

ART AND TECHNOLOGY

ARTICLES

by John Cage

R. Buckminster Fuller

Peter Yates

エッセイ

ジョン・ケージ

バックミンスター・フーラー

ピーター・イエイツ

## ART AND TECHNOLOGY

by John Cage

(They) bring people together (world people), people and their energies and the world's material resources, energies and facilities together in a way that welcomes the stranger and discovery and takes advantage of synergy, an energy greater than the sum of the several energies had they not been brought together...not just inside our heads, but outside of them in the world where our central nervous system (electronics) effectively now is.

Everything happens at once (a different music).

Art's in process of coming into its own: life. Life includes technology.

The purpose of art is not separate from the purpose of technology.

The urgency to avoid beauty.

Do not imagine there aren't many things to do. We need for instance an utterly wireless technology. Just as Fuller domes (dome within dome, translucent, plants between) will give impression of living in no home at all (outdoors), so all technology must move toward way things were before man began changing them: identification with nature in her manner of operation, complete mystery.

Introduce disorder.

Sounds passing through circumstances.

Invade areas where nothing's definite (areas--  
micro and macro--adjacent the one we know in).  
It won't sound like music--serial or electronic.  
It'll sound like what we hear when we're not hearing  
music, just hearing whatever wherever we happen to  
be. But to accomplish this our technological means  
must be constantly changing.

Bewildering and productive of joy.

Are we an audience for computer art? The answer's  
not No; it's Yes. (A computer that turns us into  
artists.)

What'll art become? A family reunion? If so,  
let's have it with people in the round, each  
individual free to lend his attention wherever he  
will. Meeting house.

Composer, who no longer arranges sounds in a  
piece, simply facilitates an enterprise. Using a  
telephone, he locates materials, services, raises  
money to pay for them.

Art and TV are no longer two different things.  
They're equally tedious....TV's vibrating field's  
shaken our arts to pieces. No use to pick them up.  
Get with it....Art's socialized. It isn't someone  
saying something, but people doing things, giving  
everyone (including those involved) the opportunity  
to have experiences they would not otherwise have  
had....Sounds everywhere. Our concerts celebrate  
the fact concerts're no longer necessary.

Tried conversation (engineers and artists). Found  
it didn't work. At the last minute, our profound  
differences (different attitudes toward time?)  
threatened performance. What changed matters, made  
conversation possible, produced cooperation,  
reinstated one's desire for continuity, etc., were  
things, dumb inanimate things (once in our hands

they generated thought, speech, action).

We do what no one else does. Economy. (We do not believe in "human nature.") We are nouveaux-riche. Beyond that, we are criminals. There, outside the law, we tell the truth. For this reason, we exploit technology. Circumstances determine our actions.

Computers're bringing about a situation that's like the invention of harmony. Sub-routines are like chords. No one would think of keeping a chord to himself. You'd give it to anyone who wanted it. You'd welcome alterations of it. Sub-routines are altered by a single punch. We're getting music made by man himself: not just one man.

Art's (Technology's) self-(world-)alteration.

The Launching of INTUITION

By R. Buckminster Fuller

Buckminster Fuller's thoughts  
As expressed at the Port Marina,  
South Portland, Maine  
On the occasion  
Of the initial launching  
Of his new  
Forty one foot  
Morgan designed and built,  
Fibre glass plastic hulled,  
Mercedes Benz auxiliariated,  
Ocean cruising sloop,  
Which having been trucked  
Overland for four days  
From St. Petersburg, Florida  
To South Portland, Maine  
Was lowered into her  
Design destined  
Realization  
Of water borne existence  
At mid-day July 31, 1968.

God gave man a faculty  
Beyond that of his and other creatures'  
Magnificent physical brains -  
And that unique faculty  
Is the metaphysically operative mind.

Brains apprehend and register,  
Store and retrieve  
The sensorial information  
Regarding each special case experience.

Mind alone can and does search out  
The integral pattern concepts  
And generalized principles  
Which hold true  
Throughout whole fields of experience.

Mind alone empowered humanity to conceive  
Of objective ways to employ  
The subjectively acquired concepts  
Of generalized principles  
Such as leverage -  
And thereby favorably to alter  
The environment -  
By - for instance - differentiating out  
All the fundamental atomic structurings  
And subsequently employing  
Their uniquely recombining synergetic behaviors  
Thereby to attain  
Greatly augmented  
Relative human advantage.  
For synergy is one of those  
Generalized principles  
Which is scientifically defined as  
Behavior of whole systems  
Unpredicted by the behaviors  
Of any of its separate parts  
Or by any subassemblies of its parts  
As for instance is disclosed by  
The tensile strengths of alloyed metals,  
Such as chrome-nickel-steel,

Which is several fold stronger  
Than the sum of the tensile strengths  
Of each of the separate metals  
Which altogether comprise the alloy.  
Thus synergy permits  
Humanly conceived and executed  
Rearrangements of the environmental constituents  
In ways which are ever more favourable  
For the regeneration of life  
Aboard our Spaceship Earth.  
Thus metaphysically equipped  
To first apprehend, then comprehend  
The significant potentialities of  
The generalized principles  
Permeating his physical experiences.  
We're humans gifted to  
Imaginatively and teleologically  
Employ and process  
Complex information.

