

INSTITUTE OF CURRENT WORLD AFFAIRS

RR-6
Buckminster Fuller

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Dear Dick:

R. Buckminster Fuller, designer of the United States pavilion in Montreal, visited Tokyo a few months ago and we enjoyed two evenings with him. We had exchanged several letters over the past year concerning my wish to use some of his "ventilated prose" (Fuller's term for the poetical layouts he achieves by segmenting his dense writings) as the basis for an electronically presented "lecture." In spite of the many testimonials one finds to the disarming warmth and openness of the man, I had written to him with a discomfiting sense of temerity, outlining my plan to organize a "lecture-composition" on one continuous flow of words, but to distribute the individual words and phrases between three separate stereophonic channels of sound. This idea grew out of observations on how effectively his own graphic arrangement orchestrated the content of his writing.

Placing speakers at the vertices of a triangular layout, I proposed to distribute the material of the discursive text so that each "side" of the triangle would emphasize different idea content and, if possible, style of expression. Thus, if one moved about in the affected area his sense of the argument - of the thread of intention - would constantly change as he entered one or another of the fields created by the sound axes. (Argument, sometimes on a vast, almost epic, scale is typical of Fuller, as will be seen below, possibly because his life has so often put him in the position of stating ideas with which his listeners were hopelessly out of touch.) The innately rhetorical nature of Fuller's prose requires the frequent repetition of key phrases, and the periodic retracing which is necessary to pressing an argument home. These features, in turn, provide additional "musical" substance, ostinato-like counterpoints and extensions, and give some insurance of the redundancy that is so necessary to communication.

His responsive replies were encouraging, and he graciously supplied several reprints and books as well. I formed a text primarily of extracts from the "Untitled Epic Poem on the History of Industrialization," and he agreed to record the materials while in Tokyo for discussions with Japanese architects and businessmen on an enormous model city. I contacted him on the morning of his second day here. Typically, he was somewhat concerned about how I would recognize him at the hotel. I as-

sured him that there would be no problem, privately wondering how many men of his renown could imagine themselves anonymous.

On the way to our house, I began speaking rather loudly to him, remembering his damaged hearing. Startled, he backed away and explained that he had recently found an exceptionally good hearing aid. From this exchange grew some remarks on noise, selectivity, and the unfortunate way in which hearing aids amplify indiscriminately, leaving the afflicted person in distress, at the mercy of his momentary surroundings. When there is only one primary source, and background noise is low, an aid aids. In more normal situations one battles to extract the proper sounds from the general blare. Normally, of course, our direction-finding ability is assured by two receptors (ears) placed about six inches apart. Fuller advised me, as a composer, to rent a hearing aid for a few days so as to have this aural experience.

We were passing a construction area, almost inevitable in Tokyo, and Dr. Fuller reflected on Japan's dynamicism and capacity for rapid adaptation. He began to speak about the sea. My initial confusion was gradually replaced by delight at this first personal contact with his spiraling explanations. This time he was making an observation - or rather a series of them - about the influence that Japan's island geography had had on its people and their development. The sea, he said, forces a total responsibility upon the ship, its fittings, and the sailors. Japan is a ship of sorts, he observed, and this fact has forced its people into special assimilative facility and reliance patterns.

This reference to the sea and life on it was one of a number of allusions and illustrations which confirmed the teleological import of his boyhood summers on Bear Island off the coast of Maine, a point which he has frequently mentioned himself. On another evening he used the nautical knot as an image in describing his view of personality (or "pattern integrity"). "Take three different ropes of equal diameter," he began, "one of manila, one of nylon, and one of cotton, and make a simple running splice of the three. Next, make a simple back-loop knot in the end of the cotton rope and slide it along over the splice into the manila rope, and along the manila rope until it slides past the second splice onto the nylon and makes clear that the knot is neither cotton, manila, nor nylon, but a pattern integrity made visible to us by its temporary local displacement of the electromagnetic frequencies visible to us as colors and shapes."

