

As a virtual performer, technology has forced us to consider musical and aesthetic issues that go to the heart of what we believe performance to be. The most important of these issues may be considered through contrasting the ontological basis of human artistic performance with the detached form of musical presentation that the virtual performer offers. When the two types of presentation are combined, the virtual performance becomes an extension of the human presence. It can be illustrated that this extension of presence is something that many composers have explicitly developed in works for this medium.

What is it then that constitutes performance? In the traditional definition, performance is an activity which performers engage in when interpreting a work for an audience to behold.¹ It follows, therefore, that through their being, or physical presence, the performers become embodied in the work, and naturally become part of that with which the audience identifies.

This association between physical presence and sound has characterised traditional performance. Since the advent of the recording however, the virtual performance has often been perceived as disembodied and, as a consequence, detached from an audience who cannot identify in the same sense with a performance which has no performer:

We hear music on tape without being able to associate the sounds with any instrument, and even in live electronic music the aural results may well seem to be out of all proportion to the activity observed: when a violinist reaches into the upper register, or when a pianist strives for maximum volume, the strain is evident in the way he comports himself (and we may even feel that strain in a recording), but the technique of electronic instruments involves no such relationship between sound and gesture. Sound seems to blossom independently of any sounding body or human action, and again our reaction may be one of wonder, or disquiet.²

But the reasons for this disquiet goes deeper than simply being unable to associate sound with either gesture or performer. At its heart it typifies an uneasiness felt towards a 'machine' capable of partici-

pating in performance and of expressing itself. Notions of strain, effort, comportment and failure are fundamentally human characteristics that the listener is able to identify and the electronic performer is unable to sympathise with. In characteristic pessimism, Baudrillard has written:

What will always differentiate the functioning of men and even the most intelligent machines is the ecstasy (sic) of functioning itself - pleasure. Fortunately, to invent machines that would recognise pleasure is as yet beyond man's capabilities. All types of prosthesis may contribute to his pleasure, but he cannot invent machines that would accept pleasure by proxy.³

But it is not merely an absence of pleasure that distinguishes human from electronic performance. The distinction is, fundamentally, an absence of that body from which these feelings initially stem. These ontological differences manifest themselves in music in a variety of ways.

In a work such as *Trans* (1971) by Stockhausen, the performer is shown to have a metaphysical presence as well as a causal one. The composer has stated:

In *Trans* each visible movement is made in connection with the sound...all that you hear and see, is integrated into the entire process. In this respect *Trans* is a very essential piece. And then, it is also a phenomenon because it throws open the basic question—through its performance practice—why is the presence of a musician important in the moment when the music is being played? You see: there is a large orchestra of winds and percussion divided into four groups. And the four groups are amplified over four loudspeakers; the loudspeakers hang above the orchestra. But one never sees this orchestra during the performance...It is therefore a metaphysical work insofar as the entire time, one feels: the essential is 'behind' but one cannot see it! And thus, the entire time, one is confronted with the question: does the sound that one hears—the orchestra sound—come through loudspeakers only played by a tape recorder, or what is it actually?...Because one must believe, so to speak, that the musicians who are behind are important, or one must really

feel their presence. One could certainly also make a performance of *Trans* once perhaps, in which absolutely no musicians would be behind the strings and the music would only be a tape...and what then? Do the people notice it? That is the decisive question.⁴

For Stockhausen, the physical presence of the performer creates a distinct difference in the listener's perception of the work. And of course this difference can only be perceived through actively participating in the traditional performance structure. Clearly, if one were to listen to a recording of *Trans*, one would be unable to distinguish between the live performers and the hidden performers. The ritual value of the work necessarily changes because, as in all recordings, the performance is 'frozen'. In the live performance of the work however, the deliberate association of movement with process naturally draws attention to the music of the hidden performers. What *Trans* questions therefore is whether one simply assumes the 'hidden music' to be humanly produced or that one is, in some mysteriously intangible way, able to feel it through the being of the hidden performers.

The virtual performer offers a music which is not intrinsically related to a sense of being or activity and is by consequence detached from the listener. By extension then, it is in itself unable to actively participate in the traditional performance structure and by definition does not, strictly speaking, engage in performance. This necessarily changes the social value which we attach to the music offered to us through the virtual medium. We tend to associate virtual performance with the work and the human performer with an activity associated with performance, which has its own intrinsic aesthetic and cultural worth.

