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birth
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Cybernetics of the Sacred

by PAUL RYAN

illustrated by Jodie Sibert

AN INTERFACE BOOK

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SCHOOL OF THEOLOGY
AT CLAREMONT
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EDITOR'S PREFACE

Man is an endangered species.

We think the separation of fact from value is the principal illusion responsible for the nearly terminal condition of species man on planet earth. This series is an attempt to share the facts and values of intelligent people who know valuable things that might help us find, live, and experience in ways that are species - enhancing, not species destructive.

We think sharing information of this kind is as vital to humans as water is to fish.

We think we can depollute our information environment by introducing life enhancing values into the changing currents of our lives.

We think the series should serve as a critical information resource for people who are seriously trying to enhance the life of species man.

We will publish hard science only when we think it will help us to do that. We will publish opinion, analysis, exhortation, review, speculation, experiment, criticism, poetry and/or denunciations if we think it is of critical human benefit.

We are not naive. We don't think publishing a few truths will set us free. We are not optimists. We don't think the chances for human survival are very good. We are not elitists. We don't think that showers of wisdom from Olympus will illumine the simple man's darkened awareness.

We believe that human consciousness both guides and responds to human interaction, and that most contemporary interaction proceeds from and perpetuates assumptions about human life that are no longer valid. We believe that these assumptions can be changed if/when we want to.

Some of our fondest assumptions have already been unmasked, revealing blind committments to short values. The most glaring example--we once believed technology made interaction "easier". Now we know that when our technologies violate ecological laws, we murder each other.

Some new forms of interaction (and some old ones) are currently being touted as the way. We don't think there is, or can be, any one way. How to sort out the promising ones from the blind alleys constitutes our principal aim.

We therefore deliberately adopt a post-disciplinary stance, believing that no one view, be it philosophical, scientific, aesthetic, political, clinical, what have you, has the answer.

We do this simply because we believe that man is living in an era of hurtling social change, which he cannot experience with worn out categories. He is thus in danger of trying to live without experience (surely a suicidal venture) or with the illusion of experience (usually a homicidal venture).

If we must experience to live, but cannot do so without terror, we shall surely perish. Whether by suicide or homicide won't matter.

Is it really the case that experience itself has become nearly impossible? We think so. Because we become human by learning a set of values, feeling, perspectives and assumptions when we are young, helpless, and uncritical. When that set of values and feelings is no longer adaptive to the world we later inherit, we experience a crisis, which commands on the one hand that we interpret the world as we originally learned to do, and on the other that we realize that the world which gave birth to our first philosophy is no longer what it was. When we must simultaneously trust and mistrust our most fundamental values, it is hard to know what being human means.

We think a "long hard march" through the assumptions that presently imperil us can only be undertaken if we do it caring about each other, whether mandarin or peasant, star or clown, master or disciple. We think new ways must be crafted and built, not simply found or borrowed. Together.

We intend to be a sort of whole earth catalogue for people who think that thinking about the human predicament might help us to live, as one self-aware species, deliberately guiding its own evolution, for the first time.

As editors, we will select and publish things we value as attempts to foster that kind of voluntary humanity.

Therefore, we invite anyone, whether clinical, social, behavioral scientist (or fan) student, faculty (or interested person) young or old (or in the middle) to join us in the attempt to make a joyful human future not only possible but likely.

So--if you think "Science" is the way, we're not for you, and you probably won't like us. If you think radicals are mad (nee crazy, disturbed, insane, deviant, misguided, etc.) we're not for you, and you'll probably loathe us. If you think the world will not be safe 'till sociologists are kings, we think you're mad. Ditto for politicians.

Every day, changes race into our world like mad floodwaters, undermining all we hold sacred and sure.

Change is called for.

Yet, change is crisis.

What to do in such times. How to live. Feel. Know. Experience.

That's what this series is about.

Victor Gioscia
Executive Director
Center for the Study of Social Change

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shore to bend of bay and bring us by a
commodius vicus of recirculation back to
Howth Castle and environs.*

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Introduction

Writing itself is for me a dubious craft. The first time I took myself seriously as a writer was in the summer of '66. During that year I had done a lot of thinking about the relation of the writer to the American power structure in the formidable context articulated by Conor Cruise O'Brien in his course on Literature and Society at New York University. Dealing with the draft board and the frustration of demonstrations about Viet Nam was very heavy. I got my C.O. The war went on. I locked myself up in a garret on the Lower East Side and pounded the typewriter. People were burning themselves to death. I was writing. The war went on.

Midway through the summer, I tuned in WBAI's coverage of the International Writers' Conference. There was this guy saying, "Of course, in this electric age of computers, satellites, radio and television - the writer can no longer be someone who sits up in his garret pounding a typewriter." It was McLuhan. His rap blew my mind. I could hardly read a page or write a line for six months.

By the next spring, I was in Michigan's graduate school of computer sciences. The draft board, however, refused a student deferrment. They insisted my alternative service be done right away and offered work as an orderly in a New Jersey hospital. I had been in contact with John Culkin at Fordham's Communications Center about the possibility of working there the following year since McLuhan was to be a visiting professor. Culkin gave me a definite "yes"

on the job. I went into the draft board with a copy of *Understanding Media* under my arm, and convinced them it would be good for the country if I did my alternative service as a research assistant to McLuhan.

Halfway through that year I was saying to myself - "This man's rap is either nonsense or it's not. If it's not, it will work with a medium he's never talked about." I got my hands on some old 1/2" videotape equipment and began experimenting. It is at this point that the writing in this book begins.

I once asked a friend who thought of himself as a generalist, what he was doing specializing in Chinese studies. "Oh," he said, "it's only a front." Videotape has been my front. I have taken it more seriously as a metatool, than as a tool. As a metatool, videotape gradually takes you into the realm of cybernetics. At the time I wrote the first piece in this book, the extent of what I knew about cybernation was that it had to do with communication in man and machines, that it had to do with input storage and output of information, and that the word came from a Greek word meaning "steersman" on a ship. The sense of cybernetics one develops using videotape is radically different than when using computers and punch cards. With video, people, both live and "live on tape" are always part of the looping and balancing process. This compels one to stay close to human concerns. You are not dealing with people abstracted into numbers, but with a mercilessly revealing electric image of people and their own and others relation to that image. Grounded in thousands of hours of this kind of experience, one raids the cybernetic lexicon selectively, critically.

Depth psychology is said to have begun with the still photograph. Videotape is an x-raying of human processes that takes us into realms traditionally charted by religion, traditionally referred to as "the sacred." In Joyce's phrase, video "*imbues the soulskin...sobconsciously.*" More than anything else, this book seeks to chart something of that territory.

The reader will find no line of argument, no central theme to this book. This aggregate of writing might be described as attempts to articulate in print different states of excitement about human possibility in a trial and error process of using videotape as a cybernetic tool. The insistence on cybernetic modeling of video process provides the reader with a kind of "organizing redundancy." Perhaps only practitioners of video will care to follow the subtleties of the different modeling. The general reader may well find these passages simply repetitious and pass over them. Beyond that there are recurring excursions into such areas as rock music, McLuhanese, religious commonplaces, personal experience and the intuitive mathematics of topology. Generally, the writing proceeds by negating non-cybernetic contexts and suggesting alternatives through intuitions of congruence.

Much of this material has appeared in print before. The two pieces in the educational section were written for *Media and Methods*. A good part of the material in the art and guerrilla warfare sections appeared in *Radical Software*. I have made minor revisions and additions besides adding brief introductions to each section.

The explicit attempt to define the sacred cybernetically began with the death of my father. The timing and circumstances of his death were such that I did a video wake for him as a man seized.

This sent me looping back through the video into four years I had spent in a monastery - trying to find balance, trying to find a way through tape to configure a tribe that would define the sacred. The Wake did not work in the way I had hoped. No tribe configured. The work on sacred chreods is, then, a spin-off of the Wake. Defining the sacred cannot be done alone or in print. The attempt here is to suggest a language in which the sacred might be defined.

* * *

These efforts simply would not have been possible were it not for the work of a number of men whom I have had the good fortune to have been in contact with. I wish especially to acknowledge Conor Cruise O'Brien, George Steiner, Robert Pollack, Ted Carpenter, Marshall McLuhan, Vic Gioscia, Al Schefflin, Denis Walsh, Frank Gillette, Philip Slater, Warren Brody, Avery Johnson, Gregory Bateson, Thomas Berry and Claude Ponsot. Special thanks to Avery Johnson for letting me include his piece on McCulloch's Calculus of Intention and to Vic Gioscia for his commentary on the video wake. Thanks also, beyond the graphics, to Jody Sibert for handling the mechanics of the book under transatlantic conditions. Thanks also to Megan Williams for her help with production.

Special thanks also to my brother, Jim, whose gentle critique in terms of access of ideas to the reader, is responsible for much of whatever intelligibility the last essay has.

I wish also to acknowledge all those I have done tape with.

Electric Grammars

(Educational Context)

The following two pieces were written soon after spending a year with McLuhan at Fordham. "Videotape - Infolding Information" was based on working with video and kids at a Montessori school for a half year and then with anybody I could find in the New York area who wanted to play with video during 1968. The Cable TV piece was written right before doing a media project with high schools kids involving video and cable in Newburgh, New York in 1969-70. The project was a disaster for many reasons: problems with the School Board, delays in funding, difficulties within the staff, etc., etc., etc. This fruitless experience with a "straight" media project was in part the reason for deepening my involvement in "the video movement" - which is a story in itself.

Someone once asked me what I learned from McLuhan. Caught by surprise, I said, "not much content." Which is true. What I got into with McLuhan was a way, an approach to media which I think is evident in these pieces. McLuhan is a genius in this junkyard of Western civilization, a "Savage Mind" in Levi Strauss' sense of the phrase. More than any contemporary figure, McLuhan is willing to slug it out for *The Mechanical Bride* in "the foul rag and bone shop" of her academic heart. The shaping of a sacred language that this book

works toward, using the elegance of R. Thom and Gregory Bateson, was for McLuhan a process of restructuring the primitive emotions. That process remains characterized in my mind by a seminar in which Marshall bravely chanted T.S. Eliot's, "Fragment from an Agon" with a bunch of reluctant, disbelieving Fordham students.

*"Birth, and copulation, and death.
That's all, that's all, that's all,
Birth, and copulation, and death..."*

"Fragments of an Agon", T.S. Eliot, from COLLECTED POEMS 1909-1962, published by Harcourt, Brace, Jovanovich, Inc. Copyright 1936.
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VIDEOTAPE

(Infolding Information)

Replay time. Six neighborhood youth corps kids from Brooklyn and I are watching videotapes we took at a state park in Jersey. Don Herd is smiling and threading his tape, "Wait'll you guys see this. Wait'll you see it." He had fought with the group and took off with one of the two 1/2" battery portables we were using. The tube shows trees, shaky trees. Fifteen minutes into the twenty minute tape and we're bored.

"You haven't seen it yet!"

"Seen what, seen what?"

"The best part. Wait, just wait... here it comes now, here it comes." He's squeaking with delight and he's serious.

The camera pans shakily around an open field. Suddenly out of focus and grinning, Don Herd himself. A shy laugh from the tube. The camera slides off the face, hesitates, and comes home to rest on the happy face of Don Herd.

This open field in the state park plus the feedback experience of Don Herd had a kind of coherence and completeness hardly possible for him and his classmates in the present school system. Classroom-space and clock-time condemn them to a three dimensional game of tic-tac-toe in which experience is blocked out by time schedules and movement from classroom to classroom, a game in which there is very little coherence.

Into the grid of this game ETV (replete with the playback capacity of VTR) entered, enthusiastic. This system could do the old job better. One ad for VTR calls it the "incredible copying machine"; it lets you make "carbon copies of a single gifted teacher for the entire school system." X-space could be conquered by videotaping the lesson to be pigeonholed into the classroom at a convenient hour. X-Space, O-Time, and the game goes on.

Manufacturers entered into the game, enthusiastic. They encouraged the stenciling of the commercial television system, with its complex and costly traditions, for the school system. The only differences were that now "educational" materials were being transmitted and you were working with a captured audience of kids rather than consumers to be captured - who at least had the indirect option of forcing a show off the air by not watching it.

Shoot first, ask questions later. So the new medium, videotape, masquerading as the incredible copying machine, has wedded itself to the physical fact of school buildings and their classrooms. The automatic bells ring out anniversary celebrations every 41 1/2 minutes. But the Don Herds are not happy.

ETV AUDIENCE AS RESEARCHERS

Ten months of experimenting with videotape has convinced me that the bias of this medium is not to play three dimensional tic-tac-toe. But before getting into the grammar of videotape itself and what it suggests for schools, I'd like to pass on an insight of McLuhan's applicable to ETV in general.

... The classroom, as much as any other place, can become a scene in which the audience can perform an enormous amount of work.

The audience as work force has unlimited possibilities. Suppose we were to brief fifty million people on some extremely difficult problems facing top-level scientists. Inevitably, some dozens, hundreds of the fifty million audience would see instantly through any type of opaque problem, even on the highest scientific levels. Robert Oppenheimer is fond of saying that 'there are children playing in the street who could solve some of my top problems in physics because they have modes of sensory perception that I lost long ago.' There are enormous possibilities for using an audience as work force in scientific research, or any other type of research. It is simply that we insist on beaming instruction at them instead of allowing them to participate in the action of discovery.

Printed in The American Scholar. Copyright International Center for the Communications Arts and Sciences, New York

ETV has taken from commercial television the metaphor of the audience as consumers of information. Programs are produced, packages are made, often of the classroom lecture. The students consume.

With next to no adaptation, present ETV facilities could change the role of the student from consumer to problem researchers. The x-ray capacity of the TV tube could be utilized to present the anatomy of real problems. This does not mean a journalistic report on a problem. Nor does it mean pseudo problem-solving: urban air pollution is not solved by inhaling the country's atmosphere through a Salem cigarette. Presentation of real problems, like cancer research, could begin to take the place of pre-packaged information.



TV facilities can transfer information over distance at high speeds to many people. With problem presentation, the more people reached quickly, the better the chances of solution. ETV could be a mass brainstorming media.

SCULPTING TIME AND SPACE

VT is not TV. If anything, it's TV flipped into itself. Television, as the root of the word implies, has to do with transmitting information over distance. Videotape has to do with infolding information. Instant replay offers a living feedback that creates a topology of awareness other than the tic-tac-toe grid. Anthropologist Edmund Carpenter tells a story about two Eskimos who went on solo trips around an island. They were asked independently to draw maps of the island. Their maps were quite good replicas of the island, yet they both differed in one significant aspect. Each had camped and hunted near a certain cove and that area on their maps was larger according to the length of time each had stayed there. Videotape creates a kind of Eskimo awareness of time-space. Especially with the 1/2" battery operated portables one can sculpt time-space in accord with the contours of experience. Information can be infolded to enrich experience.

PARTICIPATING IN YOUR OWN AUDIENCE PARTICIPATION

With videotape, the performer and the audience can be one and the same, either simultaneously or sequentially. In an actor's class a student did a piece from *Spoon River Anthology* first without the monitor, with me shooting her face from a distance with a 1-10 zoom. Then she did the same piece facing into the monitor so she could see herself while performing. Delighted with both experiences, she said that she felt more secure facing the monitor than with me at a distance using the camera and no monitor. The distance shooting without monitor left her with no feedback other than the glassy-eyed lens. With her performance extended into the monitor, she was, to use McLuhan's phrase, "participating in her own audience participation." Feedback was immediate and self-supplied. She could use simultaneously her expressive abilities as an actress and the set of responses she had as an ordinary theater goer. She could take in her own performance. Enter the talented audience. Add to this the dimension of instant replay and a new kind of performer is bound to develop.

This actress's sense of security and confidence with the monitor seems akin to my whole experience with videotape. I am developing a different sense of myself. Very much like the sense of myself I have when I swim lazily. Very much like the Chi sense of myself I have gotten in doing some T'ai Chi Twan. I feel more able to move in my own fullness. And this awareness extends beyond the actual use of tape. Confidence seems almost to be a function of communicating with oneself.

HEART TRANSPLANT BY VIDEORECORDER

VT offers image and sound feedback that creates a field richer than ordinary conversation. A marriage counselor uses videotape to play back to couples their conversations. Often dimensions are revealed outside the perimeter of the spoken word. On replay they may hear themselves saying they don't want anything to do with each other while at the same time they can see their arms open to each other in a simulated embrace. The old heart to heart seems to be more possible with videotape. Indeed, the label on the machine has as its root *cor*-videocorder-heart in the full rich sense of Newman's dictum *Cor ad Cor Loquitur*. Compare this with television's *Peyton Place*.

COMMUNICATING WITH ONESELF

In the Langley Porter Youth Drug Clinic for psychedelic dropouts in San Francisco they allow patient videotaping sessions in private. The patient is free to erase the tape or show it to someone of his choice. The patients testify that "it's a real trip." This kind of communicating with oneself has an implication of self actualizing that goes far beyond mere self discovery. A student, discussing the Columbia student strike with her fellows at lunch, ran up against such vehement cliched ignorance that she could not talk for fear of exploding into curses and tears. She went home and videotaped, without being monitored, what she would have said. Someone

else played their roles. Upon replay she was amazed but said little. The next day she spoke her mind at lunch calmly and firmly, without exploding.

Seeing herself doing it live on tape opened up communication with herself about it. She could take in her own outside and consider it. The net result of this inner dialogue was the confidence to move in her own fullness, to actualize herself.

Videotape enables a person to be present to himself in a new way. This past summer an eleven-year-old black girl was hitching home from Star Lake summer camp. The counselor caught up with her. Her main complaint - "I'm ugly." He had the sense to take her to the VT setup and show her herself on tape. "Ooh, that's me, huh? Okay."

In a videotape marathon at Aureon Institute this fall, Steve Lawrence asked each member of the encounter group to introduce himself to the others while the camera taped him. He would playback the tape to the person immediately. This worked to open up inner communication thereby facilitating communication with the group. Comments ranged from "I don't like what I see; I see a whining baby," to "I like what I see. I mean I always thought of myself as peculiar but I can see I'm put together like other people. Like anybody you'd see in a subway."

STRATEGY FOR SCHOOLS: FEEDBACK PROCESS

Given this feedback capacity of videotape, it seems the best strategy for its use in present schools is as an ever present service for both teachers and students, much like a telephone or a mirror. Half-inch, one-inch, even two-inch systems could be utilized in this way. Productions for audience research could be moved to more centralized locations where the budget is bigger and the talent thicker. This would free the TV studio to become a special space for infolding information. Portable units could provide the service in other parts of the building. Battery operated units could be used for field trips and such.

Discussion groups, reading aloud, student performances, debates, cheerleading, dancing, self-evaluation for teachers (perhaps with the help of other teachers or students); there is an inventory of processes in the school that might be enriched by the living feedback of instant replay.

The word replay is deceiving in a sense. As indicated above in the student discussion of the Columbia situation at lunch, videotape can function as instant *preplay*, as a simulation service. Students going for job or college interviews, making a presentation before the class or a public speech could use videotape in this way. Such a feedback service would "from many a blunder free us." The emphasis is on us. It's what's live, not what's on tape that counts. The living process not the product.

Between full feedback and packaged information lies a whole area of what George Hall of NAEB calls "interactive structuring of program materials," in which student response is itself part of the learning. With videotape this type of programming can grow much more sophisticated than the one stimulus, one response pattern. As Dr. Carol Headley of Fordham School of Ed points out, you must incorporate into your program the power the medium gives the student to "react to his own reactions."

STUDENT LIBERATION BY INFORMATION

Authority is based on information. Cybernetics and papal pronouncements have made that apparent. Upon introduction of a 1/2" system into one school, the drama teacher complained, "Students are notoriously their own worst directors. If they start seeing themselves on tape they'll start directing themselves." Her authority as director comes from a tradition she knows and observation of the students performance in relation to that tradition. With the feedback from videotape, the students can take in their own outside, can take in information that increases their control over their performance. The director's role shifts toward that of a consultant, someone who offers perceptions from what is now an alien tradition.

There is a very real sense in which portable VTR is a complete cybernetic system. It is not part of a system like an 8mm camera that needs the drugstore developer; it is not like the TV in your home which is only one terminus of a huge network. Portable VTR is a self contained system for processing culture - family culture,

classroom culture, therapeutic culture. It has input and output and can be operated without experts. It offers a completeness in itself. Those outside the closed circuit involvement are an audience once removed. Most likely, they are not interested in what is of vital importance to the "in" group. Steve Lawrence found that the broadcast ratings for therapy sessions on VTR in the Los Angeles area were abysmally low. With VTR it is wise to concentrate on the "in" culture and not harbor the secret hope that CBS might want to buy up rights for broadcast.

In the sense that a portable videotape recorder is a complete system in itself, it is structurally different from other VTR equipment. Much like the TV generation which lives in radical cultural discontinuity, claiming they must be father and mother to each other since they in fact have no cultural parents, so this small user equipment is from a user's point of view, completely new. It is its own baby.

Broadcast television in ten years will reap the fruit of this diversity and decentralization of PVTR in the hands of kids only to the extent that the centralized pattern is not stenciled onto these systems. One factor clearly works in favor of decentralization. The VTR systems of the different manufacturers are incompatible. There are 15 or 16 different formats. Electronic transfer can be made but only on expensive equipment. This will encourage small users to feed-back into their own situations rather than feed off it for others.

VIDEOTAPE IN THE CLASSROOM

Classroom cultures can be revolutionized by VT. The shift in authority is one dimension. Students can take a much larger part in the processing of information. What the kids dig most about school is other kids. Videotape can facilitate the learning from peers.

The underlying analogue of the classroom culture is the book: teacher as chapter title and the kids as gutengerber-babies all in rows. The title controls the content. The teacher with his subject matter controls the kids. The teacher is the type font of all knowledge imprinting on the blank pages of the students' minds a continuous sequence of prepackaged knowledge called a lecture. His notes become their notes. Finishing the course is more important than dialogue. He works under the burden of a body of information to be transmitted. He is slave to the syllabus. Only questions "on the track" of the curriculum are acceptable.

Contrast the videotape format of *Laugh-In*. As opposed to focus on one font of information, there are many. As opposed to continuity and moving along, there is discontinuity and repetition. The attention span required in a classroom for a straight lecture is forty some minutes.

The Humanities class at Newburgh Free Academy in N.Y. is experimenting with class format and small videotape. By giving each student an index card with a short bit on it, teachers Bob Pritchard, Antone Aquino and Thomas Fry turn the class into a laugh-in, learn-in cast.

A student tapes each bit with the hand-held battery portable which frees him from tripod perspective. Then instant replay. So far, instant insane success.

It is hard to say what will happen to content in a course transformed by VTR. The Newburgh Humanities Program is currently using random bits like selling toothpaste, calling the garbageman, doing an ad for yourself. Perhaps the syllabus could be turned over to students the first day to be scripted for VTR. It may work. Videotape, however, seems to have more potential for exploring environments. I took a battery videotape and three "Born Losers" from Spanish Harlem to Resurrection City the weekend of Puerto Rican Day. They were so into shooting with the video camera that they didn't even stop to eat. They looked and learned. One gave me an extensive comparison between the cops in D.C. and the cops in N.Y. that would stand up in any sociology text.

A teacher willing to bypass the lecture format in favor of a VT learn-in will find a deeper understanding of the commonplace tradition in oral cultures invaluable. Eric Havelock's *Preface to Plato* and the works of Walter Ong can be of great help here. John Cage's *Silence* and *A Year From Monday* tend to give one the courage to experiment with random compositions. It won't be long before the kids pick up on TV ads for clues as to how to present their bits.

'TO MONITOR OR NOT TO MONITOR'

The videocorder tends to divide process phenomena into those that lend themselves to simultaneous monitoring and those that do not. Putting on makeup, combing hair, shaving, *Spoon River* practice; these lend themselves to simultaneous monitoring. Other things, such as the classroom composition, work better without simultaneous monitoring. The monitor (from *moneo*, warning) acts as a censor and inhibits the experience. In using videotape equipment, it is necessary to understand the process at hand in these terms.

SELF-ERASING, SELF-EFFACING

Once upon a time I had a teacher who considered the eraser to be the worst thing that ever happened to the pencil. He liked things thought out before they were written out. This defender of the pure pencil was onto something. An eraser creates a different style of thinking. Videotape is erasable. We can redo it if we don't like it. Since videotape, "live" TV is mostly tape, and it's different. Hugh Downs is among the many who defend pure television as the "now" medium.

"Live on tape" means all those tribal things we call living on a magnetic tape that permits detachment à la literacy. Adoption agencies now use videotape. The parents see the child on tape first. The "live" child can be considered without the immediacy of his needs present. Sounder judgments can be made. If the child is old enough, the process is also reversed. High level cultural exchange is possible via videotape - between blacks and whites, for instance. What about a direct exchange by tape between a group of Montessori kids in the U.S. and a group of Suzuki kids in Japan. Live on tape, tribe to tribe, three-year-olds may make the best ambassadors.

The mythology and the use of mirrors deserves serious study by the users of videotape. "Mirror, mirror, up against the wall ..." the ugly duckling, Narcissus. McLuhan's chapter on the Narcissus myth in *Understanding Media* is extremely important if we are to get beyond the gadget lover stage with videotape. McLuhan's description of Narcissus applies perfectly to one three-year-old's experience with videotape. She felt compelled to imitate herself on the screen. If we were replaying her singing, she sang; walking down the stairs, she ran up and walked down again. McLuhan, in talking about Narcissus' reflection in the water, wrote: "This extension of himself by mirror numbed his perceptions until he became the servomechanism of his own extended or repeated image... He was numb. He had adapted to his extension of himself and become a closed system." As we grow more willing to contemplate "what's happening" this need not be the case with videotape.