Incidentally, one can gain more insight into the way Fuller has drawn on the elements of his early environment by looking at Calvin Tomkins' fine profile in *The New Yorker*, 8 January, 1966, and also in Dr. Fuller's own "Ideas and Integrities," published by Prentice-Hall. The aggregate is a fascinating testimony to the potential importance of stable and imagable surroundings during childhood - an environment in which one can see direct solutions to physical problems: the rudder, the net, the knot.

His continuous reminding of these early and apparently leisurely periods of island observation is also reflected in the circularity of his speaking and writing as noted above. Fuller says that while going over the same formulated territory - ideas that he has, as it were, "checked out" - something new frequently is revealed, and there was ample evidence of this even in the short time that we spent with him. The circling paths of his speech moved in and out of familiar territory, familiar, that is, to anyone who has read much of his writing, and yet they constantly surprise by new orderings and branchings which ultimately, and sometimes exhaustingly, lead precisely to the point originally under discussion.

Arriving at our place, Fuller submitted graciously to my musical explanations, drank copious amounts of tea, while refusing all "extras," explaining that he had recently lost sixty pounds in his continuing battle with commercial carriers' overfeed policy. After recording the materials I had prepared, he opened another manuscript, written for the Saturday Review's series entitled "What I Have Learned." Characteristically, Fuller's contribution is entitled "How Little I Know."

I have learned
 That man knows little
 And thinks he knows a lot.
 when any man can tell us
 Just how and why he is handling and disposing
 The energies of his breakfast;
 How he breaks down his chemical energy and
 To which glands is he routing
 The diversified energies of his ham and eggs;
 * * *
 We may say that this man
 Knows a little,

This material I was unfamiliar with, and it was, therefore, all the more surprising in variety of thought, approach, and language it employed, To move in a few sentences from the amusing directness of this metaphor on prenatal times:

I can't consciously recall those busy elementary assembly days, but postgraduate activity in experimental biology by me and you (one and two) which surprisingly produced wee thee (we three) and more (four), suggests to us that our subconscious reflexing can never forget the satisfactory routines of our 273 undergraduate days.

to the following information packed syllabry:

...the non-simultaneous aggregate of complex frequency integrated, multi-degrees of freedom permitted, individualized sequences, of experience evolutions, which we wave-modulatingly identify, in the subconsciously formulated, tongue and lips shaped, omni-directionally propagated, air wave patterning - sound WORLD.

is unsettling, at least. Not only the linguistic demands of finding oneself under bombardment by a sequence of multi-syllabic words, often performing unfamiliar grammatical functions, but the aural barrage as well is astonishing (almost like a Danny Kaye patter song). In spite of one's best efforts at attending to the words and their significance, one cannot avoid an awareness of the spectacle: this man's enormous personal wealth. His voice is soft, and he picks his way with apparent pleasure and interest through what would appear to most of us at first hearing an impenetrable thicket of words and ideas.

Afterwards we went to dinner and Fuller agreed to meet with several young Japanese professional people, a gathering we offered to arrange in spite of concern over the demands of his heavy schedule. While we ate, he remarked that one of the artist's important functions now is service as a repository. He recalled that an investigation into "creativity" financed by the National Academy of Sciences last year took special note of the artist's powerful methods of protecting his innate intellectual and conceptual capabilities. Thus, the artist may now serve a function not unlike that of the monk in his monastery during the Middle Ages. Not because there is any darkness now, but because a full scale personal armor is not so easy to come by in our age. Now, as in the past, there are values and ways of behaving which deserve conservation during a period of drastic change which is basically (even if unmaliciously) antithetical to them.

