for extended periods of time, and the alteration of behavior of the single organism being studied is one of the prime investigative tools. Stated otherwise, the attempt is to develop lawful procedures and relations which hold using an individual organism.

Accordingly, an experimental and technological procedure which assays its success by its effects upon the individual may be relevant for music education, which assays its success similarly.[93]

5. *Learning may be a long-term process.* The child learns over an extended period of time.

Operant research involves extended periods of time, and the learning organism is checked against his own behavior at preceding times. It has been observed that changes which occur over a short period of time are often transient, and are not characteristic of the changes that a procedure will produce when applied over an extended period of time. Accordingly, a procedure which incorporates such long-term effects in its design may be relevant for the procedures of music education.

6. *Learning often involves continual adjustments.* The experienced teacher tries, especially with beginners, to provide continual successes. He tries to arrange the material and his rela-

tions to the child so that the child is not discouraged by failures, and keeps advancing.

In programmed instruction, an attempt is made to set up a program which starts with the child at his entering level. Through successive steps which require small changes in behavior, and are so arranged that the child is reinforced at every step, his behavior is altered to the terminal behavior required, without failures which might discourage him.

Programmed instruction is, to a considerable extent, related to the experimental analysis of behavior. Accordingly, if it is to be applied to music education, consideration of its rationale may be relevant.

7. *Motivation may be defined by observables.* . . . Motivation is often considered a process within the child, whose motivational processes are thus considered difficult to tap.

Operant research defines motivation in observable terms, and suggests procedures for its experimental control. These procedures find use in laboratories where behavior is sustained for extended periods of time, under conditions which allow for considerable freedom. Motivational variables enter into the very definition of the stimulus and response classes being investigated.

Accordingly, a procedure which incorporates motivational variables into the basic definitions of some of its major terms, and deals with them in an observable and manipulable manner, may have relevance for motivational problems in music education.

8. *Complex processes are known by their behaviors.* Music educators often talk in terms which imply complex higher mental processes. Examples of such terms are insight, creativity, meaningfulness, and appreciation. These processes are considered extremely important in learning music.

One of the characteristics of linguistic analysis, which operant research shares, is its attempt to specify complex processes through the behaviors and conditions by which such processes are identified. The question asked is essentially the following: When we state that a person is engaged in a certain process, say, that he is interested, what is it that he has to do, and under what conditions, for us to state that he is interested? Rather than trying to define interest as an internal process (although there may very well be internal components), we look for the behaviors which define the term for us. Stated formally, the question is: What behaviors under what conditions define the process we are interested in? We can then not only see whether or not we are getting such behaviors as criterion behaviors. If the intervening steps on the program are also specified behaviorally, we can also see how successful we are and alter our training procedures accordingly.

9. *The acquisition of knowledge is incorporative.* The teacher who develops a new method or new insights tests them out by

incorporating them into further practice, or by having others incorporate these procedures or insights.

In the experimental analysis of behavior, the procedures and functional relations developed to alter the behavior of a single organism are then repeated and validated with other single organisms. The functional relations and procedures developed in operant research have been replicated literally thousands of times. That other investigators are able to apply them leads directly to the next point.

10. *Communication of knowledge is often simplified by explicitness.* The attempt is often made to communicate new methods and insights developed in music education. The procedures and insights are often difficult to describe, and their validation is also often difficult to assay. One result of this communicative difficulty has been the establishment of special schools or approaches, whereby the new approach is communicated by implicit methods through having the student engage in similar behaviors.

In the experimental analysis of behavior the procedures for modification and the functional relations obtained are stated explicitly, and can be incorporated by other investigators, and validated by them.

Accordingly, an experimental and technological procedure which can explicitly state its advances so that others can incorporate them or validate them, may be relevant for the incorporation and validation of new techniques and insights gained in music education. Such explicitness is, of course, not restricted to operant research, but is an aim of scientific communication in general.[94]

In this manner we might arrange it so that the wrong key produced no sounds, and only the right keys produced sounds.[95]

With regard to music education, it should, however, be pointed out that the devices used in music education are instruments which *naturally* lend themselves to such programming. We do not have to add an electric typewriter to intervene between the child and the material. We do not have to develop special devices which convert the behavior into discrete responses such as tapping a key. Pianos are such devices. Other instruments contain similar devices. Even the violin requires discrete responses in the fingering by the left hand.

Musical instruments seem to be readily convertible to instruments to which the technology of behavior can be applied. And music also contains certain reinforces. People pay money to go to concerts and children whistle, practice instruments, and buy records. The instruments, the subjects, and appropriate contingencies are available. What seems to be required to apply the technology of behavior to their linkage is attention to such technology.[96]

The music educator should be cognizant of the great amount of significant work that has been done in the area of music and pro-

gramed instruction. This paper relies heavily upon a large body of writing and research that to a large extent merely hints at the future and pleads for continued efforts. Whether further activity will bear out the hopes of many for more sophisticated programs or will change the direction of pursuit to other techniques cannot honestly be answered at present, but the success and progress made by past endeavors would seem to point to very beneficial and desirable outcomes that only the Vernes, Huxleys, and Orwells of our age can uninhibitedly and imaginatively envision. One is generally ill-advised and naive to seek for panaceas, but to seek for possible improvements and for more efficient media is a challenge to every man of thought in this age of technology.

GLOSSARY OF TERMS

1) AUGMENTING

A method of teaching a concept, working rule or principle by building up to it through small sequential bits of information. As the student learns the small easily assimilated steps, he will be led to formulating this concept or principle for himself without actually seeing it written out or explained. (Foltz).

2) AVERSIVE REINFORCEMENT

A way of negatively reinforcing a given action by an injurious or distasteful means such as spanking or subjecting a child to public ridicule for being wrong. In programing it is used to describe the technique of encouraging errors and then reinforcing the right answer by telling the student how wrong he is. (Foltz).

3) BRANCHING

A type of programing which has built-in alternate sequences of items for the extra-bright or slow student. If a student makes a single or a number of wrong responses, he is led through an alternate sequence of steps to give him remedial practice and new explanations of a concept he cannot immediately grasp. ("Wash back"=backward branching). If the student demonstrates by a series of correct responses that he has quickly grasped the material, he may be skipped forward over additional material on the same subject. ("Wash ahead"=forward branching). In a sense, any departure from a sequence of items proceding methodically towards a given learning goal. Intrinsic programing employs the branching technique. (Foltz).

4) CARTESIAN METHOD

A basic technique of programing devised by Descartes. It consists of breaking down a subject to be taught into its smallest component parts and then arranging these into a hierarchial order to aid the learning process. (Foltz).

5) CUE

Used interchangeably with *prompt* to mean any bit of information added to a program item to make it easier for the student to make the correct response. One of the objects of much current research

is to determine how much material should be given to a student to enable him to get the right answer. This is called the problem of cue clarity. (Foltz).

6) ECHOIC REINFORCEMENT

Reinforcing a student response by showing him the right answer. Merely telling him he is right or wrong is called non-echoic reinforcement. Current research indicates that echoic reinforcement is the better method of reinforcing correct answers and leads to longer retention. (Foltz).

7) EXTINGUISHING

The process of forcing a student to unlearn a learned response or mode of behavior by failing to reinforce it each time it is emitted, or reinforcing it aversively or negatively. (Foltz).

8) FADING

The technique of lessening the number of cues or prompts as the program progresses, thus weaning the student slowly away from reliance on the program and forcing him to think more for himself. (Foltz).

9) FEEDBACK

A technique essential for programed learning which gives the student (and eventually the teacher) immediate knowledge of the correctness of his answers to items in the program. This acts as a type of reinforcement to correct answers. (Foltz).

10) FRAME

A single step of a program usually containing information and a question to be answered in one form or another. So called because it is exactly the amount of material that will fill the space of a display panel of a self-instructional device. Used interchangeably with *item*. (Foltz).

11) HEURISTIC

Applied to arguments and methods of demonstration which are persuasive rather than logically compelling, or which lead a person to find out for himself. (Webster New Int. Dict., 2nd Edition, 1954).
Serving to guide, discover, or reveal; *specif*: valuable for stimulating or conducting empirical research but unproved or incapable of proof — often used of arguments, methods, or constructs that assume or postulate what remains to be proven or that lead a person to find out for himself. (Webster New Int. Dict., 3rd Edition, 1961).
This word comes from the Greek, *heurisko*, to discover or to find out, a meaning that still holds. The student is given the basic responsibility of solving the problems that confront him. The term is essentially synonymous with problem method or development method. (Encyclopedia of Modern Education, 1943).

12) LAW OF RECENCY

A basic concept of reinforcement theory, stating that the last response reinforced is the one that is learned. A corollary is that the more rapidly a response is reinforced, the better it is learned. (Foltz).

13) LINEAR PROGRAMS

Also called straight-line, non-branching, or Skinnerian programs. These are programs where the sequence of items is fixed, unalterable and identical for each sequence. Crowder would call these extrinsic programs, because the rate and sequence of presentation are not built in but determined by an outside agency, the program writer or instructor. (Foltz).

14) MATHETIC

Of or relating to science or learning. (Webster New Int. Dict., 3rd Edition, 1961).

15) PINBALL MACHINE EFFECT

A phrase coined by Skinner to describe the novely effect of learning with a self-instructional device. The use of a device or machine of any sort seems to be more interesting to the student than merely reading a text. (Foltz).

16) PROGRAM

The textbook of the self-instructional device. It consists of course material broken down into small, easily digestible bits and arranged in sequence to lead the student to a fundamental understanding of concepts basic to the course. (Foltz).

17) SELF-INSTRUCTIONAL DEVICES

Also called learning machines, teaching machines, or auto-instructional devices. This includes any device which can present systematically programed materials while making efficient use of reinforcement. That is, it has the facilities for displaying the programed material, offers some method for making a response and showing whether the response is correct or not. (Foltz).

18) SOCRATIC METHOD

The method of inquiry and instruction employed by Socrates, esp. as represented in the dialogues of Plato. It consists of a series of questionings the object of which is to elicit a clear and consistent expression of something supposed to be implicitly known by all rational beings. (Webster New Int. Dict., 2nd Edition, 1954).

19) STEP

This is the space between one item and another in terms of the mental operations necessary to go on to the next item. Difference in step-size is practically impossible to measure, although a subject of much theoretical dispute. The question is how much mental effort can be demanded of a student in going between one item and the next. (Foltz).

20) VANISHING

Both a programing technique and a factor of device design. In programing it refers to the gradual withdrawal of prompts from the program item so that the student is weaned away from reliance on the program for clues to the correct responses. In devices it is the mechanical capability of dropping out questions which have been answered correctly before. (Foltz).

FOOTNOTES

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4) E. L. Thorndike, *Education* (New York: The Macmillan Company, 1912), pp. 165-67.

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6) Wayne Lee Garner, *Programed Instruction* (New York: Center for Applied Research in Education, 1966), p. 2.

7) *Ibid.*, p. 8.

8) Foltz, p. 3.

9) June Lewis [Barton], "Pilot Study in Programmed Listening," unpublished manuscript and project report (Department of Music, Washington University, St. Louis), p. 1.

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18) See pp. 13-14.

19) Lan Chakerian and William Ventolo, *Fundamentals of Music* (Albuquerque, N.M.: Teaching Machines, Inc. (TMI-Grolier, 1961), p. iv.

20) Foltz, p. 7.

21) B. F. Skinner, "Teaching Machines," *Scientific American* (November, 1961), p. 9.

22) Chakerian and Ventolo, p. iv.

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24) Genevieve Hargiss, "The Development and Evaluation of Self-Instructional Materials in Basic Music Theory for Elementary Teachers." *Council for Research in Music Education: Bulletin No. 4* (Winter, 1965), p. 2.

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26) Foltz, pp. 22-23.

27) Theodore Harold Askounes Ashford, "An Investigation of Programmed Instruction in the Fundamentals of Music Theory" (unpublished Ph.D. dissertation; Northwestern University, Evanston, Ill., June, 1965) p. 16.

28) Foltz, p. 64.

29) *Ibid.*

30) James C. Carlsen, "Programed Learning in Melodic Dictation," *Journal of Research in Music Education* (Summer, 1964), p. 140.

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32) *Ibid.*, pp. 144-45.

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43) *Ibid.*, 93.
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49) *Ibid.*, p. 74.
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51) Carlsen, *Comprehensive Musicianship*, p. 29.
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54) June Lewis [Barton], p. 3.
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75) Obviously, what is needed and what may be immediately had are by no means synonymous.
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FACTORS INFLUENCING THE CHOICE AND PURSUANCE OF A CAREER IN MUSIC EDUCATION: A SURVEY AND CASE STUDY APPROACH[1]

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This study investigated the interactions that influenced the choice and pursuance of music education as a vocation. Eighty Southwest Missouri State College music education graduates, the total of 1960-64 graduating classes, were sent questionnaires soliciting information about family, school, and musical backgrounds. From the respondents (100%), ten, a representative boy and girl from each year, were selected by the music faculty for intensive case study. These were selected to be "representative" of the graduates — not the most successful, necessarily.

Tape-recorded interviews with each of the ten were made and transcribed. Also interviewed were parents, school administrators, ministers, siblings, friends, and others. Although conclusions from such investigation are definitive only for the ten cases, a comparison of their questionnaire responses with the other seventy revealed no significance difference.

Two attempts were made to find typical patterns of personality. First, the Edwards Personal Preference Schedule (EPPS) was administered; second, each transcription was analyzed by a counselor and a counseling psychologist. The great amount of peripheral information was searched for possible relationship to career selection and success.

The following findings are reported:

The EPPS showed only normal personality traits to exist, with deviations from "average" understandable in the light of the case study material and in agreement with reports from school administrators and teachers.

The high school years, especially the senior year, were crucial in vocational decision. Musical performance, peer recognition, and personal satisfaction significantly influenced the choice. High school and private music teachers were the most influential persons. Vocational testing, counseling, and guidance were either completely lacking or inadequately used.

On the basis of their present knowledge and experience, most of the subjects rated grade school music poor, lacking in rudiments, appreciation, and opportunities for group participation. High school and college training was rated good because of increased opportunities for group and contest participation, with resultant increased interest and motivation. Although administrators felt these young teachers had been adequately prepared, most rated their practice teaching poor, lacking in intensity and reality. Academic success

1) Unpublished doctoral dissertation.

and subsequent teaching success showed no marked correlation.

This study seemed to depict the "typical" music educator as having had the following background and experiences: 1) most homes had a piano, radio and phonograph; 2) more parents were unmusical than musical; 3) the mother was the dominant parent; 4) poor musical backgrounds in the school seemed to promote a drive within the subjects to become better teachers; 5) feeling of inferiority prevailed among the subjects concerning their current teaching and knowledge of music; and 6) most of the subjects had problems in disciplining their students.

After becoming teachers and meeting the problems faced by the profession, they found that classroom discipline and motivation of students were greater problems than they had anticipated. Although the college provided little or no in-service assistance after graduation, administrators and colleagues did give effective help. They found their older colleagues more conscientious and better trained than they had previously thought. Most felt satisfied and justified in their career choice.

Certain weaknesses in the music curriculum are implied in these findings: 1) a need for better vocational testing and counseling and greater recognition of the influence of private and school music teachers in career selections; 2) a need for more in-service assistance from the colleges, such as clinics and seminars; 3) a need for more meaningful practice-teaching, including more intensity and diversity of experiences; 4) a need for more communicative arts in college; 5) a need for more training in discipline and classroom procedures; and 6) a need for re-evaluation of the effects of music contests, on both teachers and students.

Comments

While the true worth of a questionnaire research study is often doubted, the strength of this study lies in the personal histories of ten of the respondents and the relationship of these case studies to the validity of the findings in the questionnaire responses of the others.

