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In one of his fascinating short stories dedicated to the idea of the labyrinth the Argentine writer Jorge Luis Borges introduces a Chinese wise man, name of Tsui-Pen, who after many years of ~~the~~ distinguished public ~~work~~^{service} retires in order to ~~write~~^{write} a novel and to create a labyrinth which should be infinite. When he dies thirteen years later, his heirs are sorely disappointed. There is ~~no~~^{neither a} labyrinth ~~to be found~~^(nor a novel) ~~and~~ only a heap of totally confused, repetitious literary fragments. In Borges' story an English scholar solves the ~~enigma~~ puzzle when he finds in one of Tsui-Pen's letters this sentence: "I leave the garden of the ramifying pathways to the divers futures, not to all of them." The scholar says: "Almost upon reading this, I understood: the garden of the ramifying pathways - the labyrinth - was the chaotic novel. The term: 'divers futures, not all of them', evoked the image of ramification in time, not in space. In all works of fiction a character confronted with various possibilities chooses one of them and rejects the others. In Tsui-Pen's utterly inviolated work he ~~chooses~~ chooses simultaneously all of them. ~~Thus~~ In this manner he creates for himself divers futures, divers times which equally grow and ramify." Unquote.

It is not only in the work of fiction that a character ~~chooses~~ decides for one of the possible avenues to take, but also the author of the work has to decide at any given point which one of the countless possible continuations he will choose, and so has the composer whose work unfolds in time. ~~He~~ In the old days - if he was

in doubt - he could invoke a rule, ~~and decide whether to follow or to break it~~. What is a rule? It is a description of procedure to be followed if certain results are to be obtained. If, for instance, somebody wishes to write music in the style of Palestrina, he has to follow certain well defined rules, which were derived from a detailed description and analysis of Palestrina's procedure. If he wishes to write a piece of music in E flat major - which is a much less narrowly circumscribed project - he will have to apply the rules of functional harmony in order to know ^(at any given point) which ~~ones~~ ^{number of} of the ~~practically infinite~~ possible continuations will be favorable and which others must be avoided.

Rules of this nature are derived from existing practice. They are empirical. At the same time they are based on assumptions created by the human mind according to man's aesthetic aspirations and ideals which, as we know, are different in different civilisations and ~~the~~ subject to ^{historical} change within the same civilisation. In this respect they are ^(in character) related to the axioms of mathematics. Just as a system of non-Euclidian axioms will create a perfectly consistent non-Euclidian geometry, a system of non-tonal aesthetic assumptions will describe technical procedure leading to the creation of non-tonal music.

In any period of change the defenders of the status quo will try to represent their theoretical assumptions as something absolute and permanent, which cannot be changed, so that any attempt at changing it ~~will~~ ^{must} be condemned as presuming foolishness. The most promising way

(aesthetic)
 of protecting an theory against corrosion is to cover it with a layer of scientific veneer, in order to demonstrate that the theory is ~~an inevitable~~ ^{arbitrarily} ~~after~~

the inevitable result of scientific research into the natural conditions of the material

~~of the material~~ conditions, which of course can not ~~be~~ ^{be} changed. The trouble with this kind of reasoning is that ^{the results of} scientific insight, as we well know, are far from durable.

The theory by which Ptolemy explained the motion of the celestial bodies was not only an admirable product of acute thinking, but also almost entirely correct since it covered almost everything that he could observe in the sky. New ~~methods~~ ^{methods} of observation furnished results that required different interpretation, which was worked out by Galileo, Newton and others and superseded the old theory. ~~But~~ In our own time ^{however} ^(in its turn) this new astronomy is becoming more and more a museum piece. Evidently a theory of musical composition will not be protected from obsolescence by making it appear to be ^{the} result of objective scientific investigation.

Besides, we admire the great masters of the past not so much because they obeyed the rules particularly faithfully, but because of their ingenious ways of modifying, stretching ^{even} or creating the rules. Mozart and Beethoven did not know any better than ^{hundreds of} ~~many~~ hackwriters of the period how to resolve a diminished seventh chord or how to modulate from here to there. But they constantly found new and untrod methods of going ^{through} such elementary routines ~~so~~ so that they would ~~appear~~ ^{sound} neither elementary nor routine-like.