Thus also humanity was permitted  
By God  
To participate in meager degree  
In God's own vast  
Evolutionary designing capabilities,  
And of all the designs  
Thus far formulated by man  
None have been as  
Adequately anticipatory  
Of the probable reoccurrences  
Of yesterday's experiences  
And therefore as  
Progressively comprehensive,  
Complexedly adequate,  
Economically exquisite,  
Powerfully eloquent  
And regeneratively reinspiring  
To further evolutionary perfection  
As is the sailing ship.  
For it is visually obvious  
Even to the inexperienced viewer  
That the sailing ship is designed

To cope with the nature's  
Most formidably hostile  
Environmental conditions  
For human survival  
At the interface  
Of the oceans's and the atmosphere's  
Tumultuous ferocity.  
For it was the almost lethal experiences  
With those myriad  
Of awesomely demanding conditions  
Which progressively invoked  
Man's subjective discovery  
And objective invention  
Of general engineering principles  
As well as the foundations of mathematics  
From which he evolved  
His celestial navigation  
And thereby derived  
Instrumentally guidable safe passaging  
Amongst the rocks and shoals  
Under the invisible conditions -  
Of night, fog and high seas.  
And sailing ships  
Unlike bulldozers  
Do no damage to the sea, land, or sky  
While employing the windpower  
Without any depletion  
Of the vast wealth of universal energy.

And because the sailing ship's beauty  
Is the unpremeditated consequence  
Of omni-integrity in designing  
Both its comprehensively anticipatory performance as a ship  
As well as the technology of its building,  
That functional beauty has inspired  
The high seas sailorman  
Voyaging safely within its womb like hold  
Not only to reproductively proliferate  
The successful prototypes  
But also to spontaneously identify  
Sailing ships as females.



Three quarters of our planet  
Is covered by water  
And in developing the ability  
To live at sea  
And thereby to integrate  
The world around occurring  
But very unevenly distributed  
Gamut of physical resources and knowledge  
And thus to make all resources  
Available to the integrated production  
And distributive service to all humanity  
Despite the world around recurrent formidable conditions -  
Humanity has manifested,  
Its greatest comprehensively anticipatory  
Scientific designing effectiveness  
In the high-seas sailing ship,  
The by-products of which have been  
His establishment of a science-founded  
World-embracing  
Scientifically laborated  
Search and research navigated  
Speed of light intercommunicated  
Industrial mass-production complex  
Out of which in turn has come evolutionarily  
Humanity's mastery of sky and interplanetary travel  
And its biochemical conquest  
Of physiological disorders  
Of the human organism  
And possibly soon to come  
The adequate physical sustenance of all mankind.

Key to humanity's scientific discoveries,  
technical inventions,  
design conceptioning,  
and production realizations

Has been a phenomenon  
Transcendental to humanity's  
Self-disciplined  
Objective concentrations of thought  
And deliberate acts -  
A phenomenon transcendental  
To humanity's inventive capabilities.

That key is the first  
And utterly unpremeditated event  
In all discovery, invention, and art.  
It is humanity's intuitive awareness  
Of having come unwittingly upon  
A heretofore unknown truth -  
A lucidly conceptual,  
Sublimely harmonic,  
Regenerative relationship of a priori universe -  
An eternal principle -

And then seconds later  
The intuitive awareness  
Of what the conceiving individual human  
Must do at once  
To capture the awareness of  
And secure the usefulness of  
That eternally reliable principle  
For all humanity  
For now and henceforth.

Again and again -  
Step by step -  
Intuition opens the doors  
That lead to man's designing  
Of more advantageous rearrangements  
Of the physical complex of events  
Which we speak of as the environment  
Whose evolutionary transition ever leads  
Toward the physical and metaphysical success  
Of all humanity.

And because its design  
Permits humanity to live anywhere  
Around our planet's watery mantel,  
And because this sailing craft  
We are now to launch  
Is the epitome of design competence  
As manifest at this moment  
In the forever forwardly mounting and cresting wave  
Of design capability,  
We herewith give

To this world-around dwellable  
High-seas sailing craft  
The name --- INTUITION.