Buckminster Fuller has enormous confidence in the natural potential of men (that part which is usually inundated before it knows how to defend itself), and interest in the importance of reshaping the environment so as to allow us to rely less on "don't" and "no," the two words with which we so often intrude on a child's exploration. This had been displayed earlier in the evening as he recorded a passage from the Saturday Review article:

Despite their billionfold numbers
 Babies and very young children
 Soon after their arrival on Earth
 Have uttered and continue to utter,
 Spontaneous comments and questions -
 Concerning life on Earth
 And in Universe -
 Which are so economical
 And uniquely fresh
 In viewpoint and formulation
 As to be pure poetry
 Proving, apparently, that
 Poetry is inexhaustible:

To which their sophisticated
And surprised off-guard adult audience
Cliche unpoetically
"Oh how cute."

Our educational methods, he said, rob us of our innate intelligence. To demonstrate, he launched into an informal destruction of the haloed formula that a triangle has only three angles, the sum of which is 180 degrees. If a triangle is scratched in the dirt with a stick instead of drawn on a flat blackboard, we must consider, as a starter, the dual (concave-convex, inside-outside) nature of the enormous spherical surface on which we are actually drawing.

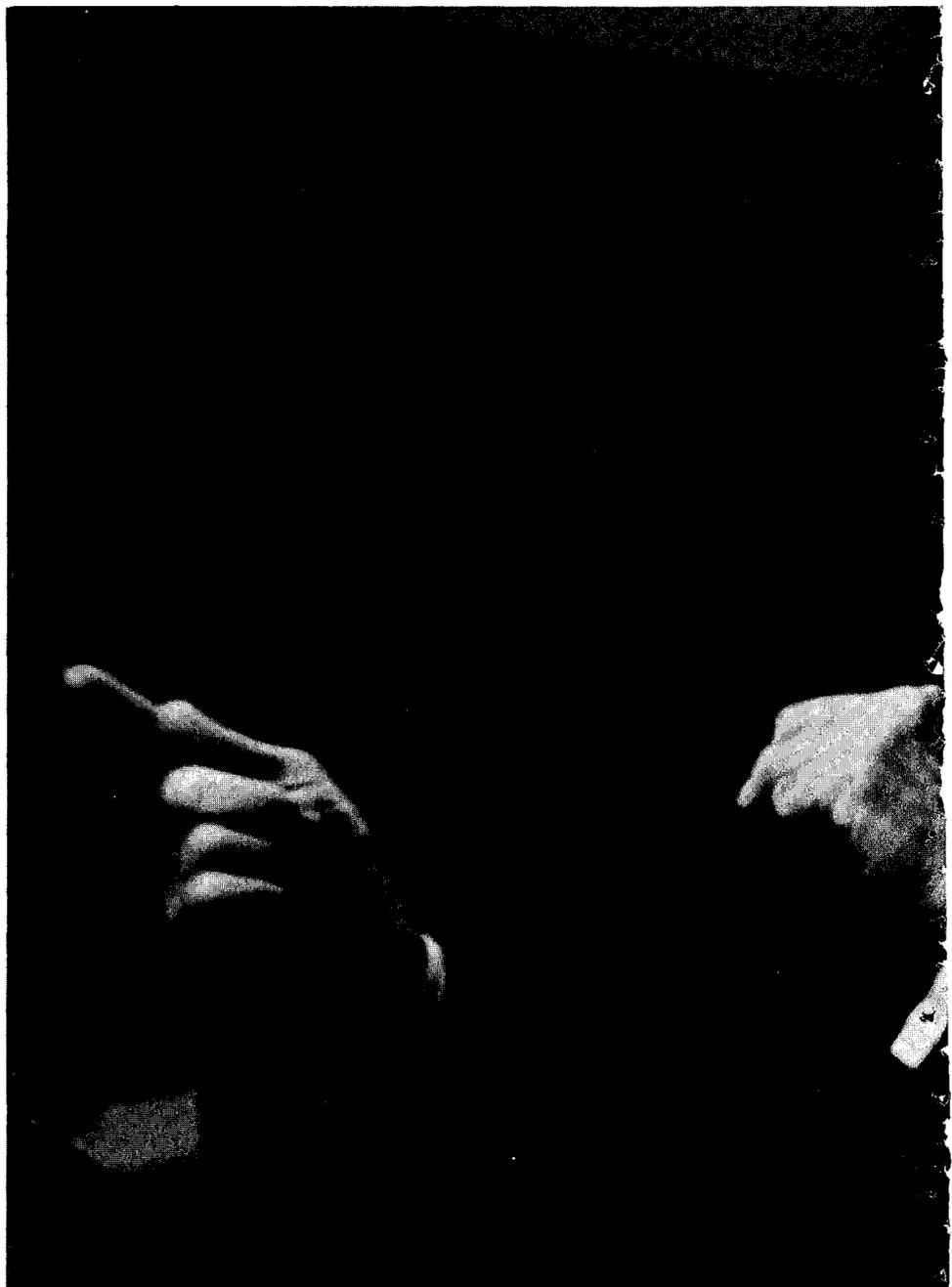
Two nights later, Dr. Fuller once again shared his time with a gathering, this time including not only Karen and me, but four Japanese in their thirties: metallurgical engineer Tatsuo Hiratani, architect Arata Isozaki, art critic Yoshiaki Tono, and the versatile Kuniharu Akiyama. Tono mentioned having heard Fuller's lecture in New York last Fall (one of a series of talks which featured others like composer John Cage, whom Fuller spoke highly of), and thus began the first spiral of the evening.

