

Committee V
East-West Perspectives on Science
and Spirit: Time and Consciousness

DRAFT--5/15/91
For Conference Distribution Only



MUSIC, POETRY, AND ZERO TIME

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The Eighteenth International Conference on the Unity of the Sciences
Seoul, Korea August 23-26, 1991

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Musical time has been traditionally defined as motion. Of course, music does not really move : indeed only some parts of the musical instruments vibrate, and only some of the vibrations may be heard. Nevertheless, at least in Western countries, the metaphor of motion has proved useful. It reminds us of the teleological (goal-oriented) linearity of most of our musical constructions.

But from Schönberg onward, the history of XXth century music shows the increasing blow up of de-linearizing practice. According to George Rochberg, John Cage's "chance music", for instance, is to be understood not only as a logical development of Busoni's and Varèse's

inclusion of noise in the world of tones, and of silence in the world of sounds, through the acceptance of all audible phenomena as material proper to music - but as making a real fetish of the present moment, freed of any connection with the moment before or after ; such an attitude, Rochberg argues, prevents the listener to whom Zen or existentialism are alien from perceiving any meaningful order in the apparently formless succession of events he is confronted with(1). And in a similar way, Leonard B. Meyer declaims against the lack of connectedness between events in the course of "indeterminate" performances, which can but focus the attention "only to the uniqueness of things" (2). The music composed by "radical empiricists" or "transcendental particularists" (3) may appear as realizing "the essence of the static", says Stravinsky (4); since it demands that the listener's mind jumps "from isolated 'present' moments to other isolated 'present' moments"(5), it insists on transferring the indispensable

mobility from the musical text to the listener's body, thus violating the traditional assumption of passive hearing as well as the sacrosanct mind/body split.

However the Renaissance is over (6), so that one is obliged to take into account the diversity of temporalities in the new music. In an authoritative article, Jonathan D. Kramer has suggested to classify the variety of temporal modes according to their relative degrees of mobility (7). The classification runs as follows :

1 - In the linear temporality, music is both teleological and continuous ; the Western model is the music composed according to the rules of the tonal system ;

2 - Some composers use multiple superimposed time lines which are in principle independent of each other ; such polyrhythms may remind of certain non-Western (mainly African) devices, for instance the hemiola ;

3 - When the composer saves himself the bother of clearly beginning and ending, of ordering the various sections and of connec-

ting them, he interrupts the flow of linear time ; Stockhausen has elaborated on this technique of suspension and called it "moment time" (8) ;

4 - The music of the "transcendental particularists" on the one hand, and the minimalist-repetitive music on the other hand, may be considered as being motionless and thus timeless ; they aim toward a total de-linearization (9).

Let us lay stress on the differences between the two last categories. In his well-known manifesto about musical form, Stockhausen explains that the "moment" can be thought of as "static" as well as "processual". But the "states" or "processes" must be seized as absolutely discrete instances, which produce "quasi-vertical layers penetrating in an oblique manner the horizontal time-span until they reach the intemporality I call eternity"(10). The music of Momente (11), "Cantata-like in scale, operatic in scope", celebrates "sensual delight" through a "stream-of-consciousness soliloquy" which recollects highly fragmented

events (12); the composer has very carefully avoided any general pattern as well as any temporal sequence, so that the only remaining link between the moments pertains to free association in the listener's mind. However, one can but recognize that the listening is in fact "statistical": far from abiding by the unconnectedness of the different events, one proceeds in a cumulative way and reinstates gradually a "meaningful" pattern, i.e. a unidirectional flow of causality going from past to present. And the responsibility is incumbent upon the composer himself : what the score organized first was a series of contrasts between three principal lattices dealing with timbre (Klang : Moments "K"), melody (Melodie : Moments "M") or duration (Dauer: Moments "D"). But the author, bothering about the reactions of the listeners, decided to homogeneize the flow by introducing between the lattices some amorphous or indeterminate fragments (the i-moments) which should "neutralize" the differences between "musical order and ambiance disorder" (13). And in another version, he

added a new introduction (the i-K moments) and several filling up repetitions (14), thus altering his own initial decision of freeing himself from any "calculative" thought.