While the researcher set out to point up the factors that influenced a music education career (which he does effectively) it seems to this reviewer that the true worth of the study lies in the implications for teacher preparation. The report of case studies themselves would be very beneficial as collateral reading for students who are preparing to teach. Indeed, a collection of these and similar personal case histories from many and varied sections of the country would make a prized publication which would create in the minds of the students the need for and the techniques of self-evaluation. It points up further the desirability of some background studies in mental hygiene and other psychological-oriented studies for students regardless of choice of profession.

While the glamor of high school performing groups and the desire of students to be "like their high school music teacher" and eventually to direct a similar "glamor" group seems to lead many students to music education, the facts are plainly evident that good

counseling and vocational testing would change the course of many prospective teachers and point up background needs which reach far beyond the "glamor" of high school music.

The respondents who were the most successful as teachers were those who had advantage of private instruction in grade and high school. "Private lessons" was listed as the most important experience in grade school by the largest percentage of respondents (21.3%—p. 35). This seems to point to the need of closing the chasm which too often exists between the school and private music teacher. The complete training of the child musically is a cooperative effort of both the school and private teacher, and those of us in public education need to do all we can to strengthen the relationship of all teachers in this regard.

Special Implications for Teacher Training

This study seems to point toward the need for the training of music teachers to be broader. (And with a curriculum already overcrowded, this has implications for a five-year program which is already established in some states). There seems to be too much "instrumental" or too much "vocal" rather than "instrumental-vocal" in the training program in relation to the situation (sometimes frustrating) in which the young students find themselves. Of the 28 teachers in the study who were teaching both vocal and instrumental music, only nine (9) had been prepared for both instrumental and vocal. The majority or respondents (55%) were teaching grade school music either exclusively or as a part of their teaching assignment. While the study did not specifically go into the training for elementary music teaching, the elementary programs from which the 80 respondents came were rated as "poor". One cannot help but wonder how many elementary programs in the country are taught by frustrated teachers who prepared to be high school teachers but for whom there were no positions. The large number of college girls who major in clarinet, for example, (often to satisfy the instrumentation needs of the college band) have a limited field of teaching secondary instrumental music. A study into what happens to these girls would be rewarding. Are they the people who became grade school general music teachers despite a lack of preparation, pedegogically and psychologically, and who eventually make the high school music teacher say "I wish they would teach these kids something in the elementary school?"

It seems to this reviewer, also, that the need for better functional keyboard experience would be a boon to teachers. The more insecure teachers in the case studies seemed insecure also in basic piano for the classroom. "Most of the subjects felt that majoring in piano or organ would enable them better to teach either vocal or instrumental music in the schools." (p. 207) Basic piano for the prospective music teacher who is not a piano major is quite deficient in American teacher training institutions.[2] Sight reading, playing simple chordal accompaniments to school songs, and playing parts of open octavo vocal scores are skills essential to music teaching which are not acquired by playing "pieces." The implications for

applied music teachers charged with training the music educator are obvious.

A thorough investigation of student teaching for music majors seems to be indicated in the study. Despite the "apologies" in the study that student teaching was done in a laboratory school and that the situation is now different on the campus of the institution involved, similar conditions exist in many schools across the country. The key to good student teaching revolves around a good cooperating teacher. Unfortunately, the study did not attempt to delve specifically into the assistance rendered by the cooperating teacher. However, such passages as the following from one of the case studies (p. 98) gives some insight into conditions:

> Mr. T. did not feel that his student teaching was in anyway "typical" of an actual teaching situation. He taught kindergarten and first grade vocal music, and he shared these experiences with four other practice teachers. One day each week they took turns directing instrumental reeharsals or teaching beginners. The supervising teacher was present a little more than half the time, but he had no conferences with the practice teachers. All of the student-teachers were required to turn in lesson plans, but no comment was made about them other than that they were fine. The supervisor never spoke to him about personality problems, teaching approaches, or methods, and he never offered any comments about his teaching. Mr. T. did not feel that this was a valid form of supervised teaching . . . His college training motivated him to go out and teach, but his practice teaching discouraged him.

Nor did the study indicate what kind and number of observations of the student were made. Was the observation by a member of the music faculty whose experience included public school teaching or was the sole observation by a member of the education faculty? There are certain aspects of music teaching which indicate that at least some of the observation and clinical comments should be made by someone on the music faculty. Typical of most laboratory schools as the one in the study, music seems to be an extracurricular activity usually with classes meeting before or after school — a situation quite different from the comprehensive American school.

A large majority of the respondents had difficulty with discipline. And music teaching involves some special discipline "pitfalls." Someone has said that a student in an instrumental class or organization has a "weapon in his hand." This weapon can be used effectively to irritate the teacher and disturb the class. Some provision should be made to present discipline correction techniques that are unique to music classes before students enter a teaching situation. Whether or not this advantage was given to the students in this study is not indicated, but at the expense of indulging in he dangerous business of generalizing, this reviewer is of the opinion (from observation) that most music method classes

are weak in this regard.

It goes without saying that institutions of higher learning should incorporate plans for follow-up conferences with graduates. More and more this is becoming one of the prime functions of the modern college and university. In some fields — medicine, science, mathematics, etc. — higher education performs this function well, and as Dr. Burgstahler points out, music departments should have a continuing interest in the development of former students.

In this connection, also, the undergraduate training of music teachers should include a thorough indoctrination of future teachers to the splendid opportunities provided by the professional organization of teachers for clinics, conferences, and workshops on the regional, state, divisional, and national level. As a profession, music education excells in the number and opportunities of these.

Dr. Burgstahler indicates rightly, also, that music educators should undertake to "present to students a realistic view of the standards of performance skill required for effective teaching; . . . increased attention to instructional skills, as distinguished from performance skills, and increase the attention to developing critical skills (accurate evaluation of another's performance) as distinguished from performance skills (the ability to perform)" (pp. 225-226). Performance for performance sake is undoubtedly one of the downfalls in the training of music teachers. This situation seems to call for a lessening of some of the public performance pressures by inaugurating more laboratory performance in which the students themselves would undertake the teaching and conducting of music selections of the type and in the manner they will need to do as teachers. In fact, this type of situation could well replace the traditional student teaching which may work well for mathematics and English teachers but leaves much to be desired for music teaching.

Finally, one cannot help but notice the emphasis given to performance groups in the geographical section covered by the study and the almost disregard or exclusion of other aspects of a music program that could affect the lives of all of the children. Possibly the real objectives of a school music program were never considered in the formulation of curriculum or in teacher preparation. Changes in curriculum are occurring in all fields. Music educators are not in the vanguard of these changes. Such organizations as the American Council of Learned Societies are very critical of the fact that music in the school touches such a small percentage of the student population and predicts that music will be completely extra-curricular unless changes are forthcoming. This research seems to indicate that we should give more attention to "why" we teach music.

Dr. Burgstahler has made a real contribution in this study and every person involved in teacher training in every aspect could well give it serious consideration.

2) Buchanan, Gillian, "Skills in Piano Performance in the Preparation of Music Educators," *Journal of Research in Music Education*, Vol. XII, No. 2, Summer 1964, pp. 134-138.

THE DEVELOPMENT AND USE OF THE RENAISSANCE TROMBONE

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There are a large number of delightful and interesting stories about the origin of the trombone but many of them are of dubious authenticity. The book of Daniel (3:5) mentions a "sackbut" (the medieval name for trombone) but it is a mistranslation of the Greek word *sambyke* (Aramaic *sabeca*) which was probably a four-stringed instrument of the harp or lyre class. An early account often related is that of the Spartan Bard Tyrtaeus who supposedly got an idea from playing a trumpet with a tuning slide and invented the trombone in 685 B.C. The invention has also been ascribed, strangely enough, to the mythical Osiris, Egyptian god of the underworld and judge of the dead. The ancient Roman trombone reportedly given to King George III of England cannot be traced. It apparently was one of those large horns or *buccina*[1] which form part of the National Museum at Naples.[2] The "sackbut" of the ninth century said to be illustrated in the famous Boulogne Psalter (M.S. No. 20) is probably akin to the *cithara*[3] and thus is in no way related to the trombone. A number of royal trombonists are mentioned in a document dating from 1257[4] but lack of details leave little to be gained from the reference.

While it is not known exactly when or in what country the instrument first appeared, the ascription most likely belongs, if not to an oriental country, to Northern Italy or South Germany before or during the fourteenth century.

An effort to unravel the origin of the trombone's name[5] is in itself a difficult task. Not only was there a great deal of variation from one language to another, but there were innumerable and diverse forms and spellings of the word within the same tongue. In Italy it was called *tromba da tirarsi, tromba spezzata, trompone, trombone a tiro* or simply *trombone*. In Germany the title was *buzaun* which came from the long straight *buzine* or *pusine* and later became *posaune*.[6] *Zug-trommet* or *zugposaune* are also German references, while *bazuin schuijftrompette* is a Dutch term. French appelations were *saquebute, saqueboute* (pull-push), *carbouc, trompette harmonique,* or *trompette a coulisse*. The term *sacbut* derived from the Spanish name *sacabuche* which in turn came from *sacar* (to draw) and *bucha* (a pipe). The popular old English name *sackbut* came from this source. *Shakbusshe, sagbut, saykebude, sakbud, shackebutta, shagbolt* and *draucht trumpet* were all used in England and throughout the British Isles.

It cannot be determined just who was responsible for the invention of the slide or where it originated. While it has been insin-

uated that the idea grew out of the use of a tuning slide, there is little evidence to support the claim. It is obvious, however, that such a device could suggest the type of slide found on the trombone.

Pictorial evidence shows that the early slide trumpets had a kind of sliding mouthpiece "throat" which lengthened and shortened the tubing to provide several chromatic tones.[7] This device is logically an immediate predecessor of the U shaped slide which later appeared on the trombone.

Before 1400 the medieval straight trumpet appeared folded into an S shape. The shorter straight trumpet soon developed into the Clarion and Field Trumpet and the longer *buccine* became the Sackbut or trombone. The earlier form of the S shaped Trumpet[8] had only to receive the addition of a slide and an attachment of metal stays (for greater rigidity) to appear as the first form of the Sackbut.[9] Although the higher slide trumpet was not a very efficient instrument, the draw form of the low trumpet, which developed into the sackbut, seems to have gained favor from the start.

That the slide was already in use by the fourteenth century is evidenced by the occurrence of the words *sacabuche, saquebute* and other forms of the word in the writings of the time. A representation of a slide instrument, together with *shawms*[10], on an ivory chessboard[11] of Burgundian origin adds solid support to this evidence. Galpin claims the instrument to be an early sackbut [12] but the position of the player's hands lends support to the suggestion that it is most likely some kind of a slide trumpet. In an early fifteenth century art piece, however, an "unmistakable trombone, making up a dance band in company with three *shawms,* appears in 'The Wedding of the Adimari', a Florentine chest painting of about 1420."[13]

The slide mechanism itself was an idea which had tremendous possibilities. While the first slides likely produced no more than two or three semitones, it was only a matter of time until the slide was sufficiently lengthened to make the instrument fully chromatic. Appearing thus, it was perhaps the first of all the orchestral instruments to arrive in its present shape. Paintings of the fifteenth century show all the essentials of the modern instrument.

Granting that information about the use of wind instruments in the middle ages is scanty, certain pictorial and literary evidence indicates conclusively that the trombone was among those instruments which were used. It is known to have doubled a voice line or substituted for the singing voice in some of the *cantus firmi* of earlier masses and motets. Similar use in *rondeaux, chansons,* and other musical forms is also certain. Gustave Reese, referring to one version of Pierre Fontaine's three-part rondeau, *J'ayme bien celui qui s'en va,* preserved in the Escorial V. III. 24 manuscript, points out the use of a slide instrument. In Reese's words, "there is no question of a part that may possibly call for the instrument . . . ;

the source actually demands one."[14] While the contratenor part of Fontaine's composition is superscribed *trompette,* it covers the rather wide range from D to D[1] and includes every diatonic note except E and B. "None of the mysterious fifteenth century slide trumpets could have managed this, but it lies perfectly for a trombone in F."[15]

The trombone also served in connection with the activities of the old tower musicians. These players, which originally functioned as watchers at the gates, used their instruments in giving established signals. Eventually they became more sophisticated and musical reaching the point of professionalism. The cities paid them to play at various public performances. "In Bologna no less than sixteen *cornetti, tromboni,* and *pifferi,*[16] together with a drummer, played for an hour each evening in front of the town hall or *Palazzo Publico.*"[17] At a celebration given by the Duke of Burgundy in 1488 one of the musicians present played *une trompette saicqueboute.*[18] A rather interesting use of the trombone occurred when a trombonist posted on the church steeple alternated antiphonally with a group of eight trumpeters and a tympani player posted in front of the city hall.[19]

The profusion of musical instruments used during the fifteenth and sixteenth centuries attained increasing prominence. The courts vied with one another in securing the most skilled players. Members of city bands composed of trombones and trumpets earned for themselves a fine reputation and made their living by playing at frequent civic affairs. Prominent families were also inclined to employ instrumentalists. Coronations, processions, banquets, funerals and similar public and private gatherings saw a use for the trombone in ensemble. It appeared most frequently with *cornetti,*[20] *shawms,* and *krumhorner.*[21]

Marriages were among the most celebrated of occasions of the Renaissance. Purely instrumental performances, along with vocal and mixed ensembles, are frequently mentioned in accounts of wedding banquets. Trombones are named among those instruments providing music at a wedding feast at the court of Ferrara in 1529. At the marriage of Duke William of Bavaria and Renee of Lorraine, trombones play an important role in the performance of the forty-part *Ecce beatam lucem* by Striggio. The wedding of Cosimo de'Medici and Eleonora of Toledo saw an interesting performance of Corteccia's ceremonial motet. "This work was sung over the archway of the great door of the Porta al Prato with 24 voices on the side and on the other 4 trombones and 4 *cornetti* on the entrance of the most illustrious Duchess."[22] In Campion's Maske, performed at Whitehall on Twelve Night, 1607, at the marriage of Sir James Hay, a "doublesackbote" (bass trombone) was used.

The trombone was perhaps the most popular wind instrument the sixteenth century. King Henry VII was fond of instrumental music and it is known that trombones were a part of his ensemble.

Henry VIII, liking them no less, increased the number of trombones to ten.

In reference to the frequent use of trombones and slide trumpets in the sixteenth century, Curt Sachs quotes from Agricola's *Musica instrumentalis deudsch* of 1528:

> Ettiche aber halen der locher keyns
> Nur allein aben vnd unden eyhs
> Auff diesen wird die melodey / allein
> Durchs blasen vnd ziehen gefuret rein
> Als sein Busaun / Trumpeten vnd Claret

Translated as:

> Some have no holes at all, I trow,
> Save one on top and one below:
> Claretas, trumpets, and trombones
> By breath and sliding yield their tones[23]

Almost every composer of the time used trombones in one way or another. A composer named Kruger published a volume of chorales in 1558 for four and six trombones to be played with the organ. Alexander Orologio's twenty-eight entradas published in 1557 are also intended for trombones together with *cornetti*. Similar works by other composers are to be found in abundance.

In Italy, creators of opera were using trombones. Two of the earliest, Striggio and Corteccia, provided music for *intermedi* by Giovanni Battista Cini. This was given between the acts of d'Ambra's *La Cofanaria*, performed at the marriage of Francesco de'Medici and Johann of Austria in 1565. In France, a performance in 1581 of Balthasarini's *Ballet Comique de la Reine* included the use of trombones. Monteverdi's *L'Orfeo* (1607) employed five trombones — two altos, two tenors, and a bass.

It should be made clear that the trombone, as well as other instruments of the time, was used not only for secular music and gala festivities but that it was also used in the performance of liturgical music for the worship service. They were used both for accompaniment of voices and in independent ensemble playing. The complaints which were raised leading up to the Council of Trent are indicative of how much instruments were being used in the Church. As early as 1500 there was a performance of two masses which were accompanied by an organ, three trombones, a *cornetto*, and four *krumhorner*. Throughout the sixteenth century the trombone was used in consorts where a choir, *cornetti* and sackbuts were used during Mass celebrated by a bishop (1590).