CABLE TV

(The Raw And The Overcooked)

Three freshman boys on the remedial track at Bloom's High in Chicago Heights, Illinois, are getting into their usual near fist fight. They are asked to go to the cooling off room. Midway through the normal rubric of figuring out who will go to the counselor first, one of them spontaneously flips on the half-inch videotape recorder in the room and begins to role-play the "counselor." They replay it a few times, discuss it, and switch roles. Another series of replays, more discussion. Another changing of roles, replays and discussion. They then decide to make a fresh tape with each of them taking a turn as counselor. With teacher Sandy Szelag's blessing, they show the tape to the class. The real counselor is invited and he leads the class in the dynamics that result from the tape. For the rest of the year, the three boys get along.

THE TV GENERATION IS CAPABLE OF AN INSPIRED USE OF TELEVISION SYSTEMS

Cable is a distinct television system with exciting possibilities for education and for the TV generation. A Community Antenna or Cable Television System (CATV) consists of a super antenna to pick up broadcasted signals, a "head" or "headend" which processes these signals *and can also serve to process locally originated signals*, and

coaxial cable which is strung via telephone poles or city ducts to the home TV sets of subscribers who generally pay \$5 a month for the hookup. Cable capacity is presently 12 or 20 channels. There are people who envision as many as 400 channels.

There are over 2000 cable systems operating in this country now. Roughly another 2000 franchises have been granted and another 2000 or so franchises are pending. 6000 or more separate cable heads mean 6000 or more separate information systems - the possible restructuring of communications in this country. We can wire according to the information contours of our culture. An entity as small as a city block can have its own headend, its own channel as a sub-system of a cable set up. Any cultural entity can now balance its television intake with input of its own. It can control the processing of its own information rather than be the passive participant in the broadcasted process. What was technically, financially and politically impossible with broadcast television is possible with cable TV.

For schools, cable offers a unique opportunity to function effectively in the information environment. Before discussing Cable TV and the educational system, it seems useful to talk about the difference between television and the kind of videotape television used by the freshmen at Bloom's.

There was no videotape recorder on board Apollo 11, only a television camera. Television, as the root of the word implies, has to do with transmitting information over distance, in this case a quarter million miles from the moon. Videotape has to do with infolding information, the kind of feedback that goes on in encounter groups. Working with encounter group leader, Denis Walsh, I videotaped while a girl stood in the middle of the group

with her eyes closed and described how she thought people were reacting to her then and there. The contrast between her negative description and the positive responses to her that the playback revealed were both illuminating and encouraging for her. This was information infold. What she and the group put out was taken by the tape and given back to them.

In some ways, the difference between broadcast television and the videotape recorder is the difference between Hippies and Yippies. As Abbie Hoffman has pointed out, the hippies are products of the mass medium, while the yippies create media events. Hippies take television as part of the service environment, merely an output terminal. Yippies, on the other hand, treat television as an entire information system into which one can input such things as police brutality. As has been pointed out, the cost of getting a message on television for an honest man with little money is at least a few days in jail. That the Yippies are willing to pay this price seems to me a small indication of the increasing demand of the TV generation to share in television systems.

While the living room or classroom television is merely the terminal of a larger system, videotape is a complete information system unto itself. It has input (camera and mike), storage and processing (the record/playback deck) and output (the monitor). The freshmen at Bloom's were treating their videotape as an entire information system enabling them to feed back to themselves the way they were behaving so that they could communicate about their behavior and enlarge their control over it. The videotape extended them as cybernators. By contrast, behavior induced by the output of a television set is merely the terminal behavior of consumers.

THE BUSINESS OF CABLE

Confusion about the grammar of media, such as tape and TV, as McLuhan has shown, is par for the course. New media began by doing the job of the old media better. The car was a "horseless carriage." The radio was a "wireless telegraph" used for point to point communication until the Irish rebels used it for broadcast in 1916. IBM grew successful as it came to understand it was not in the business of business machines but in the business of moving information.

Cable TV is now transmitting broadcasted signals better. This "snowless" signal is not what a cable system is about. The basic business of cable is the cultivation of local culture. This does not mean stenciling national network type programming on a local setting. Any culture is *already* programmed. That is to say, the life style of the people is structured by the local environment with its interlocking system of roads, postal service, restaurants, recreational facilities, television intake, telephone usage, etc. The role of a cable system is to increase the community's awareness of their existing cultural system thereby giving them more control over its development - to cultivate the local culture. Just as VTR extends man as a cybernator, so cable can enlarge the capacity of the local culture to communicate about and control its development. This control can include some decisions about importing information.

Centralized production facilities in a cable setting that exploit the salable aspects of local culture for export will have a short life. This is to model the cable system on broadcast television before the invention of videotape. Packaging information for elsewhere on the stark vision-over-distance model of tele-vision, amounts to strip mining of local culture. Low priced portable videotape units make it possible for the cable company to take their whole district as their studio. Feeding back into the culture rather than feeding off of it will insure lasting relations between cable and culture.

THE CABLE COMPANY AND THE EDUCATIONAL SYSTEM

If cable can effect a genuine awareness and cultivation of life patterns, it will find its best resources in the enriched and unique perceptions of its community. The information overload in our society is placing more and more of a premium on pattern recognition. Pattern recognition is a function of perception. A diverse pattern of unique perceptions such as is possible with the growth of cable in this country, could turn CATV systems into so many think tanks.

As readers of Peter Drucker's *Age of Discontinuity* are aware, our society is shifting from an economy based on capital to an economy based on information. Cable television companies are initiating policies within the dimensions of this transition. They are compelled to work out new relationships between capital and information. Once a cable company realizes that local culture is in fact their business,

it seems appropriate that they will want to develop a working relationship with the school system. Via cable the educational system can function as a consulting institution to the developing culture. Conceivably, a cabled culture could develop to a level of enlivened awareness such that it could turn its perceptions into profit if it cared to. Brainstorming others' problems by cable through a technique of "organized ignorance" is a source of revenue the cable industry has not considered.

THE EDUCATIONAL SYSTEM AND THE CABLE COMPANY

There is a Japanese composer, Joji Yuasa, who works with "white noise." Just as white is the presence of all color, so "white noise" is the presence of all noise. The "static" one gets tuning between stations on a radio is really white noise. Yuasa boosts up this sound to a rich fullness and surrounds you with it. His composition is a process of filtering out from the fullness of noise that which he does not want.

White noise is a perfect analogue for the world of total information we are approaching. Ideally, everyone will be their own composer. All non-private information will be available to anyone at anytime and place in any mode they want. Though there is no way of saying for sure, it seems likely that cable will be a major conduit of this information from the data banks to the home communications centers. People will have freedom to the extent that they control the filtering process. Hopefully we can move from a mass transit

system of information such as we now have (you meet their schedules) to one of random access, of self-processing in a world of information movement. Education becomes the empowering of people to maneuver in a world of white information.

Cable can serve not merely as a conduit to total information, but more importantly, each separate system can provide the skeleton of an information structure in which students can build up the indigenous data base necessary for self-cybernation. Give them videotape, audiotape, and film and let them find forms for their own experience and their own environs rather than the teacher taking the data, informing it, and presenting it as a pre-cooked packet to be warmed over and consumed in the classroom. Self-structuring of unprepared data develops the capacity to be your own information composer.

There is a technique being used in some schools for teaching an inclusive kind of anthropology. Students, in so far as is possible, live the life of another people for as long as a year. This includes cooking, monetary system, education, etc. With cable it is possible to do this with one's own culture "live on tape." The near and the now can be put on tape in such a way as to permit detached examination. The dictum that the unexamined life is not worth living is close to the concerns of an educational system based on the detachment possible with the phonetic alphabet. If you code experience in the phonetic alphabet, it can be examined. Videotape offers a different mode of detached examination. For example, there will soon be on the market an inexpensive VTR that takes a frame a second for twelve hours and can be played back in a half hour. Simply placing this at different meeting spots would reveal patterns of interaction. Documentary type productions on the pattern of teenage car usage, etc., is possible.

Regular exchanges could be set between sister cable systems: rural/urban, black/white, East coast/West coast, etc. Let teachers from the different disciplines function as commentators on the video verité.

VIDEOTAPE VS. FILM

The movies and broadcast television have implicit in their structures a perceptual imperialism. You watch what others want you to watch to a large extent in the way others want you to watch it. When Fred Wiseman shows *High School* everybody does see a different film, but it is of somebody else's high school. The kids in the actual school will not be shown the film. Others control access from camera angle through the editing process to the decision as to whether it will be shown. Film edits the experience of others for you. With videotape, on the other hand, you can pre-edit your own experience simply by setting down your script on audio tape and following it in front of a camera. Film is the packaging of information in cans. Videotape is involved in the feeding back of process. Film rips information away from a situation for use elsewhere. Videotape can feed back into a given situation and enrich experience. Film extends man as a spectator. Videotape extends man as a cybernator. Film imports information. Videotape implodes indigenous data. In describing the incident cited at Bloom's, teacher Sandy Szelag said the class treated the tape presented by the three boys in somewhat the same manner as they treated a short story. The difference is that a short story or a film for that matter, would be an information import and thereby run the risk of being another high definition

disaster characteristic of the school system. The tape done by the boys, on the other hand, was native to the group, low definition, cool. Portable videotape works with the raw, the uncooked data, the "static" of the surround. In the cauldron of a cabled culture, this kind of data could be more exciting than moon rocks. It should be said that cabled cultivation of local culture can only proceed through a process of creative destruction. We do not yet understand the information contours of culture well enough to cybernate smoothly. In this condition, raw data is dada.

BETWEEN THE RECIPE AND THE REALITY

Talk of the wired white world, given the realities of cable, is somehow reminiscent of the political realism of Snow White and the Seven Dwarfs. Concern with cable is concern with the art of the possible. Those of the interface generation between the establishment and the new youth who try to put portable videotape in the hands of students, will soon find themselves accused of running guns to the Indians. Harold Innis, a mentor of McLuhan, with a sense of political realism, saw social change as the result of the disenfranchised groups (in this case, youth) trying to gain control of the new communications media and thereby gain a form of social power. Providing high school students with portable videotape is like providing David with a slingshot. The broadcasted armor of the communications giants seems even less vulnerable than was Goliath. Yet anyone who has experimented with portable videotape equipment knows that the potential of television has hardly been touched. Perhaps nothing that is really television will happen until those who were raised on it gain control of it.

New media like Cable TV mean opportunity, not inevitability. The power gap opened up by this new media has attracted a host of contending parties and opened up a number of tricky questions. Educators who decide to enter the cable arena will soon find themselves involved with local politicians, media barons, venture capital, the FCC, the Supreme Court, Congress, copyright lawyers, broadcast interests, computers that want to talk to other computers over cable, the possibility of a two way system, the Joint Council on Educational Telecommunications wanting twenty percent of cable capacity for education, questions of local advertising, franchise questions.

This much seems clear. There is a natural alliance between the TV generation, educators who understand something of the implications being raised on TV, and the cable television industry. From the side of the educator, there are a number of difficulties with such an alliance.

- Many of the franchises negotiated by the town fathers contain unimaginative, token provisions for education. The cable companies will have to be willing to give on this.

- Practically all of the possibilities I have talked about here are based on the use of portable half-inch videotape equipment and to a lesser extent super eight film and audiotape. The industry generally is adopting a one-inch format which confines it to studio and mobile van production. Formulas will have to be worked out for transfer from half to inch, and direct use of half-inch. There is also question of the quality of the image yielded by half-inch. Standardization of line resolution for cable seems to me unnecessary. If the image is

stable, it should be allowed. To make the definition of the image uniform would be as senseless as making the comic strips in the Sunday funnies of uniform definition.

- The ethical code of the National Cable Television Association reveals they have done little thinking about the TV generation. They conceive of their responsibility toward youth in terms of providing the "right kind" of information and withholding the "wrong kind" of information. Educators will have to show the cable industry the critical necessity for a systems approach to the needs of the young rather than a content approach. Part of this dialogue need be the critical discussion of the feasibility of possible ways of implementing a two-way system.

The world of white information and the outcome of contentions over cable seems far away. Perhaps not worth the efforts of educators at this point. But educators cannot afford to defer their consideration of cable until it is too late to do anything but hold class discussion after the fact. The rules of the game are being drawn up now. Educators can now secure a share in the cable structure so critical to the TV generation, or they could "back up into the future" reading books about TV.

Both the FCC and the cable industry want cable-casting. Given the right combination of circumstances, portable videotape, cable availability, and the will to do, educators may well declare themselves fed up with the overcooked, cafeteria curriculum and go roll in the raw data of the seventies.

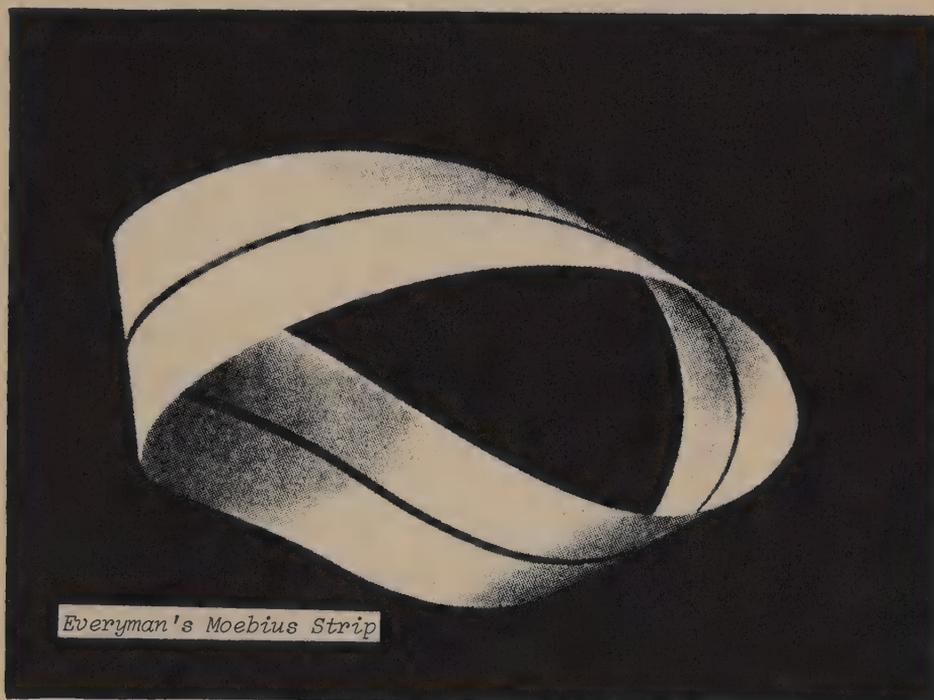
"He hasn't adjusted to the sixties yet and already it's the seventies."

(OVERHEARD)

Random Probes and Art Pieces

The Howard Wise Show, "TV as a Creative Medium", from May 17th to June 12th, 1969, pulled me into the art world, somewhat unwillingly. The preciousness and protectiveness of it all seemed ridiculous, especially in the face of the political realities of 1969. To me, art was "anything you could get away with" and we were moving into an electric mode where we would soon say with the Balinese, "We have no art; we do everything as well as possible." Now it seems too few people are in a position to do everything as well as possible and we'll have art for a while to come. Art remains a refuge from which to suggest the sacred.

SELF PROCESSING



A moebius strip is a one-sided surface that is made by taking a long rectangle of paper, giving it a half twist and then joining its ends. Any two points on the strip can be connected by starting at one point and tracing a line to the other without crossing over a boundary or lifting a pencil.

The moebius strip provides a model for dealing with the power videotape gives us to take in our own outside. With film, we are taking in the edited experience of others. What follows is a composition for video to be edited, directed, acted and viewed by you in privacy. Feel free to bend, fold and mutilate as you wish. It is not designed to peel your own skins off until you find some fiction called the true you. Rather it is designed so that you might get a taste of processing yourself through tape, so that you might begin to play and replay with yourself. Hopefully it will suggest ideas for your own compositions.

YOUR STRIP.

YOUR TRIP.

Technically, this is the way it works.

Using an audio tape recorder, record the following series of cues, pausing after each instruction for as long as you would want to follow it out.

Set yourself up in front of the videocamera, for a head and shoulders shot.

Have the monitor off.

Roll the tape.

Follow/don't follow the cues.

Relax and breathe deeply, just relax and breathe deeply

Loosen up your face by yawning

*stretching your neck
working your jaw*

Now, explore your face with your fingertips

Touch the favorite part of your face

Close your eyes and think of someone you love

Remember a happy moment with them

With eyes open give facial responses to the following people

*Don Rickels
Spiro Agnew
Your Mother
Huey Newton
Margaret Mitchell
You*

For the next twenty seconds do what you want

Now let your face be sad.

Turn your back to the camera

Now face the camera

take a bow

REPLAY

"WOW, IT'S LIKE MAKING IT WITH YOURSELF"

(Piece from the Howard Wise Show)

As long as we adopt the Narcissus attitude of regarding the extensions of our own bodies as really out there, really independent of us, we will meet all technological challenge with the same sort of banana skin pirouette and collapse.

From UNDERSTANDING MEDIA by Marshall McLuhan. © 1964 by Marshall McLuhan. Used with permission of McGraw-Hill Book Company.

McLuhan understands all extensions of man as inducing a corresponding numbness and closure. Narcissus' image in the pool is a kind of self amputation brought on by irritating pressures. To counter the irritant of amputation, his image in the pool produces a numbness in Narcissus which makes it impossible for him to recognize his extended self.

This mechanism is at work with people seeing themselves on tape. The most telling instance I know of is a replay I did for a three-year-old girl in a family setting. She felt compelled to imitate what she saw herself doing on the screen: if her taped self was singing, she sang; if dancing, she danced. In one section of the tape she was walking down stairs - upon seeing this section of the tape she ran up the stairs and walked down again. This three-year-old seemed to be using real time mirror ground rules to deal with her videotape experience. It seemed she was playing a mirror part for her video image - the part the mirror would ordinarily play for her. In doing so she became a numb servo-mechanism of her extended image. The next time I brought the camera around she ran. She refused to become spellbound by her tape extended self. By contrast I hear a children's sensitivity leader once brag that he seen so much of himself on tape that he was desensitized to it.

The moebius video strip is a tactic for avoiding both servo-mechanistic closure and desensitizing in using videotape. Tape can be a tender way of getting in touch with oneself. In privacy, with full control over the process, one can learn to accept the extension out there on tape as part of self. There is the possibility of taking the extending back in and reprocessing over and again on one's personal time warp.

*There will be tape, there will be time,
To prepare a face to meet the faces that you meet.
Time to murder and create.*

It may be wise to invite a good friend to watch some of the replay with you. Yet avoid inhibiting word labels on what you're doing. The moebius tape strip is a tactic for infolding information unto a fullness. "*Excuberance is Beauty ... the cistern contains, the fountain overflows.*" To overflow one need be infolding. The process of infolding cannot be frozen in words. Let go the formulations and take another trip round the moebius strip.

Videotape is the "some power" that is answer to the prayer of Burns people which they instinctively quote when talking about tape.

*Oh wha some power the Giftie gie us
To see ourselves as ithers see us
It would from many a blunder free us
And foolish notion.
What airs in dress and gait would lee us
And e'vn devotion.*

"IT WOULD FROM MANY A BLUNDER FREE US."

It would enlarge our ability to self correct.
It would extend us in a cybernetic way.

With video we can know the difference between how we intend to come across and how we actually do come across. What we put out, what is taken by the tape, is an imitation of our intended image; it is our monkey. A video system enables us to get the monkey off our backs where we can't see him, out onto the tape where we can see him. That is the precise way in which we've been making a monkey of ourselves. The monkey has been able to get away with his business because he operates on the other side of the inside/outside barrier. The moebius tape strip snips the barrier between inside/outside. It offers us one continuous (sur) face with nothing to hide. We have the option of taking in our monkey and teaching him our business or letting him go on with his.

Taking in your own outside with video means more than just tripping around the moebius strip in private. One can pass through the barrier of the skin - pass through the pseudo self to explore the entirety of one's cybernet - i.e., the nexus of informational processes one is a part of. You can listen to the Beatles too much. You can turn a moebius strip composition into a merry-go-round of ego tripping on a single loop. In fact, we live in multiple loops. Moebius composition can touch on these loops: Agnew-mother-Huey Newton. But to confine ourselves to this use of video is to confine a cybertool to closet drama.

"Cybernetics ... recognize(s) that the 'self' as ordinarily understood is only a small part of a much larger trial-and-error system which does the thinking, acting, and deciding. This system includes all the informational pathways which are relevant at any given moment to any given decision. The 'self' is a false reification of an improperly delimited part of this much larger field of interlocking processes..."

"The Cybernetics of 'Self': A Theory of Alcoholism," Gregory Bateson, as printed in PSYCHIATRY, Feb., 1971, 34:1-18, published by The William Alanson White Psychiatric Foundation, Washington, D.C.

The cybernetic extension of ourselves possible with videotape does not mean a reinforcement of the ordinarily understood "self." Total touch with one's cybernet precludes the capitalism of identity at the expense of understanding process that the west has habitually engaged in. One's resume is not one's reality. Master Charge does not make you master of anything but involves you in an expensive economy of credit information processed by computer, your checking account, TV ads, long lines in banks and busy telephones. The Master Charge Card exploits the illusion of unilateral control over life the West has suffered with. "I am the Captain of My Soul; I am the Master of my Fate." We have yet to understand there is no master self. They are now putting photos on charge cards when they should be mapping the credit system the card involves you in. Video users are prone to the same illusion. *It is easy to be zooming in on "self" to the exclusion of environmental or social systems.*

Doing feedback for others one comes to realize the necessity of taping and replaying context. I had the opportunity to do a kind of video meditation on the house of two friends while they were away. The replay served to deepen their sensitivity to their everyday surroundings.

A friend I know did a half-hour continuous tape of his family eating cold cuts in Chicago. Showing this tape to friends in New York was in effect using video to interloop two discrete pathways of "himself."



OTHER PROBES AND PIECES

VIC AND I recorded a conversation between us using full body shots on a split screen. We were seated facing each other. A week later we played the tape back using slow motion and no sound. We both sat facing the screen imitating the kinesics of the other on the screen and verbalizing how we felt from going through the motions.

It was extraordinary. Holding my head and rocking back and forth in imitation of Vic.

"Yeah. I'm listening to what you're saying, Ryan, but I'm really getting ready to strike back."

Following a diminutive hand gesture, "Let me make it nice and small, Ryan, so that you can understand it."

Vic was scoring on me in a similar way and we were laughing our heads off. What was even more extraordinary was when I woke up the next morning. I felt like I was wearing his body. That I had it on. I called up Vic and started telling him how I felt about the relation between his/my stomach and shoulders, stomach and head, torso and legs, etc., etc. Each time Vic confirmed I was right on. For the next few weeks I found I could recall the sense of his body when I wanted.

COLLEGE IS A HIGH CHAIR * requires a prepared tape of a 9-12 month old baby eating in a high chair. This tape is shot from a tripod facing the baby in real time. An appropriate ten minutes are run through slow motion at half speed to create a new tape twenty minutes long. No sound. This tape is then played back on a video projector screen in front of a classroom. The participants are seated in the standard college classroom desks with the desk top coming around from the side of the chair. Participants are then asked to imitate the baby's movements for the entire twenty minutes in silence.

**UNEXECUTED*





GUNS, KNIVES OR VIDEOTAPE * works this way. Two people, each with a portable pack and camera, face off fifteen feet apart. At a given signal they start "shooting" each other. Both roll tape continuously for five minutes. Then both tapes are played back simultaneously on two monitors set up side by side. The area should be large enough so that participants can move around. Variations are possible. Doubling up in teams of two, doing it in a mirrored room, setting up a third camera on a stationary tripod to catch the whole duel for playback with the participants' tapes.

* EXECUTED IN PONTIAC, MICHIGAN

Video feedback in a museum is a delicate business. I'm thinking of a one-man video environment that was a large walk-in TV set. Those outside the "screen" (a piece of glass) could see what the one man inside was doing. He sat facing a monitor surrounded by mirrors angled to amplify the image on the monitor. The monitor alternated showing the person's face in real time and pre-programmed material on a four-second cycle.

I saw one guy go in and start digging himself on the monitor intercut with Martin Luther King. Suddenly he finds himself intercut with a couple making love in an open field complete with full genital shots. He giggles nervously, turns to his friends and other strangers looking in at him, looks back at himself on the monitor and stumbles out of the TV ... very uncool.

To me, this one-man video environment exploited feelings of shame for the sake of show in a museum.

It was pseudo-feedback in a fishbowl.

There are two negative effects of using video in our present fragmented society that I know of.

Corruption of Memory means simply that you tend to forget everything else about an event except that which you record and replay on tape.

Displacement of Intimacy means that relating to people "live on tape" can have a tendency to drain away the normal capacity for intimacy. One moves into a vicarious experience of intimacy with an electronic image that cannot respond in real time. If possible it is wise to include your entire circle of intimates in the taping process.

EGO ME ABSOLVO * is an ordinary single penitent confessional set up against the wall. The penitent (participant) goes into the confessional and kneels. He flips on an audio track which guides him through an appropriate confession. While he confesses, he goes round where the priest sits and watches the replay of his own confession. Then the tape is erased by the next penitent. Appropriate audio tracks could be gotten by bringing a tape recorder with you to confession. Different tracks could be developed for different kinds of people - young girls, teenage boys, married women, etc. All audio tracks would be the authentic voices of real priests in an actual confessional situation.