In comparison, the musicians of the fourth category, either "indeterminists" or "minimalists", seem to remain true to their commitment to de-linearize music, whether with or without the use of redundancy. But one has to be wary of any hasty diagnosis about their attitude toward temporal continuity. Even John Cage, who is automatically considered, at least in Europe, as the pope of discontinuity, has defined musical form as "continuity", and method as "the means of controlling the continuity from note to note"(15). According to his view, a composer needs both spontaneity, which allows form to be itself, i.e., unique in its expressive continuity, and structural control over the musical material. And since Cage's own interest in expressivity was likely to impose restrictions and exclusions among

this material, thus endangering continuity, he decided to save and even reinforce continuity by giving up his own subjectivity. Hence his description of the Music of Changes for piano (1951), the sounds of which were decided through chance operations via the I Ching, as a "composition the continuity of which is free of individual taste and memory (psychology) and also of the literature and 'traditions' of the art."(16) Cage's rationale entails the fact that discontinuities may very well be experienced in the listener's mind, even if they do not exist in the work itself ; this idea, already present in 1937 (music has now to be "faced with the entire field of sound")(17), is applied in 1948 to the temporal dimension as such (18) and enlarged in 1955 to include the reversibility of time, i.e., space : "a sound, Cage tells us, does not exist as one of a series of discrete steps, but as transmission in all directions from the field's center" (19). In 1957, Cage elaborates upon

indeterminacy with the famous statement that "Any sound at any point in (the) total sound space can move to become a sound at any other point" (20).

Clearly enough, an indeterminate composition needs not to be static, and Cage is not averse to (re)introducing motion as a basic metaphor of music. On the other hand, his emphasis upon the possibility of enlarging the field of musical continuity has led the composer and theorist James Tenney to base a new practice of harmony on the multidimensional character of sound space : according to Tenney, the "field of force" available in the harmonic space has to be taken into account for itself, i.e., without invoking only, as Helmholtz did, the overtone series, or, as Rameau had done, the tonic chord root phenomenon. Moreover, such an enlarged harmony will involve not only the "verticality" of the Western musical writing but the "pitch relations manifested in a purely melodic or monophonic situation" of the East and Far East as well (21). Indeed, the substitution of ubiquity, or

"transmission in all directions", for "discrete steps", has a strong Oriental flavour : as Lewis Rowell has observed, even if the Indian drone did not develop earlier than the fifteenth or sixteenth century (22), the image of continuity, together with the image of organic growth and the technique of respiration, have proved influential upon the Indian musical traditions ; they have molded the aesthetics of rasa, i.e., of this immaterial fluid which bathes all the participants in the same (e)motion (bhāva) during a given performance (23). No wonder, then, if Cage, who had been converted to Indian views by his student Gita Sarabhai, tried to express the nine permanent emotions of the Indian thought in his Sonatas and Interludes (24): the use of the "prepared piano" had already led him to leave the Greek notion of "sound as impact" and the conception of music as a "nexus of points", whether in space (pitches) or in time (beats)(25). Later, he attended Daisetz Suzuki Teitaro's lectures on Kegon (Chinese : Hua-yen)

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Buddhist philosophy at Columbia University, from 1951 onwards ; and he found in the Bible of the Hua-yen sect, the Avataṃsaka Sūtra, the notion which was to become central to his own aesthetics of music and poetry, the principle of "interpenetration without obstruction"(26), according to which, in Leibnizian terms, "Every individual substance expresses the whole universe in its own manner", so that it resembles a "living mirror" revealing "all that happens in the universe, past, present, and future."(27)

Even Cage's most recent production may be said to obey the "interpenetration" principle ; in particular, the co-presence, in several of the last scores, of elements borrowed from variegated styles of the whole history and geography of music, shows how deeply involved in the exploration of the "cosmic web of interrelationships" between sounds as well as between words|the composer-poet has been, at least since the beginning of the fifties. But one has to take into ac-

count simultaneously Cage's denial of subjectivity ; far from deciding to "translate" the Hua-yen doctrine into music or poetry, the composer found in it the confirmation of what he had previously felt as the vocation or destiny of music and the arts : to "sober the mind" so as to open it to "divine influences" (28). Because of such a humbleness, one has to be cautious about interpreting one-sidedly or one-dimensionally the musician's commitment to the ideal of "interpenetration". Sure, what Cage had in mind when he began to support this label was the inner feeling of the necessity of grounding every of his works, or each of his activities, in some "universal matrix of intercausation"; and one may well describe, as Steve Odin has suggested, "such a micro-cosmic-macrocosmic universe of simultaneous-mutual reflections in terms of the contemporary 'holographic' model, as a three-dimensional multi-coloured laser projection, bright and vivid yet wholly transparent, wherein each

