Kaleidoscope and Silly Putty: An Appositive Inquiry

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Recently a young friend, aged eight, came to visit me bearing a gift: a plastic egg containing a blob of Silly Putty. Perhaps he made me this present for the simple reason that he himself wanted to play with it, for he promptly proceeded to do so. But I would rather like to think that he regarded it as a sort of return gesture, for I had given him not long before a Kaleidoscope that he now brought along, too, a fascinating toy that even I like to play with occasionally. At any rate, here I was between the proverbial twin horns of a dilemma: should I join my young friend in play or should I retire to my study to pursue my own contemplations? I solved the problem the way one usually does when not in complete control of the alternatives: I did first the one and then, after Daniel had left, the other. Even now, some weeks after that visit, I am not certain which of the two was the worthier enterprise. But since the reader was not able to participate in the pleasures of the first, I think that I ought to share with him the results of the second.

Silly Putty is a plastic material with properties that invite manipulation. Its texture is homogeneous; it possesses both plasticity and elasticity. It can be made to take on any shape or form without having either of its own. One can knead it into a ball and bounce it around as if it were rubber. It can be flattened out like dough or clay, molded into mountains or molehills, given an angular line or an undulating one, made to resemble a phallus or the twin humps of a Bactrian camel. In short, its versatility is protean, reflecting ultimately only the limitations of one's own imagination or dexterity. Amorphous itself, it exists as a potential for multiple shapes and does not require or create an environment in which to function. It is stuff from which to fashion any number of simulacra, entirely at one's convenience. It serves equally well as a means for escaping reality or, if one so wishes, for emblematically exploring it.

I am as attracted as the next man to escaping reality by means of play or contemplation. Constitutionally, though, I am more predisposed toward exploring it, particularly within the safe comforts of emblematic thought. But at the same time, as a creative artist of sorts, I am also impelled to direct action, i.e., to give concrete reality to a set of personal constructs through the free exercise of my craft. If these be seemingly opposite tendencies, their integration does not constitute a problem but rather an enduring (and obdurate) challenge. Certain it is that a reconciliation of opposites, a resolution of contradictions, cannot meet this challenge. To maintain them in a permanent—even if precarious—balance is more to the purpose. Hence I turned toward seeking a more informed confrontation of implications.

At the outset the derivation of the very name Kaleidoscope suggested an essential quality of its nature: a spectrum of "beautiful form." It would be pointless to argue at length the obvious ambiguity of terms like "beautiful"

and "form." Ambiguity is not to be feared here but rather considered an asset, revealing the very nature of things much better than might a precise definition with its built-in straight-jacket constraints. In any case, I have no intention of implying that our pleasure and delight in the ever-changing configurations of a Kaleidoscope should be attributed solely to an aesthetic sensitivity stimulated by "beautiful forms." There are other, more important considerations, particularly when viewed against the polarity of Silly Putty's amorphous nature.

A Kaleidoscope is, of course, a highly structured instrument created for a specific purpose: to present the collective of its ingredients in one particular way. The ingredients (slivers of colored glass) have properties of which only two, viz., Transparency and Color, play an important part. The ingredients are not viewed directly, and neither is their combination; nor do we form any abstract image of their relatedness or cohesion. It is their refracted reflection, combined into a perforce symmetrical pattern, with which we are presented. We can produce different patterns by simply shaking the Kaleidoscope but cannot control the nature of the changes or predict their results. All patterns formed will differ from each other to some degree. Yet in the end the basic similarity of all patterns far outweighs the differences observable in each. Protracted contemplation will result in satiety and force us to confess that all the differences do not, in fact, make any real difference. What we are offered are not similar or different forms but the *prototype* of a collective form as instanced by an almost endless number of variants or permutations.