And as the boat's keel  
Kissed the water  
Miss Sarah Abbot broke a  
Bottle of Champagne on the sloop's  
Stainless steel stem head  
And said,  
"THE NAME OF THIS BOAT IS  
INTUITION"

Her official port-of-hail  
Is my lifelong  
Most frequently returned-to dwelling point  
BEAR ISLAND  
(In Penobscot Bay,  
In the State of Maine,  
Of the United States of North America,  
Aboard our greater spherical craft  
Spaceship Earth.)

## APPENDIX

During pauses in the post-launching events  
Buckminster Fuller's soliloquy  
And later that evening  
He inscribed those thoughts, which ran as follows:

I am now seventy-three years of age  
And am eager to participate further  
In humanity's designing functions -  
That is in metaphysically comprehending  
And mastering in orderly ways  
The physical energy universe's  
Inexorably expanding disorder -  
And am aware that humanity  
Is approaching a crisis  
In which its residual ignorance, shortsightedness,  
and circumstance-biased viewpoints  
May dominate,  
Thus carrying humanity  
Beyond the "point of no return" -  
Enveloping his exclusively sun regenerated  
Planetary home  
In chain reactive pollutionings  
And utter disorder.

As a design scientist I am aware  
That the reciprocating engines  
Of all our automobiles  
Are only about  
Fifteen percent efficient  
While our gas turbines  
Are about thirty  
And our jet engines  
About sixty  
Percent efficient  
In delivering power  
From the energies they consume.  
The overall mechanical efficiency

Of World around humanity's power-to-work  
As presently designed and tooled-up  
Is only about four percent,  
While experienced engineers and scientists concede  
That the world's industrial network  
Could easily be redesigned to operate at better  
Than an overall fifteen  
Percent efficiency.  
Ergo I have long been intuitively aware  
And am now scientifically confident  
That a physically permitted design revolution  
Is indeed feasible  
Which can fourfold the present design tool-up  
Raising it to a meager  
Sixteen percent  
Overall efficiency  
Which can  
Do so very much more  
With progressively ever less  
Of kilowatts, minutes, and grams  
Of the physical resources of our spaceship Earth  
To be invested in  
Each function accomplished  
As to be able to raise  
The overall percentage of humanity  
Enjoying a satisfactorily adequate standard of living  
From the world's present forty percent "haves"  
To a one hundred percent "haveness"  
Of all the humans now aboard  
Or about to come aboard  
Our spaceship Earth  
Which witnessed a condition  
Only two-thirds of a century ago  
When less than one percent  
Of its human passengers  
Enjoyed an anyway comparable standard of living.

I am also acutely aware  
That only a very small percentage of humanity  
Have had enough comprehensive experience  
And cerebrated reconsideration of those experiences  
To know that the foregoing is true.

I also realize intuitively  
That the elimination  
Of the condition of resource inadequacy  
And thereby the elimination of human want  
May probably eliminate war  
- or quick death -  
Which is always consequent to the overlong protraction  
Of the slow and more anguished poverty's  
Slow dying  
As brought about by lethal ignorance  
In respect to the design revolution potentials -  
As society takes its only known recourse  
In political actions  
Which can but throw the "Ins" out  
Or pull the top down,  
Unwitting that the design revolution  
Could effectively elevate  
To higher levels of advanced living -  
than those already realized -  
By all those now on bottom  
As well as by those now already advantaged  
Without taking away or diminishing the advantages of any humans.  
For the norm of all the yesteryears  
Was failure,  
As unwillingly conceded  
By a sometimes  
Vainly boastful  
But most often abjectly prayerful  
Poverty and disease bewildered people  
Living out only one-third  
Of their potential years  
In utter ignorance  
Of the invisibly bounteous life support system  
Hidden in the superficial landscape  
And consisting  
Only of instrumentally gleanable information,  
Abstract and weightless generalized principles,  
Unique electro-magnetic frequencies  
And exclusively mathematical realizabilities,  
While the norm of today  
And of all our tomorrows,  
If any are possible,

Must be total success  
For all of humanity -  
As inherent in  
The integratable potentials  
Of the comprehensive family  
Of omni-inter-accommodative,  
And omni-orderly  
Generalized principles  
Discovered by scientists  
To be in a priori governance  
Of universal evolution's aggregate  
Of non-simultaneous  
And only partially overlapping  
Transformative events.

