lished in the journal's last five years (1980-1984, plus the Spring 1985 issue), 39% represent research on adolescents or children. This may or may not indicate a trend; nevertheless, it is encouraging that we, as music educators and researchers, are expending considerable effort in trying to sort out the musical variables of our most important and worthy population: young learners.

The child-study movement was a late nineteenth- and early twentieth-century educational fashion whose impetus came from the influences of Darwin's Origin of Species (1859) and from the advent of empirical psychology in the 1860s and 1870s. Child-study leaders sought to reform the public schools, calling for widespread and "scientific" observation and study of children. Music educators adopted some child-study principles, incorporating them in certain vocal music series and music appreciation textbooks. These books contained, for example, materials designed to correspond to the various stages of interest and maturity in children. Several nonmusician child-study researchers began to gather data relative to musical learning, while psychological literature on music perception proliferated. Music teachers, more interested in teaching methods, left research activities to future generations of music educators.

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The Child-Study Movement and **Public School Music Education**

The child-study movement was an educational fashion among educators and psychologists in the late nineteenth and early twentieth centuries. It called for widespread and "scientific" observation and study of children. Child-study leaders sought to reform the public schools, restructuring them to conform to new scientific findings and to make them more child centered.

Child-study's roots can be traced, in part, to the learning theories of Jean Jacques Rousseau, who had challenged, as early as 1762, the notion that human nature is inherently evil and that children are born in sin. In his epic work Emile, Rousseau suggested that individuals progress through natural stages of development beginning with infancy and extending through adulthood. He recommended that education be organized according to these natural stages of development (Rousseau 72-73).

Rousseau's revolutionary theory had little immediate influence upon educational practice. Children were at that time and for almost a century afterwards viewed as miniature adults, capable of dealing with adult concepts while differing from adults only in physical size and intellectual

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maturity. It remained for nineteenth-century educators, led by Johann Heinrich Pestalozzi and Johann Friedrich Herbart, to revive and put into practice Rousseau's theories that called for the structuring of educational experiences along "natural," developmental lines (Thayer 190).

Two important phenomena led directly to the child-study movement itself. The first was Charles Darwin's Origin of Species, published in 1859. Although Darwin's theory of evolution was not new, he had gathered such a vast amount of empirical data that the theory began almost immediately to have a profound effect on educational theory and practice in the western world. It became probably the most powerful influence on education in the United States in the last half of the nineteenth century and beyond (Knight 510). As discussed by Ross (89–133) and Rideout ("Early Applications"), evolutionary theory led to a theory of recapitulation that held that the growth and development of individuals, civilizations, and entire cultures corresponds generally to the evolutionary development of the human race. Recapitulation theory became an important tenet in the child-study movement.

The second phenomenon leading to the child-study movement was the advent of empirical psychology, which began when psychologist Wilhelm Wundt of Leipzig and his students began to observe human behavior in the laboratory during the 1860s. The idea that human behavior could be studied on an empirical basis was revolutionary. Empirical psychology soon began to eclipse "faculty" psychology, which had been dominant in educational thinking prior to that time.

Faculty psychologists believed that all people learn in exactly the same ways, that some merely learn more rapidly than others, and that training one faculty of the mind improves the mind's ability to function from that point on. Sometimes termed "transfer of training," this theory held that training the mind by memorizing Latin vocabulary words, for example, would aid the individual in memorizing any other material.

Wundt and his disciples began to demonstrate that the premises of faculty psychology were not always supported by data collected from laboratory- and field-based observations. Their empirical studies of learning, practice and fatigue, optimal work conditions, and individual differences began to supplant faculty psychology in the minds of many leading educators (Murphy and Kovach 160–63).

The theory of multi-staged, evolutionary development in humans and the disillusionment with faculty psychology brought about by empirical psychology helped lead to vehement criticisms of America's schools in the 1870s. During this decade alone the number of states with compulsory education laws jumped from 2 to 15. With the increasing acceptance of the principle of common public schools came increased pressures to reform them.

One of the first attacks came from Charles W. Eliot, president of Harvard University. In an 1875 article in the *New-England Journal of Education*, he charged that classes and schools were too large and that young, inexperienced female teachers employed at low salaries tended to leave the profession after marriage.