The New York lectures had been sponsored by the group of artists organized several years ago by Jasper Johns and Robert Rauschenberg, among others, to assist some of their contemporaries in the less object filled (and therefore less sales oriented and supported) fields. This led to Fuller's commenting on governmental acceptance of the artist's importance. I asked why he thought this had come about.

He began to speak about the development of the cipher, 0 ("a necessary symbol for abstracting the situation in which an abacus row has not one or two beads against the bar, but none"); how this led to the possibility of the abstract calculation necessary to navigation; how rulers (priests) tried to control this knowledge-power for their own profit (the witch doctor calculated taxes and barter equivalences). This description slowly spread outward into a more historically vast scale as he described how those in power (those who controlled those who had specialized knowledge) became pirates, at first actually, and later figuratively. To remain strong, he stressed, it was in the "pirate's" interests to maintain a broad view and to make certain that those who held special skills developed no more than a narrow band of awareness. Specialized skills were required for the exercise of power and influence, and as long as the specialist remained docilely focused there was no danger that he would begin larger manipulations.

Tying all this in with military expediency and the growth of industrialization, Fuller proceeded to uncover the ways in which the gradually enlarged arena of human activity fostered the rise of challengers to the established, how theories not previously put to use (for want of sufficiently wide views of their potential context - "the way that already works is the best way") came into play. This brought him up to the period of the First World War, and from there it was a relatively short step to the Sputnik scare and the American government's subsequent interest in reexamining its educational procedures.

Fuller noted that the arts often serve as a last refuge within the academy for the "misfits" (the "drop-outs") and that, as a result, teachers of the arts were most widely experienced in dealing with persons who were unwilling or unable to fit within the normal categories of American-style education. When consulted by the National Academy of Sciences, these teachers revealed, with the help of some statistical analysis, that the two most frequent components in the educational experience of outstandingly creative scientists were graduation from a small liberal arts college (MIT and Cal Tech graduates



were not among the top twenty) and "intimate association with a great, inspiring teacher."

Thus, in spite of politically imposed restraints ("It would be considered political madness to risk charges of corruption through voting government funds to an individual, especially to 'great inspiring teachers' - 'Crack-pot longhairs!' So it goes - to hell with the facts when reflection to political office is at stake."), the government became interested in the artist. Not, certainly, for his products, but for his process. It wants to know how he goes about making, inventing, formulating unprecedented but productive juxtapositions.