And the norm of success  
Will be realized  
By the computer developed information  
That humanity can afford  
To gratify handsomely  
Whatever of its needs  
And growth requirements  
Can be satisfied  
By what can be produced  
Out of the as yet untapped resources  
As well as out of  
The no longer used resources  
Employed in yesterdays  
Now obsolete and scrapped  
Technological devices.  
For we now know scientifically  
That wealth consists exclusively  
Of physical energy  
Which cannot be depleted,  
Plus intelligence's Know How  
Which can only increase  
As the ever metaphysically improved uses  
Of the family  
Of unique physical behaviors  
Of energetic universe  
Are ever more promptly  
Reinvested to omni-regenerative advantages

Of all humanity's ecological involvements  
Within an omni-considerate  
Universal evolution integrity.  
But as of this old-to-new era's  
Threshold crossing moment,  
Ignorance of the design revolution potentials  
Is pervasive and its vacuum persuades  
The most powerful political thought  
Of the largest organized groups of society  
- Amongst the sixty percent of humanity  
Now aboard Earth  
Who are as yet "have nots" -  
To assume that  
Since there seemingly  
Is nowhere nearly enough  
Of vital resources  
For all to be successful,  
And in current fact  
Only enough to support a minority,  
The only fair condition for society  
Is one of comprehensive destitution

And a camaraderie of poverty  
Which ever and again  
Can assuage its emotional depression  
By vindictively leveling  
All attempts of any individual humans  
To advance standards  
As constituting new upshoots  
Of the socially abhorred  
Survival only  
Of the fittest selfishness.  
We are also aware  
That other vast numbers of the "have nots"  
Who are less or entirely  
Unorganized politically  
Have for so many milleniums  
Suffered intensely  
Both physically and metaphysically  
Throughout their short-termed lives  
That there has been  
No suggestion in their experience



That life was meant to be  
Anything other than a tortuous trial.

Ergo, they rationalized  
That the only explanation  
Of such a negative experience  
That could be hopefully contemplated  
Was that life on Earth constituted  
A period of qualification  
For an eternal life  
Hereafter and elsewhere,  
And the greater the hardship endured  
In the temporary or temporal life  
The pleasanter the life hereafter.  
And to all such life-hereafterers  
Any attempt to ameliorate and improve  
Their short life on Earth  
Assumedly threatens  
To dissipate and preclude  
The eternal ecstasy  
Of their life hereafter.

I am also aware that  
An increasing number of human beings -  
More especially the young people of the world -  
Who have witnessed the success  
Of my earlier prognostications, inventions  
And developmental initiatives  
In doing more with less  
To inaugurate the design revolution  
Are asking me  
At an increasing frequency  
And in increasing numbers  
To share with them the experimental knowledge  
Which I have gained  
And the philosophically harvested  
Design strategies I employ.  
They seem especially interested  
In my environment control devices  
Which employ only the high priority --  
Sea and sky sciences and technologies  
Of advanced industrialization

It also seems clear  
That an increasing number of young,  
Or young-minded people  
Are beginning  
To share my awareness  
That total holocaust  
Is now being ignorantly induced  
By the world's preoccupation with  
Exclusively political palliatives  
Which are inherently shortsighted  
And applicable only  
To the emergency dramatized local aspects  
Of the greater and unrecognized  
Evolutionary problems  
With which human life  
Aboard our planet is beset -

For evolution is apparently intent -  
No matter how long it takes -  
That life in universe  
Must not only survive  
But must be demonstrated  
As eternally supreme.  
For life contains the weightless  
Omnipowerful, omniknowing  
Metaphysical intellect  
Which alone can comprehend  
Cohere and integrate,  
The physical energies inexorable  
And ever expanding disorder.  
Little humans  
Preoccupied with the immediate needs  
Of their physical regeneration  
Have locked their zoom-lens focusing mechanism  
On the close-ups only  
Leaving it exclusively to their intuition  
To remind them  
Once and again in a surprised while  
Of the vast long-distance focusing  
Of evolutionary events.  
And because evolution is apparently intent  
Upon accomplishing humanity's total economic success,

Whenever society delays overlong  
In adopting, producing, distributing, and using  
In peaceful spontaneity  
The evolutionarily essential  
Discoveries and inventions  
Of its individual human pioneers,  
Evolution then forces the adoption  
Of the technological innovations  
Under the aegies of group fear of military defeat.  
And its defensive action taking  
Whereat humanity reorganizes  
The physical environment  
In naturally permitted ways  
Which turn energy as matter  
Into a myriad of wheel mounted levers  
And shunt energy  
As radiation induced flows  
To impinge upon those levers  
Thereby to do the gamut of tasks  
Conceived of by the human mind  
As most productively efficient  
And requisite to the immediate survival emergencies  
Thereby inducing humanity's  
Inadvertent acquisition  
Of the subsequently and peacefully employable  
Mass production capability.  
And so we progressively discovered for instance  
That the copper mined, refined, and shaped into wire  
Strung upon poles to conduct energy from here to there  
Does not lose its conductivity after the war  
And it does not unrefine itself and return to the mine  
But goes on through progressive meltings  
To perform ever more exquisitely important functions  
In ever more efficient ways  
Progressively permitted and induced  
By the environmental alterations and  
Favorable conditions for research and further discovery  
By the human mind  
Which the productive tool-up regeneratively induced.  
And thus there ensues a chain reaction  
In the advancement of living standards  
For ever more people

And the multiplication of their life spans  
And the multiplication of their mobility  
And the decrease of natural restraints  
On so vast a scale as to auger  
The swift advantaging of all humanity.  
For humanity does not as yet realize  
That the greater schemes  
Of potential evolutionary success  
Are entirely metaphysical and invisible  
To an omni-specializing and only  
Physically emphatic world society.