* UNEXECUTED

On the dimly lit floor of an old gym, sixty blindfolded students are lying in random order. For the last hour, Czech happenist, Milon Knizak, has been blindfolding them one by one leading them down the winding corridor into the gym.

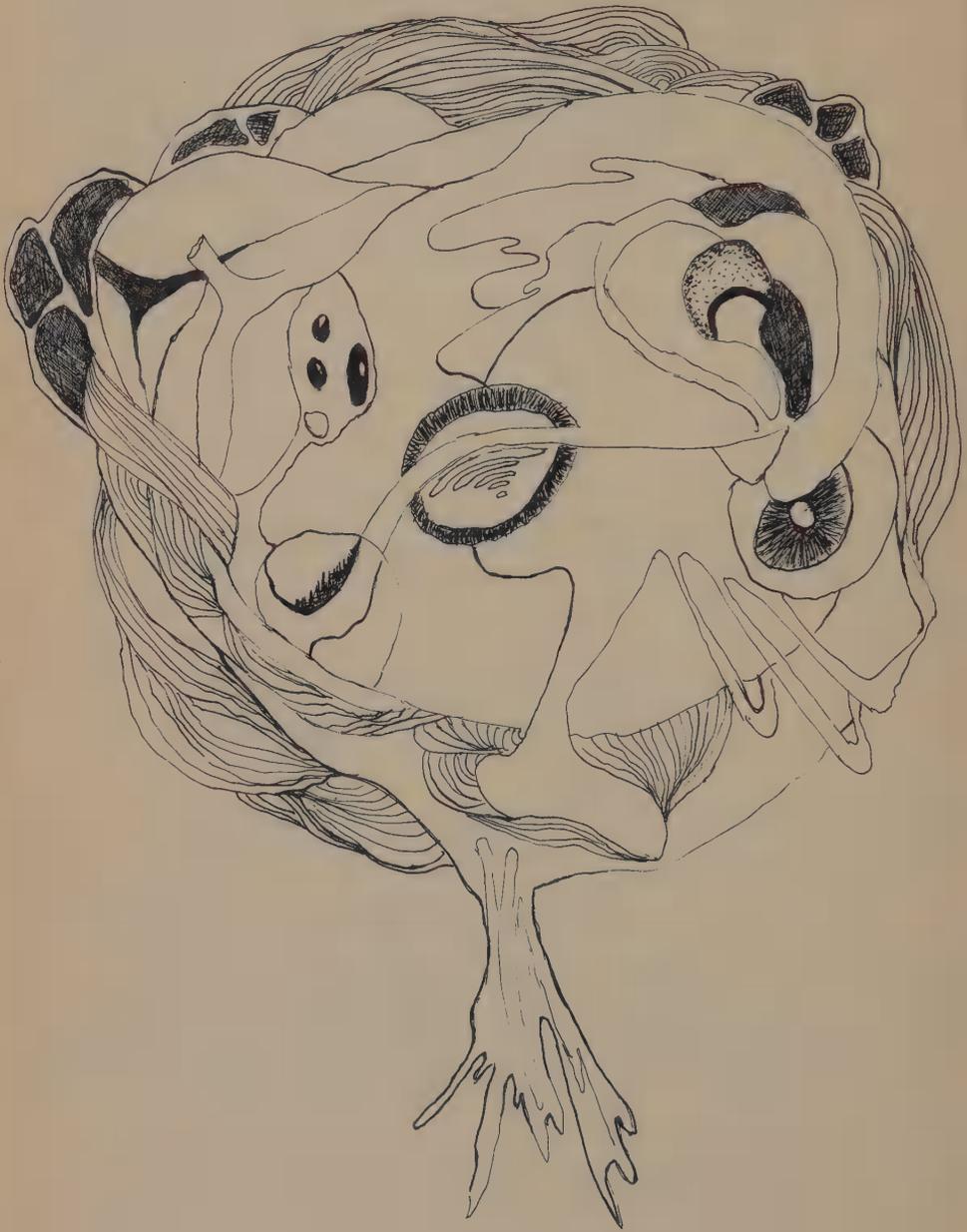
Some of the students are coughing. A few are lighting cigarettes. Others explore their space. Most wait quietly. I am videotaping snatches of what's happening for a twenty-minute playback after the three hour event.

*A guy and a girl are touching retreating not peeking
touching again exploring
risking more
embracing blindfolded.*

Exquisite. Their turn comes to go back separately, and they don't like it. Still blindfolded. Before playback I ask about objections. The couple's groping was so fine. It might be better to leave the experience contained in the blindfolds. They do not object.

Replay ... Infolding the experience.

Others say, "We could have been doing that, but we just waited for something to happen."



He gazes at this reflected image in the mirror in front.

*The constructed colored features of his face are void of entity.
The face of the reflected image looks hither; his own face
looks thither.*

Because there is no disagreement of mindfulness, the
genuine face is also void of entity.
According as he manages not to be attached, the appearance
of the reflected image is in his own mind.

He contemplates the color of his mind, for example the manifestation
of lust, thinking it to be void.
He contemplates his mind to be a reflected image and the appearance of
his body to be his own mind.

Body and mind are like the reflected images.

Deny a person that way, he has become free from attachment
by gazing at the reflected image in the mirror.

(Matitripadas Mahamudrasiddhantopadesa)

The natives who think that to take a man's picture
is to take his soul
are right

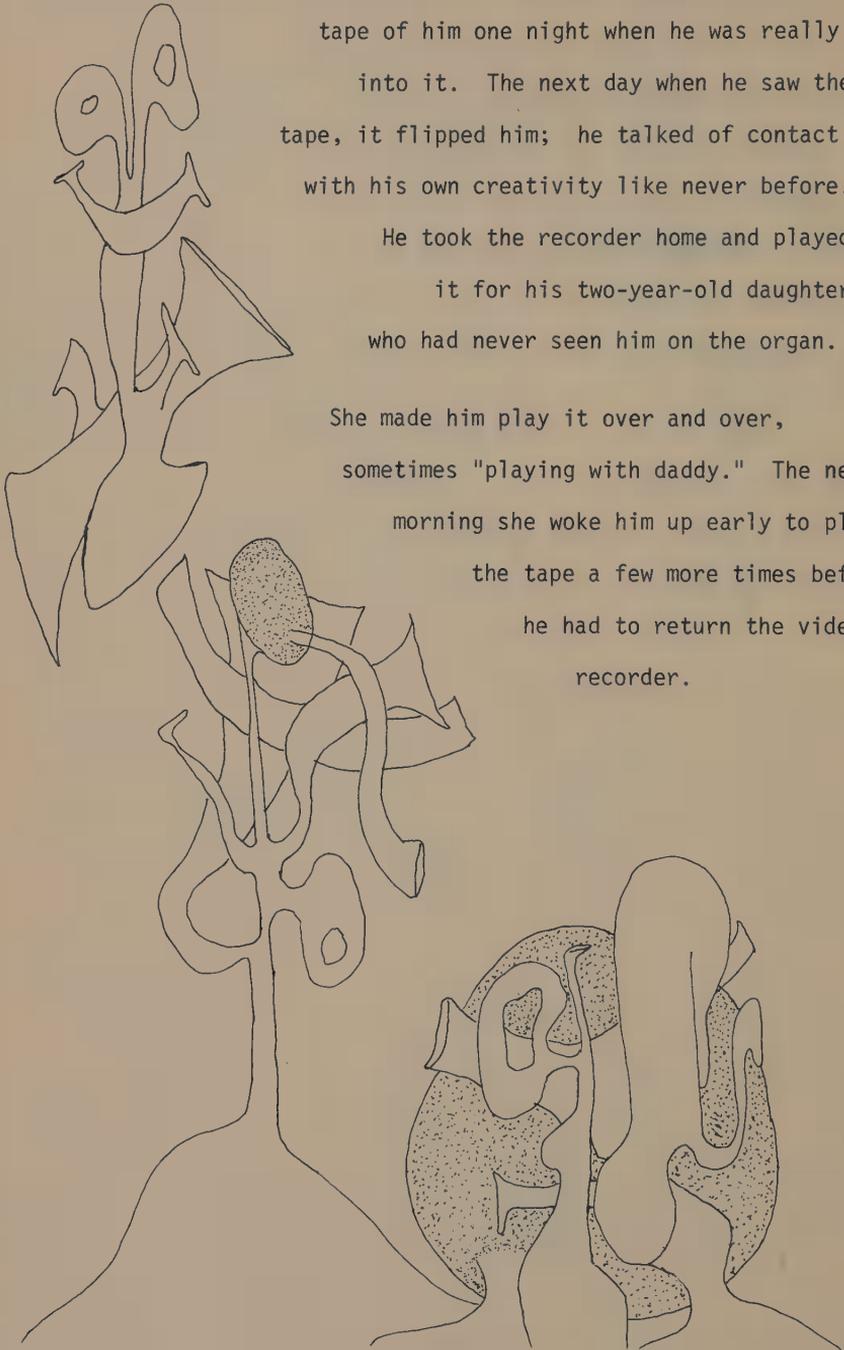
In manus tuas, domine, commendo spiritum meum

Inscription of a
fifteenth century
Italian mirror:

"Don't complain; I only give back what you give to me"

Luther had been playing jazz organ in a bar for seven years. We did a twenty-minute tape of him one night when he was really into it. The next day when he saw the tape, it flipped him; he talked of contact with his own creativity like never before. He took the recorder home and played it for his two-year-old daughter who had never seen him on the organ.

She made him play it over and over, sometimes "playing with daddy." The next morning she woke him up early to play the tape a few more times before he had to return the video-recorder.



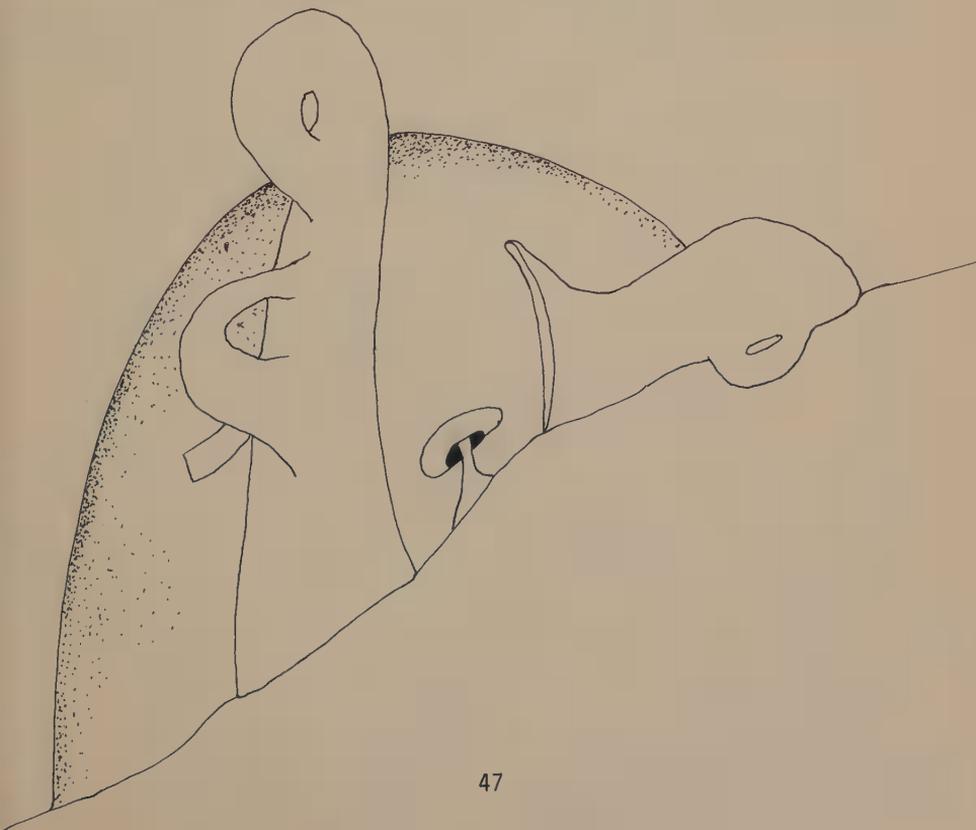
Someone told me of cops in the midwest
videotaping demonstrations of "longhairs"
They would then take the tape back to the station,
guzzle beer and laugh at the freaks.

People can become replay things.

*Richard (age 5) and Steven (age 6)
were alone with the video and fought
over who should hold the microphone.*

*It was a matter of who had it first and each
claimed he had been first. They brought their
case before the adults for judgment.*

*We talked with them a long time.
Richard cried, threw up and would
not be comforted until we played
the tape back and told him that
we had seen what had happened.*



YES AND NO is an experience in one's own balancing of positive and negative feedback.*

Set up two videotape machines with a single tape. The first machine records you and the second plays the recording back on a five-second delay. According to how you feel, start with saying YES or NO into the camera.

If you start with YES, when that comes back on the monitor five seconds later, you can either switch to saying NO to your YES - and so on and so on. All manner of ambivalence can be explored in this way.

Feelings of

A C T I V I T Y STILLNESS

O P E N N E S S...CONTRACTEDNESS

A T T A C K DEFENSE

(* Piece in the Brandeis Show)

Take the video to your private therapy sessions. Set it up on a tripod and record. Take the session home with you.

Hang the video camera from a rope. With some favorite music playing, dance a naked solo in the video space.

With the monitor on, compose an advertisement for yourself, designed for the monitor space.

Leave the camera set up near the phone. Flip it on when you get a call. Replay it to get a better idea of how you relate to the party on the other end.

TAP YOUR BODY

NOT THE WIRE

When I first met Paik he told me
that to have a *NUN* in Korea
WAS THE HIGHEST ACHIEVEMENT.

But, he said, it's funny - *they are bald.*

There is no one who knows the way
of pure topological play
in the CRT CLOUD OF UNKNOWING
like Paik.

I have seen a hardened TV technician
who scoffed at video artists
Remain to watch Paik's work
with the delight of a child

Paik reading Cage to me over the phone at Jud's:

"Slowly,
slowly,
we are getting nowhere...

But now we know that
we are getting nowhere...

Slowly.....



Cybernetic Guerrilla Warfare

This next section was written in New Hampshire while working on soft control cybernetics and licking my wounds from the "video movement"/Council on the Arts interface over funding in the spring and summer of 1970. Partly through a certain post-McLuhan political naiveté, I was caught, as it were, in the middle of the fray. Perhaps someone will do a useful accounting of that conflict - they are welcome to my 18-odd pages of heated memo. The thrust of this writing is toward generalizations that would work against repeats of similar situations.

The juxtaposition of cybernetic theory and guerrilla strategy had been brewing in my mind since Newburgh and was catalyzed by the State Council controversy. The section on an information economy is, perhaps, the weakest in the book, but I include it in hope that it may have some use to others dealing with problems of independent economic stability.

The section on the Calculus of Intention is not an excursion into esoteric cybernetic theory. It was immediately occasioned by the breakdown of dialogue within the "brotherhood of the video movement." As I hope to at least suggest in the last chapter of this book, McCulloch's problem of coding a triadic logic for the reticular core of man's brain is congruent with man's problem of defining the sacred.



Men defining themselves merely in terms of a new technology, such as video, is nonsense. Herbert had it down pretty well in DUNE:

"I enjoy watching the flight of birds on Arrakis," the banker said... "All of our birds, of course, are carrion-eaters, and many exist without water, having become blood-drinkers."

"Do you mean, sir, that these birds are cannibals?" said Paul.

"That's an odd question, young Master," the banker said. "I merely said the birds drink blood. It doesn't have to be the blood of their own kind, does it?"

"It was not an odd question," Paul said... "Most educated people know that the worst potential competition for any young organism can come from its own kind." He deliberately forked a bite of food from his companion's plate, ate it. "They are eating from the same bowl. They have the same basic requirements."

*"It's a rule of ecology," Kynes said, "that the young Master appears to understand quite well. The struggle between life elements is the struggle for the free energy of a system. Blood's an efficient energy source." **

It is the magnificent and mythic Desert people - the Fremen of DUNE who culturally face their own cannibalism. Killing a member of the tribe, or another, and taking their water for the tribe is a holy ritual. It seems terrifyingly simple. There is no brotherhood, no sisterhood in any extension of man. Only by a shared definition of the sacred can we transform our blood struggle with each other.

Dying for oneself is meaningless. You can only die for others.

*"The meeting between ignorance and knowledge,
Between brutality and culture,
It begins in the dignity with which we treat our dead." **

* From Dune by Frank Herbert. Copyright © 1965 by the author. Reprinted with permission of the publisher, Chilton Book Company, Philadelphia.



GUERRILLA STRATEGY and CYBERNETIC THEORY

*To fight a hundred times and win a hundred times
is not the blessing of blessings. The blessing of
blessings is to beat the other man's army without
getting into the fight yourself.*

The Art of War - Sun Tzu

Traditional guerrilla activity such as bombings, snipings, and kidnappings complete with printed manifestos seems like so many ecologically risky short change feedback devices compared with the real possibilities of portable video, maverick data banks, acid meta-programming, Cable TV, satellites, cybernetic craft industries, and alternate life styles. Yet the guerrilla tradition is highly relevant in the current information environment. Guerrilla warfare is by nature irregular and non-repetitive. Like information theory, it recognizes that redundancy can easily become reactionary and result in entropy and defeat. The juxtaposition of cybernetics and guerrilla strategy suggests a way of moving that is a genuine alternative to the film scenario of NYC urban guerrilla warfare "Ice". Using machine guns to round up people in an apartment house for a revolutionary teach-in is not what the information environment is about. All power does not proceed from the end of a gun.

We suffer the violence of the entropy of old forms - nuclear family, educational institutions, supermarketing, cities, the oil slick complex, etc., etc. They are running us down, running down on us and with us. How do we get out of the way? How do we develop new ways? This ship of state continues to oscillate into runaway from its people and its planetary responsibilities, while efforts continue to seduce us onto boarding this sinking ship - educational loans, fellowships, lowering the voting age. Where did Nixon come from anyway? How did that leftover from the days of Elvis get to be Captain of our ship, Master of our fate?

How many Americans once horrified by thermonuclear war are now thinking the unthinkable in ecological terms with a certain spiteful glee of relief at the prospect of a white hell for all?

Psychedelic my ass: Children of A-Bomb
Bob Lenox

Nobody with any wisdom is looking for a straight out fight. We have come to understand that in fighting you too easily become what you behold. Yet there is no way on this planet to get out of the way. Strategy and tactics need be developed so the establishment in its entropy does not use up our budgets of flexibility. The efforts to enlist the young in the traditional political parties of '72 will be gross. Relative to the establishment and its cultural automatons, we need to move from pure Weiner wise Augustinian Cybernetics into the realm of war game theory and practice in the information environment.

The most elegant piece of earth technology remains the human biocomputer; the most important data banks are in our brain cells. Inherent in cybernetic guerrilla warfare is the absolute necessity of having the people participate as fully as possible. This can be done in an information environment by insisting on ways of feeding back for human enhancement rather than feeding off people for the sake of concentration of power through capital, pseudo mythologies or withheld information. The information economy that begins in a guerrilla mode accepts, cultivates and depends on living, thinking flesh for its success. People are not information coolies rickshawing around the perceptions of the privileged, the well paid, or the past. People can and do process information according to the uniqueness of their perceptual systems. Uniqueness is premium in a noospheric culture that thrives on high variety. Information is here understood as a difference that makes a difference. The difficulties of a negentropic or information culture are in the transformations: how do we manage transformation of differences without exploitation, jam or corruption that sucks power from people.

I am not talking about cultivation of perceptual systems at the expense of emotional cadences. Faster is not always better. Doing it all ways sometimes means slowing down. Internal syncing of all facets is critical to the maintenance of a flexibility and avoidance of non-cybernetic "hang-up" and "drag."

The bulk of the work done on cybernetics from Weiner's guided missiles through the work at IBM and Bell Labs along with the various academic spin-offs has been big budget establishment

supported and conditioned by the relation of those intellectuals to the powers that be distinctly non-cybernetic and unresponsive to people. The concept of entropy itself may be so conditioned. Witness the parallel between Weiner's theoretical statements about enclaves and the enclave theory of withdrawal from Vietnam. One of the grossest results of this situation is the preoccupation of the phone company and others with making "foolproof terminals" since many potential users are assumed to be fools who can only give the most dumb dumb responses. So fools are created.

The Japanese, the people we dropped the A-Bomb on in '45, introduced the portable video system to this country in 1967, at a price low enough so that independent and semi-independent users could get their hands on it and begin to experiment. This experimentation, this experience, carries within it the logic of cybernetic guerrilla warfare.

Warfare ... because having total control over the processing of video puts you in direct conflict with that system of perceptual imperialism called broadcast television that puts a terminal in your home and thereby controls your access to information. This situation of conflict also exists as a matter of fact between people using portable video for feedback and in situations such as schools that operate through withholding and controlling the flow of information.

Guerrilla warfare ... because the portable video tool only enables you to fight on a small scale in an irregular way at this time. Running to the networks with portable video material seems rear view mirror at best, reactionary at worst. What is critical

is to develop an infrastructure to cable in situations where feedback and relevant access routes can be set up as part of the process.

Cybernetic guerrilla warfare ... because the tool of portable video is a cybernetic extension of man and because cybernetics is the only language of intelligence and power that is ecologically viable. Guerrilla warfare as the Weathermen have been engaging in up to now and revolution as they have articulated it, is simply play acting on the stage of history in an ahistoric context. Guerrilla theatre, doing it for the hell of it on their stage, doesn't make it either. We need develop biologically viable information structures on a planetary scale. Nothing short of that will work. We move now in this present information environment in a phase that finds its best analogue in those stages of human struggle called guerrilla warfare.

Yet this is not China in the 1930's. Though there is much to learn from Mao and traditional guerrilla warfare this is not the same. Critically, for instance, in an economy that operates on the transformation of differences, a hundred flowers must bloom from the beginning. In order to "win" in cybernetic guerrilla warfare, differences must be cherished, not temporarily suppressed for the sake of "victory." A la McLuhan, war is education. Conflict defines differences. We need to know *what not to be* enough to internally calculate our own becoming earth-alive noosphere. The more we are able to internally process differences among us, the more we will be able to process "spoils" of conflict with the entropic establishment - i.e., understanding the significant differences between us and them in such a way as to avoid processing what is dangerous and

death producing. Learn what you can from the Egyptians; the exodus is cybernetic.

Traditional guerrilla warfare is concerned with climate and weather. We must concern ourselves with decoding the information contours of the culture. How does power function here? How is this system of communications and control maintained? What information is habitually withheld and how? Ought it to be jammed? How do we jam it? How do we keep the action small enough so it is relevant to real people? How do we build up an indigenous data base? Where do we rove and strike next?

Traditional guerrilla warfare is concerned with knowing the terrain. We must expand this to a full understanding of the ecological thresholds within which we move. We must know ourselves in a cybernetic way, and know the ecology so that we can take and take care of the planet intact.

The traditional concern is for good generals. What's desirable for us is *ad hoc* heterarchies of power which have their logistics down. Cybernetics understands that power is distributed throughout the system. Relevant pathways shift and change with the conditions. The navy has developed war plans where the command in a fleet moves from ship to ship every fifteen minutes. It is near impossible to knock out the command vessel.

The traditional tricks of guerrilla warfare are remarkably suited for cybernetic action in an information environment. To scan briefly.

Mixing "straight" moves with "freak" moves.
Using straight moves to engage the enemy,
freak moves to beat him and not letting the
enemy know which is which.

Running away when it's too heavy. Leave the
enemy's strong places and seek the weak. Go
where you can make a difference.

Shaping the enemy's forces and keeping our
own unshaped, thereby beating the many with
the few.

Faking the enemy out. Surprise attacks.

The business of deception in guerrilla warfare is a turn off for most people in this relatively open culture. This is simply an area that need be better understood, if we are to be successful. People feel that concealing is unethical. Yet overexposure means underdevelopment. Many projects die of too much publicity. There is a sense in which we are information junkies feeding off each others' un-lived hopes. The media repeatedly stuns the growth of alternate culture in this country through saturation coverage. It is hard for an American to just keep his mouth shut and get something cooking. You are what you reveal. The star system renders impotent by overexposure and keeps others impotent through no exposure. Seeming different is more important than making a difference. Deception in guerrilla tactics is an active way of avoiding control by an alien, alienating intelligence. When a policeman takes your name, he takes over. I know a guy who is inventing another identity for the computer. There is a virtue of mistrust and wisdom in knowing significantly more about yourself than you reveal. *Love Thy Label as Thyself.*

Count the Cost. We need develop an information accounting system, a cultural calculus.

Use the enemies supply. With portable video one can take the American mythology right off the air and use it as part of a new perceptual collage.

Be flexible. In cybernetics, flexibility, the maintenance of a good guessing way is critical.

Patience. Cybernetics is inherently concerned with timing and time design. It is a protracted war.

We retreat in space, but we advance in time.

MAO



Q. Who are the enemy?

A. All conspiring with entropy.

Ourselves in so far as we make trash of consciousness.

Q. Who are allies?

A. All who are developing self-referencing modes of sharing life on planet earth.

Do not repeat a tactic which has gained you victory, but shape your actions to an infinite variety. Water sets its flow according to the ground below; set your victories according to the enemy against you. War has no constant aspect as water has no constant shape.

Sun Tzu

ATTEMPTING A CALCULUS OF INTENTION

Calculus of intention was a concept developed over many years by the cybernetic wizard, Warren McCulloch. He was in the business of brain circuits. McCulloch felt that dialogue breakdowns occurred largely because we lacked a logic that could handle triadic relationships. Here is his description of the problem of the calculus of intention.

The relations we need are triadic, not diadic. Once you give me triadic relations, I can make N-adic relations; but out of diadic relations, I can't go anywhere. I can build strings and I can build circles, and there it ends.