Apparently the demand for greater numbers of musicains in the Church brought about the need for certain restrictions. Denis

Arnold, referring to the musicians employed in the cappella at the Basilica of St. Anthony in Padua (1594), quotes Tebaldini:

> . . . the body of musicians in ordinary should not exceed 16 voices, 4 for each part, and to the bass soprano a cornett . . . and the musicians extraordinary should not exceed 5, i.e., 4 trombones and a violin; and when there are sufficient sopranos, the afore mentioned cornett will be added to the musicians extraordinary, thus making 6 and no more.[24]

While the earliest evidence of the trombone is found in widely scattered literary references and certain pictorial representations, genuine trombones surviving from the second half of the 16th century can be observed and examined even today. These provide, in addition to visual appraisal and specific physical measurements, a tangible tonal evaluation, in that some can still be played.

The sackbut made by Jorg Neuschel, dated 1557, is the oldest known sackbut in existence.[25] Formerly in the collection of F. W. Galpin, it is now in the possession of Anthony Baines. Collections in Verona, Hamburg, and Amsterdam all contain trombones. Some of the earliest ones are dated 1579, 1587, and 1593.

Hans Neuschel of Nurnberg is the first known maker of trombones. He was an exceptionally skilled craftsman whose work earned for him a wide reputation. He received quite a large number of orders for instruments to be made for royal courts. In 1542 he received a request from Duke Albrecht of Prussia for a silver trombone with four slides (double slides). "For Pope Leo X he made some silver trombones, and visited Rome, where his playing was greatly admired and duly rewarded."[26]

Neuschel's business letters (still extant) indicate that he was very well paid for his services. In one dated 1545 he says that he will make five large Trombones and a "Mittel Busone" (a smaller instrument) for £60. For similar sets the King of England, the King of Poland and others always gave him twice that amount.[27]

Like the trumpets of the same period, the trombones were made of hammered brass. They were bent into the appropriate shapes and several braces were then added to give the instrument strength and rigidity. Short overlapping sleeves held the various pieces together. Even though the mechanism of these early trombones was very simple, the makers and players of the sixteenth and seventeenth centuries guarded their secrets very carefully.

Very important to the trombone of the sixteenth century were its crookings which were inserted between the slide and the bell

joint. In this manner various lengths of tubing could be employed, making it possible to adjust the pitch to suit the occasion. It was common practice to add enough tubing to change the pitch by as much as a fourth or fifth, a habit which obviously would affect the normal playing register considerably; thus a tenor trombone could add a crook lowering its pitch to the extent that it could play the bass parts. The Colbert trombone shown in PLATE V strangely enough has a crook, although it is already a bass. An interesting feature of the early trombones is that they could be completely dismantled. All the tubes and U bends could be separated. Figure 1, from Mersenne's *Harmonie Universelle,* shows how the instrument was disassembled. The following explanation is offered:

But all of its arms come apart since the first arm BF, the second FD, and the winding part GH separate at their joints F, G, and H, as well as the mouthpiece A, which is imbedded in the arm at the point B. Similarly the three bands C, E, and M are easily dismantled, so that the workmen make them more easily, and they are more portable. But principally two things must be noted in this instrument, that is, that one rarely used the winding part, which begins at the joint L and ends at the joint G, so that the part of the arm NC, that is to say the bell, is customarily fitted into the joint G so as to bring the sackbut back to its natural tone.[28]

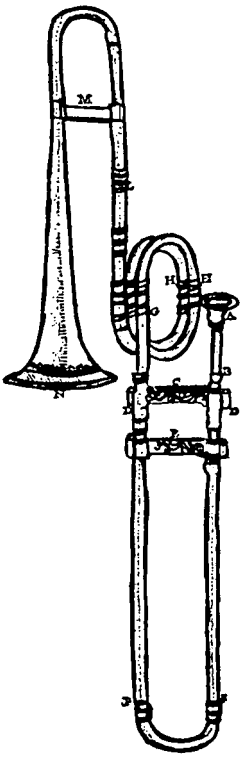

Figure 1. From Mersenne's *Harmonie Universelle, The Books on Instruments,* Trans. Roger E. Chapman. The Hague: Martinus Nijhoff, 1957.

A popular notion about old trombones is that they were constructed of heavier, thicker gauge tubing which would likely result in darker timbres. This was often, but not always the case. A sev-

enteenth-century tenor trombone[29] in the Stearns collection at the University of Michigan in Ann Arbor is such an exception, having almost paper-thin tubing walls. The bells of the old instruments, which were ornate (and consequently heavy), were of a funnel-like shape throughout and were smaller and much less flaring than those of the trombones today. The old trombones generally contained more cylindrical tubing than modern instruments and the bore size of the tubing was smaller.

Figure 2 draws a comparison between old and modern mouthpiece profiles. The typical mouthpiece on the early trombone was funnel-shaped, somewhat like the old type French horn mouthpiece. It was about .7 of an inch deep with a fairly sharp throat and about an inch across the top of the cup.[30] "When attached to the trombone this type of mouthpiece subdues the sonority, but brings out other qualities of tone which cannot be achieved by the ordinary type: the tone becomes richer and comes out without effort."[31]

Figure 2.

There are a number of literary references to "hault" and "bas" (high and low) instruments. These designations do not refer to pitch, but rather to loud and soft instruments. That the trombone was often classified with the latter group is apparent. Its sound was softer and therefore more appropriate for use in small ensembles together with recorders or stringed instruments. Mersenne[32] makes it clear that the instrument was not to be sounded in imitation of the trumpet, but that it should approach the softness of voices. Nevertheless the trombone was not limited to intimate chamber work and was used constantly in processions and outdoor concerts with *shawms* and *krumhorner*.

All during the Renaissance the music was arranged for the instruments by the musician in charge rather than by the composer. This makes it more difficult to point to actual compositions in which trombones specifically took part, although they were constantly required to participate. It would be a great mistake, however, for anyone to believe that the practice of instrumentation was haphazard. Such factors as the style of the music, the sonorities and capabilities of the instruments and the acoustics were all considerations which were taken into account. In outdoor performances even the weather was a consideration. "In 1569 Francois Robillard of Paris, 'master player of instruments', contracted with a group of hatters (*chappliers*) to provide ten musicians for their festivities on the feast of St. Michael; they would play six *aubades* on cornetts (*cornetz a bousquin*) and violins if it did not rain, or on flutes (*fleutes d'alemens*) and trombone (*saqueboutte*) if it did"[33]

It was very late in the sixteenth century before composers specified particular instruments for the various parts. In earlier times a

player executed any part within the scope of his instrument, without hesitating to double or substitute for a singing voice. Giovanni Gabrieli was one of the first composers to assign different parts to specific instruments. The composer's *Sonata pian'e forte* (1597) calls for two instrumental choirs, one consisting of a cornet and three trombones, the other of a group of stringed instruments called violino. This is the earliest ensemble work to have indications of dynamic levels, as suggested by its name. Another of Gabrieli's compositions require twelve trombones, which play every part from alto downwards in three juxtaposed choirs.

The earlier practice of printing on the music "*buoni da cantare et sonare con ogni sorte di instrumenti*" (good for singing and playing on any sort of instruments) was common in Gabrieli's time. Apparently the publishers were disinclined "to limit performances to one set of instruments, and therefore Gabrielli's wish for precise instrumentation was only partly realized."[34]

At the end of the sixteenth century, the family of trombones was made up of alto, tenor, and bass instruments.[35] The standard lengths of tubing and the specific keys of the various instruments are somewhat ambiguous, clouded by a frequent use of crookings which changed the pitch constantly. Probably the most used keys were F, E-flat and D (alto); B-flat, A, E and D (tenor); and F, A and E-flat (bass).

Evidence has shown the trombone to be one of the most illustrious and colorful instruments of the Renaissance. Although most of the compositions employing the instrument were small in scope, its use was frequent and varied. The style of writing greatly resembled that of vocal writing but a few instrumental idioms are found. Perhaps the popularity of the trombone is best explained when consideration is given to its sliding mechanism. This simple, yet most unique device, placed the trombone well ahead of its nearest competitor. The advantages of diatonic and chromatic tones enabled the instrument to meet the demands of composers at a time when other wind instruments were still limited to the production of overtones and military sounds. While the Renaissance instrument differed relatively little from the modern trombone, there are many who believe that some of its characteristics were not only equal to, but superior to that of its successor.

It is interesting that the trombone has been very much caught up in the modern revival of early instruments and their music. Helmut Finke, Joseph Monke, and the Alexander Brothers of Germany are all importing reproductions. These, of course, are an added aid to those wishing to perform Renaissance music "authentically." It is well to remember, however, that a modern trombone played in a subdued, vocal manner, would be less of a desecration than a genuine, antique sackbut played in a bombastic, unimaginative style less than appropriate for the music.

FOOTNOTES

1) A long straight medieval trumpet with a cylindrical tube. See PLATE I (1).

2) Francis W. Galpin, *Old English Instruments of Music: Their History and Character* (London: Methuen and Co., Ltd., 1932), p. 207.

3) A fretted plucked instrument not unlike the banjo in appearance.

4) Gustave Reese, *Music in the Renaissance* (New York: W. W. Norton & Co., Inc., 1959), p. 715.

5) The word *trombone* comes from the Italian term *tromba* meaning "big trumpet."

6) The evolution of the trombone (Posaune) from Busine is especially interesting in reference to the German tradition of placing the *trombone* in the hands of the Archangel of the Judgment day.

7) The *English Slide Trumpet*, said to have been invented by John Hyde in 1804, had a U-shaped slide like that of the trombone only with a spring attached which would return the slide to its original position.

8) Illustrated in Plate I (2).

9) Galpin, p. 208.

10) Early double reed instrument made from one solid block of wood with two bores, one descending, one ascending and terminating with a bell.

11) Reproduced in Canon Galpin's very excellent paper on The History and Evolution of the Sackbut. See footnote 27.

12) Galpin, *Old English* . . . , p. 208.

13) Eric Blom (ed.), *Groves Dictionary of Music and Musicians*, 5th ed., Vol. VIII (London: MacMillan & Co., Ltd., 1954), p. 555.

14) Reese, pp. 35-36.

15) Blom, p. 555.

16) Shawms or bagpipes.

17) Edmund A. Bowles, "Tower Musicians in the Middle Ages," *Brass Quarterly*, V, No. 3 (1962), p. 97.

18) Ibid., p. 100.

19) Reese, p. 721.

20) German *zink*. A wooden instrument covered with leather having a cup mouthpiece and fingerholes.

21) A curved, nearly cylindrical double reed instrument with a wind cap which kept the player's lips from touching the reed. Its shape was somewhat like the letter J.

22) Reese, p. 366.

23) Curt Sachs, "Chromatic Trumpets in the Renaissance," *Musical Quarterly*, I, No. 2 (1957), p. 66.

24) Denis Arnold, "Brass Instruments in Italian Church Music of the Sixteenth and Early Seventeenth Centuries," *Brass Quarterly*, I, No. 2 (1957), p. 86.

25) The Galpin Society, founded in 1946 for the purpose of investigating the history and use of musical instruments, uses the 1557 Neuschel sackbut as its emblem.

26) Adam Carse, *Musical Wind Instruments* (New York: Da Capo Press, 1965), p. 251.

27) Francis W. Galpin, "The Sackbut, Its Evolution and History," *Proceedings of the Royal Music Association* (1906), p. 12.

28) Mersenne, p. 342.

29) Robert Sheldon, who has personally examined and blown the instrument (in first position only), has described it to me in a letter.

30) Characteristic mouthpieces may also be observed on the trombones in PLATE I.

31) Nicholas Bessaraboff, *Ancient European Musical Instruments* (Boston: Harvard University Press, 1941).

32) Mersenne, p. 342.

33) Frank Harrison and Joan Rimmer, *European Musical Instruments* (London: Studio Vista, 1946), p. 25.

34) Kenton, p. 74.

35) See PLATE V.

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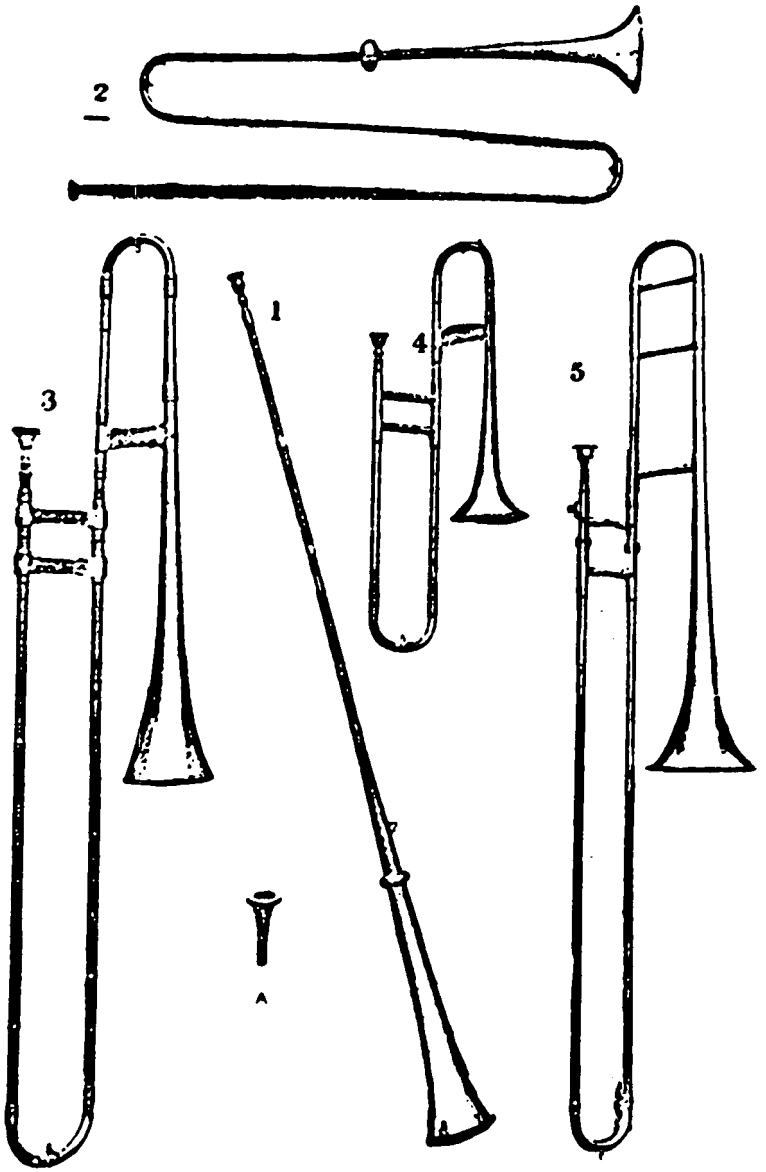

PLATE I

Reproduced from Galpin's article "The Sackbut, Its Evolution and History," *Proceedings of the Royal Music Association* (1906). PLATE III in Galpin's paper.

1. Busine, by Hainlein, 1460.
2. Folded trumpet (earliest Medieval form).
3. Sackbut, by Jorg Neuschel, 1557.
   A. Early shape of bass mouthpiece
4. Descant trombone, by Johann Schmied, 1781.
5. Tenor trombone, by Boosey & Co., 1907.

A STUDY OF THE STATE MUSIC FESTIVALS IN MISSOURI FROM 1959-1966

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In 1965 the author made a study of the District Music Festival of the State of Missouri which was published in this Journal (Vol. 1, No. 5). In connection with that study, recommendations were made concerning some aspects of the district festival and the manner in which they were organized and operated. It was the intent of the study to bring into focus figures and percentages that had not previously been made available to the music educators of the state of Missouri. As a result of that study, much discussion was aroused and several decisions were made by leaders in music education. The State High School Activities Association made plans to alter some of its organizations regarding the festivals and more complete tallies and percentages were forthcoming with the 1966 district and state festivals.