In other words, when they had to choose one of the infinite possible ramifications of the path, they selected one that was just slightly off the well marked avenue

of tradition. This situation was aptly described by the American composer Carl Ruckert in an analytical paper where he stated that the strongest artistic effect is achieved by an event that is both: unexpected and necessary. It must be unexpected, that is to say: it must contain an element of surprise. ~~But~~ What we would expect is a sequence of events described by the accepted rules, which we either know ^(explicitly as connoisseurs) because we have learned them, or which we are aware of implicitly because we are accustomed to hearing music written according to the rules. To create something unexpected, that is to overstep the ~~the~~ limits set by the rule is rather easy. To make it ^{so that it will} be felt as necessary is a much more difficult assignment. The inevitability of the unexpected event will be ~~perceived only~~ ^{perceived only} if we are prepared (through the context in which it appears) to expect the unusual. It is still unexpected because it is not what everybody else who was steeped in the traditional rules would have done, but it appears necessary because we, ~~after~~ ^{by} remembering what had happened before - that is, by being aware of the context - knew that something unusual would have to happen. By appearing necessary the unexpected takes on the character of a unique solution. It is certainly not a chance result.

In the course of the 19th century composers became increasingly tempted to trespass on the traditional rules rather than to obey them. What caused this trend has been examined from a great many viewpoints, and more or less convincing explanations were propounded. We do not have to go into this field of inquiry, for here we are only concerned with the results of those processes. The fact is that the present-day composer in the case

of doubt ~~to not any longer find comfort in~~ (5)
referring to a rule, ~~but~~ no matter whether he wants
to apply or to break it, for there are not any
longer any generally accepted rules. Mozart
was still able to explain that in a certain ~~aria~~
in the Abduction from the Seraglio he would modulate
to a more remote key, to demonstrate the mental
derangement of Osmin, ~~than the one everybody would expect~~
a procedure that could appear promising only ^{in order} on the
premise that the audience knew exactly what key to
expect if Osmin had not been mentally deranged.
Today this sounds like a fairytale from another
planet.

Ever since the advent of atonality, about
~~fifty~~ sixty years ago, we have been increasingly
inured to the condition that "anything goes". The
originators of the movement, Schoenberg and his
immediate followers, tried to put brakes on the
avalanche by suggesting other than the traditional
criteria of "Stimmigkeit", ~~that~~ which is a German
term ~~for~~ meaning approximately correctness,
appropriateness, being in tune with some overall principle
and the like. ~~If these were the only principles~~
Since the rules of tonal harmony ~~simultaneity of sounds~~ ^{was long gone} which apparently had
been the ^{chief principle} governing traditional music ^(did not exist any longer)
the twelve-tone technique would substitute the new
concept of consistent use of tone patterns, in
which the ^{hastily adhered to} succession of ~~the~~ pitches would produce
a new kind of context by which to measure
the degree of surprise engendered by the musical
process.

It is curious to notice that exactly the opposite happened.
Undoubtedly a musical work completely executed in the
dodecaphonic technique presents a high degree of

consistency because of the ubiquity of the tone patterns and tone configurations derived from the basic tone row. The listener does not have to perceive consciously this tones row, but according to the degree of his alertness and sensitivity he will be aware of the unity of design. However, this over-all unity does not affect the progress of the musical process in the same way as the directive tendencies inherent in tonal harmony ^{had done previously} ~~had done previously~~. In other words, nothing can be expected, which is only another way of saying that anything may happen. Obviously it is this lack of familiar landmarks which causes in many listeners a lack of orientation, and this feeling of being lost is the cause of the difficulties experienced in the acceptance of this new music.

The evolution of that music has gone one step, or even several steps further, in the realization of what is known today as serial music. Technically this means that the concept of overall unity is extended to cover all and any aspects of the musical process, not only the succession of pitches which used to be the prime concern of the twelve-tone technique. In fully worked-out serial music pattern of values are established not only for the ordering of the tones, but also for dynamic levels, timbres, densities and above all for rhythmic conditions, that is for time relations and durations.

These patterns are premeditated and consistently adhered to, so that the composition is controlled in every detail and at any given point by the complex mechanism that the composer had set up in his system of patterns, not by his inspirational impulses as in the old days.

The complexity of the mechanism makes it impossible to foresee with any degree of accuracy what is going to happen at distant points of the work,

although the elements constituting the particular event are predetermined. The unpredictable happens by necessity. Since it is predetermined, it is objectively not to be described as a chance result, but since it is subjectively unpredictable, it contains an element of chance. Since it is the result of completely predetermined processes, ~~and~~ nothing else could happen at the point under consideration, so that the event does not offer any surprise. At the same time it may ~~present~~ ^{produce} configurations which seem to contradict vehemently a context that the listener imagined to exist on the strength of his interpretation of what had been going on so far, so that the element of surprise is potentially present after all.