part is an image of the whole."(29) But one runs always the risk of misinterpreting the principle of interpenetration, for it is far too easy to dismiss one or the other of its constituent terms. As Ken Wilber has recalled in an interview (30), one must not forget that in order to utter correctly the final formula shih shih wu ai, "between phenomenon and phenomenon there is no obstruction", it is necessary to admit, first, the existence of shih ("separate thing or event"), second, the existence of li ("transcending principle or pattern"), and third, the truth of the shih li wu ai ("between principle and thing there is no obstruction"). Now, if one isolates the last item from the first three ones, one forgets the true meaning of the interpenetration, which gathers together different levels or strata of complexity but ^{also} recognizes, thanks to the gathering as such, that every layer is different from all the others. True, all the

thing-events interact, "but not in the merely one-dimensional fashion of pop mysticism" (31). "If the higher levels contain attributes not found on the lower levels, you simply cannot have bilateral equivalence between them." (32) In more technical terms, the Hua-yen doctrine admits perhaps (the problem is still under discussion) a "symmetrical" model of causation, in which future events may influence the present or even past ones, just as the past ones influence the present or future ones, so that the causal relations appear as "internal at both ends". But another highly sophisticated doctrine of mutual interfusion, the Whiteheadian process theory, which "provides what is perhaps the most expansive hermeneutical framework yet formulated in Western culture by means of which to interpret East Asiatic thought patterns in general"(33), "articulates a theory of asymmetrical causation in which causal relations are internal at one end and external at the other" (34), so as to

save, with the arrow of becoming, the idea that "all events cumulatively penetrate their successors in a unidirectional flow of causal influence from past to present."(35) Hence the question: how is it possible to situate the "transcendental particularism" of the "experimentalist" of today ? Not on the side of "pop holistic philosophy": Rochberg and Meyer, as we have seen, are wrong when they interpret Cage as the gravedigger of Western music - they oversimplify the Cagean "continuity of no-continuity" and forget that for the composer himself, anarchism does not necessarily pave the way to the police. Rather, a "transcendentalist" musician might appear nowadays as advocating what Ken Wilber calls a "holoarchy". - But it seems no less difficult to classify such a creator among the supporters of a return to some Whiteheadian "cumulative" conception of causality and "asymmetrical" time : even if Cage has explained more than once his allegiance to the

"composition as process" (36), his definition of the "process" does not entail the "filling up" of the various gaps between the "moments" of an opera aperta. Far more Whiteheadian is the way of composing of Stockhausen, who seems unable to bear the weight of the Void, of the "Nothing-in-between".

Why not then locate precisely Cage and the other "transcendentalists" (Morton Feldman, Christian Wolff, Alvin Lucier, Max Neuhaus and some others) in the middle, in the "Nothing-in-between" which separates as a no man's land the Hua-yen absolutism from the Whiteheadian relativism? Is ^{this} not the only "non-dualistic" way of thinking music, and musical time, today? But in order to get a better understanding of what "interpenetration" means for Cage and the composers we have just mentioned, let us come back first to the dualism between linearity and non-linearity which we had taken as starting point.

In a recent reappraisal of the whole problem, Jonathan D. Kramer has suggested to

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define anew the linearity, as "the determination of some aspects of music in accordance with expectations that arise from preceding music". On the other hand, non-linearity is "the determination of some aspects of music in accordance with expectations that arise from principles that govern an entire piece or section". The "most pervasive linearity" is to be found in tonal music, but, Kramer adds, "even tonal music displays non-linearity", whether in "the creation of consistent textures" or in "the realm of formal proportions", since "the lengths of sections and/or amounts of time spent in various tonal areas interrelate in an atemporal, non-linear manner." Symmetrically, certain atonal pieces may preserve linearity, and others will allow "a cumulative understanding of ~~no~~ non-linear proportional balances". In sum, all music is both linear and non-linear ; linearity and non-linearity "can coexist on different or

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even the same hierarchic levels". But though total linearity and total non-linearity "are both impossibilities", "certain experimental composers of the last quarter century have approached both these extremes".(37)

What Kramer introduces here is an "interpenetration without obstruction" between the two polarities of linearity and non-linearity. Thus these polarities may appear as complementary. In confirmation of such a thesis, one may quote Christian Wolff's statement about non-linearity as resulting from a holistic perspective taken over the whole of a work : seen in this way, the limits of a piece "are expressed, not at moments of time which mark a succession, but as margins of a spatial projection of the total sound structure"(38). Non-linearity, then, does not negate linearity ; rather, it emerges from linearity. "Moves intersecting and voices overlapping, Wolff says in another text, can obscure structural out-