This present study is meant to bring into focus some of the results of the state festivals in order that figures and percentages might be viewed by music educators and administrators of the state.

Of significant importance is the increase in participation of schools at the state level. From a total of 298 schools in 1959, the 1966 state festival listed over 360 schools participating. It is important to note that beginning in 1960, when high schools were arranged into four divisions, according to pupil enrollment, in every size classification there has been an increase in the number of schools participating in the state festival. While festival enrollments have increased, the number of school districts in the state has not changed proportionately. In fact, some consolidation of schools has occurred. In spite of this, however, the number of participants has increased.

The current research was designed as a follow-up to the District Music Festival research that was conducted in 1966. Some research has to do with investigation of results, or as in some cases, to study certain actions and reactions. It has not been the purpose of these two studies to "cause" any particular action to take place. It is hoped that further investigation does not cause the professional teacher to be disturbed by assumptions on their part not intended by the author.

TABLE I

Number of Schools Attending The State Festival

Year	*Class* *A*	*B*	*C*	*D*	*Total*
1959	30	111	157	No Division	298
1960	24	35	128	118	305
1961	30	38	126	123	317
1962	33	51	134	136	354
1963	37	56	132	135	360
1964	44	56	134	129	373
1965	42	56	145	119	362
1966	48	54	143	112	357

In Missouri it has been the practice to require that all participants in the state music festival must first get a superior rating at the district music festivals. Festivals were held before the year 1959 but records were not kept by the Activities Association. The Missouri Music Educator's did not become concerned with this kind of record keeping until the number of the festival entries demanded attention.

In the early years of state music festivals, schools were permitted to enter large ensembles (bands, orchestras, choruses). However, it became evident that much money was being spent on transportation for large groups and much of the activity was a duplication. Today, only solos and small ensembles may be taken to the state music festival center, and of course, only if these organizations have received a number one rating at the district level. The elimination of large ensembles at the state festival is still discussed by many teachers.

Effort has been made by the Missouri High School Activities Association to reduce the number of state festival entries by encouraging judges at the district centers to grade participants a little more carefully, trying to allow only those students to attend the state festivals who had musically earned the coveted right. In spite of these efforts, more and more students have earned their right to take part at the state level. A review of the district festival results in an earlier research will disclose these results more clearly.

TABLE II

Distribution of State Festival Results Expressed in Percentages

		Class A	*Class B*	*Class C*	*Class D*
			1959		
Rating	I	46.8%	36.9%	33.8%	
	II	40.8%	61.2%	55 %	
	III	12.0%	13.7%	23.7%	
	IV	.3%	.6%	.3%	
			1960		
	I	50.2%	45.8%	49.2%	32.6%
	II	48.2%	51.1%	48.5%	52.7%
	III	3.8%	12.4%	12.4%	14.5%
	IV	2.0%	1.1%	.3%	.2%
			1961		
	I	50.9%	42.6%	33.4%	25.5%
	II	39.1%	55.2%	54.5%	55.4%
	III	9.2%	8.5%	10.8%	18.2%
	IV	.9%	1.0%	1.2%	.7%
			1962		
	I	48.1%	48.0%	36.7%	33.7%
	II	42.5%	43.6%	50.3%	52.5%
	III	8.2%	8.3%	12.5%	13.3%
	IV	1.0%	0.0%	.3%	.4%
			1963		
	I	37.8%	38.7%	37.8%	37.1%
	II	51.6%	50.2%	51.6%	49.5%
	III	10.1%	10.8%	10.1%	12.7%
	IV	.2%	.2%	.3%	.5%
			1964		
	I	50.9%	43.4%	41.0%	32.8%
	II	41.5%	44.6%	47.5%	53.3%
	III	7.4%	11.1%	11.0%	13.4%
	IV	.1%	.1%	.3%	.3%
			1965		
	I	51.1%	38.7%	35.6%	30.1%
	II	41.8%	50.6%	50.7%	50.7%
	III	6.6%	10.3%	13.3%	18.5%
	IV	.3%	1.0%	.3%	.6%
			1966		
	I	50.7%	39.9%	29.8%	26.3%
	II	37.6%	45.4%	48.0%	46.0%
	III	10.1%	13.1%	20.9%	25.7%
	IV	.1%	.7%	1.2%	1.8%

TABLE III

Distribution of Results According to Specific Entries:

IE—Instrumental Ensembles IS—Instrumental Solos

VE—Vocal Ensembles VS—Vocal Solos

1959 STATE MUSIC FESTIVAL

Class A Schools (30 Schools)

	Ratings:				
Entries	I	II	III	IV	Total
IE	37	30	2	0	69
VE	17	14	2	0	33
IS	70	52	23	1	146
VS	24	33	11	0	68
Total	148	129	38	1	316

Class B Schools (111 Schools)

	Ratings:				
Entries	I	II	III	IV	Total
IE	46	91	16	1	154
VE	41	48	6	0	95
IS	92	139	40	1	272
VS	44	75	19	2	140
Total	223	353	81	4	661

Class C Schools (157 Schools)

	Ratings:				
Entries	I	II	III	IV	Total
IE	27	36	27	0	90
VE	31	37	23	1	92
IS	74	107	23	0	204
VS	27	65	26	1	119
Totals	159	245	99	2	505

1960 State Music Festival

Class A Schools (24)

	Ratings:				
Entries	I	II	III	IV	Total
IE	27	50	1	0	78
VE	22	8	1	0	31
IS	86	52	7	3	148
VS	31	45	3	4	83
Total	166	155	12	7	340

Class B Schools (35)

Entries	Ratings: I	II	III	IV	Total
IE	16	35	11	0	62
VE	25	17	4	0	46
IS	38	43	12	2	95
VS	27	25	3	0	55
Total	106	120	30	2	258

Class C Schools (128)

Entries	Ratings: I	II	III	IV	Total
IE	62	97	27	1	167
VE	54	39	8	0	101
IS	134	107	24	2	267
VS	62	40	17	0	119
Total	312	283	76	3	674

Class D Schools (118)

Entries	Ratings: I	II	III	IV	Total
IE	18	43	9	0	70
VE	16	37	15	1	69
IS	53	69	13	0	135
VS	35	50	18	0	103
Total	122	199	55	1	377

1961 STATE MUSIC FESTIVAL

CLASS A SCHOOLS (30)

Entries	Ratings: I	II	III	IV	Total
IE	44	51	8	0	103
VE	18	18	0	0	36
IS	107	67	20	3	197
VS	51	32	12	1	96
Total	220	168	40	4	432

CLASS B SCHOOLS (38)

Entries	Ratings: I	II	III	IV	Total
IE	25	46	2	0	73
VE	27	28	6	1	62
IS	51	38	10	2	101
VS	23	29	7	0	59
Total	126	141	25	3	295

CLASS C SCHOOLS (126)

Entries	Ratings: I	II	III	IV	Total
IE	52	100	27	0	179
VE	34	61	4	0	99
IS	92	124	28	7	251
VS	41	72	12	1	126
Total	219	357	71	8	655

CLASS D SCHOOLS (123)

Entries	Ratings: I	II	III	IV	Total
IE	15	38	8	0	61
VE	13	28	6	1	48
IS	25	40	23	1	89
VS	13	37	10	0	60
Total	66	143	47	2	258

1962 STATE MUSIC FESTIVAL

CLASS A SCHOOLS (33)

Entries	Ratings: I	II	III	IV	Total
IE	43	62	11	3	119
VE	37	8	1	0	46
IS	107	79	10	1	197
VS	46	67	10	1	124
Total	233	216	32	5	486

CLASS B SCHOOLS (51)

Entries	Ratings: I	II	III	IV	Total
IE	54	48	11	0	113
VE	37	36	5	0	78
IS	85	60	9	0	154
VS	32	45	11	0	88
Total	208	189	36	0	433

CLASS C SCHOOLS (134)

Entries	Ratings: I	II	III	IV	Total
IE	89	110	22	1	222
VE	21	59	18	0	98
IS	115	146	32	1	294
VS	51	64	22	1	138
Total	276	379	94	3	752

CLASS D SCHOOLS (125)

Entries	Ratings: I	II	III	IV	Total
IE	27	60	12	0	99
VE	37	29	9	2	77
IS	61	75	24	0	160
VS	22	65	13	0	100
Total	147	229	58	2	436

1963 STATE MUSIC FESTIVAL

CLASS A SCHOOLS (37)

Entries	Ratings: I	II	III	IV	Total
IE	76	50	5	0	131
VE	37	22	4	0	63
IS	165	83	14	2	264
VS	62	61	12	0	135
Total	340	216	35	2	593

CLASS B SCHOOLS (56)

Entries	Ratings: I	II	III	IV	Total
IE	55	57	9	0	121
VE	32	51	9	0	92
IS	72	96	16	1	185
VS	34	46	20	0	100
Total	193	250	54	1	498

CLASS C SCHOOLS (132)

Entries	Ratings: I	II	III	IV	Total
IE	92	120	17	2	231
VE	33	49	11	1	94
IS	123	154	32	0	309
VS	47	79	19	0	145
Total	295	402	79	3	779

CLASS D SCHOOLS (134)

Entries	Ratings: I	II	III	IV	Total
IE	54	50	6	0	110
VE	30	43	13	1	87
IS	76	89	27	0	192
VS	29	70	19	2	120
Total	189	252	65	3	509

1964 STATE MUSIC FESTIVAL

CLASS A SCHOOLS (44)

Entries	Ratings: I	II	III	IV	Total
IE	104	85	15	0	204
VE	33	35	11	0	79
IS	181	136	18	0	335
VS	88	75	15	1	179
Totals	406	331	59	1	797

CLASS B SCHOOLS (56)

Entries	Ratings: I	II	III	IV	Total
IE	63	80	12	1	156
VE	40	27	10	2	79
IS	78	76	13	0	167
VS	38	42	21	1	102
Total	219	225	56	4	504

CLASS C SCHOOLS (134)

Entries	Ratings: I	II	III	IV	Total
IE	85	124	26	0	235
VE	37	48	18	0	103
IS	136	120	22	1	279
VS					
Total	258	292	66	1	635

CLASS D SCHOOLS (129)

Entries	Ratings: I	II	III	IV	Total
IE	41	68	22	0	131
VE	37	58	14	0	109
IS	68	87	11	0	166
VS	38	85	28	2	153
Total	184	298	75	2	559

1965 STATE MUSIC FESTIVAL
CLASS A SCHOOLS (42)

Entries	Ratings: I	II	III	IV	Total
IE	82	98	15	2	197
VE	46	34	5	1	86
IS	180	130	22	0	332
VS	107	78	12	0	197
Total	415	340	54	3	812

CLASS B SCHOOLS (56)

Entries	Ratings: I	II	III	IV	Total
IE	47	101	26	4	178
VE	37	44	11	0	92
IS	78	115	12	1	206
VS	66	44	13	1	124
Total	228	304	62	6	600

CLASS C SCHOOLS (145)

Entries	Ratings: I	II	III	IV	Total
IE	68	136	50	1	255
VE	33	57	20	0	110
IS	126	167	15	0	308
VS	85	90	15	0	190
Total	312	450	100	1	863

CLASS D SCHOOLS (119)

Entries	Ratings: I	II	III	IV	Total
IE	29	52	22	1	104
VE	17	58	28	2	105
IS	66	83	21	0	170
VS	51	81	29	0	161
Total	163	274	100	3	540

1966 STATE MUSIC FESTIVAL
CLASS A SCHOOLS (48)

Entries	Ratings: I	II	III	IV	Total
IE	79	69	20	2	170
VE	44	35	12	0	91
IS	194	141	23	0	358
VS	85	63	25	0	173
Total	402	308	80	2	792

CLASS B SCHOOLS (54)

	Ratings:				
Entries	I	II	III	IV	Total
IE	61	90	21	2	174
VE	29	24	15	1	69
IS	88	85	18	1	192
VS	41	50	22	0	113
Total	219	249	76	4	548

CLASS C SCHOOLS (143)

	Ratings:				
Entries	I	II	III	IV	Total
IE	54	112	38	5	209
VE	41	46	30	1	118
IS	113	148	46	1	308
VS	40	93	60	3	196
Total	248	399	174	10	831

CLASS D SCHOOLS (112)

	Ratings:				
Entries	I	II	III	IV	Total
IE	22	52	24	2	100
VE	12	32	25	3	72
IS	64	95	31	3	193
VS	30	45	45	1	121
Total	128	224	125	9	486

Interpretation of Tables

A better comparison might be to measure the number of entries against the total enrollment of schools, for with the growth in high school enrollment, the number of entries would tend to increase. The next few years, however, should see a leveling off of the number of entries. It has been interesting however, to note the increase of the number of entries in spite of the emphasis on other subjects in the curriculum.

To attempt to draw any conclusions from the number of entries and the results of the student performances is difficult. The results may or may not be consistent but each school size has peculiarities of its own, not related to other school sizes. The most consistent result observed is the fact that the great majority of students earned ratings of number one or two in every school category.

The larger number of low ratings seemed to be assigned to students from small schools. This could be attributed to the fact that students living in larger cities have better access to private teachers. This does not infer less ability on the part of teachers in large cities, but rather, that teachers are able to encourage students in large cities to take advantage of the knowledge of the professional teacher.

One significant factor which emerges from this study is the consistently larger number of instrumental as opposed to vocal entries, especially among the large schools. The "B", "C", and "D" schools seem to keep a better balance between vocal and instrumental activity than the larger class "A" schools.

The writer would suggest that readers study the results of the ratings. Many interesting facets of comparison emerge and one can only conjecture about the causes of these seeming inconsistencies.

Recently, an attempt has been made to up-grade the ratings of high school students who participated in the state music festivals. This has been done, primarily, by demanding a better performance by the student at the district festival. No one can say with certainty that this has taken place. The managers of the district festivals have always been interested in making their festivals meaningful to students and teachers alike. To prove this has happened is difficult. Even the statistics do not always provide consistent answers. The percentage points do not really change very much. The results of the year 1963 interestingly display a most even distribution between ratings in each size school and between ratings.

One could reason that as a result of making it more difficult to obtain a superior rating at the district festival, judges at the state festival in 1966 were able to give a larger number of one ratings.

A factor which seems to indicate that the district festivals have more rigorous standards is the percentage of "good" or number III ratings given at the state festival. This percentage has become smaller except in 1965 and 1966.

The only conclusion that can be drawn with certainty is that the performance when listened to by human beings, will always elicit different reactions and different evaluations depending somewhat on the time and place of the performance.

Conclusions and Suggestions:

Any conclusions drawn from this research can be based upon opinion only. It could be rewarding, however, to think through the following questions:

1. Are two music festivals needed (district and state)?

2. Would it be more practical to have just a district festival but send the large ensembles on a different date than the small ensembles, thus eliminating the state festival?

3. Is it necessary to reconsider the combination of instruments permitted to enter the festivals?

4. Would it be desirable to allow schools to send soloists in proportion to the number of ensembles entered?

5. The St. Louis Suburban Music Educators, which conducts its own solo and ensemble festivals, has recently suggested that con-

sideration be given to a special 50 state meeting on the state of the music contest and festival. This appears to the author to be an exciting and potentially valuable proposal.

The writer wishes to thank the Missouri State High School Activities Association and its executive secretary, Mr. Irvin Keller, for its aid in this study. Commendations are in order for the many managers of both district and state festivals for the fine organization and arrangements made at all festivals. The problem of scheduling is a challenge that few people are able understand. The logistics of such an undertaking are of such proportions that only those working with the problem can truly understand them.

A word of thanks is due the many teachers who send well prepared singers and instrumentalists year after year. No less appreciation is due the many adjudicators who spend many hours of trying to write helpful words to aspiring musicians. It is regrettable that so many laymen have never had the opportunity to watch young America seriously and eagerly playing and singing to gain constructive criticism.