Even more to the point were criticisms by Anna Brackett, the first

woman to head a normal school in the United States. She criticized teachers for relying upon the recitation method, which, she said, required a student to recite the answers to "categorical questions on the text of the book" (87). A student could learn the answers to these questions and "stand at the head of one's class, and be none the wiser—nay, be much the more stupid, and grow like an exogen, to have a thicker skull of indurated mental hide with every one" (87). She blamed the recitation method for students' inability to make good judgments and to determine the significance of events.

A large number of individuals followed the lead of Eliot and Brackett in criticizing the common schools, but none was more effective than Charles F. Adams, Jr., a member of an influential New England family, who had achieved prominence through his investigations of the nation's railroads (Hendricks 24–25). Adams first charged that means had become confused with ends in education, that the memorization of the rudiments of arithmetic, geography, grammar, and spelling had become the goal of the common schools. He believed that the true aim of a common school education should be "to prepare the children of the community for the far greater work of educating themselves" ("Public Library" 133).

In an address to the National Educational Association (NEA), Adams suggested that school superintendents of the future study "the operation of the child's mind,—the natural processes of growth and assimilation which go on in it,—its inherent methods of development and acquisition." He went on to make a strong plea for the scientific study of children's minds ("Development" 69).

Pleas for new teaching methods and the scientific study of children's minds during the 1870s were occurring while physiological observations and measurements of children were being made in certain schools. During the 1870s and 1880s there was a large number of studies that attempted to establish norms for height, weight, head size, arm length, growth rate, and almost every other imaginable physical characteristic of children. These studies were designed to accomplish a number of purposes, but did not purport directly to improve the nation's schools. Similarly, many studies sought to categorize and measure various emotional characteristics of children.

Although physiological and emotional studies were considered "child-study" by many, one prominent American psychologist took a different tack. In 1880, G. Stanley Hall began his studies of children by directing four kindergarten teachers in Boston to collect psychological data on a large number of children. The teachers interviewed children using a list of questions prepared by Hall that tested knowledge of such topics as body parts, animals, numbers, and hand tools ("Contents"). Hall wanted to discover the extent of children's knowledge and to reform the schools so that they took into account what children already knew and did not know. It was by these means that education would become a "science." Hall's article about this study was probably the first published report of its type in this country (Hendricks 55–56).

Although most modern investigations of the child-study movement have focused upon the work of Hall, many of his ideas originated with Pdams and others. Hall did, however, become the undisputed leader in the attempt to link scientific child-study and educational practice.

A number of books and articles by Hall and his followers soon appeared that exhorted teachers to begin systematic and "scientific" study of the children in their charge. Educational leaders began to insist that teachers view their students as individuals, each with his or her own differing abilities and potential, and to evaluate each child based upon normative standards. The teacher, rather than simply training the mind's faculties, was to collect information and make an attempt, based on the data collected, to provide guidance and training for the child.

The child-study movement swept rapidly into many countries; new associations, institutions, and publications were founded including the British Association of Child-Study (1895), the American Association for the Study of Children (1893), and the first psychological clinic for maladjusted children in the United States (1896). A journal devoted largely to child-study, Pedagogical Seminary, was founded and edited by Hall in 1891. In addition, discussions of child-study filled many pages of the NEA Journal beginning in 1893.

The music education profession was influenced considerably by the child-study movement, although certain aspects of the movement such as the subjective rating of emotional types and measuring of physical features did not relate directly to music teaching. The two main influences were the movement's effects upon some vocal series and music appreciation textbooks of the day, and the effects of music research upon later generations of music educators.

Described fully by Rideout ("Hall"; "Applications"), the authors of some vocal series and music appreciation texts of the period were influenced by Hall and his belief that teaching methods and materials should correspond to children's developmental stages. Hall believed in three stages of development. The first stage (ages three through eight) corresponded to the primitive man stage in evolution. Because of this correspondence, rhythm was to be emphasized during this first stage, rhythm being the basic element in all primitive music. The other important consideration for this stage was the child's feelings about everything he or she was experiencing ("Psychology").