The great problem of the nervous system is the one concerning its core, the so-called reticular formation ... This reticular core is the thing that decides whether you'd better run or whether you'd better fight, whether you should wait, whether you

should sleep, whether you should make love. That's its business and it has never relinquished that business. It is a structure incredibly simple when you look at it ... but the problem that I'm up against is the problem of organization of many components, each of which is a living thing, each of which, in some sense, senses the world, each of which tells others what it has sensed, and somehow a couple of million of these cells get themselves organized enough to commit the whole organism. We do not have any theory yet that is capable of handling such a structure.

From McCulloch, Warren, COMMUNICATION: THEORY AND RESEARCH.
Courtesy of Charles C Thomas, Publisher, Springfield, Illinois.

I have not made a thorough study of McCulloch. That would take years. I do not know if what follows satisfies that criterion he established for such a calculus. I have maintained a certain organization of ignorance relative to formal cybernetics and formal topology. In fact, what follows would not, it seems, satisfy the kind of discreteness, one-two-three, that McCulloch seemed to want. However, such discreteness may not be necessary.

In the open klein forms that follow, rather than three discrete entities, you have a recurring variable three-fold relationship between *part contained*, *part uncontained* and *part containing*. This gets you beyond the diadic inside/outside relationship and enables you to build self-referencing N-adic systems beyond strings and circles.

My approach stems from work with McLuhan that preoccupied me with the problem of how to maintain congruence between our intentions and our extensions. McLuhan talked of orchestration of media and sense ratios. Neither cut it. Orchestras just aren't around and sense ratios or *sensus communis* is a medieval model, essentially a simile of meta touch. Gibson's book on the senses considered as perceptual systems is richer in description of the process. It includes McLuhan's personal probing ability as an active part of the perceptual system.

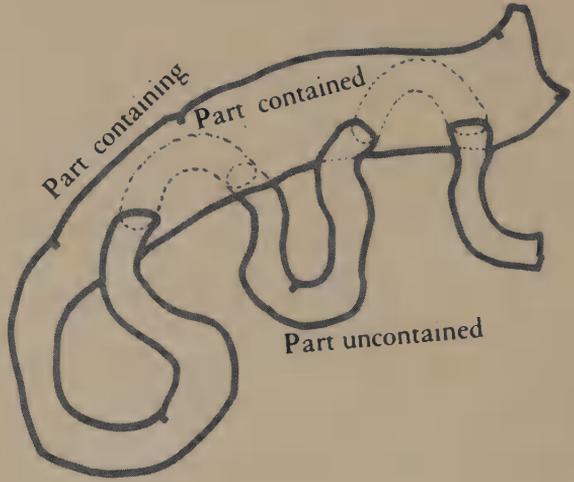
While the following formulations may not in fact work as a calculus of intention, I put them forth both because they have been exciting and useful for me and because the calculus itself seems a critical problem in terms of cybernetic guerrilla warfare. Dialogue degenerates and moves to conflict without an understanding of mutual intent and non-intent. While it does not seem that we can work out such a common language of intent with the people pursuing the established entropic way of increasingly dedifferentiated ways of eating bullshit; it is critical we develop such a language with each other. The high variety of self organizing social systems we are working toward will be unable to co-cybernate re each other re the ecology without such a calculus of intent.

This calculus of intention is done in mathematical topology. *Topology is a non-metric elastic geometry. It is concerned with transformations of shapes and properties such as nearness, inside and outside.* Topologists have been able to describe the birth of a baby in terms of topological necessity. There is a feeling among some topologists that while math has failed to describe the world quantitatively, it may be able to describe the world qualitatively.

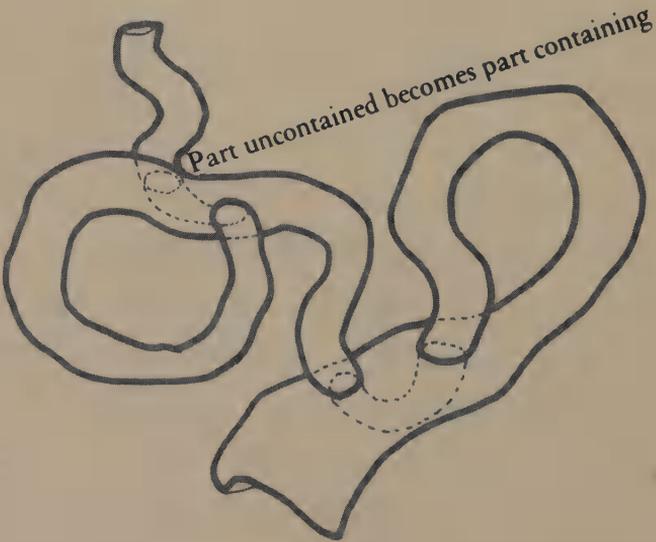
Work is being done on topological description of verbs that seem common to all languages. Piaget felt that topology was close to the core of the way children think. Truck drivers have been found to be the people who are most able to learn new jobs. While driving a truck for Ballantine one summer, it became apparent to me why. Hand an experienced driver a stack of delivery tickets and he could route in five minutes what would take you an hour. It was a recurring problem of mapping topologically how to get through this network in the shortest amount of time given one-way streets, etc. In topology, a doughnut and a cup are congruent or homeomorphic, since by an elastic twist, the hole in the doughnut becomes the place where you put your finger through the handle of the cup.

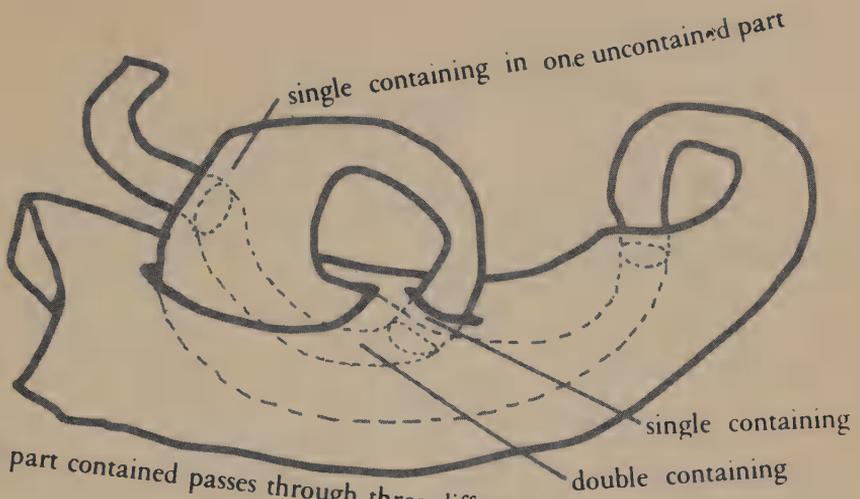
I should say that my own topological explorations have a lot to do with a personal perceptive system that never learned phonetics, can't spell or sing, and took to topology the way many people seem to take to music. The strongest explicit experience with topology I've had came via a painter friend, Claude Ponsot, whose handling of complex topological patterns on canvas convinced me that a non-verbal coherent graphic think was possible. The following transformations on the Klein bottle - Klein forms, if you will - I invented in the context of working with Warren Brody on soft control systems using plastic membranes. Behind that are three years of experience infolding videotape. I checked these formulations with a Ph.D. topologist. He had not seen them before, questioned whether they were strictly topological. As far as I know, they are original.

1



2

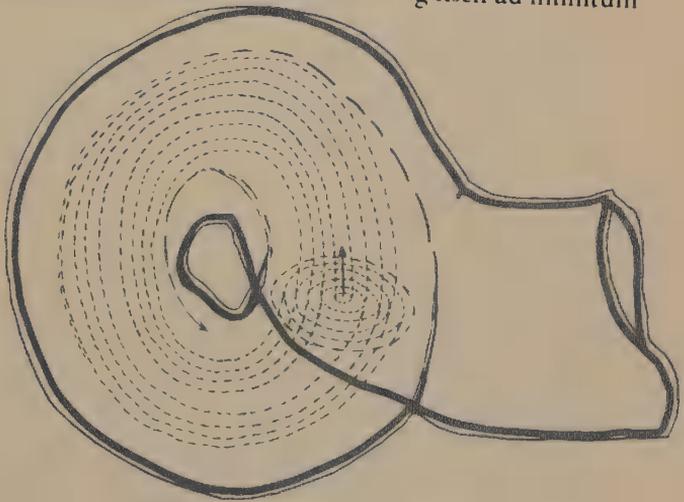




One part contained passes through three different modes of being contained

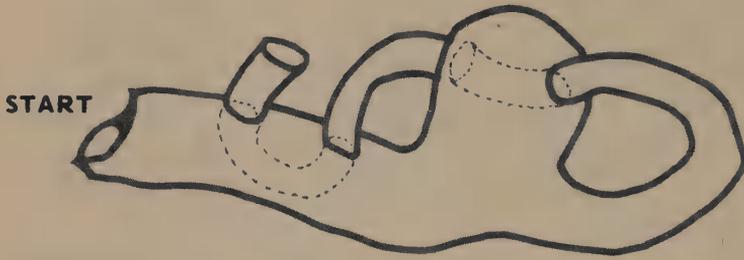
3

Inspin—part contained continues containing itself ad infinitum



4

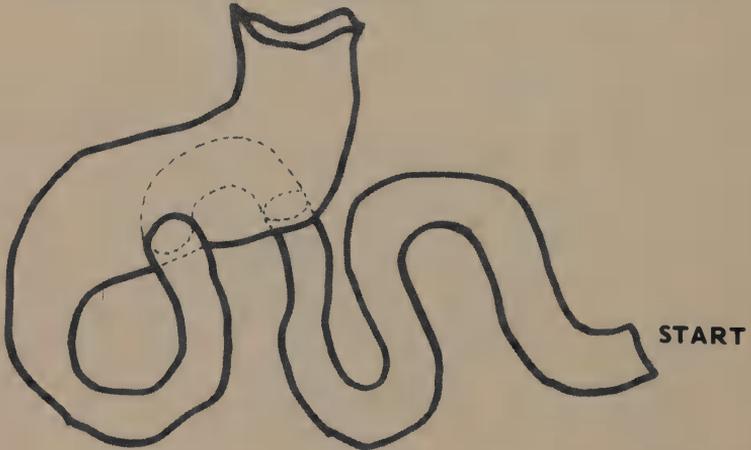
Deliberate anticipation of containing



Part containing anticipates part to be contained

5

Anticipation—Part to be contained anticipates the containing



6

Illustrations by Claude Ponsot

There are three immediate areas where I think this topological calculus of intention can be of use: acid metaprogramming, a grammar of video infolding and perceptual sharing, and in soft control structures using plastic membranes.

Relative to acid metaprogramming, I am not recommending LSD-25 to anyone nor am I endorsing Leary's approach. I am simply looking at some of the work that John Lily has done and suggesting this calculus might be useful in that context. Both in *Programming and Metaprogramming in the Human Biocomputer* and in *Mind of the Dolphin*, Lily uses the notion of interlock to describe communication between people and between species. In *Programming and Metaprogramming* he describes a personal experience with acid that in some way undercuts the metaphor of interlock, and to me suggests that the Klein forms might be a better way to describe the process he calls "interlock." Here is Lily's description of that experience which he titles "the key is no key."

Mathematical transformations were next tried in the approach to the locked rooms. The concept of the key fitting into the lock and the necessity of finding the key were abandoned and the rooms were approached as "topological puzzles." In the multidimensional cognitive and visual space, the rooms were now manipulated without the necessity of the key in the lock.

Using the transitional concept that the lock is a hole in the door through which one can exert an effort for a topological transformation, one could turn the room into another topological form other than a closed

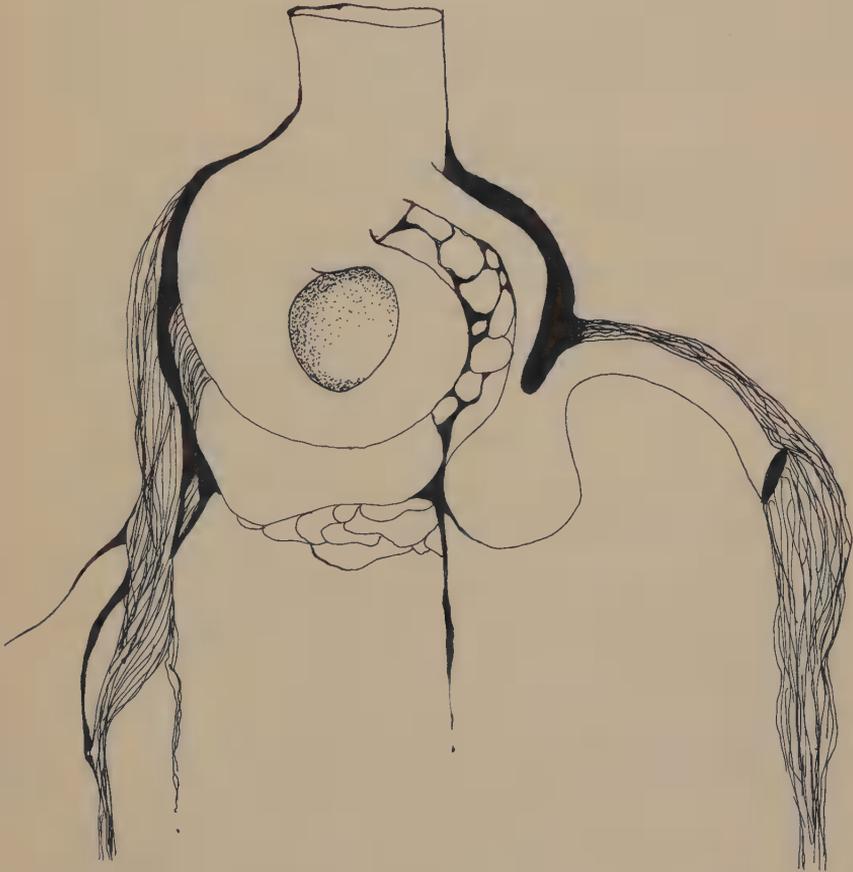
box. The room in effect was turned inside out through the hole, through the lock leaving the contents outside and the room now a collapsed balloon placed farther from the self metaprogrammer. Room after room was thus defined as turned inside out with the contents spewed forth for use by the self-meta-programmer. Once this control "key" worked, it continued automatically to its own limits.

With this sort of an "intellectual crutch", as it were, entire new areas of basic beliefs were entered upon. Most of the rooms which before had appeared as strong rooms with big powerful walls, doors, and locks now ended up as empty balloons. The greatly defended contents of the rooms in many cases turned out to be relatively trivial programs and episodes from childhood which had been over-generalized and over-valued by this particular human computer. The devaluation of the general purpose properties of the human biocomputer was one such room. In childhood the many episodes which led to the self-programmer not remaining general purpose but becoming more and more limited and "specialized", were entered upon. Several levels of the supra-self-metaprograms laid down in childhood were opened up.

The mathematical operation which took place in the computer was the movement of energies and masses of data from the supra-self-metaprogram

down to the self metaprogrammatic level and below. At the same time there was the knowledge that programmatic materials had been moved from the "supra-self position" to the "under self-control position" at the programmatic level. These operations were all filed in metaprogram storage under the title "the key is no key."

John Lily, Whole Earth Catalog, Menlo Park, California, 1970.



Relative to video infolding, it is near impossible to describe in words even using klein form graphs what I'm talking about. The following will mean little to anyone except those who have had some experience of taping themselves at different levels.

Taping something new with yourself is a part uncontained.

To replay the tape for yourself is to contain it in your perceptual system

Taping yourself playing with the replay is to contain both on a new tape

To replay for oneself tape of self with tape of self is to contain that process in a new dimension

Parts left out of that process are parts uncontained

All of this is mapable on computer graphic terminals

At one level that of reality that is left off the tape is the part uncontained.

Raw tape replayed is part contained in the head.

If it is somebody else's tape you are watching you can to an extent share in this live perceptual system via the tape he took.

To watch another's edited tape is to share in the way he thinks about the relation between his various perceptions in a real time mode. This enters the realm of his intention.

If you are editing some of your tape along with tape somebody else shot and he is doing the same thing using some of your tape, then it is possible to see how one's perceptions relate to another's intention and vice versa.

Relative to sharing perceptual systems, it is somewhat easier to talk about since there are parallels with photography and film.

The most explicit experience of this mode of perceptual sharing came in the early days of Raundance when Frank Gillette, Ira Schneider, Michael Shamberg and myself "shot" twelve rolls of tape on Earth Day. Both in replay that evening (we laughed our heads off digging each other's tape while the old perceptual imperialist, Walter Cronkite explained Earth Day for us) and in the edits that followed, each of us got a good idea of how each saw and thought about the events vis-a-vis the others.

Relative to soft control systems using plastic membranes, I am thinking mostly of the soft cybernetic work being done by Warren Brody, Avery Johnson and Bill Carrigan. The sense of the sacred and the transcendental that surrounds some of the inflatable subculture is to me a kind of pseudo-mythology. Consciousness might be better invested in designing self-referencing structures where awareness is immanent in the structure and its relation to the users; not by being invested in a religious way to a "special" structure that does not relate intelligently to the users.

A Klein Form couch is a suggestion of a possible way of moving in that direction. It could be built of strong polyurethane, filled with air, perhaps by a constant flow from a pump. People might inter-relate kinetically through the changes in the air pressure. Design of the actual couch could be arrived at experimentally by combinations and transformations of the structure described above.

INFOLDING

THE CALCULUS OF INTENTION

- AVERY JOHNSON

This piece appeared in Radical Software (issue 4) in response to the two preceding chapters. I am grateful to Avery Johnson for allowing it to be included here. Besides clarifying what McCulloch's Calculus of Intention was about, the discussion of triadic relations and negative statements was very helpful in terms of thinking through the cybernetic approach to the sacred taken in the last chapter of this book. (P.R.)

May 7, 1971

Good article by Paul in the No. 3 issue and the mention of my name in it toward the end was quite pleasing. What I really dug, though, was his willingness to let on that these ideas were some that he was wondering about, rather than his having to make it seem as though he were writing about something he knows! It's a breath of fresh air that sweeps away the ubiquitous *mustiness* of expertise.

I would like to infold - to loop back into - his *Attempting a Calculus of Intention*. As Paul said, it was Warren McCulloch who challenged the basic simplicities accepted in textbooks as God-given premises. He was thinking hard about relevance, participation, contextual containment, and the inevitability of self-reference - particularly during the last years of his life at M.I.T., and everywhere he went. He was and is a strong man. I will always account it as my own extreme dumb luck to have known McCulloch closely for 15 years and for the first five of those I was part of his Neurophysiology Laboratory with a room next door to his office. Warren was a communal type, so I saw a lot of him, and he used to worry out loud to all of us about the problems that he was playing with.

He had another office - a place of thinking and rapping - the F&T Delicatessen near Kendall Square in Cambridge. Sharing his table was an exciting metaeducation, and his eclectic search for a calculus of intention often dominated the conversation.

Spring of 1968 I asked McCulloch to teach a 1 1/2 hour session of a weekly seminar I was holding at the M.I.T. Sloan School of Management. He agreed. The title he chose was: "The Implications of Complex Network Coupling and Triadic Relations" and I have a cherished tape of that class period. Only now, almost two years after his death, is its import beginning to lift into communicable pattern which so many of us have been trying intensely but haltingly to reckon.

What follows has grown out of mulling over his lecture in the series of contexts we shared. I have not read deeply into the people and works that he referred to most often: Charles Saunders Pierce, Hegel, Aristotle, Gotthard Gunther, Turing, Russell, Goedel, and the Stoics, who seemed to have made inroads into the Logic of Relations. However, as I attempt to build upon his ideas, rearranged somewhat by my own wonderings, my hope is that a metalogue will ensue.

Warren McCulloch never did satisfy himself that he had a calculus of intention to work with, but he worked to get the questions right so that "youngsters", as he would say it, would recognize that they had the important answers. In any case, I doubt that he would have expected a relational calculus to reduce happily to words on paper - with or without diagrams. He would more likely have turned to videotape with its facility for infolding and self-referencing as the appropriate medium for thinking and teaching about it.

Consider what you might do if you were trying to drive from Home-town, U.S.A. to New York City and you didn't have a map. The logical procedure is to follow the arrowhead end of the signs pointing toward N.Y.C. wherever they occur and just keep moving. Right. Now try finding your way home again, still without a map. Easy: follow the tail ends of the same signs! Or are those the same signs? They point toward the place from which I have just come, but which road does the tail point at? Where am I? The signs look the same but the countryside is different. How do I get home again? Always easy to get back to N.Y.C., though. Might as well stay there.

... And that process, my friends, is very similar to what happened over the years to logic. The crude simplifications needed then are now habits; the old tricks, the value premises out of which the objective world is built, are impotent in a world demanding relevance. Starting from what our brains can really do for us, logicians simplified their formulations in progressive steps to where they dealt very precisely with trivial matters.

In our daily dealings with each other, taking the world as it *seems* and as we wish it to become, we are operating at a level of complexity and of context-dependency where only a *Logic of Relations* could account formally for the intermingling of cross-couplings. Science, unfortunately in its implacable search for writable truth, has been willing to settle for much less: Aristotle was interested in how to go about classifying things so as to set up a workable taxonomy to keep things straight for ever after. He succeeded in glueing the Western world into a *Logic of Classes* and its listedness: pigeon-holing named things. Simplifying further, there grew the *Logic of Propositions* wherein, for example, one

might explore the set of all Truths: statements whose validity may be checked in a manner sufficiently context-free that anyone anywhere any-time may do the checking. The recipes for finding truth are unconcerned with consequences, but only with truth for its own sake. And at the bottom of the stack we find the *Logic of Predicates*, whose simple quality of if-this-then-that makes it easy to teach by rote. Repeat after me: "All men are mortal; Socrates is a man; therefore....."

The trouble is, though, that once you go down a step in that ladder - from relations to classes and so on - if you become less than satisfied with your ability to understand the world on the lower rung, you cannot make any formal arrangement of the pieces in your pile that will get you back up a step again. The manipulation of lists of named things does not map them into their relations. Sometimes you can be lucky, and if you look all at once at a sufficient number of the *relata* you may be able to see a *relation* clearly that is lost if the *relata* are considered in more fragmented groupings. Such is the nature of the reading of words or sentences at a glance - easy to do in the cases where the context is pervasive and already grasped; difficult when the material is unfamiliar or is as formal and context-independent as, say, mathematics.

Look at it for a moment as Pierce did. Aside from his proficiency as a logician, he was an interested chemist and he talked about relatedness as a chemist would talk about valence bonds: the glue of molecules. The rare gases have no valence bonds; they are keeping their hands in their pockets and therefore make no compounds (except under extreme duress). Some elements have one hand out; the compounds they make aren't very interesting either: only pairs. Those that have two hands out, like sulphur, can make strings or can connect the string ends to make rings.

But when you start considering elements that have three hands out, you can make compounds as complex as you wish: two of them together can have up to four hands out, three can give you five, and so on.

All of the logics on the scale that one finds below the Logic of Relations are like the compounds that can be made with the elements that have one or two hands out. The building blocks are at best diadic: simple causes leading to predictable effects. The most complicated statements that can be built are at best rings or strings where "if-this-then-that" can lead from start to finish and produce a closed, formal structure - unassailed by time or by variations in the way that the facts are observed: the sort of "holy, high, eternal noon" of science.

If you have the temerity to insist upon a logic of relations which takes into account the *context* of the observations or statements of the world, then its building blocks must be triadic. That is, the elements relate cause and effect where the relatedness is determined by a third something which may arise in some other part of the structure - and which might not even have occurred yet!

We'll take up this peculiar notion about statements of the future in a moment. For now, note only this: what we are seeking is a *Logic of Becoming* rather than simply a Logic of Being.

I say to you: A loves B. In making that statement I am saying nothing essential nor measurable about A right at this moment, nor about B. What I am implying is something like: "If things go well with B, A will be happy about it." I am making a statement about A's process of becoming. We do not have a calculus to deal with such matters.

I say to you: It will rain tomorrow. Again, there is nothing either true or false about that statement today, for what I am really saying is: "I think it will rain tomorrow; I know it will ...; I am sure ..." The statement I make is necessarily self-referent back upon me - I infold myself as tomorrow infolds what I say of it today - and what I have to say about tomorrow's weather tells you something about my process of becoming. We have no calculus to deal with such statements.

I ran a race. Is the verb transitive? No.

I ran *me* a race. Self-referent. No calculus for it.

Think about the vastly different way in which flash-back and flash-forward serve to recontext the present. Very different. Flash-back explains; it fills in details and allows you to "see" more as if your familiarity with a scene had been improved. It provides background but does very little to immerse you in the context because it fails to put you into the scene along with the actors. The flash-back is someone else's memory, not yours, and it serves only weakly your power to anticipate the future course of present action.

But flash-forward is another matter. It puts you right into the scene because it allows you anticipation as an observer, demanding self-reference in your observations and imposing upon you the onus of identification with the process of becoming of the plot.

Let's go back for a moment and look at a diagram McCulloch used. There is shown on the left THE SUN as a real entity. On the right there is a statement made about it: THE SUN IS SHINING. Above all there is the LEKTON, a name given by the Stoics to that "thing in your head like the fist in your hand". The Lekton may be identified with a real, neurological event, but its importance to the diagram is that it relates the other two parts. Together they make a minimal triad.