The writer hopes that music teachers over the state of Missouri will take time to commend those responsible for festival organization. It will be helpful if your comments are constructive for better organization. Music teachers should contact their M.M.E.A. representative who serves on the Board of Control for the State Activities Association when changes are desired.

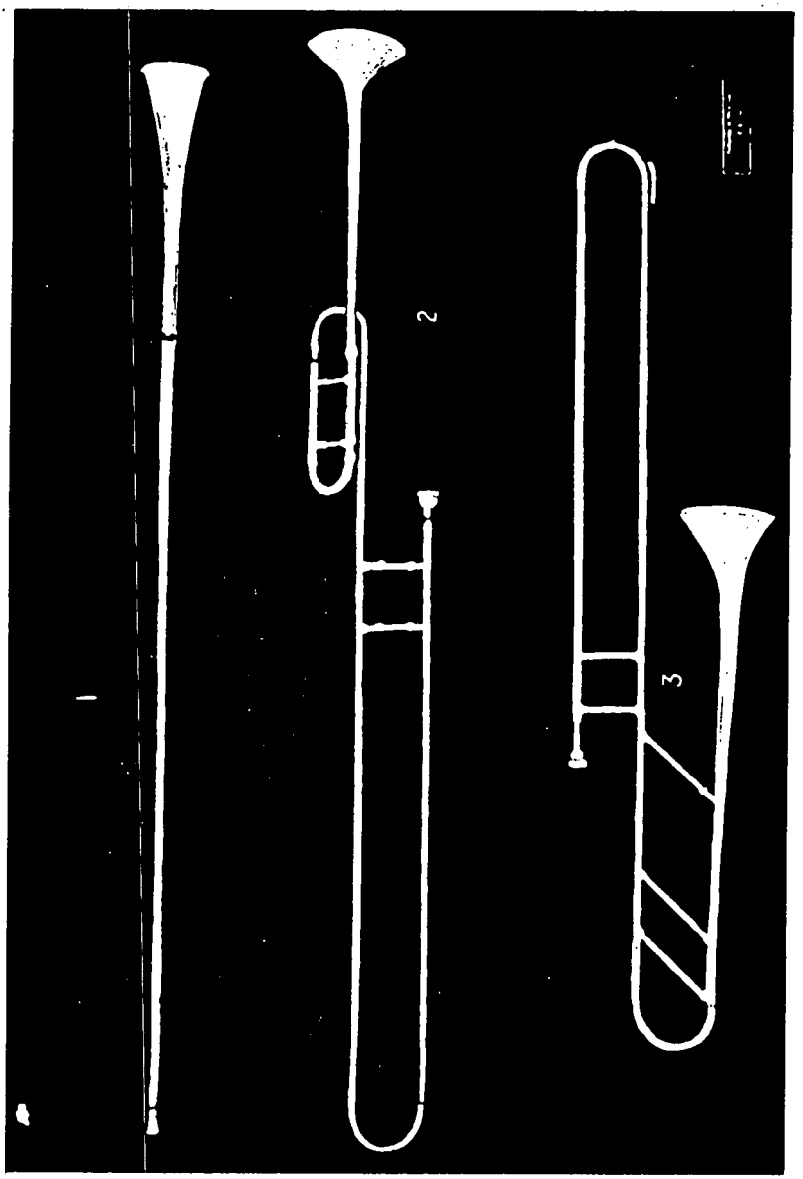

PLATE II
By courtesy of C. G. Conn, Elkhart, Indiana.

PLATE III

Tromba Spezzata (Plate V) from F. Bonanni's *The Showcase of Musical Instruments.* All 152 Plates from the *Gabinetto Armonico,* (1723). Text by F. L. Harrison and J. Rimmer. New York: Dover Publications, Inc., 1964.

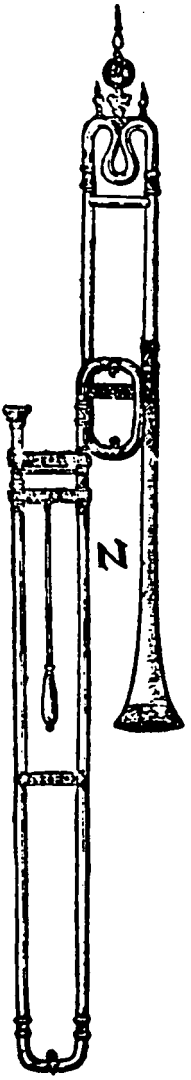

PLATE IV

Trombone taken from Plate VI of Pratorius' *Theatrum Instrumentorum* (1620), the illustrated supplement to his *De Organographia* (Vol. II of Syntagma Musicum). E. Holwein, Wolfenbuttel, 1615-19. Facsimile reprint. Kassel: Barenreiter, 1958.

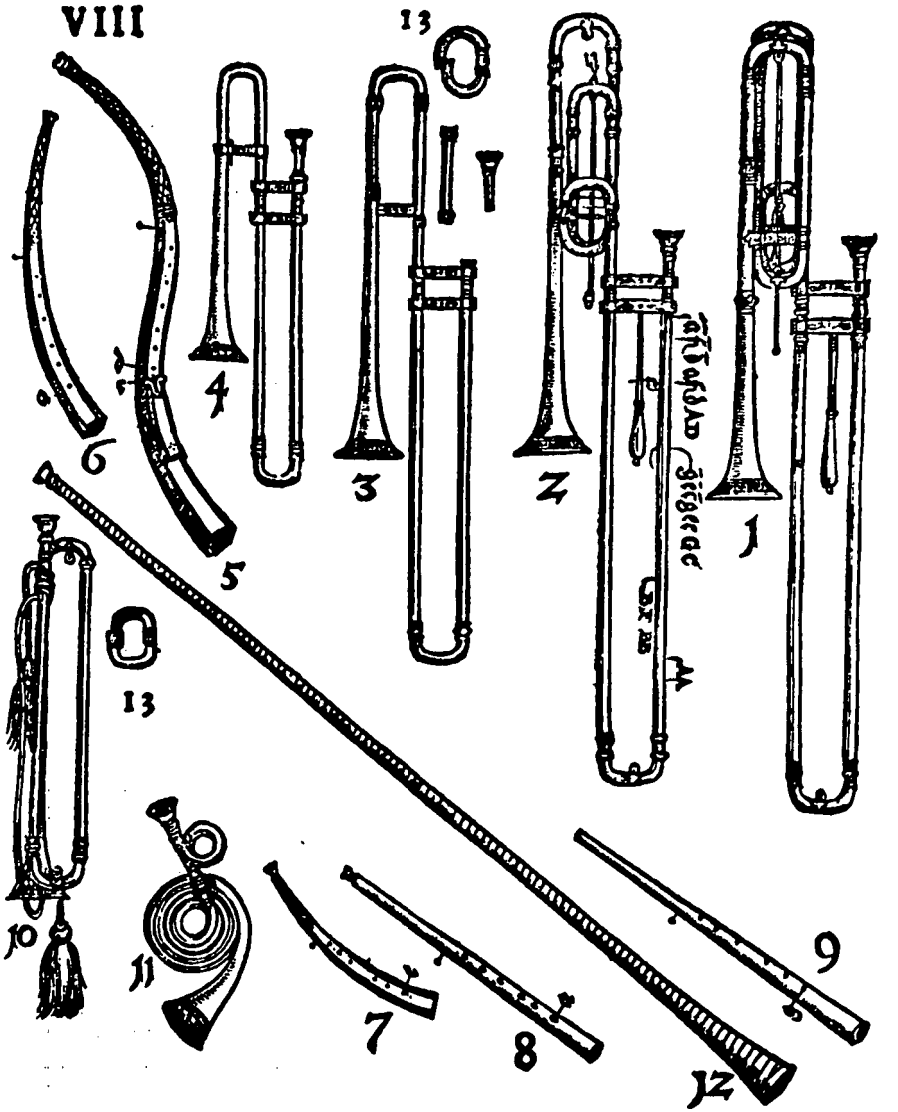

PLATE V

Plate VIII from Pratorius' *Theatrum Instrumentorum.*

1. 2. Quart-trombones. 3. Ordinary (tenor) trombone. 4. Alto trombone. 5. Cornon, great tenor cornet. 6. Ordinary choir *zink* (cornett). 7. Descant *zink*. 8. Straight *zink* with mouthpiece. 9. Mute *zink*. 10. Trumpet. 11. Hunting trumpet. 12. Wooden trumpet 13. Crook, transposing a tone lower.

TASTE, MUSIC, AND EDUCATION

A Survey of Comments on Taste in General, Music Taste, and How It Relates to Music Education

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It is common enough to hear a person described as having "good taste" or "bad taste." These words have been and are a part of our standard vocabulary. And yet, when one tries to define what "taste" is, apart from a superficial comment that good taste is "liking the things that are right to like" and bad taste is "liking what is low in taste, or what isn't the choice of the status people," one uncovers a complex of various meanings and approaches to the subject.

This paper is an attempt to present the various thoughts of philosophers, psychologists, sociologists, and other writers on the concept of taste or the standards of tastes against which beauty is measured. The comments can generally be classified as taking one of two approaches — the "classical" or the "sociological." The classicist considers that taste is an absolute standard which will reveal the beauty in art and which is universal, deriving from something ultimate and true in the world; taste is approached through the study of the nature of beauty, which is the central concern. The sociologists' viewpoint is that taste is a social factor, arising from the social conditions surrounding people and from their interaction with each other and with art. They are more concerned with the science of taste than with the nature of beauty. Today the sociologists' viewpoint seems more accepted and most of the sociologists and psychologists are studying taste from this stand. However, the first ones to consider the subject of taste were the philosophers, and particularly those writing in the philosophical branch called aesthetics, the field where the term "taste" first arose in the 18th century.

Philosophy, being an ancient discipline (psychology and sociology are comparative infants), will be the first approach that we will study in this paper, following it with approaches made by more recent writers, especially in psychology and sociology. Following a general study of opinions on taste itself, we then move to articles concerning taste and music education, our ultimate goal being to answer the questions "What is the relationship between music education and taste formation?" and "Does music education have any effect on taste?"

Because music is our field of study, this paper is arbitrarily limited to general comments on taste by people related to and interested in music to the exclusion of the other arts, as well as philosophical comments on the nature of beauty. I do not pretend to have reached all the sources of comments about taste; rather this is a general overview of the subject which should and can lead to much

more work in the specific fields of the nature of musical taste and the effect of music education on taste formation.

The Greeks' Ideas About the Nature of Beauty

Although the word taste was not used by philosophers until the 18th century, a background of thought of earlier philosophers on the various answers to the nature of beauty is important to understand later approaches. Philosophers' approach to taste was through a consideration of the nature of beauty, and the value of judgments of beauty in art and nature.

The history of aesthetics as a field of interest goes back to Greek civilization and the three great philosophers, Socrates, Plato, and Aristotle. Croce recognizes Socrates as having opened up the field.

> " . . . the problem of the nature of art assumes as solved those problems concerning the difference between rational and irrational, material and spiritual, bare fact and value, etc. This was first done in the Socratic period, and therefore the aesthetic problem could only arise after Socrates.

Plato was the first Western writer to discuss art objects and artists seriously and he was not supporting art as a divine thing. The basic concept he formulated was the concept of mimesis, or imitation. Thus art "does not realize the ideas, or the truth of things, but merely reproduces natural or artificial things, which are themselves mere shadows of the ideas."

Bernard Bosanquet, looking at the ancient world from a modern aesthetic point of view, finds the Greek theory of the Beautiful based on three principles, the moralistic, the metaphysical, and the aesthetic. The moralistic principle states that "if artistic representation is related to many only as commonplace reality, then . . . it follows that *morally* the representations of art must be judged by the same moral criteria as real life." What is immoral in life is immoral when represented in art.

The metaphysical principle states that "if artistic representation differs from the nature which it represents, whether human or other, only in the degree and completeness of its existence, then it differs only for the worse, and is a purposeless re-duplication of what already was in the world." Plato's discussions of art were critical of art, saying that since it only imitated life, it did not have as much value as life did.

The aesthetic principle states that:

> If artistic presentation can never have a deeper content than the normal or common-place object of perception which it represents, then there can be no explanation of beauty involving any deeper attributes than those which normal perception is able to apprehend in common-place reality. In other words, it follows that, *aesthetically,* beauty is purely formal, consisting in certain very abstract conditions which are satisfied, for example, in elementary geometrical figures as truly as in the creations of fine art.

Thus beauty in Greek thought was the formal beauty of the object, consisting in its lines, its unity and variety, its simplicity, etc.

Aristotle generally accepted the idea that art was imitation of living things and ideas, but he did advance the idea that art that copied unpleasant things could still be pleasant.

> Since the use of intelligence, and the feeling of wonder, are both of them pleasant, it necessarily follows that things are pleasant which are of the class of mimetic art, such as painting and statuary and poetry and everything which is well imitated, even when the object itself is not pleasant. For it is not the object which gives the pleasure, but inference takes place that 'this is that,' so that an exercise of the intelligence is brought about.

Here is a nucleus of the idea that pleasure in art is derived not from the object alone, but from employment of the mind in looking at the object.

These three principles outline the basic problems of beauty as discussed by later philosophers as well as the Greeks, and they embody some of the ways in which art is judged. In relation to the metaphysical principle, the Greeks considered art imitative, whereas later philosophers believed in the antithesis of imitation: that art is symbolic of non-imitative concepts. The moralistic principle of art raises the issue of real interest vs. aesthetic interest. That is, whether art is beautiful because it exists for a purpose, or beautiful because it exists without relation to a purpose. The Greeks and later philosophers considered art to serve a utilitarian, or hedonistic purpose. Kant was the first to establish art as free from any other purpose, a real revolution in the field of aesthetics. The third antithesis concerns the aesthetic principle — abstract analysis vs. concrete analysis. It was logical during the Greek civilization to analyse beauty abstractly, when progress in mathematics was great and importance was being placed on geometric and harmonious figures, especially by the Pythagoreans. Later philosophers looked deeper for an analysis of beauty, such as in concrete analysis, although this could not be expected by critics examining an art supposedly purely imitative.

The Middle Ages

At the end of antiquity another philosopher became important for his influence over the Middle Ages — Plotinus. He introduced the mystic view of art. It was then that art began to be understood as symbolic, not imitative. Starting from Plato's view that the object is less than the artist, Plotinus determines:

> . . . but still, if any one condemns the arts, because they create by way of imitation of nature, first we must observe that natural things themselves are an imitation of something further, and next we must bear in mind that the arts do not simply imitate the visible, but go back to the reasons from which nature comes; and further, that they create

much out of themselves, and add to that which is defective, as being themselves in possession of beauty . . .

Thus Plotinus, by allowing art to express spiritual concepts, did not limit the judgment of beauty by abtsract analysis of the object, but broadened the standards by which beauty could be judged.

During the Middle Ages, aesthetic thought did not seem to "advance," and art was in the service of God and religion. Art was moral or pedagogic in purpose, and there was no aesthetic consciousness, even though the production of art was great. Frank P. Chambers, in his book on *Perception, Understanding and Society,* believes as false the assumption that the definition of art has always been the same. "Taste is allowed to change, and the fashions of taste become matters of some interest; but each changing phase of taste is assumed to express the self-same 'art.' Yet the assumption so made, we believe, is false in fact. In order not to judge the art of other periods by our own standards it is necessary to find out what people of other ages considered and felt about their arts. It is at this point that Chambers defines art in the Middle Ages as meaning making or doing (it is so used in the Bible); and because of this definition and the lack of writings on art, he states that the Middle Ages had no aesthetic consciousness (i.e., a recognition that art was Fine Art, and could simply be enjoyed for its beauty, notwithstanding any other purpose). Therefore, " . . . artistic perception has not always been what a modern critic might assume and . . . we must in consequence be wary of our use of the words or terms for art."