From utterances of composers and from other symptoms one may conclude that the essential motivation for the ~~development~~ ^{introduction} of complete serialization was the desire to impart to the music the character of complete chaos.

It seems paradoxical that this should be achieved through the application of so strict an ordering as never before had been applied to musical creation. ~~The point is that~~ However, it is just this ordering that makes the establishment of themes in the traditional sense impossible, ^(and development)

It may be said that only through this move music became an abstract art in the sense in which we apply this term to painting, since serialization eliminates subject matter from music — by which I mean musical subject matter, for extra-musical subject matter has never existed in music except as a passing illusion of some theorists. Obviously one might think that nothing would be easier ^{than} to produce chaos if this is what is desired, and that it seems to be ridiculous to construct a formidable system of predetermined organization with the aim of conveying the impression of disorder.

and this absence of tangible solid statement evokes the image ~~concept~~ of totally chaotic shapelessness.

Practitioners of the game say that following the uncontrolled impulses of the creative mind would too easily lead back ~~to~~ into traditional grooves, for inspiration is by no means so spontaneous and independent as most people like to think. It is very highly conditioned by historical heritage, upbringing, training, environment and influences of many kinds, so that really original creation might be better ~~left to the~~ off under the control of a more objective organizing apparatus. It certainly is true that in the course of an unfolding musical process generated by serial predetermination frequently situations ~~arise~~ ^{arise} of which the composer may not have thought without being driven to them by his self-made serial vehicle, inhibited as he might have been by more conventional ways of thinking.

The most objective, completely depersonalized mechanism is chance. We know that there is a school of composition following this idea to its extreme end by letting the shape of musical events be decided through ~~turning a roulette wheel~~ ^{turning a roulette wheel}, ~~tossing coins~~ ^{tossing coins} and related procedures. Perhaps one should not call it a school, since flipping coins or rolling dice does not require much study. This seems to represent the position of the individual in Tsui-Pan's infinite labyrinth who accepts simultaneously all possible continuations at any point of ramifications by letting chance decide which one should be chosen in ~~the present~~ ^{any particular} round of the game. The implication is, of course, that the composer has completely abdicated as a generator of music. He has eliminated himself.

There are less extreme ~~variations of the theme~~ formulations of the role of chance such as for

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instance when the composer offers his interpreter space and time for improvisation. Usually this works to some satisfaction only ~~if~~ when the interpreters are so congenial and well versed in the mannerisms of the composer that they would be almost able to write the music which the composer for some reason did not want to write himself.

A more ~~not~~ promising ^{method} of ~~the~~ assigning to chance a legitimate role in the process consists in preparing a fully worked-out musical elements ^(set of) and indicating a number of different ways in which these elements may be combined, according to the choice of the interpreter. ~~The~~ The motivation of such ~~arrangements~~ arrangements is not really the urge to ~~favor~~ ^{do} the interpreter ~~in~~ a favor by letting him manipulate the material, but the belief that the artistic problem that ~~generated~~ caused the work of art to originate has more than one solution and that several of these solutions should be presented. We are here in the position of the wanderer at the crossroads of the ramifying pathways who chooses diverse futures, but not all of them.

This attitude seems to be typical of our ^(relativistic) frame of mind. It has to do with the frightening and precarious conditions of life into which we have manoeuvred ourselves. We have become doubtful of idealistic ~~thought~~ thought processes based on the firm belief in unique solutions.

If the elements constituting the material of such a work are meticulously reasoned out and snuffed through some serial construction, their various combinations will reveal more and more relationships between the particles of the material ^{and} constantly changing and frequently surprising contexts. What is next to each other in one version, may be far apart in the following, centers of density will change their positions, and so forth. The underlying principle is related to the concept of the mobile in the spatial arts.

~~instilled with~~ nourished by the assumption that
~~man~~ knows how things ought to be and kept alive by
 the optimistic hope that things will ultimately be ~~what~~
~~he~~ thinks they should be. Classical music is shaped
 in the image of speech, having the character of
 logical discourse. It moves in one direction
 from point to point, from beginning to end, and in
 discussions of that music the term ~~musical~~ "logical"
 was frequently applied to characterize supposedly
 meaningful continuations. The new music is oriented
 rather toward existentialist patterns of behavior.
 It is quite typical that in some of its branches
 reversible configurations play an important part,
~~models~~ groups of tones and sounds which may be
 played forward as well as backward. ~~Instability~~
 and openness of ~~form~~ structure, ~~emphasis~~ emphasis on
 multiple choice, variability of combinations of
 elements and changeable form characterize
 the music that is dedicated to diverse futures, if
 not to all of them.