So if the virtual performer doesn't perform, what does it actually do? This depends on the nature of the work. On the one hand, it can offer a representation of a performance through a recording and, on the other, it is able to offer what Paul Thom calls a 'work for playing'. Works for playing 'do not require performers to execute and interpret';⁵ their form is of a static nature. Music composed directly to tape and *musique concrète* are good examples of 'works for playing'; we do not say that the tape recorder is interpreting the work but that it is merely reproducing it.

When the virtual performer is able to offer a music that is not intrinsically related to being but is detached from the listener in both time and place, its value will be of a different nature to that of human

performance. For Walter Benjamin, the non-being of the virtual performance changed the social context of art by robbing it of its ritual value. In music, these ritual values come about through the interaction between the listener, or audience, and the performers.⁶ In his seminal essay 'The Work of Art in the Age of Mechanical Reproduction', Benjamin argued that this change in social context occurs because ritual values are intrinsically related to the 'aura' of the work of which, through their presence, the performers are part.⁷ By comparing the audience's perception of the stage actor and the screen actor, which are perceived through identification with the human and the camera/editor respectively, Benjamin asserts that the 'aura' of the actor can only be perceived through an intimate awareness of the actor's being. Clearly one can only identify with this presence through the ability to participate in the ritual of the performance allowed by the traditional performance structure, not through a mere observation of its representation.

The ability to participate in the ritual involves a concept of attachment, where what the listener hears conforms 'to a pattern, regulated and accepted by common consent'.⁸ This necessarily involves identification with the pattern, music, and the person realising the pattern: the performer. The audience, through its active presence, becomes part of the ritual, part of the performance and part of the music. Active listening therefore affects the relationship between the performer and listener. Obversely, Adorno has written of the relationship between regressive listening and non-participation in the ritual, arguing that a fetishism with the commodity is in fact detrimental to critical listening.⁹

Virtual performance has therefore not only changed the social and ritual value of art but has also changed the nature of our perception of it. It is explained well, although rather pessimistically, by Stephen Hill in his book *The Tragedy of Technology*, where he recounts the Myth of Narcissus who 'could not find true happiness in relating to what was no more than an echo of reality - an echo of the culture 'code' that sends out the signals of a reality that the [technology] frame stands in front of and mediates'.¹⁰ This ability to transform our perception of cultural value was recognised by thinkers such as Martin Heidegger and Marshall McLuhan as perhaps the most fundamental issue technology presents.¹¹

Is such a mediation, however, accompanied by

a change in the aesthetic value of the work in itself? Does it automatically devalue the experience as suggested by the above analogy or does it perhaps increase its aesthetic value? These questions may be considered by posing another: would Narcissus have been happy if what he saw was not a reflection of reality but an aesthetic experience to be valued in itself? If what the virtual performance presents does not purport to be anything other than that which it is, if its value and existence is authentic, then the aesthetic value we ascribe to it is of no less importance.¹² However, the aesthetic value that we attach to the presentation will be different, and may be considered by an appraisal of what happens when the virtual performance is brought within the traditional structure of performance.

Historically, composers have incorporated the virtual performer into the traditional performance structure by associating it with a human performer, thereby making it become an extension of man,¹³ or an extension of being, just as the instrument of the performer is an extension of that performer. This incorporation of body thus transforms the traditional performance structure but does not, as we have seen, necessarily reduce its aesthetic potential.

This extension of presence is explicit in processes such as amplification. We do not question the fact that the sound we hear through the speaker comes to us from the being of the performer. Computer software such as Opcode's 'MAX', a musical programming language, also extends the human performance by enabling the computer to musically respond to a live performance.

Performance enhancements also enable the body to be incorporated into electronic performance by extending the capability of the human performer. Systems such as the 'hyperinstrument' system developed by Tod Machover and Joseph Chung, *The Hands* developed by Michel Waisvisz and countless other performance enhancements reestablish the causal nature of the gesture-sound relationship through extending the capability of the human performance.¹⁴

On a musical level, this extension of presence is an attribute of works which electronically process the human performer's sound. In a work such as Boulez's *Répons* (1981-), the performers are encircled by speakers and their sound, which is transformed by the computer, is able to be moved from speaker to speaker in a number of different configurations. This extends the human performance rhythmically, particularly when

we consider the traditional concept of rhythmic motion. Writing of the work, Jameux has noted:

We do not have the impression...that the available technology gave rise to the composition, but rather that an abstract idea...led to a score written in the light of what technology could offer in addition.¹⁵