As a musician who is composer, teacher, and performer, I am naturally and perhaps instinctively interested in and preoccupied with Sound (the material of music), with its organization (or the lack thereof), and with the forms organized sound happens or tends to take. In this context, then, certain properties of Kaleidoscope and of Silly Putty have both relevance and significance, on several levels and in various ways. In the first we can see the role played by Symmetry, encompassing an almost endless variety of patterns achieved with only a limited number of ingredients. The second exemplifies a total absence of pattern, whatever the shape eventually superimposed on the amorphous and unstructured material might be. Furthermore, inherent in the first (Kaleidoscope) is an absence of the element of *choice*: we neither select nor influence the resultant patterns (or their succession) to suit some structural purpose of our own. Indeed, we cannot have a directed purpose in mind at all. Inherent in the second is the lack of *necessity*: whatever shapes we construct will be intentional, arbitrary, willful, and therefore self-justificatory. Here everything depends on free choice, while nothing (beyond our control) dictates it. The patterns of the Kaleidoscope are the products of optical laws and the incidence of chance; we do not provide them with a specific identity and cannot be held *responsible* for them. But every form into which Silly Putty is shaped is entirely and exclusively our responsibility.

Thus I suggest that in musical composition some processes employed in

the organization of sound and in giving form to organized sound may be related to aspects—inherent, latent, or manifest—of our two "toys." To a certain degree, our structural concepts of pattern on the one hand and of "free" form on the other can be regarded as metaphorical implementations of those aspects, properties, attributes. Of course, even though correspondences are striking and close, I do not mean to assert that they are all-pervasive and exclusive. But a number of parallels clearly exist and ought not to be ignored. Whatever the degree of influence, however, we must keep in mind that the individual works of art and artifacts themselves are considerably richer in expressive meaning and import than any that Kaleidoscopic patterns or Silly Putty shapes might possess. This is principally due to the many contexts of elements and of their organization in the one and the other.

To take one instance only, consider the function of *symmetry*, the specific proportionate relationship of parts to one another. Such symmetry is inherent in the patterns of the Kaleidoscope and is also prominent (on several levels of organization) in literally thousands of musical compositions. We would prefer to think of symmetry as existing in Nature, as being a "natural" phenomenon and, as such, one of the chief implementing tools of articulated order. We would like to think that given the right conditions and circumstances Symmetry will arise by itself, will exist as the proper balance of elements, and can thus be taken for granted. Yet this is not so in Music. Since Music is a process in Time, unidirectional in its forward flow and (for practical purposes) non-reversible, the segments of its continuity cannot coexist simultaneously: symmetry can apply only to the succession of its events. This means that, in Music, no *state* of symmetry or balance exists, except as a telescoped remembrance of successions that must have been willed to occur in this particular proportionate manner. In other words, symmetry itself is an event that must be brought about, having the nature of a process but not the existence of fact. Of course, by abstracting from this continuum we can create a perceptual context in which it can be thought of as functioning, and which can be conceptualized—all of which makes us fully responsible for its occurrence.[1]

And yet, perhaps we are not fully and individually responsible. For centuries, symmetry has been collectively acknowledged (and practiced) as an important aspect of order and balance, cutting across styles of discourse and often dominating—some would say oppressing—the free unfolding of musical thought, and restricting to a degree the area of individual choice to a comparatively small number of alternatives. Philosophic and aesthetic theories were elaborated which asserted that symmetry and order, being "natural," were therefore desirable, correct, and beautiful. Hence Music, if it is to take its rightful place among the arts, should or must imitate and express—or at least strive for—that same perfect harmony of parts and proportions as exemplified in Nature. Only in this way can it fulfill its deeper purpose, which is to please God, Man, Society, or what will you. Many

composers were caught up in this belief, without necessarily articulating it overtly; they shared it as something fundamental to the nature and practice of their art, rarely to be doubted or questioned. It influenced their imagination at its source and governed their inventiveness, but it also called forth and stimulated a striving for the exploitation to the utmost of preselected resources.

There is not much point in quarreling (*ex post facto*) with such a belief—I suppose it was and is as good as any other. It certainly permitted the creation of many of our greatest works of art, and I am not prepared to argue whether this came about because or in spite of such orientation. At any rate, in periods when assorted symmetries of organization exercised collective sway over creative imagination and artistic production, it was not entirely a matter of individual responsibility to reassert them anew in numerous single compositions. Could artists have thrown off such limiting constraints and pressures, had they wanted to? Could they have wanted to? This is a moot point; some who did so obviously could. As for the others, who knows?