The second stage (ages 8 through 12) corresponded to the time between the simian and historic periods of evolution. This was the stage for the development of thought and morals, and, of almost equal importance, the growth of arithmetic, language, and musical skills

(Adolescence, 1: 1-52).

The third stage was the time for the continued development of character, emotions, and an increasing interest in a variety of subjects. Musical and other types of drill were to be de-emphasized so that the child could be exposed to an array of other subjects (Adolescence, 1: 453).

Several vocal music series and music appreciation textbooks of the late nineteenth and early twentieth centuries reflected these principles. Some included folksongs to convey "social and cultural values," and others contained musical materials that encouraged a rote singing approach advocated by Hall (Rideout, "Hall" 122-23).

Other authors misunderstood the movement's call for systematic

instruction that corresponded to the stages of human development and simply ordered the music according to difficulty. These authors misinterpreted child-study's principle of adapting music to children's interests and stages of maturity (Rideout, "Hall" 95).

The effects of the other influence of child-study upon music education, music research, were not felt during the child-study era. The task of applying and extending research findings made during the 1880s, 1890s, and first years of the twentieth century would fall upon future generations of music educators. During the child-study era, music research proceeded without the participation of the music education profession.

Child-study leaders believed that spectacular research achievements in biology, chemistry, and other fields in the late nineteenth century could be equalled in the field of education. This belief led to many calls, begun by Hall in the 1880s and increasing significantly throughout the profession in the 1890s, for widespread scientific research in education.

Four movements in research methodology on children emerged. One movement, led by E. H. Russell, sought to gather data about children using any possible means. Teachers, parents, church workers, and other adults were to gather facts about large numbers of children, collate the facts, and make generalizations. Almost all kinds of facts were acceptable. The important thing was that a great deal of information be collected from masses of children (Hendricks 140-45).

Another group, led by Hall, gathered data by using standardized questionnaires. Hall and his followers issued dozens of questionnaires, often called "circulars," to teachers and others who in turn presented them to thousands of students (Hendricks 146–53).

Children's drawings and compositions furnished data for the third group of researchers, led by Earl Barnes. Thousands of children responded to questionnaires and stories by drawing pictures or by writing stories themselves. Responses were collated to provide information about the subjective lives of children (Hendricks 153-63).

The fourth group of researchers, led by E. W. Scripture and Joseph lastrow, advocated applying to masses of children certain experiments developed in psychological laboratories. They measured, for example, the ability of children of different ages and sexes to distinguish between objects of differing weights and among as many as 10 slightly different colors. From the results of thousands of individual experiments by teachers and others, Scripture and Jastrow were able to develop normative charts (Hendricks 163-70).

Of the four research methods described above, only the unstructured, informal data-gathering method and laboratory-based experiments seem to have been conducted in music during this period. Musical learning was apparently not of great interest to those who designed standardized questionnaires and those who studied creative drawings and compositions of children.

One study of the informal type elicited song preferences and reasons for the preferences from 2,000 school children (Gates). Another descriptive study (Kelsey) found that 8% to 15% of students in the first two weeks of school life were able to sing with accuracy "some" of the notes

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in the diatonic scale. After two months, from 25% to 40% could sing the entire diatonic scale; after the first grade, 70% to 80%; and by the "fourth or fifth grade," 90% to 95%. As was often true in the 1890s, the author of this report did not report sample sizes.

It is not clear what part, if any, music teachers played in these two studies, but it appears that, with these possible exceptions, music educators did not take an active role in research efforts during this period. This is in spite of the fact that in 1893 the NEA added a department called "Experimental Psychology," which concerned itself with studies of memory, color sensitivity, speech, motor development, and many other things. Music teachers were not inclined, for example, to measure learning outcomes or behaviors as a means for determining teaching effectiveness. A quotation by H. E. Holt (1886), Supervisor of Music in Boston, illustrates this point: "In order to judge of the educational value of different systems and methods of teaching, we must go to their foundation and ascertain the soundness of the principles upon which they are based" (590).

The vast majority of addresses by music educators published in the NEA Journal from 1880 to 1900 concern teaching methods and justifications for music's place in the school curriculum. There are, for example, a number of discussions of the merits of the tonic sol-fa system but no reports of the system having been tested experimentally, and only a few reports on the results of observations of the system. This is in spite of the fact that experiments and observations were being conducted in other fields.

