

# Spatial music progress report

By Henry Brant\*

In 1954, and again in 1966, I published accounts of experiments in the theory and practice of spatial music.

In offering a summary of developments since 1966 I would first like to describe, as examples, four new works which are being performed during the present season:

1. *Spatial Piano Concerto*, with orchestra, 6 isolated instrumental groups, and 16 voices. (Tucson Symphony, No. 16 and 17, 1978.) (See Figure 1.)

2. *Orbits*, for 80 trombones and pipe organ. (St. Mary's Cathedral, San Francisco, 2 performances on Feb. 11, 1979, by the Bay Bones. (See photograph.)

3. *Trinity of Spheres*, for one large and 2 small orchestras, 3 conductors. (Denver Symphony, March 8 and 10, 1979.) (See Figure 3)

4. *Antiphonal Responses*, for 3 solo bassoons, piano obbligato, orchestra, and 8 isolated instruments. (Oakland Symphony, April 24, 26 and 28, 1979.) (See figure 2.)

As in the case of my 55 preceding spatial works, each of the new pieces is designed for the hall where it is first performed, but is also intended to be adaptable to the architectural layout of any medium-to-large hall without substantial alteration of the spatial plan.

What the general climate for spatial music in the U.S. has become may perhaps be best indicated under categories as follows:

*Novelty*: Except in principal musical centers such as New York, Washington, D.C., or Chicago, and in the large music schools and universities, the performance of a big new spatial work is still something of a novelty. A surprised reaction is often the case even when the spatial piece in question was written in the 19th, 18th, or 17th century.

*Audiences and critics*: Almost invariably an audience seems to be intrigued by the acoustic results obtained by placing performers in widely separated positions in the hall. The music reviewer, however, is as likely to be nonplussed by a genuinely spatial work which uses the entire hall in an organized way, as was his predecessor 25 years ago. What seems difficult to grasp is the

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idea that spatial arrangements in music have an essential purpose and plan.

*Composing:* During a composers' discussion in 1957 I was asked whether I thought all composers would presently come to use spatial devices in their work. My view was then, as it is today, that if the objective is extreme polyphonic density with utmost contrast between the linear constituents, then spatial methods will furnish the most efficient means for the clearest results. In any even, spatial music in 1978 is still isolated from the main currents of musical thought and practice and cannot yet be said to represent a movement or tendency among composers. The more prominent composers now before the public have not adopted spatial techniques as an established element in their music, which may explain why writers on musical subjects have little to say about spatial musical concepts.

*Performers:* Along with the growing expertise and sophistication in every aspect of ensemble playing in the U.S., musicians are no longer startled or offended when asked to perform in a corner of the balcony or out on a ramp. the spatial pieces are now played with certainty and comprehension by orchestras of advanced students at the large universities and music schools.

*Recording:* In a few instances sound engineers have produced what I consider true spatial recordings via two-speaker stereo. The method is to permit only one sound source to emerge from each speaker. (Engineers usually dislike this procedure and many will refuse to work with it.) the result, however, can be a genuine, though exceedingly rudimentary, recorded impression of space music, limited to a mere pair of sound sources. Quadraphonic, let alone octophonic recordings and playbacks have not materialized commercially as of 1978, and the spatial composer who does not want his spatial balances radically altered would be well advised to limit his recordings to works for two separated groups.

*New works:* Arranging for the premiere of a new spatial work is not much different from getting a non-spatial one before the public. There is perhaps less resistance now than 25 years ago, since the inconveniences noted above are to some extent offset by potential audience interest. As with any new work, a written-on-request or otherwise unperformed spatial piece is usually more attractive to a performing organization than one which has already been played, and it has by now become generally accepted that a higher schedule of fees applies to world premieres.

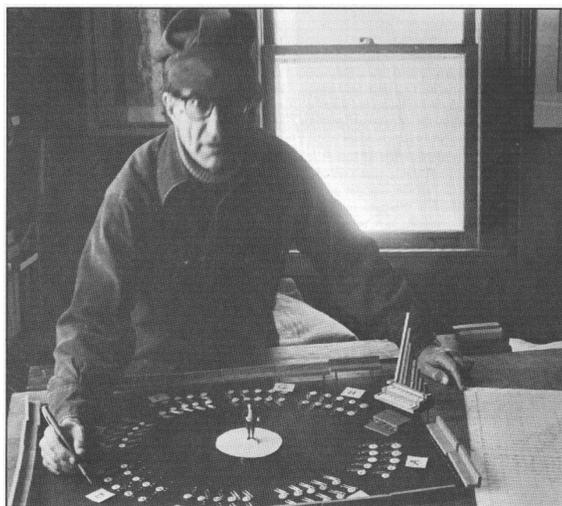
*Buildings:* New concert halls continue to be built much like old ones, with the fixed seats and stage area which severely inhibit the variety and flexibility of musical space plans. The concept of a hall specifically designed to accommodate the spatial music of the past, present, and future, a space with moveable walls, floors and ceiling, is still a project for the future.

*Moving sources of sound:* "Static" space music, where the entire horizontal and vertical area of the hall not taken up by fixed seats may be musically used, but with musicians stationed in fixed locations, continues to offer a unique and comprehensive potential for new expressive combinations as yet untried. But the exploration in depth of the spatial factor inescapably implies fluent and versatile movement of the sound sources themselves. In my 1966 article I described the difficulties encountered when musicians are expected to walk, run or climb while

playing, and the limited musical results possible. In 1978 these are still the only available non-electronic techniques for the actual motion of sound sources. Gunnar Schonbeck assures me that a viable technological solution would be a simple matter for the engineering know-how of today. He suggests hydraulic lifts with partially enclosed "cabs," each able to accommodate one to six performing musicians. These could be moved through the auditorium air-space at the desired speeds and in accordance with planned trajectories, without jeopardizing the safety and comfort of the performers and without complicating their musical tasks.

