

the diagnostic instrument. (The correlations were about .30). Thus, the diagnostic information may be of less value in individual instructional situations with teachers having better diagnostic skills.

The elaborate study by R. Douglas Greer investigates the effect of a tone's timbre on the ability of a musician to match that tone on his own instrument. Although not competent to judge whether all the acoustical controls were employed, these reviewers were impressed with the care with which the study was conducted and the data analyzed. The primary finding was that a brass instrument player could best match pitches produced by his own instrument, and had the greatest difficulty matching the oscillator's tones. Matching tones from an electronic organ and spinet piano was of intermediate difficulty. These findings suggest the importance of overtones in the matching task. It was of interest, however, that on a second series of trials, the musicians were able to reduce by half their errors in matching the oscillator tones. This study points to a need for more research by posing questions that could be crucial to the development of such external intonation and perhaps could apply to the development of absolute pitch—such questions as: Why did instruments performed in the lower range yield the lowest error scores and those performed in the higher range yield the highest score? and Why does the lack of overtones cause difficulty?

The series lacks a distinctive characteristic. Is it to be a collection of outstanding works? Although the studies in Volume 6 all were carefully performed, there appears to be no mechanism to insure that the articles selected be truly outstanding. Is the series to serve as an outlet for lengthy articles? It is difficult to find publishers for lengthy reports of research, but clearly each of these arti-

cles could have been abridged without serious loss in quality, especially if supplementary tables had been deposited with a documentation service. Is the series intended to promote interdisciplinary study of the psychology of music? If so, in the future, studies should be selected that more markedly stimulate research in other areas of music. One is left feeling that rather than having still another so-called fugitive publication source, better communication could be realized at far less expense by publishing such articles as these in an already-established journal.—*Jason Millman, Professor of Educational Research Methodology, Cornell University; and Alice P. Dyckman, graduate student in Curricula and Instruction, Cornell University, Ithaca, New York.*

The Horn and Horn-Playing (and the Austro-Bohemian Tradition from 1680 to 1830). By Horace Fitzpatrick. London: Oxford University Press, 1970; xiii + 256 pp.; musical examples; register of horn players; bibliography; index of names; stereo recording; hard cover; \$29.75.

Horn players always have wondered about the period of horn playing known as the hand-horn era. It has been difficult to understand how the abundance of beautiful but very difficult music of this period could have sounded good on a valveless horn; yet the music never would have been written if it could not be performed acceptably. Fitzpatrick discusses the artistry of the horn players of this period, their fine tone qualities, excellent intonation, and technical prowess. One feels as if he is meeting these musicians themselves, their teachers, the composers who wrote for them, and the critics and public who judged them. One comes away with a new respect for their genius.

The reader probably will have an even greater respect for the careful re-

search Fitzpatrick has done: all his facts are very well documented. Fitzpatrick's purpose is to clear up many of the long-standing fallacies regarding the origin of the horn. He explains it this way: Count Sporck went to France, where he heard the hunting horns of that country and liked them so much that he had two of his troupe trained to play them, then returned to Austria with those horns. From that time (1680) on, however, the development of the horn was carried out entirely by the Austro-Bohemians, who were first to introduce the horn into the orchestra, around 1706; first to develop the interchangeable slide so that the horn could change more quickly from one key to another; and first to develop the tuning slide. The Austro-Bohemians also developed the technique of placing the right hand in the bell to produce a complete scale. These hornists played all their major and minor scales daily, Fitzpatrick says, with nearly perfect intonation and a highly polished technique. The composers of this period seem not to have had a vision of the valve horn to come; their music was being played well by the great hand-horn virtuosi.

One section of the book is devoted to the horn makers of the period, with each discussed in detail and with special note of his particular contribution to the instrument's development. Exact measurements of each maker's horn are given. The author discusses the materials that were used, and sometimes includes original bills of sale. The Austro-Bohemians emerge also in this section of the book as the first great horn makers. It was they who founded the first great schools of horn tradition, furnished almost all the horn players of the court orchestras, and gave the world of that time all its great horn soloists. And it was certainly these soloists who inspired the great wealth of horn literature.

The chapter on the players' registers is the most fascinating. There Fitzpatrick lists horn players of all the great orchestras of the time. There is information on who played high horn, who played low horn, who studied with whom, and who the great teachers were. The reader can learn of music written for specific horn soloists, of soloists' travels and concerts, and the concerts' reviews. Fitzpatrick describes the horn in this chapter as a highly admired instrument, with the sound of "the human voice," intonation "as good as the best violins"; and he describes the players' right-hand dexterity as equal to that of the best pianists.

It is fascinating to trace the development of the horn in Fitzpatrick's study. After having done so, this reviewer has a new respect for this time in the instrument's evolution. As Fitzpatrick says, perhaps all hornists could benefit from a certain amount of natural horn playing and hand-horn playing. But this book will be appreciated not only by hornists; it will be appreciated by all who are interested in the history of musical developments. It is a fine picture of the times, and can be recommended highly in every respect. The handsomely bound volume includes an interesting recording and many interesting plates and musical examples. *The Horn and Horn-Playing* is one of the most informative books available on the hand-horn. One can only hope that Fitzpatrick some day will write a book on the invention of the valve and the development of the valve horn.—Louis J. Stout, Professor of Music, The University of Michigan, Ann Arbor.

Studies in Eighteenth-Century Music: A Tribute to Karl Geiringer On His Seventieth Birthday. Edited by H. C. Robbins Landon. New York: Oxford