The Renaissance

Chambers continues his argument by stating that the aesthetic revolution did start in the Renaissance.

> The Renaissance objectified thought and learning; it likewise objectified the arts. It discovered that *thing,* unknown as such before, the object informed with a certain quality, 'art,' . . . to be observed by an observer, judged by a judge, criticized by a critic, a thing to be hung in a picture gallery, or set up on a pedestal, . . . or played in a concert chamber.

The Renaissance not only objectified art, but introduced the aesthetic observer, as well as the artist, patron, critic, and public. And with the existence of aesthetic sensitivity, the questions arise concerning what distinguishes art from non-art, and what it is that all art objects have in common which causes them to be considered art. Thus, the chief characteristic of Renaissance aesthetics was the association of the arts with beauty.

The Baroque Period

Following the Renaissance, during the Baroque period, the first insistence upon distinguishing intellect and wit (ingegno) was made; corresponding to this arose a "faculty of judgment, which was not ratiocination or logical judgment, because it judged 'without discourse' or 'without concepts,' and came to be called 'taste.'" The

phrase "je ne sais quoi" (I don't know) was frequently used, indicating the mysteriousness of taste and the lack of logical concepts within it.

The Eighteenth Century

The next historical period of great interest to us is the 18th century. Cartesianism, through its stimulation of inquiry into the minds, had given rise to the role of imagination in understanding the arts. Giambattista Vico, his *Scienza Nuova,* 1725, distinguished between poetic logic and intellectual logic. He opposed poetry (representative of the arts) to philosophy (the intellect at work), and arrived at an independent imagination, which would be strong when reason was weak, and weak when reason was strong. Poetry, thus, deals with particulars, and philosophy with the abstract. Poets are concerned with the feelings of the human race, philosophers with the intellect. The poetic age preceded the philosophic naturally. Vico revealed that the study of Asthetics was an autonomous activity.

Baumgarten, in 1735, was the first to use the word "Aesthetics," signifying the science of sensible (from the senses) knowledge. Thus its objects are the sensible facts, its laws are universal among all the arts, and it is an independent science which gives rules for knowing sensibly and which is occupied with the perfection of sensible knowledge — which is beauty. Thus taste is the judgment of sensible and imaginative representations.

At the same time the English writers on aesthetics were concerned with wit, genius, taste, fancy and imagination; these writers and others contributed to the summary of 18th century thought by Immanuel Kant in his *Critique of Judgment,* in which he laid the basis for 19th century aesthetic theory. Burke made the point that the "origin of our ideas of the sublime and the beautiful was not in differing characteristics of the object, but in a basic difference in the experience of the observer — the difference he marks by distinguishing between *pleasure* and *delight.*" Shaftsbury defined taste as "a sense or instinct of the beautiful, of order and proportion, identical with the moral sense and with its 'preconceptions' anticipating the recognition of reason." Francis Hutcheson called it "the internal sense of beauty, which lies somewhere between sensuality and rationality and is occupied with discussing unity in variety, concord in multiplicity, and the true, the good, and the beautiful in their substantial identity."

In 1757 David Hume published four dissertations, one of which was entitled "Of the Standard of Taste," a critical comment on the people of his day. In it, Hume discusses taste as a concept that only a few people have, but which people pretend to have by agreeing with those who do have it. Thus there is more variety of taste in reality than in appearance. Variation in taste is caused by the fact that "some particular forms or qualities, from the original structure of the internal fabric, are calculated to please, and others displease."

A fine taste occurs when the " . . . organs are so fine as to allow nothing to escape them, and yet so exact that they perceive every

ingredient." There are several guides to preserving and building one's taste, according to Hume. One needs to study a work of art many times, as it is not possible to comprehend all about art on the first experience with it. Also it is necessary to make many comparisons, especially of different species of beauty. One should keep one's mind free from prejudice, as it is destructive of sound judgment. And, finally, reason is necessary to good taste.

Hume gives several principles of art which can be considered guidelines by which to decide if a work of art is in good taste, and has beauty. First, there should be a mutual relation and correspondence between the different parts. Secondly, a work of art should be judged according to how far the means at hand are used to reach the certain end or purpose of the particular art object, since all art has a purpose. Thirdly, a work of art must be observed according to its beauties of design and reasoning, and finally, the art object must show clearness of conception, exactness of distinction, and vivacity of apprehension.

Alexander Gerard, in an "Essay on Taste" (1759), defines taste as not just nature or art, but as a combination of the natural powers of the mind aided by the proper culture. He states that taste and imagination are related, for imagination is those internal senses from which taste is formed. Imagination is the middle level between bodily senses, and rational and moral faculties. Taste can proceed either from operations of the imagination or from the general laws of sensation. Thus taste, according to Gerard, is a kind of sensation, as it supplies simple perceptions, and therefore acquaints one with the forms and inherent qualities of external things, and also with the nature of one's own powers and operations.

In general these comments on taste accepted the classical viewpoint that beauty is a universal and divine quality. The philosophers concentrated their attention on trying to understand the basis of a judgment of taste, in an attempt to understand why there was a variety of taste and why some people recognized the beautiful and others didn't.

Immanuel Kant

At this point we turn to Immanual Kant. His importance in philosophy as well as in aesthetics cannot be denied, no philosophers writing on aesthetics following him have been able to write independently of him. They have either supported his ideas or criticized them, unless they were ignorant of him. Kant's importance in aesthetic theory is based on his discovery that aesthetic beauty had to be disinterested, i.e. existing for no other reason than for mere contemplation. "As against the utilitarians he showed that the beautiful pleases 'without concepts;' and further, against both, that it has 'the form of purposiveness' without 'representation of a purpose;' and, against the hedonists, that it is 'the object of a universal pleasure.'"

In the *Critique of Judgment*, 1790, Kant examines the judgment of taste and the judgment of knowledge. The judgment of taste is

aesthetic, not scientific; it is based on subjective ideas. It has two characteristics: the judgment of taste is disinterested, and, although subjective, it is universal.

> . . . we look upon beauty as though it were objective and possessed of a character of its own, and as though our aesthetic judgments might be true or false. Yet beauty, unlike truth and goodness, is not objective in the sense of being susceptible to analysis and proof. No intellectual criterion of beauty can be found and judgments of taste cannot be tested according to objective standards. We cannot approach a work of art with a clear idea in mind of what constitutes beauty and measure it in terms of this idea, for beauty does not lend itself to such conceptual treatment.

Kant felt that the aesthetic experience was unique. It seemed to be "the feeling of purposiveness without the idea of purpose . . . the awareness of finality . . . without an intellectual realization of what was aimed at . . . "

Thus Kant was able to define taste as the "faculty of estimating an object or a type of idea in respect to satisfaction or dissatisfaction without any interest. The object of such satisfaction is called *beautiful.*" But in his concept of taste there is a paradox. Beauty is subjective, therefore individual, and yet taste is universally accepted, and reveals that beauty is the same for all. Kant proceeds to explain the paradox in two ways. First, in terms of man's faculties of cognition:

> The faculty of imagination and the faculty of understanding cooperate to produce intelligent perception. In the aesthetic experience these same faculties are aroused by the object called beautiful to a more harmonious and complete activity than is occasioned by ordinary objects. The feeling of this greater and unexpected harmony is aesthetic pleasure. And, since all men's cognitive faculties are essentially alike, what gives me aesthetic enjoyment may be expected to do the same for others.

Second, the metaphysical solution answers the question "How are we to interpret the beauty of nature and the creations of artistic genius?" Kant answers:

> Genius is the vehicle of a supra-individual force whose comings and goings the artist himself can only partially control. Works of art are phenomenal expressions of the noumenal realm of value. Beauty, like goodness, is born in mysterious fashion, and its discovery by genius is not to be explained solely in terms of psychological and physical antecedents. It is created; yet, not, like goodness, by an act of will and through the agency of reason, but rather through the spontaneous activity of our noumenal nature. And since all genuine works of art are perfect and complete, they may well be regarded as the most adequate expressions of noumenal value which the phenomenal world affords.

Therefore taste can be universal and communicable, for "may it not be the super-sensible or noumenal in each of us which, thought in most cases too feeble to produce great art, yet makes possible our apprehension and enjoyment of the beauty which genius has created?" This idea that the aesthetic experience for creator and observer is really different degrees of the same thing will occur in later writers.

George Hegel

Following Kant, aesthetics of the 19th century became very idealistic. Hegel built an idealistic system in which art was a necessity, although it was subordinate to philosophy.

Hegel, starting with criticisms of Kant's work, arrived at a complete system of his own. His system, based on the evolutionary process of thinking, which starts with a concept (hypothesis), opposes it with its contradictory concept (antithesis), and then studies the two ideas until the synthesis is reached, in which the two concepts are united into a third concept. Thus, starting with the hypothesis of Being and the antithesis of Nothing, resulting in the synthesis of Becoming, Hegel eventually arrives at his concept of the Absolute Idea. The Absolute Idea can be defined as the "source of motion in experience," and as "the hidden form that seeks to obtain full realization in the matter of experience;" it can be compared to the idea of the little acorn growing into the big oak tree, revealing various aspects of itself as it grows, until it finally reached its full appearance in the oak tree — i.e. the Absolute Idea. Art becomes an important instrument to give us insight into the nature of the Absolute Idea. The beautiful, then, is that which "designates the presence of a certain kind of relationship which the artist has caused to appear in his work. He is able to bring sounds, words, or colors together in such a unique fashion that a certain highly organized and original relationship makes its appearance to the artist and the observer."

> Science describes what nature is; the artist seeks to present what nature is a sign of. The scientist describes mankind; the artist depicts what mankind is trying to become. For this reason the aim of the artist is never one of imitation of existential entities. Art, according to Hegel, is superior to nature. It tries to indicate the goals at which nature is aiming . . . In short, the artist tries to show men what kind of man would be the fullest expression of the Idea.

Hegel arrives at the conclusion that the best subject for art is mankind through a process of narrowing down the ideal moments or events which happen in the world, from the right world conditions, the right people and situations, arriving at the conflicts between society and man, and even more specifically, the conflicts man has within himself during which the ideal action or events can happen. An ideal action is characterized by the need for intelligence, forethought, and moral resolution. Thus, "art seeks to depict

the Idea. But since it cannot do this in conceptual form, it employs images and symbols. But what is to be imaged and symbolized?" Hegel's answer is that these conflicts between man and society and man within himself, "which concern the most fundamental issues of life and death, right and wrong, good and bad, . . . are the supreme motive forces of art."

Thus art is justified and necessary in Hegel's system, and furthermore, the arts can be classified as to which ones are better than others. Hegel feels that music is better than architecture, sculpture, and painting, but poetry is better than music. Music can arouse very subtle and varied emotions which are not specific but which relate to the abstract life-force. Music can provide the emotional reaction that accompanies ideal events, but is not as high an art as poetry because poetry provides both the emotions and the situations of ideal events. Music is devoid of all but aesthetic appeal, and music takes place in time, and provides a sense of unification in time. It is this unity which is the key to the sense of fulfillment in a composition. But, Hegel avoids, or cannot define what gives beauty to music and what it is that men judge the value of music upon, "As in all the arts, the musical genius supplies the crucial unknown element that results in the highest kind of music."

One other thing about Hegel's philosophy is important in a study on taste. Music expresses the ideal events through style. Hegel recognized that the laws of art are not as strict and objective as the laws of the various sciences are. Therefore, they can change, and do, for as the mind evolves (Hegel believed in an evolutionary process, not a cyclical one), the kind of enjoyment one has also changes. Therefore changes in consonance and dissonance, in harmonic functions and in tonal relations can and do occur, within general formal considerations.

Arthur Schopenhauer

Arthur Schopenhauer, the philsopher well-known for his pessimistic philosphy, in an essay on criticism consider taste the discovery of what is right aesthetically, apart from the guidance of any rule. Taste could be called the "aesthetic sense."

> The perceptive critical taste is, so to speak, the female analogue to the male quality of productive talent or genius. Not capable of *beggeting* great work itself, it consists in a capacity of *reception,* that is to say, of recognizing as such what is right, fit, beautiful, or the reverse; in other words, of discriminating the good from the bad, of discovering and appreciating the one and condemning the other.

He makes the point that critics should not try to simply find fault in works of art, but should find the qualities which excel. The standard for judging genius should be "the height to which it is able to soar when it is in the proper mood and finds a fitting occasion." Schopenhauer's explanation for why masterpieces of several generations are recognized as great, but those of contemporary times are misunderstood and judged usually wrong, is that there is a lack of critical insight. Generally, he is opposed to critics, and

makes these remarks to show that there is no such thing as the critical faculty. "It is a *rara avis;* almost as rare, indeed, as the phoenix, which appears only once in five hundred years."

Other post-Kantian philosophers departed from the idealistic philosophy also, and diffused into a variety of attempts of reviving hedonistic and utilitarian aesthetics (ignoring Kant), or basing aesthetics on empirical science. The best thoughts in the latter part of the 19th century came from writers specifically in certain artistic fields, such as Hanslick in Music.

Benedetto Croce

In the first part of the 20th century speculative thinking arose about the union between aesthetics and the philosophy of language. Benedetto Croce is the best example of this attempt.

Croce opens his *Aesthetic* with this statement:

> Human knowledge has two forms: it is either intuitive knowledge or logical knowledge; knowledge obtained through the imagination or knowledge obtained through the intellect; knowledge of the individual or knowledge of the universal; of individual things or of the relations between them: it is, in fact, productive either of images or of concepts.

He goes on to say that intuitive knowledge is independent of intellectual knowledge; and the result of art work is intuitive knowledge, while the result of a philosophical dissertation is a concept. Intuition is defined as this:

> Intuitive knowledge is expressive knowledge, independent and autonomous in respect to intellectual function; indifferent to discriminations, posterior and empirical, to reality and to unreality, to formations and perceptions of space and time, even when posterior: intuition or representation is distinguished as form from what is felt and suffered, from the flux or wave of sensation, or from psychic material; and this form, this taking possession of, is expression. To have an intuition is to express. It is nothing else (nothing more, but nothing less) than *to express.*

And so, Croce defines art as the "expression of impressions; . . . every expression is a unique expression . . . Expression is a synthesis of the various, the multiple, in one. In art, impressions are synthesized into expressions.

> By elaborating his impressions, man *frees* himself from them. By objectifying them, he removes them from him and makes himself their superior. The liberating and purifying function of art is another aspect and another formula of its character of activity. Activity is the deliverer, just because it drives away passivity.

When Croce considers taste, and the reproduction of art, he agrees with Kant's idea and that:

> The judicial activity, which criticizes and recognizes the beautiful, is identical with that which produces it. The

only difference lies in the diversity of circumstances, since in the one case it is a question of aesthetic production, in the other of reproduction. The judicial activity is called *taste;* the productive activity is called *genius*: genius and taste are therefore substantially *identical.*

When the artist has created something beautiful, it is beautiful because it has triumphantly solved the aesthic problem. Ugliness, then, is the aesthetic activity which does not overcome the obstacle. For a person to judge the beautiful creation it is necessary for him to start from the artist's point of view and work through the problem like the artist did, and overcome the obstacle. Thus taste and genius are identical. Croce does not agree either with the absolutists, who say there is an absolute taste, or with the relativists, who say there is no disputing of tastes. Instead, he feels this:

> The true solution lies in rejecting alike relativism or psychologism, and false absolutism; and in recognizing that the criterion of taste is absolute, but absolute in a different way from that of the intellect, which is developed by reason. The criterion of taste is absolute, with the intuitive absoluteness of the imagination. Thus every act of expressive activity, which is so really, will be recognized as beautiful, and every act in which expressive activity and passivity are found engaged with one another in an unfinished struggle, will be recognized as ugly.