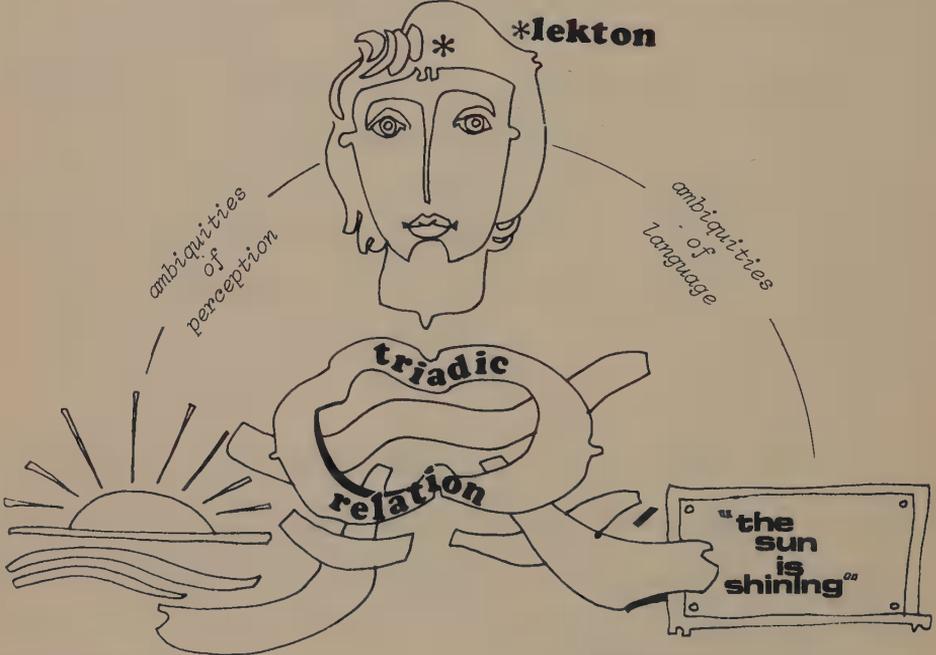
Consider it as Pierce did. He said that THE SUN has *firstness* because it simply *is*; the statement was made and so it exists and has firstness, but it also may be true or else false and on that account it has *secondness*; likewise the LEKTON *is* (something physically happens in your head) and it may be true or false when it happens, but it also relates the other two and so, in addition to firstness and secondness, it has *thirdness*.

Look at another aspect of the diagram. The direct relationship between THE SUN and the statement about it is a strictly true or false one, and so it is the kind of relatedness with which science mostly chooses to deal. It's clean.

However, the relation between THE SUN and the LEKTON is subject to disturbances due to the ambiguities of perception: I may or may not have seen the event correctly. My camera may have been out of focus, or misdirected, or whatever. The relation between the LEKTON (which is the "that-which-can-be-said") and my actual statement "THE SUN IS

SHINING" is further subject to the ambiguities of language - or editing, or presentation. This makes the Lekton damnably hard to study. When challenged to come out and reveal itself, it puts up a self-referent defense: "I think the sun is shining". The statement is looped back through the mental processes of the person making it: through the Lekton itself.

THIRDNESS:
 THAT WHICH CAN BE SAID
 Has: *Firstness: It is*
 Secondness: May be true or false
 Thirdness: Also relates the other two



FIRSTNESS: IT IS...

SECONDNESS:
 UTTERANCE OF IT IS TRUE OR FALSE
 (Also has firstness)

Illustration by Claude Ponsot

There are many necessary and artful dodges available to an elegant mind that wishes to present its thoughts triadically. One of them is statements by negation.

I say again to you: A loves B. What is the negation of that? Aristotle would only have settled for one: A does not love B. But would you believe that there are 11 more? You can negate the individual parts of the statement, or the whole thing, or parts first and then the whole thing, but its often hard to see precisely the effect of the particular combination chosen. Generally, a statement of an intentional relation does not have a clear negation but the great variety of those available allow great complexity to be conveyed. Think on it:

A loves someone other than B.

It is not B whom A loves.

It is not A who loves B.

etc and none of these say quite the same thing. The process of becoming for A that is being described is a little different each time.

Consider how unconsciously we use negation to describe something that is just a little different from what our listener anticipates. It is the difference that makes a difference. We make it easier for him by using as much of his experience in the mix as possible. I can go into the local pizza joint and ask for a combination mushroom, pepper, and onion pizza and for my trouble of spelling out the details, I am charged \$1.75 for a customized job. On the other hand, if I yell: "Calabrese and hold the tomato," I can have what I want for \$1.45. By naming the broader context in the cook's experience and then modifying it through negation, my intention becomes more perceptible to him, and it is quite irrelevant to him that the fragments of what I want are

separate elements in another context. Description by carefully constructing a hole into which will fit the things you intend, may be much more "real" than trying to describe its old kind of positive, contextless specifics. The common confusion is for the listener to demand a positive statement as if the careful work at negation were a non-specific attack, rather than a working definition of that which is to become.

In other terms, we can liken the use of video to what goes on in a newspaper. Pick up any reputable newspaper and do a brief experiment. By "reputable" I mean one that clearly separates reporting from editorial comment. Look at both kinds of writing. I can virtually guarantee that it will not take you long to convince yourself that good reportage never uses negation in stating the facts - while editorials abound with negative refinements of positive statements. The purpose of the editorial is to explore relations, while reporting is supposed to give the simple facts without imputing underlying relations to them.

Think of the ways in which you use statements by negation on videotape. Some might call it editing; some will say that you haven't given all the facts. Others might point out that you have to degrade the message in order to draw your audience into an involvement in fleshing it out for themselves. McLuhan would recommend cool statements: It's what you *don't* say that counts.

Finally, let's loop way back into Paul Ryan's chapter where he talked of Guerrilla Warfare in general terms. It seems to me that guerrilla action derives its power versus "the establishment and its cultural automatons" through its ability to shift the context of their encounters. That's what really throws someone off base: it's the power of the punchline in a joke. Establishment forces with their hierarchical

chains of command from Johnson to Meadlo must necessarily operate in a context-free modality giving positive, unambiguous orders from the top down with consequences which never can loop back to the originator. And that's what makes them vulnerable. Guerrilla action has the flexibility and the redundancy of potential command to make negative statements possible and thus cause its adversary to exhaust itself where it is not being attacked but might be. Alan Paton pointed out in *Too Late The Phalarope* that the jailer must watch all potential avenues of escape while the prisoner need only watch one.

A conventional pyramidal chain of command must maintain its ambiguity levels below a narrow, tolerable limit or risk confusion and disassociation of its parts; guerrilla forces must maintain a high level of ambiguity and must engage constantly in energetic, strongly self-referent explorations of the contexts of action - with attentive relaxation of those members not in the line of fire.

Lastly, let me comfort Paul somewhat in his wondering on what to do about deception as a tool of guerrilla warfare - since deception is despicable. Think about it. In a society educated not to accept any statement simpler than a triadic one, the notion of deception is meaningless. Deception can only work when you can speak with a forked tongue: when the context of your words can be different for different hearers. If, on the other hand, your communications media can provide a rich opportunity for contextual explorations of your metaphors of expression, you need have no fear of deceiving anyone who is skilled in the perceptive arts. He will stand with you in the context you intend.

Anyone foolish enough to accept diadic statements of "truth" deserves to be deceived.



TOWARD AN INFORMATION ECONOMY

"There is an internally recognized beauty of motion and balance on any man-healthy planet," Kynes said. "You see in this beauty a dynamic stabilizing effect essential to all life. Its aim is simple: to maintain and produce coordinated patterns of greater, and greater diversity. Life improves the closed system's capacity to sustain life. Life - all life - is in the service of life. Necessary nutrients are made available to life by life in greater and greater richness as the diversity of life increases. The entire landscape comes alive, filled with relationships and relationships within relationships."

From DUNE by Frank Herbert. Copyright © 1965 by the author. Reprinted with permission of the publisher, Chilton Book Company, Philadelphia. (From appendix on ecology.)

... Been struggling with the economics of alternate video for three years now. In that time I've been involved with one rich patron, a Ford Foundation project in Newburgh, New York, various independent consultancies, and the recent New York State Council on the Arts/Video Movement Game. In most every case, financial decisions have been in the hands of people other than those involved in the actual processing of information. In most instances this control has worked against the people involved. Equipment gets shuttled in and out of situations arbitrarily. The glorious turn-on gets no follow through and hopes turn to bitterness. The "if only" syndrome of powerlessness takes over. When you get mixed up with a bureaucracy, the bureaucracy can be depended on to reduce everything to its safe and sorry time grain.

If there are semi-creative bureaucrats who have pet projects, it's worse. Sitting on fat salaries, they play a sloppy politics of attrition - helping divide up a scene, hitchhiking on people who have been doing it without money. Because they ultimately determine where large sums of money go, their ideas and say-so acquire a disproportionate weight. Among those struggling to survive in video the presence of a large sum of capital such as the original quarter million of the State Council brings out the worst of old style politics - non-cybernetic, crude and beyond repair. All this is compounded by the sheer fact of being in the city where it is near impossible to sustain networks of trust relationships. In short, the funding of video by grants thus far has been a bummer - high promise, low yield and all the time eating up people's budgets of flexibility. Nor is the grant scene self-sustaining. After a year you know your mistakes well enough to do it better and there is no bread. Newburgh left a lot of unhappy kids.

Meanwhile, back at the marketplace, Avco, EVR and friends are stockpiling information for home and cable along traditional marketing lines, treating information as capital, not understanding relevance. They continue to hype people to the glories of this bullshit so they will scream "sock it to me" on through the seventies and make their stockholders rich. By 1980 they will have enough audiences "pinpointed" (a term used in a Rand report on Cable) so that in effect, we will move from the saturation bombing of American brain cells via broadcast television to pinpoint bombing via cable and cassette.

Where do you go? Capitalism itself is rightfully under onus with dissidents. Profit-making corporation is an instant turn-off for many of us, save those who have been "cleared" of their "money hang ups"

by Scientology. Given the ecological situation, having a lot of money in a Swiss bank so you can buy the best anti-pollutant face mask, just doesn't make it.

But then where do you go? As Frank Gillette, the original conceiver of Rainsdance would say - capitalism is like heating a house with coal. It's dirty, sooty, nobody likes it, it's a pain in the ass to manage, but it keeps the house warm until we find something better. One has only to read Norman O. Brown in *Life Against Death* on "Filthy Lucre" to realize the enormity of the money-dirt-excrement nexus that has been keeping our house warm. My sense of strategy as to how to move toward polymorphously perverse resurrected body Brown calls for, is in part by way of an information economy. The movement away from capitalism toward ecological narcissism is, at least in part, the embodying of mind in infomorphs. *By infomorph, I mean an organism that relates to itself and its environment in a way that respects and optimizes all possible transforms of differences that make differences.* It does not identify one variable, such as profit, and attempt to maximize that variable at the expense of the whole.

Our capitalist economy renders life unidimensional - more and more the same; uniformity via homogenous quantification. By contrast an information economy thrives on variety and diversity, quality not quantity, differences that make differences. More simply stated, the problem is one of how do you work in such a way that the flow of money follows the desired flow of information and not vice-versa? And how do you insure that there is enough money to do it?

There is a critical mass, a certain amount of machines and money necessary without which there is no way to manage transforms of differences. To cultivate a consciousness congruent with current complexity, one must have enough quantifiable resources to pass critical thresholds and recycle what is relevant. Buddhism is beautiful but it is an oversimplification given the need for increasing the diversity of life. Spiritual riches via voluntary poverty may be a cop out. God is not transcendent; he is immanent in our experience, in this planet. We need embodiments of mind, not disembodiments. There is enough to go round. There are enough people interested in relevant communication so that we can begin to pay each other fairly for services rendered. Open accounting will help prevent some rip off. We cannot be giving it away all the time for free in dramatic gestures, while the capitalist economy packages the drama for its own development, giving not a shit for alternate culture. When someone suggested to Warner Brothers that they air Woodstock footage over network television as a serial in keeping with what would be proper electric liturgy, he was told, "ah - we're making over 50 million on the movie; don't bother us with that."

We need to think our way through the horns of the profit, non-profit dilemma into an information economy. Deliberate minimizing of a variable such as profit (the non-profit ethic) is as dangerous cybernetically as maximizing profit or in the purity of non-profit, but distributed throughout the biosphere in accord with patterns of relevant information flow.

In our current situation there are a number of mechanisms that disenfranchise people from their own money: insurance companies, taxes and an unresponsive government, and educational institutions which thrive on real estate and the power to certify knowledge rather than the ability to process information for people. The great virtue of the *Whole Earth Catalog* has been no bullshit information based on use and consequence of use. Contrast this with TV advertising that manipulates mythologies up front to trigger consumer response in subliminal ways. In the *Whole Earth Catalog* the flow of money began to follow the flow of information.

INFOMORPH ONE ORGANIZATION OF IGNORANCE

Since only the user is in a position to know what is relevant for him and how he wants to access relevance, an information exchange must include the user from the beginning. Much of this happens naturally in just watching different tape and becoming aware of wanting to see more of this and no more of that.

At another level it is necessary to deal with desired information in a more coherent way. A healthy relation to the unknown is critical. Otherwise we grow rigid and die the death of explicitness and repetition. "I love Abbie Hoffman" reruns become reactionary. A mind that concerns itself too much with what it knows cannot maintain a good guessing way. Openness to the unknown is part of having a feel for what is relevant as things develop, a sense of the significant differences while there is still time to make a difference. Such access

to relevancy is part of the freedom to self-correct that information economy can supply. What we don't know is an infinite resource, inexhaustibly recyclible. It seems possible to develop out of our ignorance a culture with a fullness of feedback such that we would not be recurringly faced with the choice between cannibalizing the human relations we have or solo-tripping to regions we cannot relate to those we love nor ask them to trust.

A coherent relation to the unknown is possible through an organization of ignorance. Organization of ignorance is a research technique Peter Drucker explains in *Landmarks of Tomorrow* by discussing Mendeleev's discovery of the periodic table of chemical elements. At the time Mendeleev was working, only 60 odd elements were known. Rather than trying to puzzle together the known elements, Mendeleev began to ask himself what he had to know about what he did not know in order to make sense out of what he knew. He allowed the intervals, the gaps in his knowledge, to play a part in his conceptualization. In other words, he organized his ignorance.

Sample Organization of Ignorance Input

- . Hour of the ocean
- . Tape of CATV Projects
- . Rap with Stewart Brand on Economics
- . Rap with a dropout from Scientology
- . Interpersonal relations in Commune
- . Children in Commune
- . Raps for high school kids by college kids on college
- . Raps by dropout users about their experiences

- . Rap with veterans returning from Viet Nam
- . Tape in South Vietnam
- . Tape from African students on life in Africa
- . Daily life tape of situationalists
- . Tape on abortion in NYC
- . Critiques of Bucky Fuller
- . Women's Liberation Movement raps with women on where they feel
its at directed toward men
- . Rap with Weathermen
- . Rap with people who have left the city, are living in country -
how they are doing
- . Raps with people on planting electrodes in brains
- . Documentation of Earth works by different artists
- . Check out Whole Earth Catalogue and inputs



Cybernetics of the Sacred

This section has two discontinuous parts. The first is an attempt in print to suggest some of the dimensions of the Video Wake for my Father. The second is an approach to the realm of the sacred based on cybernetic theory.

VIDEO WAKE



VIDEO WAKE FOR MY FATHER

Paul Ryan

On Wednesday morning, May 12, my father died at St. Joe's hospital in Paterson, N.J. age 57 - cause - cancer - from lung to spine to brain. Then the American way of death began ... again ... I bolted at the funeral mass on Saturday.

By Monday night I had found method for my madness. At the Raindance Loft, I resurrected the ghost of my father, live on tape, and wailed into the camera for 12 hours. I pulled out all the stops - video movement - state council - marriage - alcoholism - sex - cable television - monastery - Jesus - cybernetics - Cocker - Cohen - Lennon - and more, much more. The tape is outrageous.

This video wake is by invitation only. If you've got this its because I thought of you. At one time we've seen the gleam in each other's eye and I want you to see this tape - all of it. Either that or someone I trust, trusts you.

Come as high as you want but bring no dope. I don't want this scene busted. Bring food, wine, tape you dig, raw or recyclible tape, blank checks, good friends. Somethings rotten in Denmark and I'm calling every game I know. I'm asking for everything. I'm looking for a new way to move, with you or without you. This is a good start, believe me.

Plan on staying all night. It will go for at least a week starting Tuesday May 25 at 8 PM and every subsequent night starting at 8 PM. Time out to piss, rewind, eat, and drink. My place at 530 Riverside Drive apartment 3b, NYC, NY. Tele 662-4662. That's at about 124th street. Take the 7th ave IRT local to 125th St and Broadway and walk west.

Unless you want to be born again
of tape and the spirit, don't come
to my FATHER'S WAKE - FOR if I can
turn you on, if I can drive you out
of your wretched mind, if I can
tell you, I will let you know -
Paul

Excerpt From Tape

(SIXTH HOUR)

At the risk of alienating the reader, I am including a raw transcript of a small cross section of the Wake. The only editing I have done is to add a few phrases for intelligibility and delete obscure remarks and references to other people that would have lacked proper context. I have let stand the strong self referencing statements and the hostile tone. The hostility was in part cathartic in the face of an intuition of cancer as biological runaway from critical thresholds of hostility.

The intent of the Wake was to go out raw. I taped continuously for 12 hours and allowed myself no level of irony or metaprogramming about what I was doing. The hope was that such raw revelation would initiate similar "reticular core dumps" in enough people to provide a data base out of which a tribe could be consciously constructed.

This half hour section was not chosen because it was representative. I asked Vic Gioscia to do a rap on the Wake for this book and the following section had a coherence that seemed an appropriate base for the rap he wanted to do. I would ask the reader to keep in mind that what follows is a print out of a cross section of a video rap.

The entire 12-hour piece involves manifold political, sexual, personal and cultural dimensions that are not talked about in this excerpt.

This is going to be my appeal. I am half out of my mind right now, as you can plainly see. But if you are seeing this tape, okay, it is because I got enough time away from it so that I could come back and look at it. Okay. And say, I'm going to follow through on that. I'm really going to do that. On my own crap detector. No bull shit. All right? So if you're seeing this, man, if you're seeing me talking to you, it's very much, because I want to talk to *you*.

Now here's what I've got in mind now. We cut the cable game, all right? It's like - there's no way to do it through the federal legislation, federal F.C.C. - none of that. In other words, rather than trying to do it generally at that level for everybody, do it *within* - strong. We build it up, infolding. The image is of noosphere: curved, alive, thinking. *Out* of the city, critical, out of the city. We take the whole business out of the city and we translate it into information - differences that make differences. There are enough cats around that understand that: Bateson, Weiner - some of those guys. I'm in touch with some of those kinds of guys and I can get in touch with others if we have to. Understand information. Not money. Not just, "Give me more." None of that shit. Okay? I'm looking for space. I'm looking for space for a man to be a man.

My cable system. Right? I own it. Me and you. Wherever you are. Me and you. We own it. I run it. Me. I'm in charge. Okay? And what I am doing is I'm doing it right. Do you understand? And if I can get two-way cable in, then I can get two-way cable in. And if I can provide portapacks for people, man, I'll do that. That's assumed.

There'll be enough of these things around so that when a cat needs it, he's got a place to go. We have gotten that far here. Raindance, Rain-dance, Radical Software, Michael and Ira. You don't believe me. You wanna know how hard I am to work with. Ask Michael and Ira. They'll tell you. I am hard to work with. Crazy. Goes off and he's gotta do this, gotta do that. The kid. He can't get it together because of the kid. That's together ...

I'll tell you how I'm going to make a space where people can be. It's going to be out in the country. It's going to be a cable. There are enough of these things around so that people can get to them. All right? And more than that. More than that. I'm going to develop - me - me - crazy me, who does the tape, who can think Shakespeare, can think anything, who thinks monastery, gonna get together a year program. This is how it works. The monks had it together. I got it from them. That's where it came from. The liturgy. All right? You remember? Sunday. You're up. You do it.

And it's Easter, Christmas, or something. But you get the range of feelings down, man. That's the idea, and you've got a referencing system for that. That's what they call the liturgy. Ceremony. Okay? And the difference is you don't have to go to this church. All right? You don't have to pay. If you don't like the mother fucker, you turn it off. This, television - okay, you wonder how I got into this? I'll tell you man, because you can turn me off and I can turn you off. And that's that.

And that's how it will be, man, don't you understand? We don't have to lean on each other. We've got to let each other get back in touch with what's there. Nature. Reality. Give a man space. Find ways of sharing that, man, if we want to share it.

You can call it what you want. Call it a crazy monument for my father. But it's a space. There will be a space in that place for you, for your kids, if you want them there. For your wife if you want her there. For your lover if you want her there. Not physically together. Not in the same place physically. Okay? Be in different physical places. We're going to use this thing that we got to understand - information. It also means selective. A way of choosing. We're going to develop modes so that people can choose what they want to choose, in the way they want to choose it. We're going to give them as much as we can, baby. But we're going to hold it together. We're going to hold it together. And it's going to be guerrilla. We're going to be guerrillas for a while. That's going to be the guerrilla base. Cable system in the country. We'll transmit off the air and do that whole number. Because it pays very well. Good money. Fifty per cent. You know, all that stuff. And we'll do that right. So that people get the reception and it's not bull shit. If they want to see CBS, we let them see it. That's their number. We can play numbers on CBS. You take it off the air, you know. You get it? We're going to do a liturgy. Let it be alive, you get it? People will be able to feed in and change and work with it if they want to and leave it alone if they wanna. If it is dead for them, then it is dead for them. That's okay. They can still physically be there.

What are we gonna look at? What we're going to look at is this planet and we're going to love it. A tree, a rock, and the clouds. You remember, baby, you remember. I know you remember. Find space to do that, man, and time to do that. No more time hypes. Liturgy. It comes around every year. Spring, man. It's been there. Gonna enjoy it.

We used to have a cat in a monastery. He'd say, "You know, some guys are called to serve God - we're called to enjoy him." God, man. Nature. Whatever you want to say. All right? Okay?

This way. (Tapping the camera). This is how we're going to check in on each other. Just to see that we're not fucking around. It's not surveillance. It's not Big Brother. But I'll let you know, man. I'll let you know what's going with me as I want to. I will reveal what I want to reveal. If I don't want to reveal it, I won't do it. Okay?

You see, with this thing, I get back what I don't want to put out. You get it. In other words, I check it back. If it's no good for you, it may be worth doing for me anyway. That's how it works. And I can see my whole body now. I don't have to put it into words in order to be a newspaper reporter or a journalist or something. And if people want, well, we'll have cameras on 24 hours a day. We can survey fish. We can do anything. High variety, okay? High variety systems. Doing something else.

And we're going to keep it cool, man. We're going to keep it cool. The money is going to be the worse one. Me. Me. I own. You trust me or don't be there. You trust me - I'll figure out the money

thing. I'll figure out how to keep it open. And there are guys who know. Ira and Michael are close to it. The cats out on the West Coast. They know something. We'll find it. I'll tell you, I have got nothing right now. \$1,000 in the bank or something. And they want that.

My ole man died with nothing, man. He was renting a house. They wouldn't give it to him. Renting it for \$125. Capitalist thing, you know. Property holders. I'm not here; you be there. The shit that people are doing all over. Only this time, we do the shit in the open. All right? And we call it shit. 'Cause it's a shitty deal I'm doing, man. There is no other way. And when it comes around and then maybe you can collect on me.

And we do a cable system. All right? And from there, man, we keep it together. That's the basic thing, like a monastery. You keep it together. They had it down so that you went out six months and came back in six months. Got your head together, and then went out. We'll use tape, man. People can go if they want to, or do it on tape if they want to. We'll exchange on tape. Selective access. You find out what you want to find out. We'll think about the earth. Okay? That will be the priority. Earth. God, nothing else. Earth. Not you, not your family name, not your fortune, not your private plane, all right? Not your pipe dreams about going around the fucking world. Earth. It's the only one we got. We're going to look at it, to really know what's bull shit. Who are pulling the whistle on who. Nader, man, we need a hundred guys like that. We'll find out. Find those guys. We'll keep the scene together and we'll use information. Information. We'll use this thing, man (tapping camera). You know, you can pick up what people are into, man, and weave it back into what you're doing

and so there's an understanding. Calculus of intention, coin words. I'm so frustrated with words, man, that I figured out how to do it topologically. You wanna see. I'll show you. (Camera moves to find painting on wall).

I got a painter friend. He brought some paintings down here that no one could understand and said that I don't like this stuff. What is this? I want you to look at a painting, man. See that, man? Now let me tell you about that guy. Coming out of the monastery and ... and words were no good. This cat was over there painting. Painting. See that? Can you hold that together in your head? All of that? Huh ... you see that, see that together, all of those designs and all? See that face? That camera looks a bit unsteady, you'll have to understand. I had a tripod. See that? I learned that painting from him. I went to the mathematicians. I figured out Klein Forms. I'll be famous some day. Crazy Ryan figured out Klein Forms. A mathematical breakthrough. Does that impress you? Well, I did it, man - because I had no place else to go, except lines.

This man (tapping camera) I go this far. I got to this. I got so that I can do this. I got so that I don't have to sit in the goddamned church, and have some eunuch scream over my father's coffin. I could have killed him. I turned to my mother and said, "Mother, what?" Looked over to my brother, right, and he said, "I don't know what to tell you, man." He's like that. If he doesn't know, he tells you he doesn't know. Most of the time he doesn't know, he doesn't tell you ...

Do it. You understand, do it. Cable. So we get a cable with electricity working. Electricity. Electric is elastic. Electric. Right? And we'll keep it small.

My old man died. I'm sitting here with this mirror and all these playback machines and all this tape. Had enough money and enough friends. And I've done enough things for people so this space was here. I can do this crazy thing.

