



Brian Ferneyhough

Time and Motion Study II (1973-76)

Singing cellist and live electronics (1973-76)

Duration: 17-24 minutes

First performance: October 1977, Donaueschingen Music Days, Werne Taube

Commissioned by the Musikkredit-Kommission Basel-Stadt

I.

In the first instance this work is concerned with memory, with the manner in which memory sieves, colours and reorders that which is registered by the senses. A second level concerns itself with the construction of a model designed to demonstrate the fact that memory is discontinuous: something having a decided effect on perception, on the one hand in the form of ever-increasing "interference" in development, on the other as a necessary precondition for the historical consolidation of the individual. Point of departure for this specific confrontation: a detailed examination of the nature of time and the abolition of the linear experiencing of time in the process of recall. The work itself is thus to be regarded as "the memory of a production process", the place of performance as the point of confrontation of objective (measurable) systems and subjective obscuration and elimination (these latter by no means invariably predictable in terms of their ensemble effect). The function of these subjective processes is to (re-)present and idealized projection of experiential fragments which, at some point in the future, will, by means of individual recollective mechanisms, withdraw themselves effectively from the sphere of objectively measurable temporality. As is the case in the other works sharing the present title ("Time and Motion Study III", Donaueschingen, 1975) continual reference to the concept of (industrial) efficiency serves to underline the goal-directed nature of this nonsystematical disturbance/destruction of the reservoir of experience (itself merely superficially controlled by the intellect). This goal-directed aspect is then investigated, in order to discover to what extent the individual is disorientated, oppressed and, finally, amokelated by the complexities of the permanent (and deadly) battle between history as immediate experience and the prescriptive conventions imposed on this latter by public discourse ("history"). Paradoxically, it seems only possible to imagine a temporal continuum via the decay of single instants, via the absorption of the discrete instant in the totality, but also the fact that this decay conditions the future which is born of it.

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The fabric of the piece consists of a continuous sequence of overlapping processes which, in ever-different quantities, are allowed to proceed both simultaneously and consecutively. These processes lead in turn to the accumulation of a residual "sediment". Although the essential nature of the processes dictates that these finely-sieved layers are produced as the result of several generative procedures, in practice they have been so reduced to a common denominator by means of the above-mentioned "sieving" that a continuum characterized by a constant consistency is produced. It would be false to assume that the original processes represent mere tools, which, although necessary, are, in the last analysis, not decisive. In contrast to the usual view of a "work", that which is heard is to be understood as the "sounding trace", the spoor, of the mechanisms for which it stands. Thus it is intended that not only the experiential time of the performance itself, but also the "real time" involved in the act of composition is to act as the measure of significance. One has to dig out, analyse, project back. Whilst the work can in no sense said to be improvisational, neither the cellist nor the operators of the electronic equipment whose work must be coordinated with his, the fact that the piece resists being relegated to the status of a product, of something static, leads to it being transformed into a symbol for something provisional i.e. for the conception of the self suspended in every moment between decay and consolidation.

II.

Not the least obvious of associations suggested by the almost organic relationship existing between performers and electronics (one of the central points of reference in "Time and Motion Study II") is that of various varieties of execution...The role of the electronic layout is not restricted here to such tasks as completion, commentary or support, but, on the contrary, it assumes the position of a weird "double" (Doppelgänger). Although the electronic equipment offers the texture the opportunity for self-reflection via repetition, it is only very seldom that the elements designated for repetition seem willing to subordinate themselves to the continually unfolding live material. Because of this, the repetition process frequently brings with it a darkening, a disturbing, which forms the opposite pole to the highly systematised methods by means of which the material to be repeated was selected. Repetition as precondition for a context (continuity): repetition as something superfluous (leading to fragmentation). Seen from another point of view, one might interpret this encounter between the self-expression of the individual and the distorting mirror of collectivity (continually frustrating the desire of the performer to speak freely) as throwing a little light on the relationship (in the meantime becoming symbiotic) between the individual and the public spheres of experience.



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III.

The work may be conceived of as the interaction, interpenetration and mutual assimilation of two distinct types of material. The main material consists of seven times seven rhythmic formulas which ordain the course of events through a process of continual variation, and in combination with a rigorously predetermined pattern of phrase-lengths. It is in passages organised according to these principals that the measurable aspect of time assumes particular importance. The secondary material consists of a series of individual commentaries on six distinct basic articulation types – organisms characterised by a much lesser degree of precompositional definition (i.e. a higher degree of initial abstraction) than is the case for the other material. There are six examples of between three and six types in a particular sequence, the unit of form. Each sequence is in turn more clearly characterised by the predominance within it of one or more main types. Pitch organization in these sections of the work is less perceptibly fixed in advance than is the case elsewhere: throughout the composition, pitch organization is sharply divided into a strict and rigid selection procedure for the main sections and a method allowing greater and lesser amounts of choice in context (although the relative degree of choice admitted is also fixed in advance) for the sequences.