For only one millionth  
Of the vast ranges of the electro-magnetic reality  
Is directly tunable by the human senses -  
Ergo humanity as a whole is tactically blind  
And is now as innocently helpless  
As a newborn baby.  
And its helplessness must be attended  
By all those who heed their intuitive faculty  
Thus to apprehend then comprehend and anticipate  
Evolution's inexorable transformation mandates,  
Through their inventive awareness  
Of the design science opportunities  
To rescue and advance all humanity  
Into spontaneous adoption and realization  
Of the eternal design revolution requirements  
Of universal evolution,  
And humanity's living entrance thereby  
Into a new relationship with universe,  
Involving vastly greater responsibility  
Of all humanity  
In respect to greater universe's  
Event unfoldments.

## THOUGHT CONCERNING A ROCK

by Peter Yates

Thought is what we think in the circumstance, a confluence of events. Thought is not behavioristic, because the thinker can withdraw from and observe the circumstance. How he does this makes or can make a considerable difference.

Therefore, in the Japanese habit, I have bought a rock, too large to wrestle into possession and bring home singlehanded, as has been my habit.

The setting of the rock has a Japanese ancestry, but it is not a Japanese setting. The rock stands exposed on a proportionate escarpment, like a Greek temple, but it is not a temple. It is exposed to the weather, sleek in rain, snow-ornamented, under the comfortable view of the front window. From the street it is bare rock, to be an eventual permanence of harmony beneath a counterpoint of branches. Seeing it now it is curvilinear, pierced, and rococo. From the window it is a dimensional sculpture of abstract weight. Placed, it is no longer a rock but an object, to be viewed. Against the street it is an accent; against the house front an aspiration, a predominance more pertinent to viewing than the house. For some it may be an offence against appreciation, by many unseen.

When I speak of my rocks I think of them as like the massive stuffed heads of beasts, each remembering an expedition. My rocks are not passive; each has been fought, lugged, turned, placed, wrestled

ROCK  
into position. Then, whether it stands as I first placed it or whether periodically I turn it to a new aspect, it belongs to all.

It is a mountain, my mountain, as Mont Ste Victoire belongs to Cézanne and Mount Katahdin to Marsden Hartley. The sage sits in it. I have taken it from its place to an unnatural setting by considerable work of thinking art. It is itself a considerable dimension of my thought. Let no one say it could have come there by nature or accident; it could not.

This rock does not need a museum; in a museum it would not be placed or considerable as a dimension of my thought. It would be seen for what it is, not work of art, a rock. So much is the considerable distance between work of art and "work of art". The Japanese, knowing this, do not exhibit a rock except where it has been placed by work of art. Formal, artificial, precious, or made precious by being a considerable dimension of thought, the entire landscape bends to and encloses it, a rock, by imagination a mountain, by erosion a sculpture, by abstraction and only so in its place a work of art.

At what moment did the rock, seen among many, unplaced, lugged up the four feet from the sidewalk, assume this positive dignity and abstract conceptual dimension? That began when, looking at it from several directions, touching it where it lay in mud, I saw it for what it is, this rock.

Any work of art is an artefact, but a megalith, a Sandia point, is not a pot. To understand an artefact one must see it for what it is, a chip, a pot, a boulder, not a message but a radiation of meanings, abstract of a culture, sign of intelligence and hands. When a work of art loses its place it becomes an artefact, signifying a culture.

It is evidence of a maker, it may bear his name, or we name it. We view it as anthropology, archeology, history, symbol of religion, a sign of thought in time. The artefact does not change, only our response to it. We see by relationship the beauty of a pot, the spirituality in a megalith, the skillfulness of a Sandia point. We see the object as esthetic, conveying the skill, the intention, the spirituality of a maker, the circumstance of his thinking action, and by these considerable distinctions we approach, we estimate, we discipline ourselves to appreciate the living mind. It is not wise to abnegate by cleverness this responsibility.

