

century religious thinking. Schillinger felt the trouble lay in a limited and faulty idea of what music is, which resulted in the old anachronistic dichotomies of art and science, art and life, art and nature. Once these sets of apparent opposites were understood to share the pattern-in-movement, or rhythmic, nature of things,

the arts fell into their natural place. Schillinger's perception of this, and the exceedingly comprehensive and practical application he made of so broad a philosophical concept, must have a revolutionary effect upon the relationship between composers and their craft.

*Sidney and Henry Cowell*

### FALLACY OF THE MECHANISTIC APPROACH

THE Schillinger *System of Musical Composition* will most likely arouse considerable feeling, especially among those who have not seen this type of book before. The point of view comes straight out of middle Europe in the early twenties when the application of a mechanistically conceived scientific method to the arts was all the rage. In this respect Schillinger's work closely resembles the Bauhaus books and the prose writings of Eisenstein on the movies. An elaborate show of scientific language, of schematic exposition that apes mathematical texts, plenty of graphs and pseudo-algebraic formulas, all do about as much to confuse as to clarify.

For this form of exposition is really a rhetorical method not particularly aimed at careful scientific rigor but at a kind of surprise and shock effect. Violent invective, dogmatic assertion, repetition of ideas and phrases and a certain megalomania are combined with apparently dispassionate and rigorous analysis. Old-fashioned, "intuitive" methods are ridiculed, mistakes of the great composers are shown up in the light of the "new, objective and scientific methodology." Any of the subtler forms of persuasion, like those found in regulation scientific

treatises which substantiate generalizations with verifiable facts, are omitted; the reader is browbeaten. Schillinger's book even has a rather hermetic and cultlike quality because of its lack of regard for the reader. The terminology is unfamiliar and musical terms are alphabetized: letter symbols are used which even a generous glossary at the back does not always clarify, because their significance changes from chapter to chapter.

But this is all a bitter coating for a book that makes many interesting contributions. The system aims at the all-inclusive, under the one aspect of mathematical patterning. Within the covers of these two volumes one finds the most comprehensive tabulation of musical elements, devices and procedures that probably has ever been made, certainly within the limits of such a relatively short work. For a book that is to include a systematization of rhythm, scales, melody, harmony, counterpoint, fugue, composition, orchestration and musical expression, must necessarily be brief on many scores. Although it is presented as comprehensive and self-explanatory, the book seems really a manual to supplement actual lessons in which principles are more elaborately and convincingly expounded. Thus the

huge number of tabulations, which Schillinger does not derive from already composed works, but primarily from the permutation, combination and serial arrangement of the divisions of time and pitch. And he is rarely content to mention possible permutations, even of numbers, without listing them all. This takes up space but, as the editor points out, helps save time for hurried arrangers.

Again, if the book is more than a supplementary manual, how can one account for the rather surprising omissions which occur in almost every chapter? In the first one on rhythm, for instance, the function of the bar line in relation to upbeats and downbeats, and the existence of the additive madrigal type of rhythm (which starts with a unit or a foot as a basis and combines them in changing meters) are never mentioned. But he does hit on the novel idea of deriving temporal divisions and irregularities by combining two regular patterns such as three notes against four into one line. The whole chapter is systematized on the claim that all rhythms are portions and groupings of such "resultants" of the "interference" of one set of regular beats by another. This conception of "resultants" of "interference" creeps into every part of the book like a Pythagorean refrain, with not too musical results.

Another chapter shows how to construct melodies after the rise and fall of graphs of various kinds of motion and rhythms of growth. One finds that Beethoven did not always balance things "scientifically" because he relied so much on intuition. But the principles of resistance and climax

as presented are quite helpful in classifying melodies. The *Special Theory of Harmony* treats triadic harmonies and their sequences in an unusual way, tabulating at tremendous length each type of bass motion and each possible type of combination. The *General Theory of Harmony (Strata Harmony)* constitutes perhaps the most elaborate treatment of modern dissonant harmony to appear in this country so far, with its list of different chords and their progressions.

All this material is presented with no particular regard for when to use what, for whether it sounds good or bad. It is here that Schillinger's system falls down. The composer is not shown how to use the facts or to select from them. Rigid adherence to the mathematical, which here results in rather uninteresting examples, could in fact very well diminish the young composer's ability to discriminate; this would produce a result just the opposite of the best kind of more "intuitive," less "scientific" teaching. However, for musicians interested in filling up radio time or in writing descriptive background music of a not too original character this system will save a lot of trouble and thought. It is curious that a method which gives such a high place to abstract art (art is classified in terms of its abstractness, the highest place being given to the non-representative or non-symbolic) should be followed by practitioners mostly occupied with the most functional aspect of music.

### III

The basic philosophic fallacy of the Schillinger point of view is of course the assumption that the "correspondences" between patterns of art and

patterns of the natural world can be mechanically translated from one to the other by the use of geometry or numbers. When this conception is carried to even greater lengths in the belief that music will stimulate reactions if it follows the graphic projection of geometric patterns of "mechanical and bio-mechanical trajectories," one can only feel that the

whole idea is arbitrary in the extreme. It comes from a Pythagoreanism that is quite out of place as a primary consideration in art music. Wherever this system has been successfully used, it has been by composers who were already well-trained enough to distinguish the musical results from the non-musical ones.

*Elliott Carter*

### MUSICAL FAMILY ALBUM

THE purpose of any anthology like *Letters of Composers* (compiled and edited by Gertrude Norman and Miriam Lubell Shrifte; Knopf, 1946) eludes this reviewer. Fifty years ago its title would have been "Gems from . . ." or "Flowers Gathered . . ." But this is a scholarly age, and the book is decorated with dates, footnotes, sources, index of names and titles. Such paraphernalia tempt one to comparisons that are interesting but may be misleading. Compare for instance the first letter in the book, from Sweelinck to the Burgomasters of Amsterdam, with the last, from David Diamond; the formal periods of seventeenth-century prose with the relaxed informality of the twentieth; Sweelinck's classical definition of music as a divine creation with Diamond's self-consciousness at being asked to discuss his art; the security of Sweelinck's official civic position with Diamond's anxiety for a fellowship, his gratitude for a fifty-dollar loan. This sort of contrast is dangerous only when one tries to draw too many conclusions from the casual evidence of selected personal documents, to substitute these for thorough research in historical fact and the music itself.

The book is really most like an al-

bum of the musical family. Monteverdi has his page, and so do many of our contemporaries, like Schönberg, Prokofiev, Piston, Thomson, Cowell, Copland, Moore. Clementi, boasting that he has driven a hard bargain with Beethoven, is caught in an unflattering pose. Chopin stands in a group of elegant whitegloved aristocrats, gay but a little apart as an artist should be. Schumann's letter from a mental hospital to his wife Clara is a heartbreaking glimpse of helplessness. Many of the letters disclose the authors in official garb; composers appraise a work submitted for their opinion, answer questions on theoretical or philosophical matters. Others show them at the worktable, consulting with librettists, conductors, fellow composers. And in many the composer pushes his scores aside, pours out to a friend his financial worries, his hopes and aspirations, his problems of sickness, timidity, frustration.

Probably all anthologies should fit into a pocket or a knapsack. This volume is much too big and heavy for that. But it needs to be read at leisure and intermittently. Every letter is a point of departure for reflection on the problems of music and the men who make it.

*Frani Muser*