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lines and produce meetings or events that are disengaged from them to become simply themselves. Then, a structure that seems closed by a square of time-lengths may also be dissolved by including a zero in the sequencing of the time-lengths' proportions (e.g., 2 1/4, 1, 0, 2...). The zero I take to mean no time at all, that is, no measurable time, that is, any time at all."(39) - To this elevation of time from the sphere of sequential measurement or linearity to a "subtler form of time" which is "also a more encompassing and transcendent mode of time" and may become "so all-encompassing that we can either say (paradoxically !) that time and space cease to exist entirely, or that all time and space exist simultaneously, now"(40), the only one indispensable gesture is the including of the zero : an introduction which, far from meaning only (as Stockhausen thought) the creation of a perilous gap within the continuous stream of linear time, confirms the

validity of the entire hourglass concept of time, though showing the limits of its use as well as those of any quantifiable, physical measurement. No wonder, then, if Kramer's last words seem to echo Christian Wolff's account of the "becoming themselves" of events through the transcending of the elementary temporal level : "When certain aspects of a piece, Kramer writes, exist within the space of the music for their own sake, not because of some progression, they are atemporal. Their impact is not dependent on their position along a time continuum, but they nonetheless contribute to overall coherence. Thus, nonlinearity is an organizational force.(...)It can interact with linearity in a variety of ways. From this interaction come many of the tensions, resolutions, and hence meanings of music."(41)

Since, according to John Cage, poetry "is not poetry by reason of its content or ambiguity, but by reason of its allowing musical elements (time, sound) to be introduced

into the world of words" (42), prosody, i.e. the "horizontal" (measured) verse, can but require its own transcending toward a "vertical" (not necessarily bound by measured time) dimension - somewhat analogous to Gaston Bachelard's "poetical instant"(43), which suddenly blazes up in a polysemic flash. Poetry, in this sense, needs zero time, i.e., the point of intersection between vertical non-linearity and horizontal linearity. And no less than the musician, the poet has to be the safeguard of the chink of freedom which runs the risk to be buried at any moment, if the zero disappears - a state of affairs which has been beautifully evoked by Hölderlin :

"Sent out of tune
By little things, as by snow,
Was the bell, with which
The hour is rung
For the evening meal".(44)

NOTES

- 1 - George Rochberg, "Duration in Music", The Modern Composer and His World, ed. John Beckwith and Udo Kasesemets (Toronto : University of Toronto Press, 1961). p. 60.
- 2 - Leonard B. Meyer, Music, the Arts, and Ideas (Chicago : Chicago University Press, 1967), p. 164.
- 3 - Meyer, op. cit., p. 159.
- 4 - Igor Stravinsky and Robert Craft, Dialogues and a Diary (London : Faber and Faber, 1968), p. 127.
- 5 - Igor Stravinsky and Robert Craft, Retrospectives and Conclusions (New York : Knopf, 1966), p. 76-77.
- 6 - Meyer, op. cit., p. 84.
- 7 - Cf. Jonathan D. Kramer, "New Temporalities in Music", Critical Inquiry 7 (1981), p. 539-556.
- 8 - Cf. Karlheinz Stockhausen, "Erfindung und Entdeckung. Ein Betrag zur Form-Genese", in Texte zur elektronischen und instrumentalen Musik, Dieter Schnebel ed. (Köln : Verlag M. DuMont Schauberg, 1963), vol. 1, S. 222-258.
- 9 - Kramer, op. cit., p. 549.
- 10 - Stockhausen, op. cit., S. 250.
- 11 - Cf. Stockhausen, "Momentform"(1960), in Texte, loc. cit., S. 189-210.
- 12 - Robin Maconie, The Works of Karlheinz Stockhausen (London : Marion Boyars, 1981; 1st ed. 1976), p. 164.

- 13 - Maconie, op. cit., p. 167.
- 14 - Maconie, op. cit., p. 170.
- 15 - John Cage, "Forerunners of Modern Music"(1949), in Silence (Middletown, Connecticut : Wesleyan University Press, 1961), p. 62.
- 16 - John Cage, "To Describe the Process of Composition Used in Music of Changes and Imaginary Landscape No. 4" (1952), in Silence, loc. cit., p. 59.
- 17 - John Cage, "The Future of Music : Credo" (1937), in Silence, loc. cit., p. 4.
- 18 - John Cage, "Defense of Satie" (1948), in John Cage, ed. Richard Kostelanetz (New York : Praeger, 1971),p.82.
- 19 - John Cage, "Experimental Doctrine" (1955), in Silence, loc. cit., p. 14.
- 20 - John Cage, "Experimental Music", in Silence, loc. cit., p. 9.
- 21 - James Tenney, "John Cage and the Theory of Harmony" (1983), Soundings 13 (1984). I quote from a copy of the manuscript, p. 3.
- 22 - B. Chaitana Deva, "The Emergence of the Drone in Indian Music", in Psychoacoustics of Music and Speech (Madras : The Music Academy, 1967), p. 58-86. Quoted in Lewis Rowell, "Music in India and the Ancient West", in Essays on the Philosophy of Music, ed. Veikko Rantala, Lewis Rowell, and Eero Tarasti (Acta Philosophica Fennica, vol. 43; Helsinki : Societas Philosophica Fennica, Akateeminen Kirjakauppa, 1988), p. 330.