If you're seeing this tape, man, it's because I want you to help me. I want you to help me and I want you from you what you need - to take care of your business. Okay? Up front. And if you can do it, fine. And if you can't do it, then don't do it. Don't try. Here's the way we work it. You get a tape machine. I don't want to see you. I don't want to go through that namby-pamby shit. I walk in, "Well, I think I like it." No. You send me a naked tape. Okay? Like this. Okay? Like this one you see with me. No shave. I want to see you, man, I don't want to see how you look for me, man. I want to see you. As much as you want to show me. It's up to you. It depends on how much you want to work with me. Okay? ...

... Get the cable system so that we own it. Work out the money thing somehow. But we keep the information on top of the money. All this information about the money is out. Okay. We move slow.

We get the liturgy down. We get the year thing down. Then that becomes the reference point. If you don't like it, you change it. You turn to another channel, put another tape in. Everybody's liturgy. Input - output. The Eskimos wake up in the morning and they share their dreams. Nobody has a right to private information. We have to

work that one out, man. I don't know how that one works. I want my private identity, believe me. You know, the goddamn Ph.D's and M.A.'s and all that shit, man. I'll create my own credentials. Here. You and me. Tape to tape. You like me, fine. You don't like me, forget it. Then you tell me upfront. And we tell each other. This is upfront. What's upfront that counts. This. Okay?

See, I got good enough lighting so that you can see my Irish face. And I haven't got makeup on or anything. We can do that for those who need it if we want to. But we're going to do it, man. Don't be shucking yourself. Don't be fucking around. Do it! And if you can't handle it, don't try. Don't try. If you're together to do it, okay. If you're not together, then don't. We can't take parasites. I can spot them now. I know. I've read enough Nietzsche. So it's me and you, baby. I don't know how this thing winds up. A tribe or whatever. But we get that year thing together. We get that as a referencing system. Down. All right. We do that. We've done something.

And we can check it out with that guy in Watts trying to do it with blacks. There are enough of those guys around, there's enough of an information circuit and we're using tape - not degrees and resumé's.

I'll publish a book if I have to get the money. I'll sell it to them outright. They can have it. I ain't shitting. It's good stuff. For people into videotape, my experience is valuable. It's worth three bucks to them. And if you can get it together enough to tell enough people, that book will make it. And there's enough in there to keep it going for ten years, at that level. 'Cause I wasn't kidding around when I sat down and wrote. And the stuff that I wrote that was shit is piled up in my closet. Like the tape that you're going to see.

Okay? 'Cause I don't want to bother you with it. But I get it out there and you pay what you want for it. And that's it.

I pick my nose. I'm crude, when I want to be. You too can pick your nose in public. Do anything you want. As long as you're not hurting. I don't want you, man, if you're into hurting people. And you're so fucking stupid that you don't even understand how you hurt people. I don't want you.

Self processing. Get down enough systems to check out what you are doing and not lay it on somebody else. Self-cybernate or something, man. You. Nobody else. Don't hide under a family, or a man. Don't hide under a woman. Us. You, man. Get it together. And if your woman hasn't got it together or if she's working it out at a slower pace, man, or whatever you need, man. Make a choice. But let me know where it's at. Send me a tape. And if I dig the tape then I dig you and we can begin to work, man. Do it. We'll do it. And if I can help you, man, I will. If it's no good, we'll know it's no good, and do something else. This way we keep back those FBI bastards, keep out the CIA fuckers, and those guys with the buying, buying, buying so that they got guys on needles and junk, man. None of that. We keep it tight, tight. All right? You understand, huh? I'm not fucking around. I'm not fucking around. We keep it tight. I do it. You see it in this tape. I keep it tight. And you come and you don't like the way it goes down, man - in those things where it has to be tight - I'll take that responsibility. Me. I'm the autocrat. I'm the chief. Ryan. That means king. And in Ireland, they had it worked out. Lots of kings. That's the way we do it. Two thousand cable systems. Lots of kings, man. And you can shoot me, man, you can export me. I don't give a shit what you do once it's together. I'll die, man. I don't care.

I'll go willingly. Just as long as you don't have a fucking eunuch screaming over my grave. I'll give my own eulogy. That will do it. I don't care what they say about me. I'll say it myself. All right.

You get the picture. You get how this thing works. And we're using this. (Camera). This checks it all out. Right? So we go from the guts. Go from the guts, man. And we'll get some time. We'll get some time to do just what you want to do. And it'll be cool, man. We'll have a way to signal back. Your 'ole man, your 'ole lady, we'll get cats who know how to figure those things out. I know some of them. We'll make tape. We've got tape. Doing it. Lay it out from your guts, man. Take it back. All right? When you think somebody you can handle and you want to get into a thing with them, do it. Do it. If not man, eat it. I'm going to eat a lot of what I'm doing tonight. Some of it you're going to see. And maybe I'll want from you money. Maybe I want from you tape. Maybe I want from you time. I don't know, man. But I'm going to want help, man. Okay? And I want you to give it to me, and you know, man, where it's going.

And I've seen enough, man. I'm not copping out. I'm not travelling. My old man did that. Travelled to Portugal, Ireland. He wanted to go, man, he wanted to go so bad. He was 56 before he got to Europe, for Christ sake. The last time he went two months before he died, he found some Portuguese people. They gave him a wreath, in one hand, my 11-year-old sister in the other hand, man, and they made them dance. Because they know over there that if you can't sing and dance, you're lame, man, if you can't sing and dance. I can't sing for shit. But I'm going to learn. Oh, shit!

Do you know, man, cancer. It got to his vertebrate. Gone. One of them collapsed. That old man who was on that screen. He got up and danced with my kid sister. They danced. And that's what it's about. Goddamn it. Dance as often as you can. Joyful wisdom. Earth. One fucking planet, and we're not going to blow it. It's not a bad place to be, together. We'll work it out ...

Postscript To Wake

I sent out over a hundred invitations to the Wake. In the six days and nights it ran, over a hundred people came. During that time I was in Ninevah, Nova Scotia, visiting a friend.

There are a host of "reasons" why the Wake did not, in fact, configure a tribe: New York City, differences between the social structure of one's network of friends and a tribe, history of the "video movement", lack of money forthcoming, limits of the videotape medium, few people with tape experience of themselves enough to risk naked tape such as I asked for, that which was revealed of me in going flat out on tape that turned people off, etc., etc., etc. I'm still trying to figure out "what the thunder said."

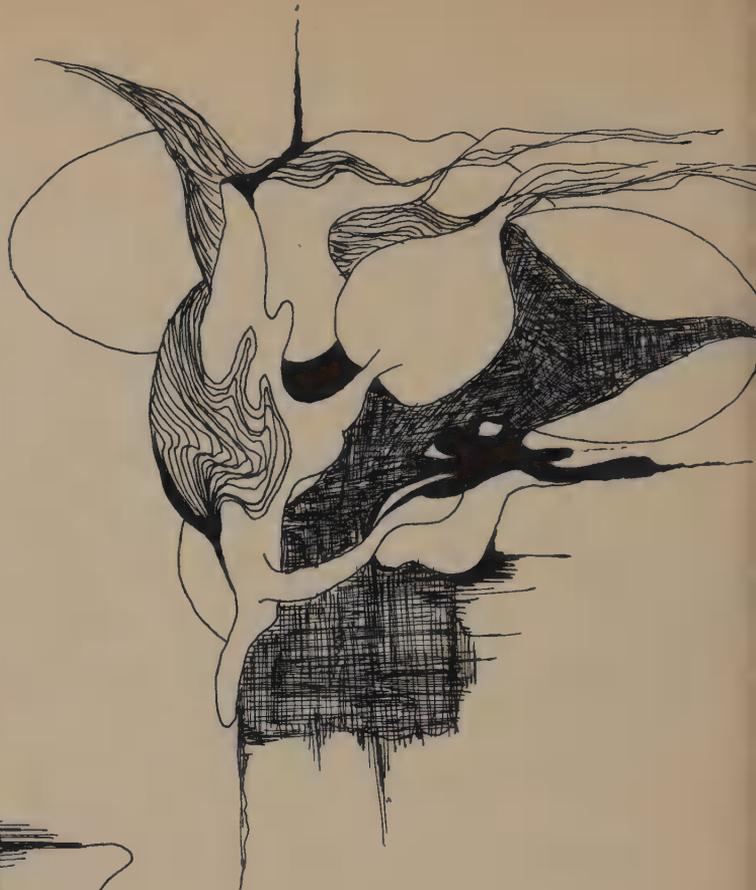
I trust that Vic Gioscia's rap will help the reader make some sense out of what happened. For me, his rap is simply another indication of a brilliant understanding of a range of delicate human metaprogramming, and hence a capacity for sharing and feedback that made re-entry for me easier - much easier. In other words, when I needed a little help from my friends, Vic was there as friend.

Ten weeks after the Wake, when all possibility of a tribe configuring via tape was gone, I sat down with Vic to go through the entire Wake tapes again. There were about two hours of myself I could hardly stand. Somebody had described that part of the tape to me as "raw, undigestable meat." There was a gnarled morphology of anger, an anger I had in common with my father that seemed

ancient in origin. It had done much to keep us apart. Father and Son, Captains of our separate souls, matching anger for anger, caught in a symmetric escalation of "pride" that continued with few respites until death parted us.

As I stayed with the tape, it became apparent to me that this gnarled morphology of anger was wrapped around none other than a relic of the true cross. The symbol of the cross provided the stability from which I was playing the role of an updated Jesus Christ superstar, the fulcrum from which I was playing Muad'Dib in DUNE. Conversely, the cross provided a locus of retreat from grief over my father and the terror of my own death. And it was on this same cross that I had learned to love my own variation on Western pathology - the pursuit of transcendental loneliness.

In the name of my father.....



Practice Dying And Dance As Often As You Can

- VIC GIOSCIA

I'm sitting here up at the Center with Paul Ryan. I've just watched reel 12 of the Video Wake - twice. I saw it once before when I watched the whole fourteen hour experience one day with Paul up here. When I first got the invitation to go to the Wake, I went up there to Paul's place, wondering if I'd have the time or the presence to do what would need to be done. I knew Paul's father had died and I said to myself, when the monk's father dies, the monk is going to be in big trouble.

So I went, walked in and found Andy Mann and 12 hours of tape. I was first kind of furious at that, and I figured, "Here comes another one of these hokey video tricks." But I laid down on the floor underneath that big carpentered bed structure he had up there, on some pillows, and Andy started rolling tape and I started to get into it. I got into about six hours of it and then started to flake out - this was about four in the morning - so I went home. Got word to Paul that I wanted to be there during his mourning time. What he didn't know was how badly I wanted somebody to mourn with because a love that I had loved was dead, murdered - brutally - and I wanted somebody to mourn with. I knew that I didn't know how either, and I didn't want to do it alone.

There's a probably apocryphal story that somebody went to Plato just before he died and said, "Listen man, you wrote 36 dialogues, I can't get into all of that, that's just too much. Boil it all down, just, you know, sum it all up." I imagine he thought that Plato wasn't going to be able to do any such thing - boil down 60 years of work. But Plato looked at him with a vast stare and said, "Practice dying."

So I went to Paul Ryan's to practice dying, with my own mourning the initial touch point to what he was going through. I knew some place in the back of my head that he would ecologize it and McLuhanize it, tape it, run his whole earth number on it, tho' I didn't know quite how. I knew it would be good and it would be honest and it would contain only about as much bullshit as is ordinarily contained in Ryan's rap - which is not a lot.

The decision to respond to one half hour out of that 14 hour obelisk and to be there from where I am means that I have to figure some way to do for that 14 hour thing what Plato tried to do for 36 dialogues. How do I capture its spirit, to coin a phrase, and touch my spirit to it. What I'm trying to do now in this rap is deal with it, because it's an appeal, and it intersects with the scream that I hear shooting like mad lightning around the wounded electric earth.

There's a paradox in Paul's crying out for what seems to be a big tool - many cable systems, many Ryans. But in the perspective that I wear as the eyeglasses on my mind, cable is a screwdriver, a small toy. It's a necessary device, a processing system we've got to get into. But somehow in the face of the huge crisis that species man is going through on planet earth at this time, although cable becomes all the more necessary, it is the broadcast device for its own shy, timid, feeble beginningness. But we gotta do it. *It is one* of the ways I

think that will tell us, show us, feedback for us how much *more* than "it" we gotta do.

We're all a little lame right now, I suppose. McLuhan said it, Carpenter said it early on - the wacky paradox of electricity is that it creates a whole new environment which immediately subsumes the former environment, puts us all in the condition where we gotta have a revolution but we can't have a revolution till we get our heads together, but we can't get our heads together till we have a revolution - that spinning wheel number. Cause we can't just change identity reels, we can't just say, "Yup. Old man died last week. Next." Or, "Going through a heavy number, Vic? Well, turn the corner, baby, dance." Ain't that easy. No sense walking around lame and whining - "I *can't* dance right now, man, don't you see I'm lame?" Also, no sense saying - "Well, dance *anyhow*. Make believe you ain't" - 'cause that's make-believe. Somehow, at such times, what we gotta do is learn how to die so we can get back to dancing and singing. And that is what is known as a heavy change to go through.

Now, cybernetics is a (relatively) new handy referencing system. Using it, we can see that a certain amount of redundancy permits the system to maintain itself in a kind of viable adaptive growth sequence. And we can see novelty - 'cause cybernetic systems feed on information so they can get beyond just redundant cycling. And we can say that the more systems remain the same, the more they'll die of a stultification, a terminal kind of death, a cancerous kind of death. And we can say that information will transform those systems so that they will have a vitality and a bouyance, a wise kind of glee, so that they move on and make the earth new and fresh. But in those moments where dying reaches out to dance, and where dance lifts the tragedy of death into the nobility of form - at that interface, there is a human craft to be

learned freshly, since none of us does it well, tho' all of us do it well, sometimes.

Examples: There's a lot of freaks running around doing the nature number, the rural trip, the getting *back* in touch, trying to make time to dig the trees and the rocks and the clouds, trying to molt the city like a dead snake skin and get back to a primal kind of a joy, find new gods and lie down on the planet as with an old passionate lover, to create a new kind of life. And there *is* a need to synthesize a liturgy for that new community. It can't just be redundant, and it can't drown in an overload kind of novelty which impoverishes it, makes it yelp in pain for its loneliness and its fragility.

There's another kind of freak running around with a quiver full of information arrows, shooting them off wildly in every direction. And what happened to those electric Indians running around with their portapacks was that they got headed off at Cable Pass by the same old Cavalry entrepreneurs who decided to pull their same old money trip, this time on the cable system.

A lot of us had the idea, back when, that with portapacks we would be able to reconfigure the monolith broadcast industry, the one-way information trip. We were going to weave a new set of clothes that the information poor could pretend that they were wearing in a vast parade down Madison Avenue where everyone would be showing off an Easter suit with its new electric arrow. Most of us now despair that the portapack will be our new communion wafer and we will kneel down together in our new electric monastery and administer wine to each other and get stoned and feel that we are free at last. But there's a new configuration behind that one, where it turns out that the cable systems are sitting

there like vast obscene Moloch vacuum cleaners, sucking up the output, the "product" of "the half-inch tape community." Cancer and positive feed. If we don't watch our fucking step, the cable systems are going to create a vast money street, and there will be hundreds of thousands of people running around with portapacks saying, "Put this on. Put this on. And, man, it's all ready, I edited it up on my own 3650, and you can broadcast it straight out, right? I'll sell it to you for \$50, or \$500, or \$5,000." That's a Western, man. We're Indians coming in with those little half-inch packs, and the U.S. Cavalry is in charge of cable. And they're saying, "Let's get 'em. Let's get those Indians the fuck out of here so we can get a railroad in here, put a space station in here, get some IBM's in here. Get them Indians out of here, they're in the way. Buy 'em out." We better be careful 'cause if we're not, that's what's going to happen.

The crazy acid sweet Jesus innocence of Paul Ryan saying, "Give me my own cable system and I will make the truth and we'll be free then and we'll love each other with innocence and joy and we'll make a new wisdom and we will give it to each other, and we will heal the death that stalks the earth." The sweet crazy innocence of that. You *gotta* be innocent or you won't get your head together, but if you are, you're going to get slammed in the face, somebody's going to hit you with a deck and say, "Do this - because that's all that's viable now." And that's what it's all about. What's "viable" now when the electric media of our time broadcast the 1984 death that stalks the species.

There's another kind of freak runnin' around, dealing with that same terminal configuration. I tease 'em sometimes and I call 'em the "feelists", the t-groupers, the Esalen people, the NTL people, the shrink community, the people who say, "Let us sit down and do yoga

together. Let us sit down and do mescaline together. Let us sit down and do alpha together. But let us sit down together and make the new kind of love - *then* we will be free." I weep for their sweet innocence too.

'Cause none of them freaks are wrong, man. I mean, we have *got* to do the kind of information-sharing that the new noosphere requires for our survival. And we've got to do it with cable. And we've got to do the small group commune number where more than two desolate people at a time can do what families used to do two dozen at a time. Communes have got to grow, man, have got to be loved and fanned into the joyous dance that they do of and for themselves, whether anyone ever sees them do it or not don't count. Not too many people saw the Druids do the Stonehenge dance, but it mattered, it kicked in, it paid its dues. And Slater and all his brothers and sisters have got to do the "feel together" number and break through the masks of life and the masks of death that we walk around with, the illusions of safety and joy. That *has* to be done.

And I'm not saying that we have to have a high variety system so that *maybe* the cable freaks will find it and then we'll go with them, or *maybe* the communards will find it and we'll go with them, or *maybe* the feelists will find it and we'll go with them - so we have to have high variety because we have to place our bets, ladies and gentlemen, place your bets. I'm *not* playing ecological roulette. I'm *not* saying *one* of them may make it so they've each got to be given their chance. And I'm not saying, we've got to get to a space where everybody gets to do his thing because I don't think that's enough. It's necessary but not sufficient.

I have a funny personal space. I go out to the university and I rap with young people. And I find that I have to hop back and forth between Plato's dialogues and McCulloch's. And I've gotta race back and forth between Heraclitus and Norbert Weiner. And I have to rap the Tibetan Book of the Dead and the Whole Earth Catalogue and Zen and Yoga and tao because those "students" are sitting in that classroom in calm serene bereft possession of the obsolescence of the visions that once got them by, in strong young pained yet striding demand for the *new* wisdom that must be had so that one can dance *whenever* one can. They know that the university is not where it's at, that books are not where it's at. They also know that cable is not all of where it's at. They know that meditation's not where it's at, Zen, Yoga, Plato, Buddha - those are all now *pieces* of information in a vast new mosaic which must be *built*, with joy, or it will not live, but *cannot* be built with joy, right now, in the terror that we are all surely dying.

Occasionally, if we love each other enough in that room, we break out into that new space where we are all children - children who dance spontaneously, but whose joy disintegrates so easily, shatters so quickly into ominous responsibilities too large for children. And yet, without the innocence of children the responsibilities *can not* and *should not* be accepted.

I wrote a poem a long time ago about children entering a burning cathedral carrying corpses of other children in flames in a makeshift wheelbarrow, up to an altar which had sound lightning shooting out of its orifices. They walked up to that altar, pushing that crazy wheelbarrow with the flaming children in it, just brought it up there and left it there for the gods to see what they had done. (Sort of a weird

Viet Nam flash of children and napalm - wrote it back in 1950 when Kerouac was trying to tell me about how to die and how to dance.) That image keeps coming back to me ... I'm haunted by it, and although I will sit with Paul Ryan and learn what he has to teach me and have done so and will do so - sometimes when I see the faces of those children wheeling that crazy wheelbarrow up to that altar, sometimes one of the faces is Paul Ryan's - big nose-picking hulking bearded Irish information drunk kid running up to that altar and throwing back his arms and staring up at the face of Isaiah and saying, "Don't you see, Lord, don't you see, the children are burning!" and waiting for the titanic voice of God to deliver and say, "I hear you, Paul, I hear you, and I will stop it soon."

Sometimes I see Paul that way. Sometimes I see him as a ... a ... quaint kind of mystic, which reminds me of a story I heard once (in a Texas accent up at Fordham). He told a story, which is also probably apocryphal, about St. Teresa, who had these mystical flashes on occasion. She was walking down the road one day, and all of a sudden the clouds burst and the rain poured down and she couldn't see two feet ahead of herself, and wham! - she gets this mystical flash and falls flat on her face in a mud puddle and just lies there quivering some place between epilepsy, acid, and whatever the hell mysticism is all about. When she came down from that, and stood up, she looked up at the sky and shook her fist and said (in this cat's crazy Texas accent), "Lord, if this is how you treat your friends, no *wonder* you got so few!" Sometimes I see Ryan like her.

I had an experience with my own father a while ago. His sister had just come from Italy. She was really his mother for lots of years 'cause his mother died when he was young, so he wanted to show his

sister that here was his super son who was a man now in his own way. He wanted to show me off. So he turned me on like a juke box, turned on a couple of my broadcast numbers so the old lady from Italy could say the Italian lady version of "Wow! Far out." After that, he put his arm around me and said, "I'm sorry I wasn't there when you were a boy. Maybe we can get together now." I still want very much for that to be so, but my old man thinks that Barry Goldwater is a Bolshevik, Nixon's too liberal, and the country's going to the dogs 'cause it's in the hands of those labor people. So I knew there wasn't a whole lot we were going to be able to do together on that channel. But I hugged him and knew that in some ways my father was dead for me, but had come back a little from his death so I could dance a little. So I just hugged him and kissed him and said, "Sure Dad - I'm your son, and I like that, and I like you." But I knew if I was going to do my dance in the information sphere that he would never understand what kind of a dance I was doing. I knew he would be blind to that dance, would never see it, and that my wanting him to see it was self-indulgent, a little petulant, trying to find my way with a little too much rear view mirror. So I knew I wasn't going to be able to do it that way, his way.

Which way, then? I've done this rap in other places - the way we become human is somehow, impossibly, infants transact scenes of vast amounts of novelty all through the wild incandescent luxurious ecstatic innocence of childhood, gradually note redundancies, patterns, and forms; deep structures are laid down and so we are programmed for certain kinds of environment. We build up novelty tolerances and we build up redundancy needs. We bury the redundancies out of awareness (some people still like to call it "the" unconscious) 'cause, if you're not trying to learn novel things, there's not much sense paying attention to patterns and

generalizations which are already known and which will recur. We say "all of those", we make nouns, we make generalizations, we make visions, and we say "this is one of *those* situations and I've done this a thousand times before so I'll pay no heed to it." We do it autonomically, automatically - we're programmed for those. If we didn't bury those deep programs we wouldn't have the energy to attend to the *new* things we have to learn, like the amount of novelty we can stand and the kind of novelty we can learn to feed on so we can grow and go beyond those programs.

Used to be that you could lay down a set of programs in those first 5 Freudian years, and the world stayed the same long enough so that those patterns would fit. By being faithful to those, one got a sense of "being true to one's own self." You could be who you *were* often enough so that sometimes, in a new scene, you could be who you *are* in a new way. But the proportion of novelty to redundancy was relatively small, and that's what those early programs were for.

But the world doesn't hold still that way any more. Now, if you're old as I am, which is 41, you've gone through 2 or 3 or 4 almost total program changes. And at the interface of those program changes, you die.

At such times, you could read a book that said, "I am the resurrection and the life" and you were home. You could lean on the good book and you could make it through because the Christian liturgical metaphor sufficed for a whole life. This is not exactly news to anybody, but it don't suffice no more because old J.C. had to do it one time, and we got to do it 3, 4 times.

Now, the metaprogram on that is kind of fascinating. In one way, it has always been true, that life could feed on death, so the crucifixion-resurrection metaphor had a certain currency. I remember Charlie Chaplin in *Limelight*, when he broke his back and fell through the drum, Claire Bloom came up to him and said, "Are you afraid to die?" And he laughed, sadly, said, "No, I have died a thousand times. It is losing you," he said, and died. Now that's a space I have some familiarity with. But now and again my joy is whole and full and serene, and now and again I break out into that sweet mescaline space where I simply *am*. And I live my life and do the things that may, in a small way, help make experience joyful on the new electric earth we now live on.

But the proportion - I seem to die more than I live, tho' it's changing. I'm beginning to live a little more and die a little less. I'm beginning, as David Cooper counsels, sometimes to wrench life out of a death that I *do* rather than a death that *happens* to me, washes over me, drowns me, annihilates me.

So here's what I think is going down in Ryan's number. I think the man sees that it is possible to wrench meaning from the gaping jaws of mere death. Yeah, go to the jaws of death, and rip and wrench and tear with a defiant kind of exuberance, with a full kind of love of the new being we're all in what must be wrested from it so we can *live* joyfully in the new being. I see Ryan *trying* that number. I see him falling on his bearded face as often as not, but that's not where it's at, as I sometimes know about myself. So you fall down in a mud puddle. So you get up again and shake your fist at Olympus and say *Fuck off, man, I'm gonna do it.*

The gods die a big death ... too. Let them die. We all die a big death. Somehow we must make a sweet conspiracy to hurl the thunderbolts back to Olympus and forage for a new kind of joyous species. And it can't be done with the false confidence that we shall *surely* make it *if* we get our cable number together.

No, man. No such false confidence. We may *not* make it. That's the only way to try. And we will also *not* make it - and I'm sure of this - if, when we confront the specter death, we spit in his face and turn our backs and walk away and say, "Let us leave *him* behind and let us walk in a *different* direction." No, man. No, you don't spit in the face of death. That is pretending that the enemy is over *there*.

