

ASPECTS OF INSTRUMENTATION TODAY

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THE recent cultivation of the chamber orchestra, which should be viewed as a reaction from the large orchestra, has indicated new paths for the art of instrumentation. New methods of treating instruments have come into existence, fresh possibilities in the technic of orchestration have arisen, all of which have naturally had their effect on musical form. Now gradually the orchestra which at first was reduced to such small proportions —*L'Histoire d'un Soldat*—is beginning to grow larger. An augmented chamber-orchestra, to all intents and purposes a diminished symphony orchestra, is the result. It is only a step again to the standard size orchestra.

The thorough exploitation of possibilities in instrumentation provided by the chamber ensemble has revealed marvelous new resources for the large orchestra, especially in the wood-winds and the brasses, and novel ways of balancing sonorities with an economy of means. But these discoveries are still only partially utilized. One hesitates even now to write a work for large orchestra scored for eight horns, five trumpets, etc. Economic rather than artistic considerations are responsible. A composition for a very large orchestra is, at least in Europe, sometimes difficult of performance. Works which require a quite large ensemble are often re-written by the composer for a smaller one. A new instrumentation of Stravinsky's *Scherzo Fantastique* and one of Szymanowski's *Violin Concerto* have been made, which reduce the wood-winds, brass and percussion to the minimum. It is undeniable that rewriting for economic reasons injures the artistic value of such works. The composer makes some, often many sacrifices.

Economic conditions severely hamper him in his work. This "working over", that is the reducing of the instrumental allocations in scores, has developed into a whole new technic. The

composer's intentions are restrained, a number of possibilities are not turned to account. Sometimes a work is passed over because it calls for two harps. Circumstances that have no bearing on art must be considered.

The technic of orchestration has gone far in the past thirty years. The problem of balance as well as of many other questions has been brilliantly solved. But there has been no solution to the difficulty of scoring for and doubling of the basses. In the usual orchestra the basses are always too weak in relation to the whole group of instruments. As a counterpoise to the high strings, wood-winds, trumpets, horns and trombones there are only the violoncelli, contrabasses and bassoons, sometimes the rather inflexible low horns and trombones which seldom consort well with the leading bass instruments. The tuba, which gives splendid support to the basses when tones are sustained, is not at all suitable for the reinforcement of more lively action. I believe that the sousaphone would be a greater service here. It is also possible to double the celli and basses by an organ, provided it is at one's disposal. The bass-clarinet is itself much too weak to play a supporting role. The contrabassoon loses intensity in rapid passages. Perhaps the future will show us how to solve this vexing question of strengthening the basses.

The horns which formerly proved such a nuisance and to which a leading role could easily be assigned, are almost subordinated in chamber-orchestral works. Their places as solo instruments are taken by trumpets and trombones and often they are entirely sacrificed in certain treatments. I believe that two horns and two saxophones could replace the four horns of the usual orchestra. This combination promises a richer sound and a certain lightening of timbre.

It is a pity that the valve-trombones used so brilliantly by Verdi in *Falstaff* have been so completely abandoned. To be sure their tone is not as strong or noble as that of the slide-trombone, but one valve-trombone in conjunction with two slide-trombones may reveal undreamed of possibilities.

A number of other instruments are also gradually fading from the orchestral scene. We seldom find the alto-flute in the newer scores, an instrument most valuable for enriching the wood-wind

section, but which nevertheless has not been exhaustively utilized. Basset horns and the various small clarinets are beginning to disappear. The sarrusophone and F-clarinet have been completely forgotten. Involuntarily one thinks of introducing military-band instruments into the symphony orchestra!

An even greater problem is that of the scoring and doubling of the basses in broadcasting. Very often, listening to the broadcast of a work by Mozart or Beethoven, one gets the impression that the music is hanging in the air. The basses, the foundation of the music, are simply not present. A number of corrective devices have been tried. The celli and the basses are sometimes made to play in unison. This increases the sound dynamically but sacrifices the lower bass-octave. One may also double the low bassoons (and the low strings too) with the dry sound of the piano. All these possibilities indicate a new path, but they do not settle the difficulty.

It frequently occurs that the same work sounds quite different at various broadcastings. This dissimilarity in the acoustics of transmission depends on a number of things. The position of the microphone, the dynamic strength of the individual instrumental groups, the loudness of the presentation are factors in making the self-same work sound different at different radio performances, often damaging its quality. For that reason the proposal of Dr. Flesch, manager of the Berlin Radio Station is most welcome. He recommends that ideal performances should be recorded on phonograph disks designed for this purpose. Thus unevenness would be eliminated since recording is absolutely controllable.

Several attempts have been made to adapt the instrumentation of certain works for the radio, by strengthening various instruments. This, like the problem of special instrumentation for broadcasting has so far been unsuccessful. It can not be assumed that revision of instrumentation will eliminate acoustical inaccuracies. The ultimate solution lies with the radio engineers. Acceptable transmission of a work with full regard for its instrumentation is attainable only through the perfection of the radio. It remains to be seen, however, if technical science can accomplish this most difficult task.