芸術とテクノロジーは、人びと（世界の人びと）を結びつける。人びと、人びとのエネルギー、世界の物質的資源を結びつけ、エネルギーとさまざまな機械装置を結びつけてくれる。そして、新しい仲間や新しい発見を歓迎し、人びとの協力の成果を活用する。力を合わせれば、バラバラになっているエネルギーよりも大きなエネルギーを発揮できるだろう……私たちの頭のなかのエネルギーだけでなく、頭のそとの世界——つまり私たちの中枢神経であるエレクトロニクスが存在する世界——エネルギーを活用できるだろう。

あらゆる出来事は、同時に起こるものである。（これが、いままでとちがった音楽である）

芸術は、本来的なものになろうとしている。それは、人生にほかならない。人生には、テクノロジーが含まれている。

芸術の目的は、テクノロジーの目的と別ものではない。

美を避けなくてはならない。

やらなければいけないことなんて多くはない、などと考えるはならない。私たちは、たとえば完全な無線テクノロジーだって必要なのだ。“フラー・ドーム”（ドームの内部のドーム。半透明で、ドームの間には植物が植えてある）は、家のなかに住んでいるという感じを、まったくあたえない。だから、テクノロジーも、人が事物を変形してしまった以前の状態をめざして進まなくてはならない。つまり、自然のまま、完全な神秘の状態だ。

混乱を導きいれよう。

音は、生活の環境を通りぬける。

なにもものも定かでない世界に入ってゆこう。（私たちの世界の隣りにある<sup>ミクロ</sup>微小の世界、<sup>マクロ</sup>巨大の世界がそれだ。）それは、音楽のように聞こえないだろう。それは音列の音楽や電子音楽ともちがうものだ。そういう音楽は、私たちが“音楽”に聴き入っていないときに聞こえてくるものに似ている。ちょうど、どこにいても耳に入ってくる音みたいなものだろう。けれども、これを実現するには、私たちのテクノロジーの方法が、たえず変化していなければならない。

とまどわせるもの。喜びを生むもの。

私たちは、コンピューター・アートの観賞者なのだろうか？その答は、NOではない。イエスである。（コンピューターは私たちを芸術家に変えてくれるのだ。）

芸術は、どうなるのだろうか？家族の再会だろうか？そうだとしたら、みんな一語になって、めいめいがしたいところで演技をすればよいだろう。それは、集会の場なのだ。

作曲家とは、一つの作品に音をまとめるのではなくて、ただ企業のためになっている。電話を使って素材やサービスを手に入れ、金を集めて、その支払いにあてている。

芸術やTVは、もう二つの別なものではなくなった。この二つは、ともに冗慢だ……TVという波動する世界は、私たちの芸術を粉みじんにしてしまった。それを、いまさ

ジョン・ケージ

John Cage



らもとにかえそうとしたって無駄というものだ。新しいものを選ぼう。芸術は社会のものになった。だれかが、何かを語るというのが芸術ではなくなったのだ。人びとが演技すること。みんなに（参加することを含めて）新しい経験をさせることが芸術なのだ…どこにも音があるという状態だ。私たちのコンサートなんかいらなくなったという事実の祝宴なのだ。

（エンジニアと芸術家が）話し合ってみた。けれども、うまくいかなかった。ついに、両者の対立（時間に対するべつの態度？）は、演奏の可能性をおびやかすことになった。ものごとを変えて、対話を可能にし、協力をつくり出し、連続性への欲求を復活させたもの——それはなにだったのか？それは物、つまり無感覚な無生物だった。（いったん私たちの手にかかる、思想と言葉と行動を生んだあの無生物だった。

私たちは、ほかのだれもしないことをやっているのだ。経済への原則がそれだ。（私たちは、「人間性」などを信じない。）私たちは、<sup>ニューポリチ</sup>新興成金だ。さらに、犯罪者だ。だから法律のそとにあつて、真実を語るのだ。であればこそ、テクノロジーを利用するのだ。環境が、私たちの行動をきめるのだ。

コンピューターは、ちょうど和声の創造のような状況を生んでいる。「サブ・ルーティン」は、和音のようなものだ。そうすれば、だれも自分の和音を自分のものにしておきたいなどと思わなくなるだろう。だれか欲しいという人があれば、やってしまいたいと思うようになるだろう。あなたは、和音の変形ならば、おのぞみだろう。「サブ・ルーティン」は、たった1つのパンチ・カードで変えられる。私たちは、たった1人の人間ではなくて、全人類がつくる音楽を手に行っているのだ。

