TIME

The experience of musical process, on which the sense of meaningful interrelations of sounds depends, is itself dependent on the sense of motion we get from music. And motion is intimately connected to the passage of time. We feel musical sounds as being in motion because events occur from moment to moment — not from any direct sensation of literal motion. The moment-to-moment passage of tendencies creates an experience of time as lived or virtual time, as distinguished from real or clock time. Time as experienced psychologically in music relates in complex ways to the real time in which it is embedded. In music, time passes, but with an internal vividness caused by tonal events both existing in time and surpassing any consciousness of literal time.

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Time in music is a matter that has interested many who write about music and musical experience. While it is an obscure problem that is difficult to penetrate, it is of great importance to those who consider the intricacies of musical experience. One writer to whom this issue is important is Susanne Langer. The relation between time and music is of prime importance to her theory of art: "Music makes time audible, and its form and continuity sensible." This assumption arises from her belief that motion is the essence of music. We experience the movement of music because of the lapse of time.

Citations for the material in this section of Part II will be found on the following pages of Part I: Langer, 90–91; Stravinsky, 178–180; Hindemith, 84; Clifton, 55.

Langer speaks to the classical philosophical conflict between time as "being" (ordinary time) and time as "becoming" (experienced or lived time). She distinguishes between virtual time (which is lived or experienced time) and actual time (which is the one-dimensional, infinite, pure succession of various temporal data, actual happenings, or moments). For Langer, actual time is synonymous with clock time.

On the basis of this distinction, Langer claims that virtual time (musical time) is subjective, dynamic, and dramatic. It embodies the images of the passage of life with which we are acquainted by intuition. Time is "the primary illusion of music." However, musical time is logical. It has the same logical patterns as our tensions which are brought to life by rhythms (the most characteristic principle of vital activity) that can be manipulated by the composer. By stating that musical time is filled with tensions and resolutions, Langer is stressing the psychological aspect of time in music. Musical time is perceptible; it is experienced solely through listening, by "letting our hearing monopolize it, organize, fill, and shape it, all alone."

Concurring with Langer, Igor Stravinsky claims that music is an art of time, presupposing before all else a certain organization in time. In his view, a musical composition involves the functional realization of time. In other words, a musical composition is based on the temporal ordering of the sounds perceived. Stravinsky also distinguishes between two types of time. For him, psychological time is the flow of time that depends on our state of consciousness and the events that influence it. Real time is the normal flow of time (clock time). Stravinsky maintains that it is the interaction of these two types of time that makes up musical time. Unlike Langer, he does not claim that music is perceived exclusively as psychological time. Rather, music "establishes a sort of counterpoint between the passing of time, the music's own duration, and the material and technical means through which the music is made manifest."

Further, Stravinsky states that some music may be mainly grounded in real time, and some music may remain faithful to psychological time. The prevailing characteristic of the first kind of music is similarity, which he believes leads to unity and true solidity in a composition. The creative process of the second kind of music is ruled by contrast, which leads to variety. Stravinsky states, "For myself, I

have always considered that in general it is more satisfactory to proceed by similarity rather than by contrast."

Paul Hindemith considers musical time to be a formal feature of music with functional significance. According to him, musical time evokes two different kinds of affect. On the one hand, musical time expressed by meter runs parallel to actual time because of its regularity. On the other hand, musical time expressed by rhythm, because of its incommensurable nature, produces an effect that in normal life is nonexistent.

Thomas Clifton is concerned with the same problem because he views time as a necessary constituent of musical experience. He regards time as "the experience of human consciousness in contact with change." Time is not an absolute medium, but an "experience . . . which is in constant flux." Clifton refers to time as horizon (the temporal edge of a single field, which may include multiple events that can be regarded as part of this field).

The distinction between musical time (which is similar to Langer's virtual time) and chronological time is important to Clifton. He points this out in the difference between the time a musical piece takes and the time it presents or evokes. For Clifton, time is in the music; it is presented or evoked by the music, and it is designated by the music.

IMPLICATIONS FOR RESEARCH

What musical parameters affect the perception of musical time? How does a listener perceive, encode, and process musical duration and tempo? Is temporal structure intrinsic to the music, the listener, or the performance?

Are different types of time experienced during the listening process? How does the listener perceive musical duration and tempo?

How can teaching and learning processes of music be affected by considerations of musical time?