The opening of the piece consists of a lengthy passage in which interlocking fragments of the two basic material categories are “analysed apart” by means of two tape delay systems with the aid of which the sequences are recorded on tape during the course of the performance by the assistants and, after a delay of several seconds, are played back (with a variable degree of distortion arising from manipulation of the recording volume-control) over whatever the cellist is playing at the moment. Again and again these fragments serve to hinder the free unfolding of the live material by reason of their “non-functional” nature. Even though the main material – at first restricted to scraping and other “impure” sounds – is not treated in this fashion, it is nevertheless recorded on a further tape (without the sequences) so that it may be played back at the end of the composition as part of a pyramidal piling up of sound-strata. After the negotiation of several intervening episodes, the middle of the work is signaled by another sort of auto-analysis. At that point rapidly alternating groups of long, held notes and short, explosive figurations are divided up and assigned, according to playing technique (“arco” or “pizzicato”), to either the lefthand or righthand loudspeakers, where they are subsequently combined in the stepwise construction and demolition of superimposed blocks of chordal structures. It is here that the “optimistic/constructive” potential of the electronic medium is deliberately and clearly exhibited, even though in practice the clarity is increasingly compromised by the inevitable errors and differing speeds of reaction on the part of the cellist

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when called upon to insert new elements into a progressively more impenetrable texture. The second half of "Time and Motion Study II", beginning directly after this point, witnesses the rapid climb to predominance of the tendency towards entropy inherent in the method of electronic intervention employed. In his desperation in the face of the sudden increase in the amount of superfluous "memory fragments" hemming him aurally in, the cellist commences a "dialogue" with the apparatus and the sounds which torture and frustrate him. The text (reduced to a string of key words) deals with the impossibility of attaining a harmony between words and emotional states: in accord with the broken link and its attendant frustrations, the vocal contribution is sucked up immediately into the electronic systems. Distorted by means of a ring modulator connected to the cello and, finally, played back on top of the live material in the form of "interference", robbed of all communicative content. The cellist plays without electronic commentary at only one moment, and that right at the end. Having at last achieved a degree of independence, the cellist finds himself reduced to endlessly repeating slight variations of the same meaningless tone. The absurdity of the situation is underlined by the fact that the performer is condemned to continue to the bitter end in the certain knowledge that all recorded tapes – his "memory" – are being silently erased behind his back.

IV.

The parallel functions of the complimentary constituents of the instrumental layout might be schematically illustrated somewhat as follows:

Instrument	Electronics
live performance.....	amplification
singing/speaking	ring modulation
foot pedals.....	"sound analysis" (e.g. varying of volume)

The various extremes are linked by means of the almost continuous deployment of delay tapes and feedback (superposition). With one single exception (the modulation of voice with instrument) all modifications of timbre are achieved purely by means of the "amplified natural sounds" produced by the contact microphones attached to the body of the instrument. As one of these





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microphones is fixed under the fingerboard, and both are independently controlled by the two footpedals operated by the cellist, it is clear that not only degree of loudness but also distribution between the antiphonally-placed loudspeakers and timbre of the amplified result are dependant on the position of the pedals at any given instant. The manipulation of these latter in respect of every note is indicated in the score. In addition there are two further microphones: one placed so as to record the live cello sounds, the other affixed to the throat of the performer. The signals from these are fed into the ring modulator as mentioned further above.

Because the cellist is to master and reproduce information of high complexity (notated at times on five simultaneous systems) he is at all times forced to invest his entire energy in order to even approach an adequate interpretation. At the same time the assistants are occupied with transforming, selecting and reorganizing that which emerges from this production-process. In the same manner as the foot pedal instructions for the cellist, the exact information for each assistant is included in the score. Because of the nature of the delay-tape layout, certain elements are only partially reproduced, other reproduced in a totally different order from the one in which they were performed. As with human memory the supposed linearity of time is here abolished, its constituent ciphers are delivered up to the simultaneity of the individual consciousness...

Whilst doubtless a very pessimistic piece, "Time and Motion Study II" is by no means nihilistic; its negativity does not stem from the relentless pursuit of some aesthetic "burntearth" policy, but rather from the desire to clear the ground in order that one may begin to build anew. It offers no solutions for overcoming the lyrical impasse, but neither does it deny meaningfulness to the attempt...

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