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23 - Lewis Rowell, op. cit., p. 329.

24 - Cf. John Cage, in conversation with Daniel Charles, For the Birds (Boston/London : Marion Boyars, 1981), p.103.

25 - Lewis Rowell, op. cit., p. 332.

26 - Cf. John Cage, "Letter to Paul Henry Lang"(1956), in Kostelanetz ed., John Cage, loc. cit., p. 116.

27 - Gottfried Wilhelm Leibniz, "Discourse on Metaphysics", in Leibniz : Basic Writings, trans. G.R. Montgomery (La Salle, Illinois : Open Court, 1968), p. 14-15. Quoted in Steve Odin, Process Metaphysics and Hua-yen Buddhism (Albany : State University of New York Press, 1982), p. 16.

28 - Cf. John Cage, quoted in Calvin Tomkins, The Bride and the Bachelors, The Heretical Courtship in Modern Art (London : Weidenfeld and Nicolson, 1965), p. 98 : "One day I asked (Miss Sarabhai) what her teacher in India had thought was the purpose of music. She replied that he had said the function of music was 'to sober and quiet the mind, thus rendering it susceptible to divine influences.' I was tremendously struck by this. And then something really extraordinary happened. Lou Harrison, who had been doing research on early English music, came across a statement by the seventeenth-century English composer Thomas Mace expressing the same idea in almost exactly the same words. I decided then and there that this was the proper purpose of music. In time, I also came to see that all art before the Renaissance, both Oriental and Western, had shared the same basis, that Oriental art had continued to do so right along , and that the Renaissance idea of self-expressive art was therefore heretical."

- 29 - Steve Odin, op. cit., p. 16.
- 30 - Ken Wilber, "Reflections on the New Age Paradigm", in The Holographic Paradigm and Other Paradoxes, Ken Wilber ed. (Boston : Shambala, 1985), p. 258. Cf. also Ken Wilber, Eye to Eye, The Quest for the New Paradigm (Boston : Shambala, 1990), p. 164-165.
- 31 - Ken Wilber, op. cit., ibid.
- 32 - Ken Wilber, op. cit., ibid.
- 33 - Steve Odin, op. cit., p. 2.
- 34 - Odin, op. cit., p. 3.
- 35 - Odin, op. cit., ibid.
- 36 - Cf. John Cage, "Composition as Process", 3 Lectures given at Darmstadt in September 1958, in Silence, loc. cit., p. 18-40.
- 37 - Jonathan D. Kramer, "Temporal Linearity and Non-linearity in Music", in Time, Science, and Society in China and the West (The Study of Time V), J. T. Fraser, N. Lawrence, and F.C. Haber, ed. (Amherst : The University of Massachusetts Press, 1986), p. 126 (Summary).
- 38 - Christian Wolff, quoted in Cage, "Composition as Process : III. Communication" (1958), in Silence, loc. cit., p. 54.
- 39 - Christian Wolff, "On Form", Die Reihe 7 (1965), p. 29.
- 40 - Ken Wilber, Eye to Eye, loc. cit., p. 78.
- 41 - Kramer, op. cit., p. 136.

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42 - John Cage, Silence, loc. cit., p. X (Foreword).

43 - Cf. Gaston Bachelard, "Instant poétique et instant métaphysique", Messages, No. 2 (1939). Published also in L'Arc, Cahiers méditerranéens, hiver 1961, p. 45-52; and in G. Bachelard, L'intuition de l'instant (Paris: Editions Gonthier, Bibliothèque Médiations, 1973), p. 103-111.

44 - Friedrich Hölderlin, "Entwurf zu Kolomb", IV, 395. Quoted in "Remembrance of the Poet", by Martin Heidegger, Existence and Being (South Bend, Indiana : Gateway, 1949), p. 234.