To summarize: symmetry and patterned order are inherent attributes, automatic by-products, of the translucent images formed in the Kaleidoscope. In musical composition, on the other hand, they are a function of relationships purposefully created. Bringing about a patterned organization on the simplest level is achieved through the intentional exclusion of disruptive opposites. We are accountable for the satisfaction and pleasure we find in such achievement, and also for the aesthetic and expressive values we associate with it. It is frequently maintained today that these "expressive values" belong to the past, that they have become obsolete in our unbalanced world, that they have lost their relevance. I do not agree; I would say rather that they retain as much relevance to our present as all esteem for any other past might be considered to preserve. This, however, is an immense variable and need not be dealt with here.

We seem to have left Silly Putty way behind, but not really. Its emblematic relevance to compositional procedures in Music (and with some self-restraint I am not considering here any of the other arts) is of a different yet equally direct order. Indeed, we could almost say that in some respects we have entered upon an age of Silly Putty. I do not mean to sound facetious: Silly Putty may be a toy, but it is not a joke. The properties that led me to discuss it have already been mentioned and need to be recalled only briefly.

First: the amorphous nature of the material itself, without inherent tendencies of its own. Today we think of and use sound, the sonorous material of music (and, for that matter, silence) in a somewhat similar way. Formerly, sound was manipulated primarily through the specific organization of its concomitant attributes: pitch, duration, intensity (volume), etc. Small (or narrow) preselected segments of such spectra were combined into compound units and interrelated within larger entities. It was these patterns of preorganized combinations (e.g., scales, chords, rhythms, tonalities, etc.) that provided the raw materials of composition. But today's composers do not

necessarily begin with such preselected, prepatterned sets of relationships, not in respect to melodic, harmonic, or rhythmic articulation, nor, particularly, with regard to Form. They begin with the stuff, the material itself, with unorganized, amorphous sound, and with the enormous, if perhaps not yet complete, range of its attributes and of new concepts of utilization. That range has expanded to an unprecedented degree, its materials shaped and molded (like Silly Putty) into any desired form, not limited to, but not excluding either, the use and development of some preorganized units or patterns. To us it may indicate that there is a break of tradition here, often deliberately posited. Old systems seem to have been abandoned or simply ignored, even though they have served us well for at least a millennium. Their time seems to have inevitably gone by; yet they survive as monuments to a vitality that is no longer ours to imitate but rather to experience and, perhaps, to re-create under some different guise. The vast number of musical masterworks survive not unlike great cathedrals that have outlasted worshipers, heretics, and even money-changers. But the main and proper concern of most composers today is with the music of the present, and perhaps of the future, too, in the sense that they are conscious of the present as the eventual past of the future rather than the already articulated future of the past. That is all, but it is quite a lot.

Second: in giving specific shapes and forms to amorphous sound material, we are very conscious today of being free and responsible agents. We select our ingredients anew and even from scratch, as it were, and also create entirely new ones. We try them out, experiment, and sometimes accomplish. We feel very "engagés" in all that we are doing and in what we refuse to do. There is a new directness to such compositional intents, a rhetorical quality of address and invocation to such music, which is often immediately effective. At its best this music has an enormous expressive potential, articulated and almost nakedly employed through the hypertrophied qualities of mere sound, of intensity, volume, and rhythmic aggressiveness. This is particularly evident when presented in a strongly personal, if not always individual, manner. The *general* expressiveness of patterns and balances, of orderliness and restraint prevalent in much music of earlier periods, may seem almost neutral in comparison: impersonal, yet strongly individual.

Third: many composers *do* want their "works of sound" to create their own environment in which to function. They aim to achieve this most directly through control—aggressive and total control of the environment. Performers and audiences alike, and even the unpredictable chance event, are all subordinated to a compelling drive aimed at maximum impact amounting to tyrannical control. But, fundamentally, this soon becomes self-defeating. The creation and the structuring of environment under imposed conditions of total control tends to become, in the end, a prison for those who conceive the "work" and devise the "event" just as much as for those who listen to, participate in, or want only to experience it. The arbitrary compulsiveness, often quite mindless, of many of these attempts seems to indicate that they

represent a newly primitive rather than a sophisticated stage of development. Becoming obsolete as soon as their immediate time is over, they turn into remnants of outdated rebellions that have lost pertinence, although they might still command some force of coercion.