*Outdoor spaces:* Few musicians will want to go along with me in excluding from concert use all electronic, amplified or recorded sound. For myself I extend this bias to spatial outdoor music, and after several ignominious failures with loud acoustic conventional instruments outdoors I am convinced that any "live" outdoor music which cannot compete with the roar of city traffic can have no dependable way of reaching city audiences. Is there any solution? Gunnar Schonbeck says that it would nowadays be no formidable technological task to design and build "live" acoustic unamplified wind instruments as loud as tugboat whistles and at the same time as clear and resonant as flutes, and human-played unamplified percussion instruments of pure pitch but with the carrying power of artillery. With instruments such as these one could then begin to explore a musical grammar for outdoor spaces.

*Other spatial matters:* This cursory discussion merely scratches the surface of spatial music. I have begun a textbook on the subject which begins with the modest axiom "Space music includes all music." If it would not seem too pretentious to regard primary musical elements as "dimensions" essential to all music, they could be listed thus: 1. frequency (pitch); 2. temporal measurement (rhythm); 3. proportion between respective amplitudes of upper partials (timbre); and 4. the necessary, omnipresent "4th dimension" of music turns out to be space itself.



Henry Brant with his plan for Orbits.

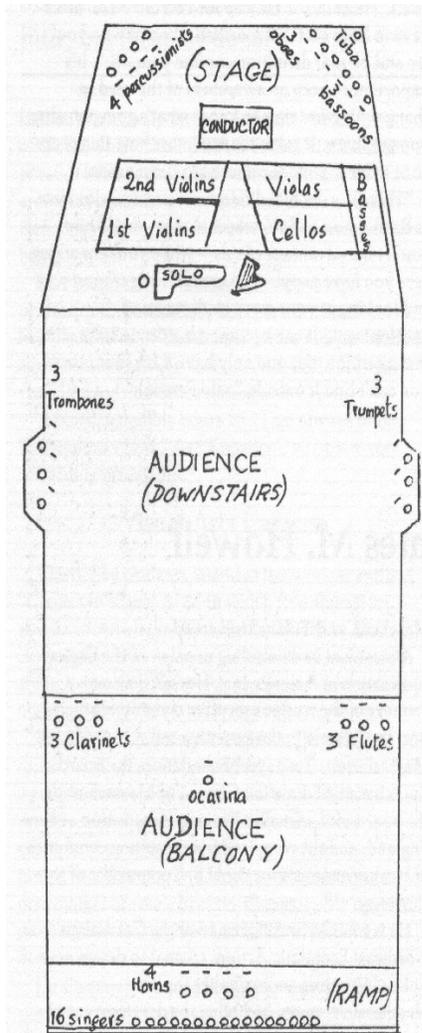


Figure 1: Spatial plan for Spatial Piano Concerto.

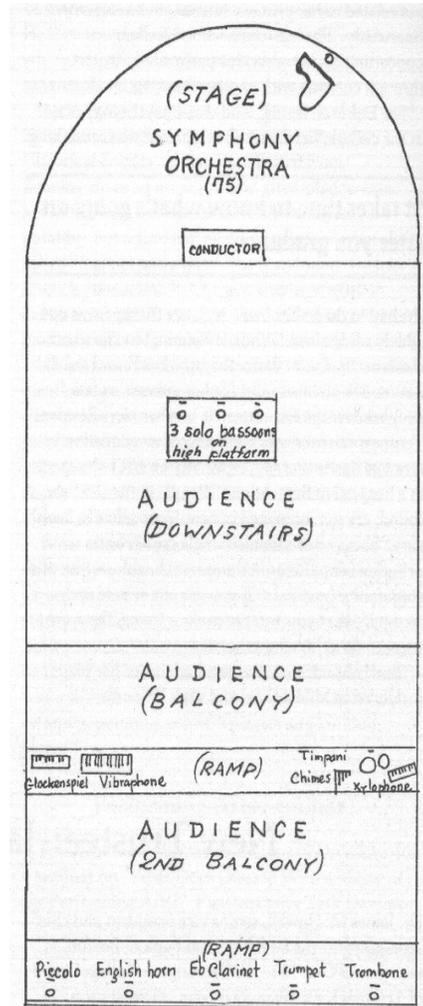


Figure 2: Spatial plan for Antiphonal Responses.

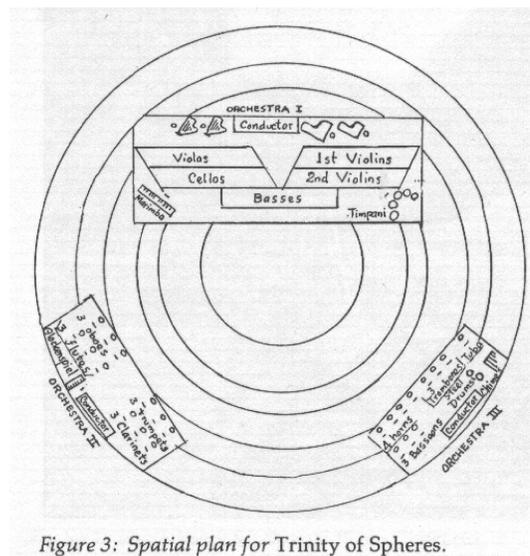


Figure 3: Spatial plan for Trinity of Spheres.