Bernard Bosanquet

Another 20th century philosopher, Bernard Bosanquet also feels that the aesthetic attitude of the spectator is "a faint analogue of the creative rapture of the artist," just as Croce says that genius and taste are identical. But Bosanquet believes that the object for contemplation must be present before beauty can be felt, contrary to Croce's idea that beauty is in the mind. Bosanquet calls the aesthetic attitude an "attitude in which we imaginatively contemplate an object, being able in that way to live in it as an embodiment of our feeling." However, his idea of contemplation is not passive, but it includes a creative element, and thus is an attitude of expression.

Bosanquet's comments on taste imply that he doesn't consider taste to be aesthetic judgment, but instead a social phenomenon. He calls taste a tradition "not altogether wholesome" and suggests that it is a superficial judgment of how things go together. The judgment of taste is not an example of the aesthetic attitude, although an observer can have the aesthetic attitude. Acually, Bosanquet is still a classicist, for he does believe in an aesthetic judgment of beauty, giving beauty an eternal quality. His use of the word taste reveals a romantic problem in which taste is used commonly as a superficial word, and is also used by philosophers to mean an aesthetic judgment of beauty. Generally, the latter sense of the word is the way it is used in this paper, unless clarifying statements accompany it.

Bosanquet also speaks to the question of why artists create with different materials:

> The feeling for the medium, the sense of what can rightly be done in it only or better than in anything else, and the charm and fascination of doing it so — these, I take it, are the real clue to the fundamental question of aesthetics . . . "How feeling and its body are created adequate to each other."

He says that "the ideal of every art must be revealed . . . in terms of the art itself." Thus art is the "heightened expression of character and individuality."

In considering the question of ugliness, Bosanquet again compares with Croce. He considers true ugliness to be "conscious attempts at beautiful expression . . . the region of insincere and affected art." A summary of his philosophy is best represented by these words: "The whole world of beauty . . . is the individual operation of a single impulse, the same in spectator and creative artist, and best discerned when we penetrate the heart of strength and greatness under the veil of commonplace destiny or tragic collision."

The Concept of Taste

Now we can turn our attention to the field of music, discussing it before we go into the general concept of *taste*, as most musical "philosophers" follow the classical tradition of thought. The concept of *taste* as a subject in itself is a result of the sociological approach of the 20th century.

Marion Bauer's article in *The International Cyclopedia of Music and Musicians*, provides us with an historical review of taste as a sociological phenomenon. This will only be a general review of the trends of musical taste throughout its history. The history of taste is another paper topic and can't be treated thoroughly here. Such an historical review, though, is valuable for the perspective it gives us in viewing the taste of our own times, making us realize its changeability. The origin of music, in primitive times, started with the fulfillment of the utilitarian needs of the people, of their sense of mimicry and instinct for reproduction. Psychically, this led to their reproduction of thoughts, feelings, spiritual force, "giving rein to his imagination, and need for emotional expression through Art."

During the Greek and Roman time much art was produced, although there was probably no aesthetic consciousness (as Chambers pointed out above). In the Middle Ages no aesthetic consciousness existed, as beauty was created for the glory of God, and was considered a skill. The Renaissance affected music as it affected all art; the art object and the beautiful were joined, and artists, patrons, observers, and critics came into being. The *Nuove Musiche* of Caccini and his contemporaries brought music into the drawing-rooms. This revival resulted eventually in Classicism. "With the perfection

of instruments and the development of instrumental forms, the aesthetics of the 'Classic Era' was also formulated."

The Musical Romanticism was a reaction against Haydn, Mozart, and early Beethoven, resulting in an aesthetic change. For the first time in art, man became aware of his own individuality.

> Of his need to express his emotions, of his relation to other individuals, of his growing love for nature, of the social changes, and of revolt against artificiality and conventionality. His urge to express this awakened self-consciousness led to the breaking down of the clean-cut boundaries between the arts. Music attempted to become more literary and pictorial.

As a result of this aesthetic change, program music and national styles evolved. Wagner was a super-Romanticist. He tried to "solve his aesthetic problems through complete freedom of self-expression attained by a fusion of all the arts." His theories were not successful.

Impressionism followed Romanticism, led by Debussy. Aesthetically:

> A new correlation between the arts was effected in which the word, the musical sound, colour, and line, were bent to the will of the writers, musicians, and painters, in a new interpretation of beauty; in a freedom from confining regulations; in an attempt to avoid direct representation and to substitute the artist's impression: in a blending of the arts that would break down the boundaries that separated them and would reveal their mystery.

Today could be considered a mechanistic age, in which "man finds beauty in the perfection and power of the machine, and in its rhythmic movement, and he respects the mechanical principle." We have left the expression of personal emotion, and replaced it with speculative intellectualism, partly in a reaction to the Romanticism of the last century. The problems in art are those of texture, line, architectural design and tonality, and music is generally clever, not inspired. Marion Bauer concludes the article with a lack of belief in a divine-inspired art.

> It has followed practically the same line as these in having passed from unsophistication to sophistication, from spontaneity to artificiality, from ignorance to intellectuality, from the mystic to the scientific; yet we are building machinery that might fall by its own weight, and upon which the future alone can pronounce final judgment. The present civilization may eventually disintegrate to give way to a new one that must again complete a cycle starting from the primitive state, but with the cumulative consciousness of the past to drive it forward.

Eduard Hanslick

Eduard Hanslick wrote a book on *The Beautiful in Music* in which he sets forth his ideas about beautiful music. This book writ-

ten in reaction to the Romantic musical tradition, is still popular today, probably because the musicians of today still agree with it. It is worthwhile to discuss in detail, for even though it only approaches taste through a discussion of the nature of beauty, it reveals the standards on which taste should be formed, and has had a great impact on the standards of taste of the 20th century. Hanslick's purpose in writing the book was to dispell the older systems of aesthetics which consider that beauty in music arises from the feelings music aroused, and to put forth his idea that the nature of beauty in music is specifically musical, and consists wholly of sounds artistically combined. The elements of music are combined to express musical ideas; music thus has intrinsic beauty, and is an end in itself. Its essence is sound and motion.

He is critical of old systems which cling to the idea that the aesthetic principles of any art can be deduced from a metaphysical conception of beauty. These old systems generally consider emotion to be the subject matter of music, and consider the aim of music to be exciting emotions. Hanslick refutes both of these statements, and also feels that each individual art can only be understood by studying its technical limits and its inherent nature. Hanslick feels that art doesn't affect our feelings, but affects our imagination, which is the organ of Pure contemplation halfway between feeling and intellect. The imagination is what sparks the feeling and the intellect, not the beauty of the art-object. To prove that there is no direct relation between the music and the feelings aroused by it one simply need look at the fact that different generations have had different taste in music and have had different reactions to the music. But even though their tastes change, the musical merit of the composition remains the same.

Hanslick lays down the conditions of the aesthetic ideal. A work of art consists of a definite conception, its embodiment, and the union of both. Beauty results from the more or less perfect embodiment of the subject. However, it is not possible to embody definite feelings in an indefinite art form such as music. Music is not capable of representing any definite emotion, but it can express ideas of intensity waxing and diminishing, of motion hastening and lingering, etc. As far as feelings are concerned, music can only express their dynamic properties. "Beyond the analogy of motion, and the symbolism of sounds, music possesses no means for fulfilling its alleged mission." And furthermore, "the beautiful in music would not depend on the accurate representation of feelings even if such a representation were possible."

Thus we arrive at the conclusion already stated above, that the nature of beauty in music is specifically musical, and its elements can only combine to represent musical ideas. Hanslick makes it even more clear. "In music there is both meaning and logical sequence, but in a *musical* sense; it is a language we speak and understand, but which we are unable to *translate*." And so to judge whether a composition is beautiful or not we examine the musical

elements of it, for a composition is beautiful if its musical structure is beautiful.

This is Hanslick's conception of the beautiful in music. It is not limited to one style; it is beautiful in a musical sense only; it is not merely architectonic, or mere regularity or symmetry, but has originality; it is independent of mathematics; and it is not similar to speech, for sound in music is the end, whereas in speech sound is the means of communication. The qualifications alone show however that Hanslick believes in absolute standards of judging beauty in music — absolute musical standards. He is basically a classicist, for he approaches the subject of taste through a study of beauty, and he does believe that beauty can be recognized by applying absolute standards. And he probably would feel that current opinion about a piece of music was not the final judge of its beauty or greatness.

Twentieth Century Points of View

Other philosophers or musicians have taken the aesthetic approach to taste, generally musical taste, by studying the nature of beauty. Ferruccio Busoni, in his *Sketch of a New Esthetic of Music,* goes back to the idea that music is to set our human emotions going; the values in music are spirit and emotion. He feels however that a program hinders the course of the music, for it has to be free. Music repeats the emotions of life, but with taste and style added. These two qualities distinguish art from life. Obviously he would judge beauty expressively, not musically, in opposition to Hanslick's thesis.

Brian Wibberly, in his book *Music and Religion,* is a classicist — he considers beauty an objective quality. Although beauty to Wibberley is an objective phenomenon, it can only be perceived by a subjective phenomenon; the function of art then is to appeal to this sense of the beautiful. But Wibberley recognizes that music is changing and progressive. Therefore, "music has to be judged not by a hard and fast rule which stands for all time, but by an unstable, fluctuating and variable standard which estimates not only the actual artistic accomplishment, but also the state of the development of the art at the time." To this extent he admits social forces on the creation and observance of music.

Frank Howe, in his book, *Man, Mind and Music,* recognizes beauty as a process. Beauty is not in the object, but is in the eyes of the beholder, or more accurately, it is in the relationship between the beholder and the object, arising from the process of contemplation. The artist's purpose in creating is communication; as he communicates he creates beauty. Howe states it this way:

> The artist, by hypothesis a man of keen sensibility, quick emotion and lively imagination, is impelled to create a work of art by instinct. When the object is made he contemplates it to decide whether it is true to his vision; others contemplate it and find it beautiful. Its beauty serves no ulterior end. It merely enriches life, makes life more val-

uable. And men recognize its nature by intuition, the primary act of the mind with which God has endowed them.

Thus it seems to Howe that a thing is beautiful if it communicates what the artist was trying to communicate. This would not refer necessarily to absolute standards of judging art.

Charles T. Smith seems to approach music from a very rationalistic and sociological viewpoint. He considers great music to be "a well-thought-out system of tonal relationships." His conclusions concerning the nature of greatness is that "only by the exercise of reason can great music be composed."

Taste can be interpreted two ways, says Smith; it is arbitrary if it means personal likes or dislikes. It is based on objective standards if it means intelligent discrimination. When he actually considers music, Smith bases judgments on the authority of people he calls the real assessors of greatness, and on the test of time. People in general make only intuitive judgments, but the real assesors of greatness are adjudicators — they understand, but are not involved in the process of creating; they are highly sensitive and intelligent, and are educated through many criticisms and comparison of music; they are moved by the music, but keep their emotions under control. Thus,

> greatness has no supernatural element; that it accrues from the arduous labour of individuals who absorb certain competencies and ideas from their predecessors and construct new syntheses called masterpieces; that an authoritative appraisement of these works is based on a penetrating analysis of the mental experiences they give when compared with an analysis of the experiences received from many other works of their kind.

The specialization trend of modern days has extended itself even to fields of study, with the result that Aesthetics, separate from Philosophy, has come into its own as a course of study. For such a study numerous authors have written textbooks to help illuminate the field, and in these books the concept of taste is recognized and talked about.

DeWitt Parker considers taste a phenomenon that is influenced and formed not only by the form of the art object but also by the expectation or set of mind of the observer. He states what taste is:

> through many experiences of good things I come to form a type or standard of what such thing should be like; and, if any new thing of the kind is presented to me, I cannot be so well pleased with it if it does not conform. The type may never be formulated by me explicitly, yet it will operate none the less.

It is impossible not to compare works of art, and such comparison leads to a formation of taste.

Parker gives three general principles of judgment which apply to all art from the aesthetic viewpoint. There must be complete use of the medium, unique use of the material, and perfect use of the medium to fulfill the artistic purpose of communication of

thought or feeling from the creator to the observer. The qualities necessary for fulfilling the artistic purpose are uniqueness, freshness, spontaneity, inner necessity, sense, order, and charm.

These principles of judgment presuppose that art has a purpose with reference to which it can be judged. The beauty of a work of art arises from the fact that it has fulfilled its function and purpose.

After such a clear list of standards, the question arises, Why the chaos in judgment? The answer Parker provides is that not all people are able to make aesthetic judgments, which require practice and education, and so many judgments are made on the basis of authority, out of ignorance, or from a partisan standpoint. But even with aesthetic standards, taste necessarily grows and is not dogmatic, but is experimental and representative of actual artistic purpose.

E. F. Carritt includes in his book on beauty some pointers about taste. He points out that supposedly taste is not disputable but a personal thing, and yet people do dispute about taste and talk about improving it, and they do have different tastes.

Carritt admits that there are objective standards of taste, that there is a common character of beauty in things which can be judged. He explains that the differences in taste result from confused ideas of beauty and from the different backgrounds and experiences of the people, among other things. Thus what someone may call beauty could be familiarity or knowledge.

Harold Lee devotes a chapter to the subject of taste, in which he defines taste as "the expression of preference among aesthetic values." A standard of taste is a measure of preference of aestehtic values.

In popular usage, the term good taste often means a preference based on an historical or cultural judgment of art. Lee refutes this idea as being possible, by arguing that if an historical judgment were the basis of a standard of taste, then change in that taste would result in bad taste. And yet, taste is continually changing; thus history cannot be the basis of a standard of taste.

Instead, taste depends upon a person's sensitiveness to perceptual data, and a standard of taste is built up from this sensitiveness to aesthetic value. Taste must be based on a native physiological sensitivity, which varies in different persons. From this a person perceives according to habit, resulting in a superficial standard of taste based on familiarity. But with practice the powers of perception become more acute, interest is aroused in perceptual aspects of objects for their own sake, and a more advanced standard of taste results. More and more practice leads to the highest standard of taste, in which "the apprehension of values may be greatly enhanced and increased through the accretion of the derived aesthetic values which arise from a thorough acquaintance and knowledge of such a situation as that being contemplated."

Generally, a person who has attained a higher level of taste is not satisfied with the superficial things which satisfy a person with

a taste based on habitual preference. But even though a person has reached a high standard of taste, he can never overcome the fact that his taste is, at ground level, based on his native powers of perception.

Lee refutes the idea of absolute standards of beauty when he says that "all genuine judgments of taste are individual," when a judgment of taste is a preferential judgment, not a judgment about an aesthetic value. It is individual, because each person bases his taste on his own perception, but the illusion of universality comes from the fact that higher standards based on more adequate perception are more complete than those based on less. However individual a person's taste is, he can be influenced by other expressed opinion. Therefore, a critic can influence people's tastes, and Lee states that that is exactly his job. Because taste is individual not everyone agrees on it, but it is still possible to analyze taste in light of its development in various persons.

"Highly developed tastes may differ greatly if they are in different historical cultures," specifically because the habits of perception upon which they are based change from culture to culture. Good taste reflects a high degree of sensitivity in a person, and bad taste means a taste which "is not acceptable according to a more developed standard."

Theodore Meyer Greene has a theory of beauty and the standards of judging it — taste — which he presents in his book *The Arts and the Art of Criticism*. He is an objectivist, for he believes that the aesthetic quality is actually characterized in certain objects and is awaiting discovery by aesthetically sensitive observers. He is also a formalist, for he believes that beauty as found in a work of art is only its formal aesthetic quality. Any formal pattern which is intrinsically satisfying has beauty, and any formal pattern which is not satisfying is ugly.

Greene then says that beauty is the proper object of taste, which is a kind of aesthetic sensitivity. A man who has taste can distinguish between formal beauty, formal neutrality, and formal ugliness. Taste is acquired through education, starting with the historical tradition and proceeding to judgment through theorizing and observing, and then testing, revising and discovering theories. The result is a disciplined sensitivity to aesthetic beauty. The role of the man of taste is very important, because "it is the critic and the thoughtful art-lover who 'make' certain objects 'works of art' by deciding that they possess the requisite quality to merit inclusion in this class."