In support of the artist's value, Fuller also cited Gregory Kepes' book "The New Landscape in Art and Science," which includes photographs of contemporary works of art and others taken through microscopes or telescopes for scientific purposes. When mixed and presented in identical format, grouped according to shapes or textures, these two groups of photos were indistinguishable. Frequently, it turned out that a pattern had been imagined by an artist before science had discovered its naturally occurring counterpart. Kepes' study may well have prompted Marshall McLuhan's oft-quoted view that art anticipates technical and social change.

(Parenthetically, it should be noted here that some other ideas occasionally attributed to McLuhan



were actually enunciated by Fuller many years ago. For example, the basic "mechanical extentions of man" idea was integral to the "Untitled Epic Poem" of 1940.)

The whole discourse above consumed over an hour, and I have tried to convey - with abject apologies to Dr. Fuller - the main thread. Once again, even if some aspects of the argument eluded one (one of the Japanese thought that Fuller referred to "pilots" instead of "pirates," and derived quite an interesting perspective on the entire discussion), the phenomenon was, in itself, arresting. Another of our visitors, normally quite verbal, confided afterwards that he had been so emotionally affected that he was unable to do anything but listen.

Subsequent conversation ranged over plans for artificial weather control over the Festival Plaza at EXPO 70 in Osaka, the future of architecture, and finally speculation over the ultimate refinement that might be achieved in communication between human beings. Fuller studied architectural drawings which Isozaki had brought and made suggestions as to how a non-solid rain screen could be devised for the World's Fair. This was followed by talk about architecture; how form no longer necessarily follows function; and how so many persons working in the field of architecture today are actually sculptors, not yet grappling with the most basic elements of shelter economically suited to the needs and resources of all mankind. It is essential to eliminate all the expendable features of architecture, it was felt, so as to concentrate the benefits of technical capacity and achieve wider effect. Fuller spoke about his pleasure at finding a young architect in Japan independently exploring terrain which he has fought so long to open.

It was a wonderful evening. It seemed that, for quite different reasons, Dr. Fuller might well have enjoyed himself almost as much as the rest of us. He could not have missed the interest or admiration of his listener-questioners, and after he had expressed satisfaction at having talked with young persons, Tono aptly noted that Fuller, himself, was "younger than any of us."

The man's questioning but never abrasive spirit comes out well in this passage from his article "How Little I Know":

...we have learned
 To test experimentally
 The axioms given to us
 As "educational" springboards, and
 We have found
 That most of the "springboards"
 Do not spring

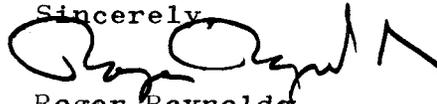
And some never existed.
 As for instance
 Points, holes,
 Solids, surfaces,
 Straight lines, planes,
 "Instantaneous," "simultaneous,"
 Things, nouns,
 "Congruence," "at rest,"
 The words "artificial" and "failure"
 Are all meaningless.

In person, the coexistence of his intelligence and humaneness is emotionally moving and intellectually exciting.

Few men are capable of both predicting and implementing. In his 72 years, Fuller has not only seen and foreseen, through what he likes to call "anticipatory design," the concerns of men, but has, through the famous Geodesic Domes and numerous other patented developments, realized actual, practical solutions to them. He is an optimist, certainly, but one who has been able to demonstrate the practical nature of his attitude. If we see the "forward functioning outward" in him, he sees it elsewhere:

...common not only to men
 but to all organic life
 at first remove from life itself,
 is the simple protoplasmic cell,
 master of photosynthesis
 by which star energy is physically translated
 directly or indirectly through storage devices
 into the mechanics integral and extended
 which comprise and differentiate
 each and every species
 and each never identical
 individual mechanism
 of life's expression
 of intense interest
 in its limitless potential.

Sincerely,



Roger Reynolds

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