芸術の自己変革。テクノロジーの世界変革。

ピトエト・オーマーゴ

colony 1969

芸術とテクノロジーは、人びと（世界の人びと）を結びつける。人びと、人びとのエネルギー、世界の物質的資源を結びつけ、エネルギーとさまざまな機械装置を結びつけてくれる。そして、新しい仲間や新しい発見を歓迎し、人びとの協力の成果を活用する。力を合わせれば、バラバラになっているエネルギーよりも大きなエネルギーを発揮できるだろう……私たちの頭のなかのエネルギーだけでなく、頭のそとの世界——つまり私たちの中枢神経であるエレクトロニクスが存在する世界——エネルギーを活用できるだろう。

あらゆる出来事は、同時に起こるものである。（これが、いままでとちがった音楽である）

芸術は、本来的なものになろうとしている。それは、人生にほかならない。人生には、テクノロジーが含まれている。

芸術の目的は、テクノロジーの目的と別ものではない。

美を避けなくてはならない。

やらなければいけないことなんて多くはない、などと考えるはならない。私たちは、たとえば完全な無線テクノロジーだって必要なのだ。“フラー・ドーム”（ドームの内部のドーム。半透明で、ドームの間には植物が植えてある）は、家のなかに住んでいるという感じを、まったくあたえない。だから、テクノロジーも、人が事物を変形してしまった以前の状態をめざして進まなくてはならない。つまり、自然のまま、完全な神秘の状態だ。

混乱を導きいれよう。

音は、生活の環境を通りぬける。

なにものも定かでない世界に入ってゆこう。（私たちの世界の隣りにある<sup>ミクロ</sup>微小の世界、<sup>マクロ</sup>巨大の世界がそれだ。）それは、音楽のように聞こえないだろう。それは音列の音楽や電子音楽ともちがうものだ。そういう音楽は、私たちが“音楽”に聴き入っていないときに聞こえてくるものに似ている。ちょうど、どこにいても耳に入ってくる音みたいなものだろう。けれども、これを実現するには、私たちのテクノロジーの方法が、たえず変化していなければならない。

とまどわせるもの。喜びを生むもの。

私たちは、コンピューター・アートの観賞者なのだろうか？その答は、NOではない。イエスである。（コンピューターは私たちを芸術家に変えてくれるのだ。）

芸術は、どうなるのだろうか？家族の再会だろうか？そうだとしたら、みんな一語になって、めいめいがしたいところで演技をすればよいだろう。それは、集会の場なのだ。

作曲家とは、一つの作品に音をまとめるのではなくて、ただ企業のためになっている。電話を使って素材やサービスを手に入れ、金を集めて、その支払いにあてている。

芸術やTVは、もう二つの別なものではなくなった。この二つは、ともに冗慢だ……TVという波動する世界は、私たちの芸術を粉みじんにしてしまった。それを、いまさ

ジョン・ケージ

John Cage

らもとにかえそうとしたって無駄というものだ。新しいものを選ぼう。芸術は社会のものになった。だれかが、何かを語るとというのが芸術ではなくなったのだ。人びとが演技すること。みんなに（参加することを含めて）新しい経験をさせることが芸術なのだ…どこにも音があるという状態だ。私たちのコンサートなんかいらなくなったという事実の祝宴なのだ。

（エンジニアと芸術家が）話し合ってみた。けれども、うまくいかなかった。ついに、両者の対立（時間に対するべつの態度？）は、演奏の可能性をおびやかすことになった。ものごとを変えて、対話を可能にし、協力をつくり出し、連続性への欲求を復活させたもの——それはなにだったのか？それは物、つまり無感覚な無生物だった。（いったん私たちの手にかかる、思想と言葉と行動を生んだあの無生物だった。

私たちは、ほかのだれもしないことをやっているのだ。経済への原則がそれだ。（私たちは、「人間性」などを信じない。）私たちは、<sup>スーパーリッチ</sup>新興成金だ。さらに、犯罪者だ。だから法律のそとにあって、真実を語るのだ。であればこそ、テクノロジーを利用するのだ。環境が、私たちの行動をきめるのだ。

コンピューターは、ちょうど和声の創造のような状況を生んでいる。「サブ・ルーティン」は、和音のようなものだ。そうすれば、だれも自分の和音を自分のものにしておきたいなどと思わなくなるだろう。だれか欲しいという人があれば、やってしまいたいと思うようになるだろう。あなたは、和音の変形ならば、おのぞみだろう。「サブ・ルーティン」は、たった1つのパンチ・カードで変えられる。私たちは、たった1人の人間ではなくて、全人類がつくる音楽を手に行っているのだ。

芸術の自己変革。テクノロジーの世界変革。

ピトエト・一モーコ

1967. 10. 10

思考とは、いろいろな出来事の合流である環境の中でわれわれが考えることである。思考は行動的ではない。なぜなら、考える人は環境から身をひいて、観察することができるからである。彼がこれをどのようにして行なうかによって、かなり大きな違いが生じる、または生じ得る。