There is no enemy - that's what I sometimes know. Yeah, lots of cable people are rip-off artists. Yeah, the capitalists are swine and yeah, they're still the money trippers and the rent people and the landlords of our soul. Yeah, they're still there. But death is not an enemy. Death, like pain, like anxiety, like anguish, is a signal: it says: transform coming up: practice dying. And it's a funny kind of transform signal because here's how it works. You're walkin' around, OK, and you're not groovingly conscious of the luxury of your own body, just walkin' around someplace not particularly conscious that you're put together and that your legs just reach the ground and that your eyes are the right height to see her eyes - you're just walkin' along. All of a sudden you stub your toe on somethin' or you bump your head into somethin' or you bang your finger with a hammer. Then a funny thing happens - you shut down... *all* you're conscious of is *the* pain spot.

Now, dig it --- *if* all you're conscious of is the pain spot you have just shut down all of the rest of you which is the resource you've gotta have to *be more* than *just* that pain. But that's how the human organism's constructed, man. We shut down, we go into shock, we take all the blood out of the periphery and we pile it in there to the central organs - so we can deal with a minor death.

But the paradox is that by focusing *only* on that death we shut down all the resources by which we can read that death signal which says, "Be more." So what you gotta do when you bang your thumb with a hammer is you got to *re-*member there's more. That, I think, is what Plato was trying to tell us when he said, "Practice dying."

So, I *don't* think we gotta get so good at joy that death goes away. I think that we gotta get so good at the death scene we're in that we remember that joy is its other face.

The only way to transact the dialectic of being and non being is to enter the time of life.



SACRED CHREODS

It may be helpful at the outset to abstract for the reader some main tenets of this essay. No "logic" of argument is claimed. The writing proceeds by intuitions of congruence.

. Both the birth and the death process have shifted significantly, rendering traditional approaches to the sacred unstable.

. It is both possible and desirable to approach the sacred cybernetically.

. The "set of essential redundancies" necessary to a cybernetics of the sacred cannot be arrived at by cybernetic theory alone. This set is comprised, in part, by a given pattern of differentiation in the current human condition. It seems possible to decode the given pattern using Thom's topological theory of the stability of self-reproducing structures. This theory provides global forms for morphogenetic process in terms of catastrophes, chreods, and bifurcation.

. A new sacred symbolism need be both self-referencing and capable of complimentary participation in the total human condition. Such a symbolism, if it is to be meaningful, is best generated in the "conflict" between the new ground of death and traditional religious symbols with their attendant life forms.

. Klein form is suggested as a cybernetic language of the sacred and two transformations of traditional sacred symbols are offered:

1. From center and circle to self stabilizing kleinforms
2. From crucifixion to cybernetic acupuncture

In reviewing and explicating cybernetics, I have followed closely Bateson's paper "Toward a Theory of Alcoholism - The Cybernetics of 'Self.'" I have also chosen to quote extensively from R. Thom's paper, "Topological Models in Biology."

CYBERNETICS AND THE SACRED

Cybernetics is concerned with transforms of differences that make differences. Systems are understood as processing differences in such manner as to be self-corrective either toward maximizing particular variables or finding homeostatic optima. Mental characteristics are inherent in the system as a whole. No part, such as the "governor," controls the system unilaterally. Each part need be responsive to the entirety of the processing of differences. This includes responding to its own behavior at a previous time. In the stock example of a thermostat, we can describe the process by saying that differences in room temperature mean difference in thermostat, mean difference in on/off of furnace, mean difference in room temperature, mean difference ... etc.

Stability of the system depends upon effective transformation of significant differences and timing of the feedback loops. Prominent parts of the system interacting with transforms of their previous behavior—and the behavior of the whole system, tend to form redundancies in the system. These redundancies are necessary for the regulation of the system as a whole. Everything cannot be different all the time. This would result in a state of total positive feed. Under such conditions there is no way of referencing "new" information. It is impossible to design such a system of infinite variability. A state of

infinite variability is a state of chaos. Limits must be accepted or established, and in the face of such limits, a group of related redundancies realized within the system in order to serve as a referencing set for processing transforms of differences while maintaining the balance of the system as a whole. The more elegant the set of redundancies, the more "essential," then the more variability the system can process, the more positive feed it can take without going into runaway/inspin/rigidification.

In computer language, the coding of redundancies is a process of programming and metaprogramming. The success of using computer terminology to chart territories of traditional spirituality is evident in the lucidity of the models provided by John Lilly in his reports on experiments with LSD-25 in "Programming and Metaprogramming in the Human Biocomputer." Metaprogramming means, of course, the process of reprogramming the programming so the system can operate successfully at a more generalized, more elegant level. It is possible to think of religious myth systems as the most generalized metaprograms of the complexities of life process. In these terms, we can say that the death/rebirth mythologies consistently developed in traditional societies were attempts to decode and accept the initially given significant differences of a living situation and to formulate - in terms of the given - a set of redundancies by which life might be stabilized at an optimum level. In large part, metaprogramming the given was a matter of shaping ceremonies around recurring life processes. Spiritual rebirth rituals sought to heal man's basic alienation from himself and his society. Marriage meant a fuller sharing in the divine-cosmic order. Burial ceremonies were ways in which people could part from their loved ones and re-enter the tribe in such way

as to transform both the beloved's death and the pain of loss into life for the tribe.

Western man tends to think of life as a series of events in between the event of birth at the beginning of the line and the event of death at the end of the line. It is, however, both closer to a cybernetic gestalt and to traditional patterns of oral cultures to think (as Thom does in his topological models) in terms of catastrophies. The birthwave is broken by the catastrophe of the rocks of death. Religious mythologies sought to decode the set of discontinuities given by the recurring intersection of the catastrophe of death with the living wave of growth in a particular ecological niche. Birth and death were defined in terms of each other. Life, riding the birth waves, was known in terms of the limits, defined by the aggregate of radical discontinuities known as death. The question was, "What did the thunder say?" What are the limits of this relative ebullience we know; what is the non-design of death that we might know, conversely, how to live in the fullest way possible. In the words of Job, "The Lord gives and the Lord takes away; blessed be the name of the Lord." Men sought to accept the initial differentiation in the pattern of "give-and-take" of a particular ecology and metaprogram life accordingly. In man's experience, there have been various sets of critical differences given by particular ecological niches.

Means available for infolding life seem one controlling factor over what can be made of the initial catastrophe set. One thinks of the contrast between Zorba dancing in the face of catastrophe, saying, "Life is trouble; only death is not" and the story Shirley MacLaine tells of the Tibetan parents who, when their baby slipped off the boat into the river, did not save him, though they might have. As she explains it, had they troubled to save him, they would have put him under such an

onus of debt, as to make his life miserable. They instinctively felt it wiser to let him go the way of reincarnation. They accepted the limits of the human condition as they understood it.

The degree to which a myth system dwells on considerations of transcendence seems an index to the frustration in a given human condition. This is true of Eastern religions that deny time, as well as Western religions that conserve unjust social orders by providing, in Marx's phrase, "an opiate for the masses." Cybernetics, with its insistence on mind as immanent, not transcendent, and its ability to include time in its considerations, seems a way to budget the entirety of consciousness in the service of self-referencing and self-regulating rhythms for this life. The hope would be that given the deciding of essential redundancies, these rhythms would be of such richness as to know themselves to be regenerative without investment of mind in transcendental dogma. There would be no need to displace the fear of death into hopes for eternal life.

Religious systems have understood that it is the setting of limits that enables life to go on in whatever fullness is possible. In the myth of paradise, there is but one negative command. Given the maintenance of that clearly defined limit, anything else was possible. The limit was necessary, in cybernetic language, to keep the system from going into pure positive feed, or a state of chaos. Inside the Gates of Eden* in Dylan's words, you can "do anything ... but die." In terms of Avery Johnson's piece, included in the previous section, it is whatever plethora of triadic and n-adic relations are possible once limit is set by a negative statement. The system of Paradise could not tolerate the symmetric cleavage of knowledge into diads of good and evil.

"Gates of Eden" (Bob Dylan) © 1965 by M. Witmark and Sons. Used by permission of Warner Bros. Music. All rights reserved.

One of the most dramatic instances of this religious metaprogramming of the human condition through limitation, is the fusion of law and religion in the Ten Commandments. It is not hard to see in scripture the degeneration of Jewish tribal life during the exodus from Egypt. By the time they got to Sinai, it was a life or death situation. Galvanized by "the complaints of the people," Moses handed down the Ten Commandments:

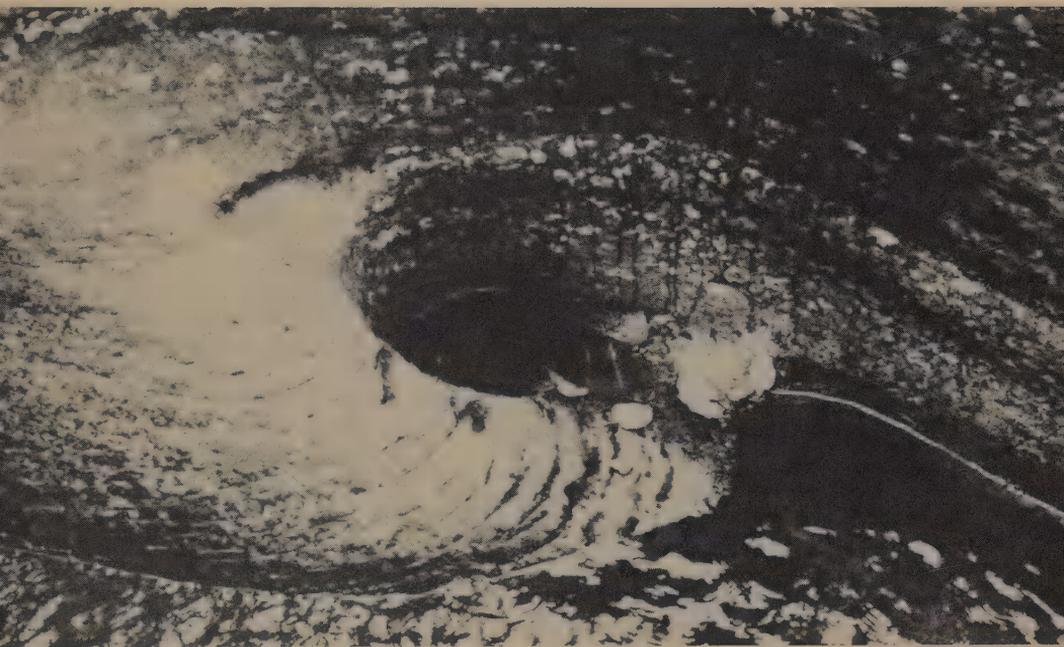
- . *I am Yahweh your God who brought you out of the land of Egypt, out of the house of slavery. You shall have no Gods except me.*
- . *You shall not make yourself a carved image or any likeness of anything in heaven or on earth beneath or in the waters under the earth; you shall not bow down to them or serve them.*
- . *You shall not utter the name of Yahweh your God to misuse it.*
- . *Remember the Sabbath Day and keep it holy.*
- . *Honor your father and your mother.*
- . *You shall not kill.*
- . *You shall not commit adultery.*
- . *You shall not steal.*
- . *You shall not bear false witness against your neighbor.*
- . *You shall not covet your neighbors house.*

*Exodus 20: 1-17
The Jerusalem Bible*

The first four dealt with recognizing, respecting and abiding a "Power greater than themselves." The rest dealt with recurring primary processes of tribal life: respect for another's life and property, sexual and family mores, and the need for trust relations in a tribe. It was an elegant set of limitations, a redundant command code that got them across the desert.

In terms of the counter-culture, there is yet a childish utopian fantasy regarding the possibility of operating in an illusionary state of pure positive feedback, outside the confines of any death/rebirth mythology. Janis Joplin's death is a dramatic reminder of death as limit. We have not created a myth system that would have enabled Janis and the many, many others yet exploring the territory of the unredeemed to turn around, to get through to people this side of death. Janis somehow lost balance, went too far out, beyond the limits of the mythology she was helping to build. With no help from her friends, she could find no mode of re-entry, of rebirth. Freedom becomes a state without feedback - "just another word for nothing left to lose." She tempts the Lord to "buy the next round." He doesn't. She mainlines death.

The mass media pirate her death and turn it into a putdown of the counter-culture. The fearful dying refuse to participate in a death that could mean new life. They continue in runaway from their children dying. Death continues to divide us. This pathology of non-participation in the death catastrophe is where the pathology of non-participation in life has its ground. We do not know the limits within which the dance of life might take place without fear.



THOM'S CATASTROPHY THEORY *

In discussing the conception of global forms to describe the stability of self-reproducing structures, R. Thom offers what is to me the most promising approach for decoding the impending death catastrophe in terms consistent with a cybernetic approach to the sacred. Before suggesting kleinform as a sacred language, I want to quote from Thom extensively, to provide the reader with aspects of his topological theory critical to this essay. Thom is talking about determinism and structural stability in natural phenomenon.

"Contrary to these highly unstable situations, there are many cases where the determined character of a process is experimentally obvious; this occurs for processes described by 'well posed problems' in Analysis, where the evolution is a continuous function of the initial data; this may occur also for morphogenetic processes, described by a set of discontinuities in the properties of the medium. If such is the case, if the given morphology exhibits stability properties with respect to small variations of the initial data, we shall say that the process is the support of a *morphogenetic field*, or to use a word coined by C.H. Waddington - that the process is described by a *chreod*. With this definition, there is no mystery at all in the notion of morphogenetic field: it only expresses the fact that a given process gives rise to a fixed morphology - defined once and for all by a model associated to the field - and this in a structurally stable way. This definition may be put in a precise mathematical form involving the topological notion of homeomorphism.

* Excerpts from R. Thom's article are to be published (with minor modifications) in a book of theoretical biology: *Towards a Theoretical Biology III*, Edinburgh University Press. Permission from the author is gratefully acknowledged.

"For any natural morphological process, it is very important to isolate first those parts of the process which are the support of morphogenetic fields, to find out the *chreods* of the process. They form kinds of islands of determinism, separated by zones of instability or indeterminacy. That such a presentation is possible, amounts to say that morphology is more or less *describable*. In fact, almost any natural process exhibits some kind of local regularity in its morphology, which allows one to distinguish recurrent identifiable elements denominated by words. Otherwise the process would be entirely chaotic, and there would be nothing to talk about...

Semantic Models

"This decomposition of a morphological process taking place on an euclidean space R^n can be considered as a *kind of generalized m-dimensional language*; I propose to call it a '*semantic model*'.

In fact, our usual language is nothing but a *semantic model of dimension one* (the time), the *chreods* of which are the *words* (spoken, or written).

"Given such a '*semantic model*,' then two kinds of problems may be considered:

i) To classify all types of *chreods*, and to understand the nature of the dynamic processes which insure their stability.

ii) A process involving several *chreods* is in itself structurally unstable (otherwise it would be covered by a unique over-*chreod*); but, frequently, one has to deal with an *ensemble* of processes of the type studied. Then, generally, there are some associations of *chreods* which appear more frequently than others. One may speak, in that case, of a *multi-dimensional syntax* directing the semantic model. The problem is then to describe this syntax, to formalize it in the same way as one may formalize grammatical rules in linguistics.

"To do that, one needs to build, first a dictionary of *chreods*, second what the linguists call a '*corpus*' of the given language'... It amounts to deciphering an entirely unknown language.

"Going back to the first problem, what would be its interpretation in usual linguistics? This would be the famous problem of Plato's *Cratylus*, to understand how the phonetic structure of a word proceeds from its meaning. One knows that, in that case, the relation between the structure of a word and its meaning is very remote, darkened as it is by the effect of a long history. In many natural phenomenon - especially of the inanimate nature - such an arbitrary coding is not to be expected, and one might hope to read more or less directly from the internal structure of the *chreod* the qualitative dynamic which insures its stability ... "

Chreods, then, are models of catastrophies. In a vector field, catastrophies are the system of shock waves in a conflict between structurally stable attractors.

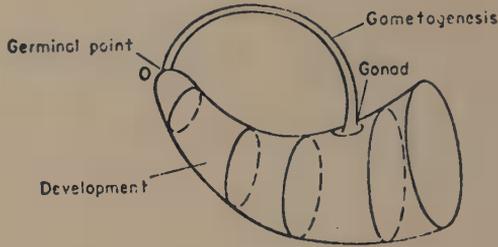
If the ... "trajectory of any point near q goes to q , and no trajectory leaves q , we shall say that q is an *attractor* of the system (stable equilibrium). This attractor is said to be *structurally stable* if any perturbation - sufficiently small - of the given system contains an attractor q' near to q . For some vector fields, like the gradient fields, almost any trajectory goes to an attractor - in general a point which is structurally stable. One may conjecture that for almost any field on a space M , almost any trajectory goes to an attractor - which may be a more complicated geometric object, like a closed trajectory, a torus, or an even more complicated set, but which is nevertheless structurally stable. We might consider, finally, only those systems which have a finite set of structurally stable attractors. There are good reasons to believe that this is finally the useful notion, and that any system may be approximated by one of this standard type. For any such system, let $A_1, A_2 \dots A_n$ be its attractors. To any attractor A_i we associate the set $B(A_i)$ of trajectories tending to A_i , the 'basin' of A_i . Almost all of the space M is partitioned into the basins $B(A_i)$, and the geometry of these basins characterizes entirely the qualitative behavior of the system..."

Thom talks more explicitly about bifurcations and catastrophies.

"Let U be a domain in space-time in which some natural process takes place; we admit that all possible local states of the process can be parametrized by points of a manifold M , and that the local evolution around a point $u \in U$ is described by a vector field $X(u)$ in M , varying slowly with u . Then, the local dynamic around u reaches a structurally stable attractor (a stable regime), and stays there for u varying in U , until we reach a point in u where this attractor breaks down through the variation of the dynamical system $X(u)$; the final state is then captured by another attractor (the 'basin' of which is adherent to the vanishing basin of the destroyed attractor). We get in u a 'shock wave' separating the two regimes, which defines in U morphology to be studied."

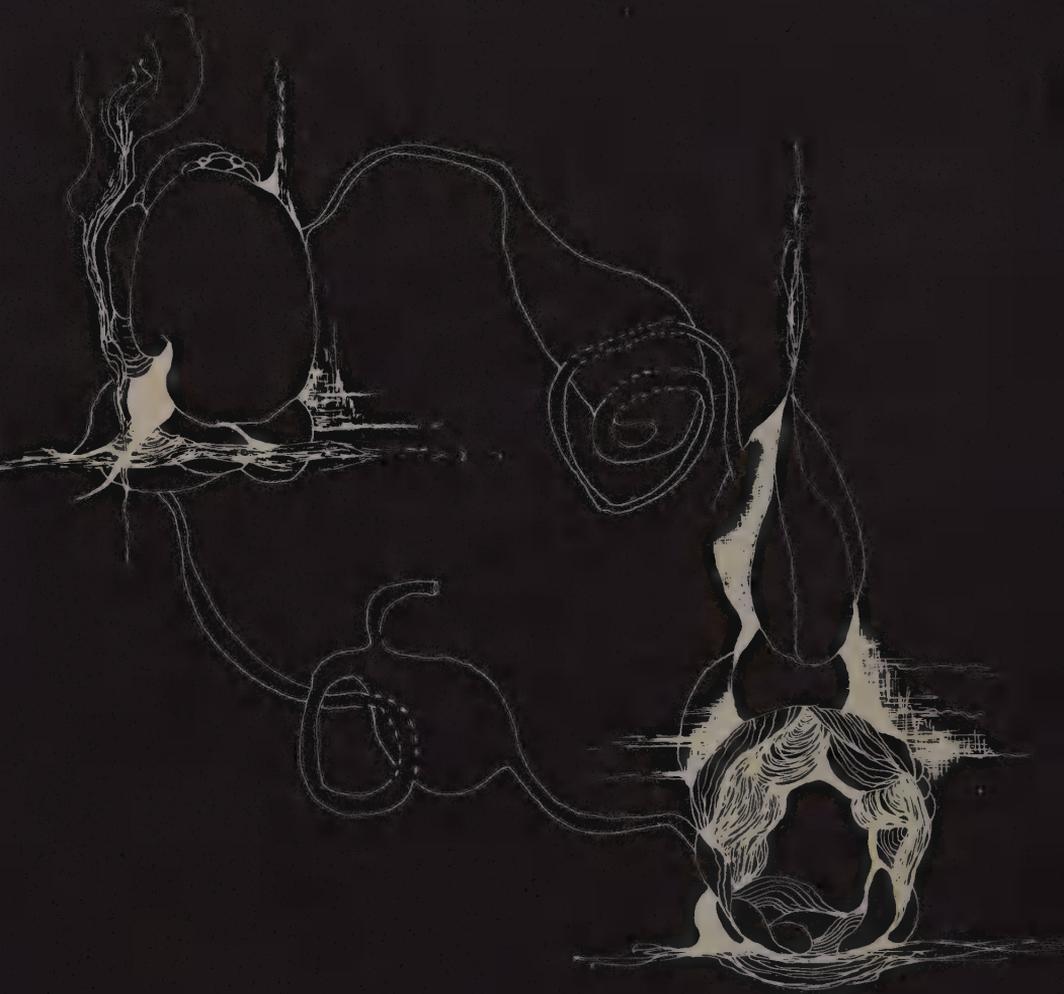
"This shows that, in such a model, the fundamental phenomenon to be studied is the destruction of a structurally stable attractor by variation of the vector field. This is the object of a part of qualitative Dynamics named - after Henri Poincaré - *bifurcation theory*; this theory is far from being well known from a mathematical point of view. The morphological effect of such a change in local regime I propose to call a *catastrophy*. Our main postulate is that any morphology can be attributed to such a bifurcation phenomenon, whatever may be the nature of the ambient medium, and the physical nature of the forces acting in the local dynamic. Explanations of this kind (with the local metabolism as local dynamics) were put forward for cellular differentiation by C.H. Waddington and Max Delbruck around 1940. But the great forerunner in this field of ideas is d'Arcy Thompson, whose famous treatise "On Growth and Form" contains a wealth of examples and ideas which still have to be explored and developed from the mathematician's point of view."

Thom provides dimension one and dimension two of his generalized m-dimensional language. Dimension one deals with natural morphological phenomena-like folds and dimension two, the "umbilics," deals with breaking phenomenon, such as waves, and in biology with engulfing phenomena, like neuralation. Interestingly, the term "infolding" used above to describe the videoprocess, was first found in Chardin's writing about engulfing phenomenon in biology. Thom also uses dimension two to describe the emission and spreading of gametes in reproduction. In so doing, he conceives a figure that approaches kleinform.



"Then development of the egg may be described by a mapping $F : B^3 \times T$ of the 3-cell $B \rightarrow U$ (called the "wave of growth") which meets transversally the catastrophe set K in U . As soon F_t meets some components of K , new cellular differentiations appear. After some time, when maturity is reached, some part of the image $F_t(B^3)$ gets back to the organizing centre w by a structurally stable process, describing (without the complication of sexuality) the formation of gametes."







KLEINFORM AND STABILITY

At another juncture in his essay, Thom rejects density as structurally stable in favor of equilibrium points. In terms of kleinform, it seems necessary to reconsider the possibility of density as providing structural stability when you have part of the density contained and part uncontained. I cannot, of course, speak in terms of mathematical proof. I am thinking intuitively from the soft control cybernetic context in which kleinform was invented. It is a world of plastic membranes of varying thickness and penetrability. The membranes form into tubes and containers filled with liquids of varying viscosities and behaviors. The first kleinform I made was out of an old bicycle tube. Even at that level, jetting air through the tube provided a certain stability of behavior.

In terms of videotape, any repeatable process might be rendered more structurally stable in kleinform simply by the triad of doing, replaying and doing again. For example, I jump. I watch a replay of my jumping. I go through the process of jumping again, this time "contained" or corrected within the process of observing the first jump. Video provides me with an x-ray of my process of jumping that enables me to stabilize the process either through articulation of a particular style or a random but recorded set of variations on the jumping process.

In a "semantic model" we can take the six kleinform (see ppg. 70-72) not as "words" or "chreods" but as an incomplete set of syntactical statements in a language of process. It is another dimension of Thom's m-dimensional language though it need not be mapped on Euclidean space. Nor does kleinform require reference to "organizing centers," for, as we shall show, it is possible to develop self-referencing chreods of stability in kleinform.

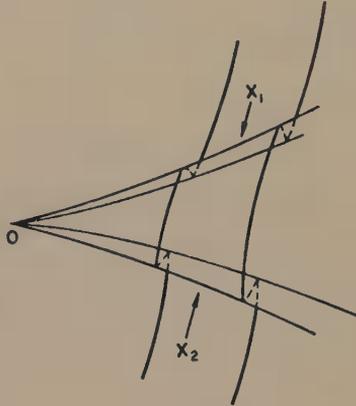
There is an intuition here that kleinform provides us with a generalized syntax of processes in which consciousness or "mind" inherent in the process seeks to take part in the regulation of that process. Spiritual rebirth ceremonies that sought to realign man with universe, historic revolutions that sought to change the course of events and finally, cybernetically programming a manned satellite to loop out to the moon and then re-enter the earth's atmosphere, are homeomorphic or congruent in kleinform.

It should also be said that unlike a language such as cuneiform which is shaped in stone and remains valid in the absence of the shaper, stable kleinform depends on the presence of the participants to fill them, otherwise they collapse into meaninglessness like emptied balloons. Kleinform represented by still graphics or photography can only freeze frames of process. Apart from participants, kleinform is as disposable as a native costume after the dance or a prophylactic after intercourse. Meaning is preserved in the nerve nets of the participants, thereby homeostasis is found. Detachable symbols are not enshrined apart from the process to be manipulated by a controlling elite.