Greene admits that a work of art also should have artistic expressiveness in addition to its formal beauty. He defines a work of art as having such expressiveness when the artist's interpretation is expressed, instead of some utilitarian function. Thus a work of art must have content and meaning in itself, without serving any other purpose.

Sociological and Psychological Points of View

Within the twentieth century the disciplines of sociology and psychology have grown, and the subject of music has received its share of experiments and studies. Generally the psychologists have worked in experiments, proving and disproving hypotheses. The sociologists have examined music as a social phenomenon. Alphons Silberman puts it this way:

> Music is chiefly a social phenomenon: social because it is a human product, and because it is a form of communication between composer, interpreter and listener. If music can be said to have an effect upon the individual in his social life, then this very relationship makes it a social phenomenon.

The psychologists and sociologists have also approached taste from a different standpoint from the philosophers. They treat it directly, considering it a social phenomenon deserving of attention and analysis.

John Mueller is a sociologist who has written extensively on music. In his article on "The Social Nature of Musical Taste" he states his opinion that writers about aesthetics in the philosophical field only concern themselves with the nature of art, and don't add to anyone's understanding of art, even though they might add to their reverence for it. His thesis is to consider the sociology of taste, that is in human behavior, "from the standpoint that music is one of the many forms of human behavior with norms set up by society." He considers the function of music possibly as simply a constructive leisure activity. Beauty is not in the music; it is "a human judgment applied to a great variety of compositions."

Thus standards are very changeable, and yet some principles seem to be quite stable; these are called folkways.

> To many, there has never seemed anything so personal, private, and subjective as one's likes and dislikes. But upon further reflection, it will be obvious that esthetic tastes display a broad consesus; they are codified; they are the foundation of a system of theory, are culturally transmitted through the school, the church, the home, and other social avenues. They are the beneficiaries of an esthetic conscience — analogous to moral conscience — which labels discrepant tastes as wrong, and resists radical intrusion of new codes and systems of taste.

To account for the variability of tastes Mueller again cites the fact that music is a social system and that "art tastes and beauty are firmly rooted in the matrix of time and space and social circumstances . . . among which change and evolution also occur." He disagrees with the idea of progress in music, and admits only change in music, and says that musical tastes are only deep habits of thought.

Mueller admits the difficulty of studying the phenomenon of taste, particularly because it becomes non-rational after it has de-

veloped, and because the enjoyment of music and art is a terminal experience and so studies concerning it have to rely on personal and individual responses.

Despite many legitimate tastes (the pluralistic concept of taste), the concept of higher taste remains. It combines the approved masterpieces with the conviction that " 'high' and 'good' in the aesthetic world assumes a certain intellectual complexity, a certain seriousness, a certain permanence, in contrast to the transient, the light, and the simple, which are easily comprehended by the unsophisticated . . . In general, any activity or practice which requires training or education for its cultivation tends to be admired 'for its own sake' and held in esteem by society in proportion to the degree of the preparatory tuition and its consequent rarity."

Carl Seashore is very well known for his experiments on music, and for his musical tests. He has set up a psychological way in which to study musical aesthetics. He believes that the aesthetics of music will be built on the basis of experimental analysis and scientific measurement, allowing any theory to be tested. A psychology of music would describe and explain musical experience and behavior, study musical talent and sensory responses to music; trace human drives which crave music and find an outlet in music; examine feelings, emotions and musical thought processes; and trace the development of the musical mind. The other scientific approaches to music — through physics, physiology, and anthropology — can be included under the psychological approach.

Of course Seashore points out that the two main approaches to the study of musical aesthetics have been through philosophy and metaphysics. But he describes the philosophical approach as a "succession of failures" in its efforts to find a single unitary principle to account for the nature and function of beauty. In the metaphysical approach eternal questions have been asked but not answered. But science is now taking over the study of aesthetics and will be in the lead until philosophy improves its constructive and creative criticism.

In another instance Seashore defines taste as "the attitude of the connoisseur in music," which rests on natural talent, even though it is often thought of as an acquired ability. The state of maturity in a person, his training in the art, and his talent are some of the psychological factors determining the likes and dislikes of composers, critics, performers, and listeners. Seashore has this to say about taste:

> The refinement of discriminating taste is one of the highest achievements, but, unfortunately, most of this taste is ill-founded imitation, inadequate and ruinous; yet it plays an important role in the assignment of beauty or ugliness to music.

Nicholas Erneston, in his doctoral dissertation, defines musical taste as the "interaction of one's attitudes toward music, one's preferences for certain types of music, and one's ability to discriminate between what is considered by recognized authorities to be 'correct'

and 'incorrect' in music." Taste has several characteristics; it is culturally derived, and is affected by social forces; enjoyment is an important part of taste; and musical training affects musical taste, usually raising it. To establish what the standards of taste are it would be necessary to develop tests to test the various factors of musical taste, such as discrimination, preference, knowledge of composers, and experience in music. This is the current psychological, empirical approach to musical taste.

Paul Farnsworth is another experimenter who has tested musical taste in order to discover its nature. He has made numerous tests to find out whether taste follows any laws or whether it is whimsy. By various experiments he has proven that taste, not just in music but in all the arts, does follow certain laws.

But Farnsworth refuses to believe that taste is absolute; if such is the case, then what laws does taste follow? His answer is that taste follows the same laws as any normal social phenomenon, resulting in both its changeability (from age to age) and its relative stability in each generation.

He cites some tests which have been devised to test musical taste. Many tests include listening and making a value judgment on what is heard (the Kwalwasser-Dykema test is of this sort). Polling tests are suggested but Farnsworth also notes their limitations. Other ways to test musical taste include studying orchestral programs, record listening, and the preferences of eminent musicians.

A survey of some of the theories about what conditions musical taste is given by Farnsworth. Some feel that psychoanalytic mechanisms determine taste, some base it on natural harmonies, others on reverence for the past, some on musical training, or on subjective qualities or even climactic qualities. This list of theories at least shows that musical tastes has been studied and needs to be studied much more.

An experiment attempting to determine a specific factor about musical taste is representative of what research is doing in this field. Dorothea Blyler tried to examine the musical interests of children in school, realizing that in the process of education "their tastes and interests must be accepted and respected but they must be broadened and refined." Thus she proceeded to analyze the song choices of children in grades two to six, first setting up four hypotheses which she wanted to test. These were: there would be common factors in the songs the children preferred; there would also be common factors in the songs the children disliked; song choices would be influenced by the words of the songs, corresponding to the different maturation levels of the children; and boys' choices would be different from girls' choices. By questioning 9007 children, some individually but all with a questionnaire, she made the following conclusions: folk songs don't hold a greater attraction over other songs. Song choices are definitely influenced by their texts, and these choices show different tendencies in the different grades, indicating the influence of maturation level. However, boys' and girls' reactions did not differ greatly. The songs

that were liked did have common factors, as did the songs that were disliked. And, generally, the songs that were liked were of a consistently higher quality than the songs that were disliked. The preferred songs had more expressive melodies, words which made sense, varied accompaniments with interesting harmonies, and good dynamic variations. Only in the sixth grade did the children reject some good songs along with bad ones. Thus she did make some findings about children's preferences which should be interesting to music teachers.

Relationship Between Music Education and Musical Taste

After a review of the philosophical, sociological, and psychological approaches to the subject of taste and musical taste, it is time to turn our attention to the relationship between music education and musical taste. Most music educators would agree that public school music education should have some effect on general musical taste. Raising the level of musical taste is generally incorporated into the purpose of music education, and specifically into the purpose of music appreciation courses.

Harry S. Broudy calls general education "the cultivation of capacities for realizing values." Music fits into this idea in the following manner:

> If we believe that childhood songs and primitive chants are as good as Bach's chorales and Brahm's symphonies, there is no point in including music in *general* education; it would be a dubious luxury for a peculiar few. If we believe otherwise, it is because we are convinced that the individual in responding to the Bach chorale is exercising his human capacities at a higher level than is the child of the savage, and to that extent he is 'better' than they are, that is, further along the road of self-perfection.

As far as taste is concerned, Broudy recognizes the connoisseur of an art as the only reliable source of standards. "For the expert, the better is that which is more subtle, more complicated, less obvious, whether the music is serious or popular." And so, in answering the question of whether we can shape preferences, Broudy sees a moral dilemma. He thinks it necessary that the music teacher be a connoisseur of the art, and be chosen on the basis of his competence. Only then is it right to impose taste on others.

> To be sure, one starts with the taste of others, but as knowledge and skill grow, freedom to experiment, to be creative, to judge, and to choose and to reject also grow. The goal of the realist is an informed taste rather than eccentric taste, and the former is as genuine and individual as is the latter.

Max Schoen is a formalist in his concept of beauty — he feels that beauty is "the feeling for form as form." And yet, in stating his viewpoint that we need a philosophy of values in music education he includes the idea that a middle course should be taken

by the music teacher between the subjective and objective views on value in music, to broaden the opportunity for the child to experience music aesthetically.

Schoen suggests that the present ways of presenting music for education — familiarity, analysis, and extra-musical interpretation — are not adequate ways to help the child have the highest aesthetic experience possible. Instead he feels that the only way to develop each child's native sensitivity to its point of highest aesthetic experience is simply to provide listening experiences for the child, without extra-musical comments which may intrude on the child's experience. This procedure best relates to Schoen's general purpose for education which he calls the bringing forth and advancing of the native powers that every person possesses to individual degrees.

Elliott Carter, in an article on music as a liberal art, discusses a method of learning about music so that an inter-related understanding of music with other arts, with literature, with history and with science is a result. Thus music is approached through listening, philosophical discussions, laboratory experiments, and lectures. He feels that this approach achieves the basic purpose of teaching music appreciation: it increases the student's understanding and enjoyment of music, resulting in a higher standard of taste among the general public and a greater appreciation of music by more people.

Hans Tischler also applies himself to the best method of teaching music appreciation in order to raise the standards of public taste. His chief objective for music appreciation is:

> the appreciation of music, which we have analyzed roughly into five ingredients, to wit: enjoyment, perception of the technical elements, knowledge of the various types of musical works, insight into the social meanings of music, and grasp of styles both as they evolve through history and as they emanate from individual geniuses.

His method of reaching this goal is to adopt a multi-principle approach, by dividing a music course into several units, each based on a principle, with all the principles being related to each other.

Tischler also emphasizes the use of analysis of music, suggesting that its purpose is "to guide the reader toward a better understanding of what he hears and towards applying what he has already learned as well as to derive some new learning from his listening experience. Thus Tischler feels that a music appreciation course should spend its time mostly listening to music, instead of learning about things concerned with music, and it should approach music through various principles of study instead of just one, such as style.

Johan Grolle places a great responsibility on the shoulders of music teachers, who he feels need to impress and educate the young musicians of today in a high standard of taste, because "music as a social force must meet the needs and the possibilities for response of the masses who, as yet, are so dilettante in their approaches and responses to music." And, in helping the youth learn

about music, teachers must not only sustain the past traditions but must keep up with contemporary music and present it to the student.

Grolle lists several influences of modern life which interfere with the intuitive response of the musical student. He feels that the general musical taste of the parents is too emotional a response to music. Also, in the public schools, music is a mass social activity, and the program is insufficient to do the job. Besides, the emphasis on the academic leaves little room for music to be taught. But although the job is difficult, it must be done, for music is a part of life and of behavior.

A group of writers have combined efforts to study the appreciation of art and its place in education. The questions which they raise are these: What are the objectives of teaching art appreciation? How much deference should be paid to the tastes of the students? How valid are the judgments concerning "masterpieces" which will be presented to the students?

In answer to these questions, they suggest that the objectives of teaching appreciation are the transmission of social heritage, the training of perception of art by developing the habit of spontaneous analysis, and the recognition of the inter-relation of knowledge, understanding, and appreciation. They take a sociological point of view about art, and define beauty not as a quality of the mind or of the object, but as the product of the relationship between the object and the past experiences of the individual observer. Thus, judgments of masterpieces must be made with this criterion in mind.

They recognize that there is much variety in taste and in standards of beauty, because everyone takes different backgrounds and experiences to the work of art. Finally, they feel that appreciation of art cannot be taught directly, but the perceptions and the experiences which will lead to appreciation must be acquired.

Bennett Reimer feels that Leonard Meyer's theory on the value and greatness in music is important to music education. Thus he briefly summarizes Meyer's theory, by saying that besides the value-determining technical criteria, value in a piece of music is dependent upon the music setting up tendencies toward a goal, and then inhibiting the attainment of that goal, or in other words, creating problems which have to be overcome before the goal can be reached, which it finally does. "The greatest works, then, are those which combine value of the highest order with the most profound content. 'Excellence' in a piece of music depends on syntactical elements, while 'greatness' includes considerations of content." Reimer sees the job of music education as teaching and explaining the syntactical (technical) nature of music, in order to provide the student with the means of apprehending and evaluating musical excellence. As for greatness in music, which arises from a consideration of content, Meyer considers music great only when it illuminates and makes conscious to the listener the ultimate uncertainties of life. Reimer has not yet been able to formulate ideas on how music education can teach this, since it is essentially a matter of religious

education — the ultimate uncertainties of life being a religious problem.

Documentation of the low taste of the public for music is easily provided for music educators who feel that their object is to raise the public's musical standards. I will give here two comments by people who are indirectly related to the musical field, i.e., they are not educators or musicians.

Sigmund Spaeth wrote a short essay on musical taste, not bothering to start with a definition of taste but considering it a social phenomenon of which he merely describes the state. The fewest number of people are able, upon hearing an unfamiliar work, to express a definite opinion about it. The majority of the American public is satisfied with light classical tunes and jazz, and there are millions who "take their music in a perpetual state of comfortable coma or luscious lethargy." Spaeth considers this the line of least resistance, and asks this question of the public: "May it not be possible for us gradually to respond to music somewhat as we respond to sports, acquiring at least the minimum information as to what it is all about?"

Goddard Lieberson, a representative of a top recording company, had some comments to make to a MTNA meeting concerning the public. He quotes William Hazlett's comment about the public, stating that it " . . . is so in awe of its own opinion, that it never dares to form any, but catches up the first idle rumor, lest it should be behind hand in its judgment . . . The public ear is at the mercy of the first impudent pretender who chooses to fill it with noisy assertions or false surmises or secret whispers." Lieberson challenges this remark, and feels that it is wrong to blame the public for the low standards of taste; after all, we are all part of the public. He feels that people knowledgeable about music who could help improve the public taste don't always do their share.

His theory about how taste operates is that many listeners start out enjoying Kern, Gershwin, and others. They then find elements in Ravel, Debussy, or Stravinsky that they like, and so their taste moves up a little. This music introduces them to some elements of Brahms.

Summary

From this summary of opinions on the concept of taste, the complexity of approaches towards it, the different meanings of it, the various natures assigned to it point out that it has been used as an easy word to cover up a difficult subject. Of the two basic ways of interpreting taste, the classical and the sociological, I will have to concede to the sociological viewpoint that taste, and standards of taste, seem to be a social phenomena, governed by folkway mores, normally stable, but changing from generation to generation. Certainly this is the predominant concept of taste that is understood today. But the opinion of the classical school cannot be thrown away completely and certainly not without much thought. I find myself unable to give up the opinion that there are some qualities

of beauty in art that are universal, even if these qualities are simply the formal structural principles that the Greeks considered beauty.

Certainly much more remains to be said on the subject of music education and the formation of taste, and many more investigations can be made concerning the relationship of the two. As a music educator, I find myself resolving the area of investigation down to three parts: convincing myself that music is an essential part of every person's life; discovering the ways in which musical taste and music education are and can be related; and then finding the method of teaching music which will fulfill the objective discovered from the first two problems. I think this is a crucial problem in music education which must be tackled.

FOOTNOTES

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