by John Gouwens.

Appendix B: Writing for the Carillon – Some Suggestions

The following is based on information sent out for many years to composers interested in learning to write for the carillon. The advice provided has proven helpful to composers who entered the GCNA Composition Competition as well as with commissioned composers who had not written for carillon before (George Crumb, Lee Hoiby, Stephen Paulus, Libby Larsen, and Lowell Liebermann). Though the following comments are oriented primarily toward composers, the principles outlined are relevant also for arranging music for the carillon. Additional materials, including a videotaped demonstration and an audio recording of representative compositions, have been produced for this purpose and are also available upon request.

The best introduction is to find a skilled carillonneur who is willing to spend time with you, showing how the instrument is played.

A few very basic considerations:

I. Technical:

- 1. Normally, carillon music is written on two staves, the lower in bass clef, representing the pedals, and the upper, in treble clef, representing the manual part. The pedal range on a four-octave North American carillon (the usual range expected for a concert instrument) is normally two octaves (c-c²). The manual range can extend as low as c, going up to c⁴; however, in practice most manual writing rarely ventures below middle c (c¹), as the heavier clappers are more easily controlled by the pedals, where the player's leg weight can assist in overcoming the inertia.
- 2. Except in slower passages, the carillonneur can generally play only one note at a time in each hand. In slower passages, the maximum range of notes that may be played in each hand is a perfect fourth; thus, two notes a fourth apart may be played in one hand, or a cluster, or of course a smaller interval.
- 3. Because of the heaviness of the lower bells, and the longer time it takes those keys to return, it is difficult to play an extended passage of notes below d¹ at a rate of more than, say, 200 per minute; rapid repeated notes in the low range are nearly impossible on most carillons.
- 4. Composers should bear in mind that frequent, radical, sudden changes in register (from high treble bells to lower, etc.) can be very awkward to execute due to the way in which the player must shift position on the bench.
- 5. Because the keys are so much farther apart (manual and pedal) on the carillon than on the piano and organ, wide reaches between the feet (a tenth at most) or between the hands (a maximum of two octaves) can be awkward if not impossible, especially for players with a smaller physique.

II. Musical:

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1. Of primary consideration is the strong series of partials (overtones). For middle C (c¹), the main overtones are c (a "hum-tone" an octave below the main note), e-flat¹ (just a minor third above the main note), g¹, and c². Because of such an unusual series of partials, harmonic intervals used especially in the lower range of the carillon must be carefully selected. (Minor thirds, tritones, minor sixths, perfect fourths, and to some extent major seconds, though not all of these would be obvious choices, can often be especially effective.) Many composers have used the "octatonic" scale (alternating half-steps and whole steps: C C# D# E F#, etc.) with telling effect, since its interval content is so idiomatic to the carillon.

- 2. Chords should be thinned out as much as is practical, in view of the already full, rich sound of the bells. Spacing of the chords is critical. (c-e-g-c¹ would sound cloudy and dissonant, whereas c-g-e¹-c², while still a bit thick on some carillons, is much more effective.) One can employ much thicker writing in the treble range (above c²), both because of musical results and because the lighter action of the smaller bells allows the player far greater agility. Because the hum tone partial is an octave below the notated "prime" tone, some piano and organ pieces have been successfully transcribed for carillon by being played an octave higher with good results.
- 3. The fact that there are no dampers means that rapid changes in harmony can be a problem (also, a rapid "walking" bass line can become quite muddy at times). The bass bells always ring longer. In the treble range, with the short ring time, one can change harmony much more rapidly. (Noted composer John Pozdro refers to such harmonic changes in the treble range as "modulation by evaporation.")
- 4. For reasons of balance, care should be taken to avoid active low bass notes against a very high melody in the treble. (An accompanimental figuration in the treble over a melodic bass can be very effective). In most carillons, the bass bells are more powerful and longer ringing than the trebles. As such, a piece which combines very high and very low notes simultaneously, with a gap between, can tend to be ineffective on the carillon.
- 5. Under the best of conditions, the carillon is capable of tremendous dynamic nuances, even more so than a piano, in the opinion of some. It is a good idea to take advantage of it!

Finally, it should be noted that compositions written with the intention of being truly idiomatic to the sound of the carillon will always find more favor with players and audiences than a piece that applies an abstract technique (such as pointilistic serialism) which is conceived as being equally effective on any instrument, while not really taking advantage of the special characteristics of the carillon. One should also be careful in selecting source material for transcriptions. A piano composition, for example, that does not match the guidelines above, such as a piece requiring rapid harmony changes or thick chords in the bass, is probably a poor candidate for a carillon transcription.

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