PROPER RANGE OF A SACRED CODING SYSTEM

Further on in his essay, Thom suggests that through the notion of chreods we might arrive at a topological theory of meaning. He does this by induction from a model for metabolism that he supplies.

"The global homeostatic properties of the metabolism of any living being may be given the following geometric interpretation: let W be an Euclidean space representing the mean states of the organism. Suppose we submit the organism to a stimulus s ; then the representative point goes to a point $s_t \in W$, and then (if the stimulus is strong enough - but not so strong as to immediately kill the animal), the metabolism gets into an excited regime; as a result, a correcting vector field Z describing a reflex r appears in W which brings the representative point back to the "ground zone" G of W , zone of rest, where the excited regime disappears in favour of a normal regime; hence Z also vanishes. There exists a fundamental correspondence $s \longrightarrow r(x)$ which associates to any stimulus a correcting reflex (or a sequence of them). This whole structure can be generated by a unique "organizing centre" in a multi-dimensional space and is called the *figure of regulation*."



"The main postulate of our model is the following: if we describe - in a convenient function space, the metabolism of the young blastula cell - or the metabolism of the gametocytes - primitive germ cells - then the geometric picture defined by the regulation of this metabolism *simulates* (in a sense which can be made mathematically precise) the *figure of regulation of the whole organism.*"

By analogy then, we can say that the proper task of a meaningful language of sacred chreods is to describe and support an aggregate of sharable exciting human states congruent with a social homeostasis, congruent with the ecological reality - a converse coding of the impending catastrophe set of death. Such a language must have the flexibility to respond to shifts in that catastrophe set while maintaining stability as a finite language in the face of death as limit. Indeed, the sense here is that necessary shifts in the pattern of homeostatic stability are insured by a system of varying excited states with the appropriate figures of regulation.

It is this significant shifting of the death catastrophe set that has rendered unstable the various meaning systems of finite sets of hitherto structurally stable attractors. A new set of sacred chreods is best generated out of that very "conflict" between the new ground of death and the "stable attractors" of traditional meaning systems, which are mainly, but not exclusively, religious systems. Developing an appropriate death/rebirth metaprogramming then, involves decoding a range of changes in the death set, including the ecological and cross-cultural complexities, the formation of institutions where one can will parts of one's body to others and the possibility of the dying electrically and chemically debriefing themselves and being



debriefed after "death". The shift in the birth process must also be considered. It is necessary to think in terms which include contraception, abortion, natural childbirth, roles of men and women, contexts for children and genetics.

Death has no self definition, no articulation, no "finite set of structurally stable attractors". Man must invent death in order to find the limits for life. In the album "Pearl", Janis Joplin obviously doesn't want a "Mercedes Benz", a "Color TV" or a "Night on the Town". These are projections, pseudo-attractors set out to decode the catastrophic despair of getting "no help from my friends" in a Woodstock Nation that had supposedly listened to Joe Cocker singing I'll get by with a little help from friends .

THE SACRED AND THE INTIMATE

It is especially appropriate to be using the term "chreod" in decoding the contemporary death catastrophe set in terms of the sacred. Chreod comes from the field of genetics and it is a proper task of sacred symbolism to provide a public coding system for the realm of intimacy. It is in the realm of the intimate that the optimum balance of life is invented, whether it be friends together, a person in touch with his own thinking, a parent playing with child, or in love making. Fertility cults sought to surround copulation with a fullness of positive feedback, metaprogrammed in cosmic chreods, so that the delicate balancing of the initial discontinuities of a human life could be risked in a state of high excitement without contractions of fear.

Modern man has no such sacred coding for copulation. Excitement is equated with sex and commercialized into 8x10 glossy photos, with circles and arrows, keys and "bunnies". Passion is manufactured for the sake of an achievement called climax, fostering a sexual economy of cheap thrills. Transcendence comes in through the bathroom window. The realm of intimacy is easily bought, sold and betrayed - debilitating man's capacity to share in the holy.

Artists have sought to suggest sacred contexts for sexuality - Molly Bloom's soliloquy at the end of *ULYSSES* - "YES". There is an understanding that the less articulation the better, as long as the context is understood as sacred.

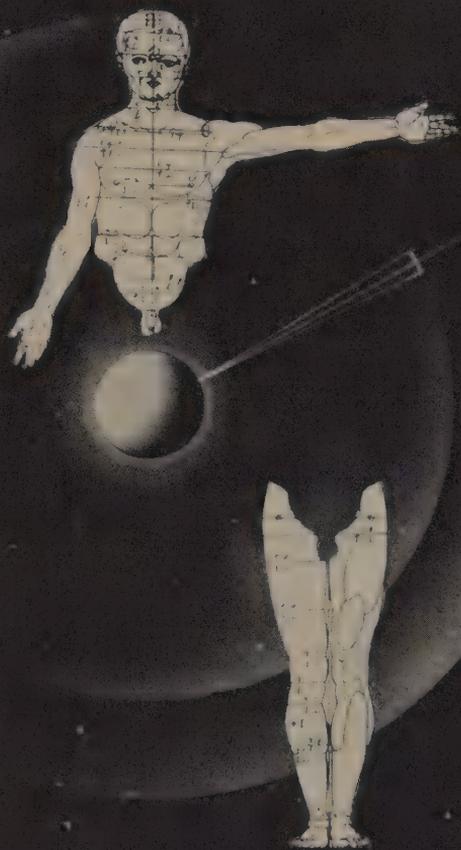
Optimally fear is transformed into a shared reverence for the "mysterium tremendum et fascinans". Dylan's cursing of the contemporary Masters of War is precisely because their megakill capacity has intruded itself into this innermost realm of the sacred.

*"You've thrown the worst fear
That can ever be hurled
The fear to bring children
Into the world
For threatening my baby
Unborn and unnamed
You ain't worth the blood
That runs in your veins".*

"Masters of War" (Bob Dylan) © 1963 by M. Witmark and Sons.
Used by permission of Warner Bros. Music. All rights reserved.

Without a shared definition of the sacred we leave the delicate balancing that is the beginning of a human being in intimacy to our private pathologies, and perhaps ultimately to genetic engineers who think the formation of mankind has nothing to do with patterns of kinship and affection.





It remains to suggest to the reader, as sacred chreods, figures where final coding came in the wake of the Video Wake for my father. These chreods, as explained, issue from the destruction of two traditionally structurally stable attractors. They are, of course, inter-related. The first movement is from center and circle to self stabilizing kleinform. The second is from crucifixion to cybernetic acupuncture.

FROM CENTERING TO SELF STABILIZING KLEINFORMS

The center has served man as perhaps the most commonplace of chreods for balancing life process. Spiritual traditions and poets talk of ways of centering. Opponents of centralization talk of decentralization. R. Thom, in developing his topological models for biology, makes extensive use of "organizing centers".

Any center makes it possible to define a circle. This sets limits on the system. There is that which is outside - indeterminacy, and that which is inside - determinacy. The determinacy derives from whatever redundancy of pattern goes on within the circumference of the circle.

The centering image cannot maintain stability in the current complexity of consciousness. It does not work because it is simply diadic - one is either inside or outside. It fails to work because it is not self-referencing. It puts you in a recurring timeless all-or-nothing situation. It cannot manage the "inner" complexity necessary to maintain congruence with the "outer" complexity.

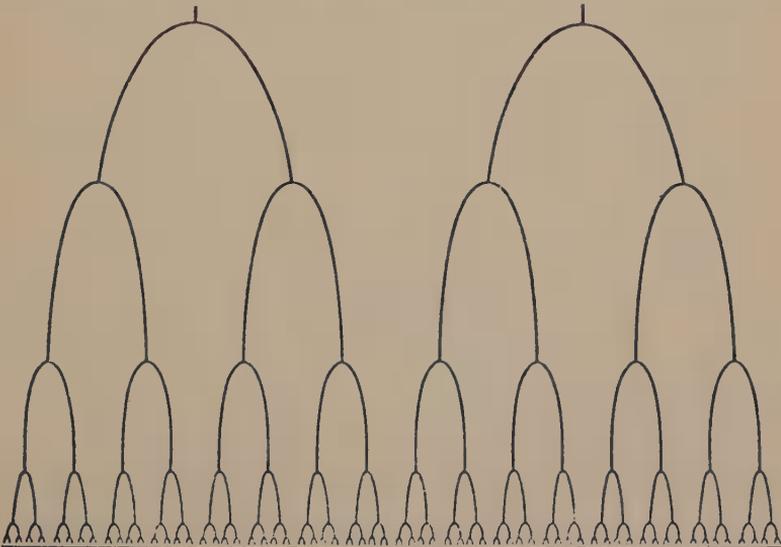
There is a limit, perhaps mathematically demonstrable, to the range of discontinuity that can be thought of within the circumference of a circle. This is also true of topological "elastic" variations on a circle or sphere. Even clusters of circles in Venn diagrams break down at a certain unacceptable threshold. Thom suggests that we may consider some pathological processes, such as cancer, to be approximate structural realizations of an organizing center *outside* the figure suffering from the pathology. I would suggest that any centering model, confronted with sufficient discontinuity, will search for other centers, outside itself, in order to regulate itself. Using Bateson's categories * we can say that if the centering model outside is of sufficiently similar size, strength, and mode of behavior, the first option of self regulation is to enter into a binary symmetrical relationship with the other. (For example, keeping up with the Joneses, boxing, etc.) Definition of self is found in a matching process that can easily escalate into "blow for blow". If one model seeks to shift to a complementary relationship (dissimilar, but mutual-like spectator and exhibitor) the first difficulty is to signal the other as to the shifting out of the competitive relationship. Even given success in signaling, the centering model searching for a mode of complementary behavior faces another humanly painful diad. Either the searching model moves inside the other model and accepts complete subsumation, or it remains outside the circle organizing itself through approximate realizations of the "organizing center", the phantom "attractor" outside the figure of its own structural regulation.

* "The Cybernetics of 'Self': A Theory of Alcoholism," PSYCHIATRY, Feb., 1971, 34:1-18, (page 14).

In the face of a certain threshold of discontinuity, centering models seem to have a set of four limiting options, even given mixed use and Venn diagram variations:

1. Maintain self through sustained symmetric competitive relationships;
2. Move within the subsumation of another organizing center;
3. Maintain themselves on balance borrowed from approximating outside organizing centers;
4. Break down into what Thom terms "generalized catastrophies," and Yeats calls "mere anarchy".

"... When the domain W is not sufficiently polarized ... we get what I call a "*generalized catastrophe*". A generalized catastrophe is characterized by a very complicated topology involving ramifying domains into smaller and smaller pieces (or, conversely, the condensation into isolated clumps of a dust of very fine particles). Such generalized catastrophies appear as a rule in all symmetry-breaking processes, and they are in general structurally unstable (although the final state of the catastrophe may be very well determined)...."



*Turning and turning in the widening gyre
The falcon cannot hear the falconer;
Things fall apart; the centre cannot hold;
Mere anarchy is loosed upon the world,
The blood-dimmed tide is loosed, and everywhere
The ceremony of innocence is drowned;
The best lack all conviction, while the worst
Are full of passionate intensity.*

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In kleinform it is possible to develop chreods that have the flexibility to handle considerable more discontinuity than centering models. Both symmetric and complementary modeling is possible. Let me first offer a relatively simple symmetric model.

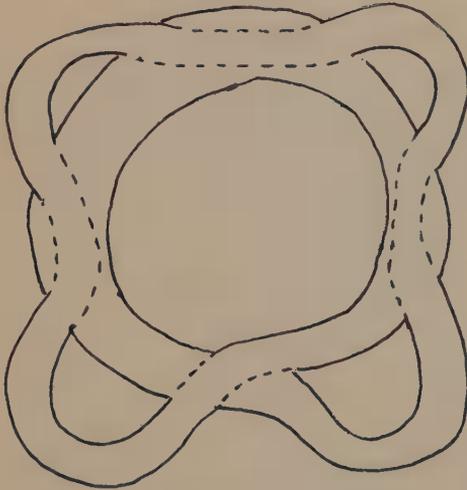


Fig. 1

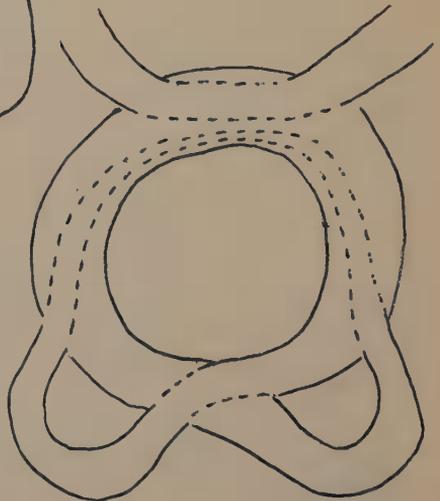


Fig. 2

As opposed to being either opened or closed, this model can behave in both modes at the same time given the following assumptions:

- The part containing provides a "shelter" within which a part contained can disengage from itself and be taken "out" by its adjacent parts uncontained or join with other parts contained.

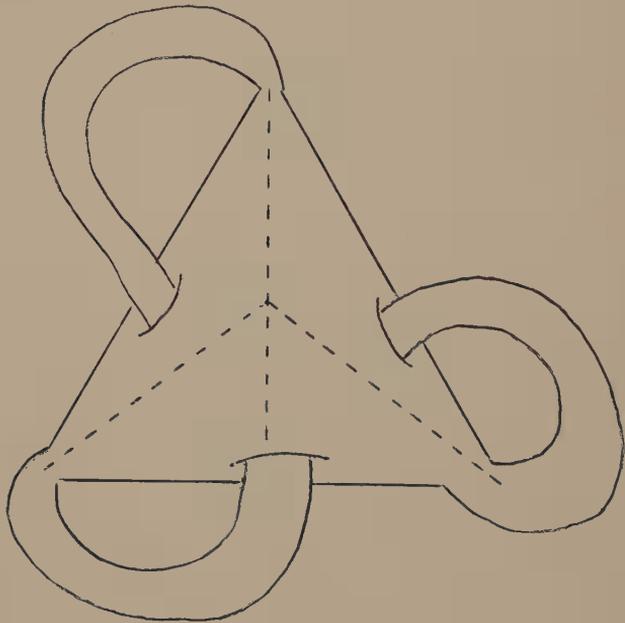
- The "breach" in the part containing is thought of as self-sealing.

Thus Figure One can be transformed into Figure Two.

If you pinch the inner face of the torus to provide the spine of bilateral human symmetry, this figure can serve as a balancing model for the four-limbed human body. The part containing can be thought of as the nerve net that habitually balances one limb in terms of the other. Simple touching closes the loop between limbs. I am thinking particularly of the lotus position where the simple turning of the palms from touching the knee to facing out, create an "open loop" to the outside while self-referencing stability is insured by maintaining the legs in a closed loop. Centering models cannot represent this psychic state. This kleinform model may be useful also in terms of recent work done on kinesis.

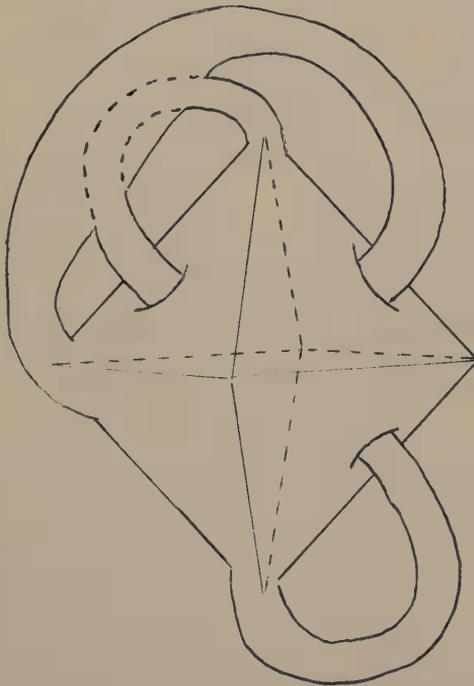
This notion of closed and open chreods can be taken further if we do kleinform variations on polyhedron. Let us take, for example, the basic module of Fuller's geometry, the tetrahedron. Kleininforming the basic module opens the way to kleininforming the entire system.

The tetrahedron allows us to think not just in terms of a single loop starting someplace and doing triadic variations within and without itself. We can now think in terms of multi-start and multi-loops, some closed and some open depending on the needed stability and the desirable form of openness. Each point of the pyramid becomes a passage for a loop that moves out uncontained and then returns through the adjacent face to reconfigure with the other loops in the contained area of the original tetrahedron.



Manifold models starting from more complex polyhedrons could be generated depending on the relevant information pathways and the needed self-referencing stability.

Thom, in talking of spatio-temporal development models that yield chreods subjected to a relatively precise metric control, as in bone and eye formation, says, "... external (unfolding) coordinates of a chreod, C , play the role of internal variables for the succeeding chreod, C_2 ..." In kleinform, there need not be a succession of unfolding chreods, since we are moving in a minimally three-fold relationship that is not necessarily successive. This means that it is possible in kleinform models to avoid the evolutionary "cul de sac" resulting from over-articulation.





FROM CRUCIFIXION TO CYBERNETIC ACUPUNCTURE

In the current cacophony, the crucifix re-emerges for many as a meaningful symbol. The Christ of the Gospels understood how his crucifixion would function as an attractor. "I, if I be lifted up, will draw all things to me". The universal experience of suffering misunderstanding and abuse in spite of maintaining "good intentions", finds ready referencing in a man of love hanging on a cross of contradiction.

It is well to look at the structural stability of the crucifix itself. The totally non-foetal openness of the figure *depends* for its openness on being nailed hands and feet to the cross. By contrast, as discussed above, the Buddha in lotus position maintains a self-referencing stability in the balanced positioning of the legs. This enables the hands to open to the other without stigmata.

We can note also that the cross itself is a homeomorph of the x/y coordinates of Euclidean space. Nails maintain a man at the center.

This pattern of man depending on a fixed relation to an "external" object for his psychic stability has recurring homeomorphs in the West. It is a pattern that seems to have much to do with Western man's ability to tolerate and desire technological development. The emotional "software" set of a man driving his car, a set configured by the advertising chreods of capitalism, can be taken as a homeomorph of Christ on the Cross.

In our current state of disillusionment with "technological progress", we might say that Evil Knieval, leaping across a private canyon on a jet-propelled motorcycle because life is boring, is a technological *reductio ab absurdum* of Christ on the Cross.

Fuller's dictum, "reform the environment, don't reform man", moves in a similar hardware/software vein. Fuller's great utopian vision depends for its stability on the stability of his geometric structures. Re-engineer the environment, and man's ability to get along with his fellow man will be stabilized in utopian fashion. In his vision there is little appreciation of the need to restructure the primitive emotions.

This Christian code has its consequence in the realm of intimacy. Love becomes impossible without taking the cross into the realm of the intimate. In his book *Maria Cross*, Conor Cruise O'Brien skillfully describes this phenomenon in terms of the imaginative patterns of eight Catholic writers, including Mauriac, Bernanos, Greene, O'Faolain, Claudelle and Bloy. With appropriate qualifications about generalizing, O'Brien nevertheless articulates the central theme of their writing as follows. "Woman is the cross". Then more precisely, "Woman becomes mother and that is the cross". Charges of male chauvinism are readily acknowledged. All the writers are male. Patterns of crucifying the beloved in the realm of intimacy are mutual. We know not how not to cause pain.

Referencing pain is a most difficult process. Neurologically, no nerve net is exempt from pain. Physicians tell us that amputees cannot think of their pain without imagining the missing limb. The wounds of life are extremely difficult to understand in terms of source of affliction. Yet the signal system of pain is part of our experience.

We tend to hold onto our pain as a way to ground our knowledge of our experience. We know because it hurts, and perhaps the remembrance of the hurt will enable us to avoid a recurring hurt.

The cross is a crude referencing system for pain. A wooden image of a double bind. As a compelling chreod, however, it tends to attract all phantom pain in search of referencing. People fall into patterns of trading on pain. Pain is reified and dealt by pain merchants.

This distortion has its converse in what the psychiatric profession refers to as sado-masochism. People refusing to resign themselves passively to an impoverished realm of crucified intimacy will strike out or invite being struck. The cross becomes transformed into a club. In McLuhan's exquisite phrase - "violence is a lust for compensatory feedback".

*"Christian Wars they tell the sin
No one managed to save him."*

Bob Lenox - *Train* album

The man was overdosed on love.

Nobody could handle it.

ACUPUNCTURE

Acupuncture is a Chinese medical therapy antedating Christianity by about two thousand years. The theory is that pathologies in the body result from disequilibrium with the universe. The equilibrium of the body is normally maintained by 365 channels that pass through the body and correspond to the harmony in the universe. These channels also correspond to 365 points related to the body's neural network known to the practitioners of acupuncture. Different pathologies are healed by the tender and attentive insertion of pins into the appropriate set of points on the body at the appropriate time. This results in a gestalt of neural excitement that cleanses the pathology and realigns the body with the harmony of the universe. Note that the human body is not considered as "central" but as "part of" the universe.

The self-processing through videotape discussed earlier allows one to think of self not as center on a private axis, but as part of a trial and error nexus of shifting information pathways. This is true in terms beyond the actual contexts in which taping of "self" is done.

Being present to yourself on tape is not simply a matter of "seeing" yourself doing this or that - it is a neural phenomenon. This is a perception that McLuhan repeatedly tried to get across, especially to those who thought the difference between film and TV was only a matter of scale. TV is no more a visual medium because you see an image, than perfume is a visual because you can see it in the bottle. Electricity is an extension of the central nervous system. The TV image is an electric image, that "imbues the soulskin ... sob consciously". It is

like a pointillist painting - dots on a screen, similar to the points on the body known to the practitioners of acupuncture. As the hands relate to working clay, so the nervous system properly responds to the video mosaic through a "Lekton dance". The basic motif of the dance is participation through imitation or converse response to the image. Variations become increasingly possible as one comes to know one's own and others' repertory of neural gestalts. I refer the reader to the experience described in "Other Probes and Pieces" (see page 39) sharing in another's body sense through imitation of video image.

"Putting on" the body of another through imitation of video image opens up the possibility of cybernetic acupuncture as a mode of stabilizing intimacy, as opposed to mutual crucifixion. Rather than a professional interpreting the bodies' pathology in terms of an abstract cosmology and piercing the nervous system to achieve homeostasis, it becomes possible to share psychic stability through an electric intercouring of nerve nets. Patterning complementary neural gestalts, is, of course, a delicate procedure and requires proper mapping of the "relevant informational pathways", of which the "selves" are part. Any form of "standing outside self", of ecstasy such as this, needs the objective correlative of proper mapping if the system is to maintain homeostasis. This does not mean an abdication of uniqueness. Bateson, in discussing the relation between members of Alcoholics Anonymous and the "power greater than themselves", has the following passage critical to an understanding of cybernetic acupuncture.

"This Power is felt to be personal and to be intimately linked with each person. It is "God as you understand him to be". Cybernetically speaking, "my" relation to any larger system around me and including other things and persons will be different from "your" relation to some similar system around you. The relation "Part of" must necessarily and logically always be complementary but the meaning of the phrase "part of" will be different for every person. This difference will be especially important in systems containing more than one person. The system or "power" must necessarily appear different from where each person sits. Moreover, it is expectable that such systems, when they encounter each other, will recognize each other as systems in this sense. The "beauty" of the woods through which I walk is my recognition both of the individual trees and of the total ecology of the woods as systems. A similar esthetic recognition is still more striking when I talk with another person."

From "The Cybernetics of 'Self': A Theory of Alcoholism," by Gregory Bateson as printed in PSYCHIATRY, Feb., 1971,34:1-18.

Given the syntax of kleinform, any "part" consciously participates in the process of balancing the whole through moving in complementary modes of containing, being contained or being uncontained. The aggregate of "parts contained" provides the system with the needed redundancy set.

In Thom's terms, we can be "figures of regulation" for each other within greater "figures of regulation". The limits of this procedure, simultaneously self-referencing and participatory, seem to be in the mutual knowledge of one's own and others' unique Lekton language. Kleinform can provide stable closed mappings of the particular system within which corridors this electric intercouring might take place. Proper mappings are necessary, otherwise pathology contains pathology in subjectively self-correcting inspin. Proper mapping can insure a synapse of Lektors that include the signal system of "pain" in an ecstasy that converts emotional entropy. The realm of sexuality can also be provided with appropriate electric figures of regulation.

This putting on of another's pathology or disequilibrium to heal is not new. It is the traditional role of the shamen in tribal society. As anthropologist Ted Carpenter points out, the electric rock music of today enables musicians to take on the role of shamen. Elvis Presley put on for purging the most characteristic pathology of the late fifties. The pitch of the head, the slurred speech, the roll of the eyes and the body movements were quite similar to those found in any patient in a mental hospital suffering from catatonic schizophrenia.

Currently Joe Cocker bodily puts on what McLuhan calls the "spastic search for feedback" of a world crucified by its own meaningless industrial hardware. Working with the driving power of the rock music, Cocker shatters the hardware hold into rhythms of released fullness. Similarly, in what might have been a complex double bind crisis, I have known the cross to dissolve into ecstatic gestalts of cybernetic acupuncture.

You were not born of yourself

You cannot die for yourself

You cannot define the sacred alone

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* * *

Radical Software, published by Rairdance Corporation, 8 East 12th Street, N.Y.C.

This is as close as you can get in print to an understanding of the current video context. Everything from nuts and circuits to high rap. Especially relevant to this book are Vic Gioscia's piece on "Frequency and Form" in Issue Two, Gregory Bateson's "Restructuring the Ecology of a Great City" in Issue Three, and Warren Brody's piece on Biotopology in Issue Four. (Implications of Kleinform for biological think).

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