Child-study advocates who were not musicians were involved in research in music learning and perception, however. One child-study researcher measured children's perceptions of quarter tones (Tanner 345), while two others observed babies' reactions at different ages to piano playing (Shinn 115; Tracy 82). These and "experiments" like them were not, due to the small sample sizes, exactly what child-study leaders like Hall had in mind, but were, nevertheless, part of the child-study movement. Music-learning research studies of this type, where someone other than a music teacher observed individual or very small groups of children, began to appear in the literature in the 1890s, but, even then, studies in music were far less numerous than those in many other fields.

More truly experimental approaches to music psychology, principally in the fields of acoustics and perception, had been occurring for several decades and were increasing in number around the turn of the century. Hermann Ludwig Ferdinand von Helmholtz, Wundt, Carl Stumpf, Thaddeus L. Bolton, Benjamin I. Gilman, Max F. Meyer, Jastrow, Scripture, Whipple, and others did extensive work with music in the laboratories, some of it involving children. One fairly typical example of a laboratory experiment with children and music was conducted by J. A. Gilbert and was called "Experiments on the Musical Sensitiveness of School Children." Gilbert measured the sensitivity of children of different ages to changes of pitch.

Some psychologists were critical of the work of educators who attempted to conduct experiments. One example is a psychologist's

review of a child-study book entitled A Study of the Child (Hogan). The book reported the results of a musical preference study in which a child preferred a "Largo" by George Frideric Handel to a concerto by Joseph Joachim Raff. Psychologist Kathleen Moore wrote that:

This observation, at least in its present form, is not available to psychology except as having the value of an impression; for it lacks the verification which it should have received from subsequent observations, or from an alternation of the concerto and the largo in order to determine whether the child's feelings changed with the change in the music (316).

COMMENTARY

The child-study movement, chiefly through the efforts of G. Stanley Hall, influenced the contents of certain music textbooks, and it is through him that the child-study movement made its most significant immediate impact upon music education. Experimental research in the psychology of music seems to have been the purview of the psychologists and, to a lesser extent, nonmusician child-study researchers. Music teachers were apparently more interested in teaching methods and in music's acceptance in the school curriculum than in music perception and preference studies by psychologists and educators.

Perhaps music teachers were unaware of the work of others that related to their field; perhaps they lacked the training to interpret the results or to conduct their own research; perhaps they believed, as did William James, that the new experimental approaches to psychology produced "a string of raw facts; a little gossip and wrangle about opinions" (James 468). It is more likely that they were simply too preoccupied with other, more pressing matters.

The child-study movement in education eventually yielded to the powerful progressive education movement. Many years would pass before the music education profession would begin to adopt the research methods of experimental psychology and child-study. Yet, the influence of research in music begun during the child-study era has equalled and probably surpassed the other child-study influences described here. In any event, the legacies of child-study are far-reaching and profound.

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Histories of the introduction of music into the emerging public school system of antebelium America traditionally have emphasized the highly influential role that "music education" came to play in shaping American musical culture. Little has been said, however, about the character of that influence. Accepting the interpretation that presents public school music as a cornerstone of the culture, this study attempts to analyze the nature of this contribution by placing the theories and practices of the first "music educators" more clearly within the context of both their musical heritage—New England sacred music—and the social thought of their era. In so doing, it can be demonstrated that the presence of music in the antebellum common school both typified and contributed to a uniquely American ambivalence between musical and amusical ideals that came to be the hallmark of the culture.

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Roots of an Ambivalent Culture: Music, Education, and Music Education in Antebellum America

The history of music's entrance into the American public school system, due to a perspective that emphasizes the later results of the achievement over the dynamics of the achievement itself, generally has been characterized by an approach long on description and judgment but short on analysis. One scholar, for example, has called the introduction of public school music "perhaps the most far reaching achievement of the early nineteenth century in the development of American musical culture" (Grimes 16), while another has termed the activities of Lowell

^{1.} The most recent, and possibly most comprehensive, account of this subject is Keene. Other relatively recent studies include Sunderman; Tellstrom; Britton, "Historical Gritique"; and Britton, "American Specialty." Previously, the standard treatment was Birge.

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