だから私は、日本人の習慣にならって、一つの岩を買った。それは、私がいつもよくやるように、だき起こして片手で家へ持ち帰るにはあまりにも大きかった。

その岩の背景は日本古来のものであるが、岩そのものは日本的背景ではない。岩は、釣り合いのとれた急斜面の上に、まるでギリシャの神殿のようにむき出しになっているが、もちろん神殿ではない。外気にさらされ、雨に濡れて光り、雪で装飾され、正面の窓からちょうどながめやすいところに置かれている。表通りから見れば、それは単なる岩で、重なり合う枝々の下に、調和の究極的永遠性をなしている。いまその岩を見ると、それは曲線的であり、うがたれ、ロココ風である。窓からは、それは抽象的重みをもった次元彫刻である。そこに据えられれば、もはや岩ではなく、ながめられるべき対象である。表通りに対してはアクセントであり、家の正面に対してはアスピレイションであり、家そのものよりもながめるのに適した支配的存在である。ある人にとっては、それは観賞を害するものであるかもしれないし、多くの人によって見過ごされてしまう。

私が自分の岩について語るとき、私はそれらの岩を、それぞれがある探検を思い出させる、大きなはく製の獣の頭のように考える。私の岩は受動的ではない。それぞれが戦いとられ、ひきずられ、ころがされ、据えられ、悪戦苦闘の末、配置されたのだ。だから、岩が最初私が置いたままになっているか、時々ころがして新しい面を出させているかに関係なく、それはすべてに属する。

それは一つの山であり、サン・ピクトワール山がセザンヌのものであり、カターディン山がマースデン・ハートリーのものであるように、私の山である。聖人がそれにすわっている。私はその岩を、それがあつた場所から、思考芸術の考えられるかぎりの働きによって、非自然的な背景へと移した。それ自体が、私の思考の考えられるかぎりの次元である。岩が自然に、あるいは偶然にそこに来たなどとは、だれにもいわせない。そんなことはありえないのだ。

この岩は博物館を必要としない。博物館では、それは私の思考の次元として、配置されないし、考えられもしないだろう。それは、あるがままのもの、芸術品ではなく一つの岩として見られるだろう。芸術品と「芸術の働き」との間に考えられる距離はそれほど大きいのである。日本人はこのことを知っているから、芸術の働きによって配置された場所以外で岩を展示しない。形式的、人工的で、貴重な、あるいは考えられる思考次元であることによって貴重になる。そして風景全体がそれに屈服し、それを取りかこむとき、岩は想像によって山となり、侵蝕によって彫刻となり、抽象によって、さらにその場所においてのみ、芸術品となる。

多くのものにまじって見られ、定まった場所を与えられず、歩道から4フィートも引

## ピーター・イエイツ

Peter Yates

きずり上げられた岩が、いかなる瞬間において、このように明確な威厳と抽象的な概念的次元をおびたのであろうか。それは、さまざまの方向からながめ、土の中に横たわっていた場所でさわり、私がこの岩を、あるがままのものとして見たときに始まったのだ。

芸術品はすべて人工物であるが、メガリス(巨石)やサンディアのヤリ先は、つぼとは違う。人工物を理解するには、それが瀬戸物のかけらであれ、つぼであれ、丸石であれ、あるがままのものとして、つまり一つのメッセージではなく、いろいろな意味の放射、ある文化の抽象、知恵と手のしるしとして、それを見なければならぬ。芸術品はその場所を失うと、人工物となり、一つの文化を意味する。それは、作者の証拠であり、彼の名前をおびているかもしれないし、そうでなければわれわれが名をつける。われわれはそれを人類学的に、考古学的に、歴史として、宗教の象徴として、時の中での思考のしるしとしてながめる。人工物は変化しない、変わるのはそれに対するわれわれの反応だけである。われわれは、つぼの美しさ、巨石に含まれる精神性、サンディアのヤリ先の巧妙さを、関係によってみる。われわれは対象を審美的に、つまり、作者の技能、意図、精神性、彼の思考行為の環境を伝えるものとして見る。そしてこれらの考え得る特徴によって、われわれは、生きている心に近づき、推測し、それを理解できるよう自身を訓練する。この反応性を利口ぶって拒否するのは賢明ではない。



A group respected throughout the world  
for quality  
in Pharmaceuticals and Fine Chemicals

To search for the new  
to create the trustworthy  
to preserve what has stood the test of time —  
These are the aims of pharmaceutical and medical research at

ROCHE

新しきものを求め  
信頼し得るものを創り  
時代の風雪に耐えぬいたものは

これを守る

これが ROCHE

医学薬学研究の

目的です



A group respected throughout the world  
for quality  
in Pharmaceuticals and Fine Chemicals