Fourth: although the material of both Silly Putty and Music may be shaped into any number of forms, there remains an important difference. Musical forms, even if self-generated and self-justificatory, are highly organic. That is to say, they derive relevance directly from the nature of the material, they acquire significance through purposeful organization, and they show an interrelatedness of the parts to each other and to the whole, one that cannot (and never could) be defined in terms of patterns and balances alone. The organic configurations of compositions, however, are a matter of choice, not necessity. In this sense, the shapes of Silly Putty, deliberately created though they may be, cannot be equated with the new organic forms that we can see emerging from recent musical practices.

A few further observations are necessary to point up instances of unresolved contradictions. Mutually exclusive opposites are embraced as a matter of course in the compositional practices of today: e.g., total serialization (of all musical elements) on the one hand, totally aleatory procedures on the other. The most exact specification of parameters in electronic music might alternate or combine with instructions directed toward achieving complete independence from them through positing the widest possible latitude in realization-performance, and even in the "accidents" of the composition itself. Thus the distinction between composition and performance may be blurred at will, or sharpened into a contrast between the first as a process and the second as a mere reproduction of the results of that process. Such opposites coexist in today's music quite peaceably. How much farther we might go from here, and toward what future, cannot be predicted. Our anxieties, if we feel any, are part of the scene, and so are reactions of surprise, shock, indifference, or exaltation. But we do know how far we have come: we can retrace (in historical perspective) a progression from the anonymity of composers to the individualized and even personalized figure of the artist. One line of development might lead to the depersonalization, partial or complete, of computer-made music and its absolute determinacy, if desired. Another line might lead to deindividualization, e.g., a sort of symbiosis of composer and performer, the former selecting and supplying the raw material, and the latter attending to sequence and combination. What beckons is a sort of collective improvisation and eventually completely aleatory "Happenings," aimed at absolute indeterminacy. Thus the future, either future, is full of question marks.

From the wish that our works of art possess lasting, unchanging values, created for eternity, as it were (what presumption!), we have moved to the near-compulsion of capturing the immediate present in them and expressing it as *the* event of the moment (what pretention!). We may organize our compositions without any specific definition of shape, form, or structure,

and we might also deliberately avoid giving them any fixed identity. We may want every performance to be different from all others, i.e., induce ever-new permutations of the same elements. At the same time, obverse impulses drive us to immobilize one particular performance on tape, record, or film, to fix it immutably to a degree that was unknown (and would have been both inconceivable and undesirable) in previous ages of symbolic notation through conventional signs. As in our Kaleidoscope, such a series of alternate sound-events (performances) constitutes really a *prototype* of a composition that has no existence other than the totality of all its variants.

In the end all such contradictions and opposites are complementary and perhaps even neatly balanced. They serve as new psychological imperatives by the aid of which our turbulent age continues to evolve, offering itself for our comprehension. Not all our earlier questions have been answered, it is true; what is to be done about them? Jacques Barzun has written that "cultural periods are united by their questions, not their answers . . ."[2] In this sense our present age might have begun long ago to develop and build its own future, for the latter may well reveal what our missing answers were (or must have been), simply by having already implemented them in a synthesis inaccessible to our present awareness. At the same time it will surely reinterpret our questions themselves, placing them in a perspective that we cannot and need not discern. All things considered, this should be a comforting thought to those in despair over the chaos swirling around them, and a reassuring one to those concerned with doing their own thing.

As for me, I am looking forward to the next visit of my young friend. He phoned to tell me that he received a new toy called Digi-Comp No. 1, a small digital binary computer. He wants to know all about it, and soon he will want to know all about future implications, developments, and possibilities. I confess to being slightly apprehensive; would you not be?

NOTES

[1] We are of course able to compress the consecutiveness of articulated aural events, symmetrical or not, into simultaneity, be it in performance or on tape, etc., but not, however, without a change in identity of the totality of segments, and thus in effect producing a new "composition." Hence, the potential of temporal symmetry and proportionate balance with which the original segments might have been endowed is suppressed.

[2] *Classic, Romantic and Modern* (Boston and Toronto, 1961), p. xx.