The ability to view the virtual performer as an extension of the human performance is most easily maintained in the timbral domain. In works where there is a distinct timbral relationship between the human performer and the virtual performer, this association is made even easier to maintain. For example, in Jean-Claude Risset's *Voilements* (1988) for saxophone and tape or bass-clarinet and tape, the timbral relationship between the sound of the two instruments is such that they cannot often be distinguished aurally. For the listener present at the performance, the nature of the sounds of the virtual performance extends outwards from the sound of the human performer, not only timbrally but also gesturally. Even when the sounds on the tape move away from the imitative, thus expanding the gestural language of the work, there is always a distinct contact with the presence of the human performer. An instance of this occurs at the end of the work, where the vocal and chant-like textures of the tape are complemented by the breath of the human performer.

Despite the unprecedented timbral variety available to the modern composer of electronic music, it is not surprising that many restrict themselves to timbres that are similar to or complement the human performer. This self-imposed restriction enables the virtual performer to be more easily perceived as an extension of the human performer.¹⁶

While timbre is an obvious and explicit point of association with the human performer, other musical attributes help to establish the virtual performance as an extension of the human performance. For example, in Davidovsky's *Synchronism No. 3* (1966) for cello and tape, long bowed tones of the cello are associated with stillness and short rhythmic figures with a sense of motion or physicality. When these musical gestures occur on the tape they evoke an activity which has been initially associated with the human presence.

Naturally, the ability to musically perceive the virtual performance as an extension of the human presence becomes easier with the development of more

advanced and more responsive technology. It is clear, however, that both modes of musical presentation have their own ontological basis. The nature of these foundations and the relationship that they have with each other when they are combined suggest that the virtual performer extends itself from the being of the human performer. Composers have been able to draw on this extension in a number of ways and in so doing have deepened the aesthetic value of that which they create.

Notes

¹ Paul Thom, *For an Audience—A Philosophy of the Performing Arts* (Philadelphia: Temple University Press, 1993).

² Paul Griffiths, *A Guide to Electronic Music* (London: Thames and Hudson, 1979), p. 28.

³ Jean Baudrillard, *Xerox to Infinity* (London: Touchepas, 1988), pp. 3-4.

⁴ Karlheinz Stockhausen, liner notes, *Trans*, Deutsche Grammophon, 2530726, 1976.

⁵ Paul Thom, *For an Audience*, p. 56.

⁶ Robert Bocoock, *Ritual in Industrial Society* (London: George Allen & Unwin, 1974).

⁷ Walter Benjamin, 'The Work of Art in the Age of Mechanical Reproduction', *Illuminations* (New York: Schocken Books, 1969), p. 229.

⁸ Francis Edwards, *Ritual and Drama : the Mediaeval Theatre*

(Guildford: Lutterworth, 1976), p. 10.

⁹ Theodor W. Adorno, 'On the fetish character in music and the regression of listening', *The Culture Industry: Selected Essays in Mass Culture*, ed. J. M. Bernstein (London: Routledge, 1991).

¹⁰ Stephen Hill, *The Tragedy of Technology*, (London: Pluto Press, 1988), p. 210.

¹¹ See for example Martin Heidegger, *The Question Concerning Technology and Other Essays*, trans. William Lovitt (New York: Harper & Row, 1977); Marshall McLuhan, *The Gutenberg Galaxy: The Making of Typographic Man* (Toronto: University of Toronto Press, 1962); and *Understanding Media: The Extensions of Man* (New York: McGraw-Hill, 1964).

¹² Monroe C. Beardsley, *Aesthetics from Classical Greece to the Present* (Tuscaloosa: The University of Alabama Press, 1991), p. 374.

¹³ Marshall McLuhan, *The Letters of Marshall McLuhan* (New York: Oxford University Press, 1987), p. 309.

¹⁴ Tod Machover and Joseph Chung, 'Hyperinstruments: Musically Intelligent and Interactive Performance and Creativity Systems', *Proceedings of the 1989 International Computer Music Conference* (San Francisco: Computer Music Association, 1989). Michel Waisvisz, 'The Hands, a Set of Remote MIDI-Controllers', *Proceedings of the 1985 International Computer Music Conference* (San Francisco: Computer Music Association, 1985).

¹⁵ Dominique Jameux, 'Boulez and the "machine": Some thoughts on the composer's use of various electro-acoustic media', trans. Nigel Osborne, *Contemporary Music Review* 1.1 (1984), p. 20.

¹⁶ Commercial and political reasons have also, of course, affected this choice.