

The
Difficult But Possible
SUPPLEMENT

to the

WHOLE EARTH CATALOG

2 rumors:

Syntex, developers of The Pill, have developed an effective aphrodisiac and don't know what to do with it.

Page 9

BHT is a legal, inexpensive, non-addictive, non-psychoactive, non-nutritious, anti-oxidant chemical that may make you live twice as long as the other mice.

Page 15

March 1969 \$1.65

FUNCTION

The WHOLE EARTH CATALOG functions as an evaluation and access device. With it, the user should know better what is worth getting and where and how to do the getting.

An item is listed in the CATALOG if it is deemed:

- 1) Useful as a tool,*
- 2) Relevant to independent education,*
- 3) High quality or low cost,*
- 4) Not already common knowledge,*
- 5) Easily available by mail.*

This information is continually revised according to the experience and suggestions of CATALOG users and staff.

PURPOSE

We are as gods and might as well get good at it. So far, remotely done power and glory—as via government, big business, formal education, church—has succeeded to the point where gross defects obscure actual gains. In response to this dilemma and to these gains a realm of intimate, personal power is developing—power of the individual to conduct his own education, find his own inspiration, shape his own environment, and share his adventure with whoever is interested. Tools that aid this process are sought and promoted by the WHOLE EARTH CATALOG.

SUPPLEMENT FUNCTION

The Supplement corrects and updates information in the most recent CATALOG, carries on-going research toward the next CATALOG, and publishes what doesn't fit in the CATALOG but does relate to the use of tools.

RETAINING SUBSCRIBERS

Mark Albert
Edmund Scientific Company
John Doss, M.D.

San Francisco, California
Barrington, New Jersey
San Francisco, California

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Item-related Information

Cosmic View denied page 5

The John Day Company has been out of stock of the dandy little mind-buster *Cosmic View* for months and months—since last Fall. We have received no reply to requests for information on when it will be available. Back orders from customers are stacked up. We're starting to get hardened and cynical about it. If your outrage is fresh, write Richard J. Walsh, Jr., President, The John Day Company, Inc., 200 Madison Avenue, New York, N.Y. 10016, and/or Walter J. Minton, President, G. P. Putnam's Sons, 200 Madison Avenue, New York, N.Y. 10016. Give them our regards.



Tantra Art page 10

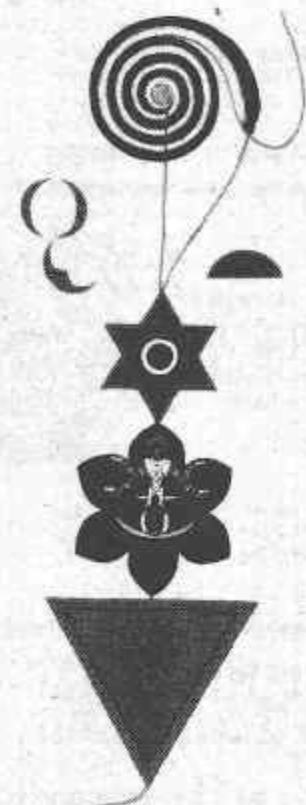
The dock strike in New York has held up all delivery of *Tantra Art*. Until it's over we won't have any. If you can't wait, order straight from Paris and have it shipped air mail: \$32.00 plus \$11.80 for postage.

from: Ravi Kumar
42, Ave du President Kennedy
Paris 16^e, France

TANTRA ART



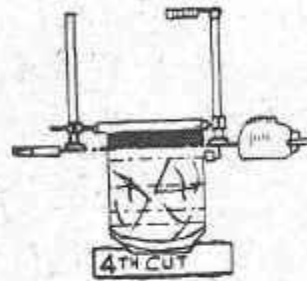
Color posters of pp 2, 23, 31, 132, 137, and cover of *Tantra Art* are available at \$2.85 each postpaid from Shambala Booksellers, 2482 Telegraph, Berkeley, CA 94704 or WHOLE EARTH CATALOG.



Alaskan Mill: boo page 17

We received the following opinion from Bonadventure HQ, canoe trip outfitters based in Pennsylvania.

Incidentally, five years ago we tested an Alaskan mill such as is priced at \$267.50 in your Fall 1968 Whole Earth Catalog (Shelter & Land 17). We found that, unless the timber is large, the cumbersome mill is virtually useless. It should be very clearly stated that a chainsaw with a minimum of 6 horsepower is mandatory for its operation. It is not a 'one-man sawmill' as far as we are concerned. The testing took place in the Quebec bush.



Fome page 25

John Holt ('How Children Fail', 'How Children Learn') sent us an article from a recent Yale Alumni magazine which had this to say:

The foam-structure project was conceived by Bill Grover, a student working for his master's degree in architecture. Watching television one night, he saw a commercial in which a boat landed on an island and unloaded a man and a package. Within moments, the man had inflated a balloon, sprayed it, cut doors and windows, and set about adding more rooms.



With the encouragement of Felix Drury, a professor of architectural design in charge of the program for second-year students, Grover contacted Union Carbide, which donated \$7,500 worth of the foam. Paper-backed burlap was obtained to serve as an under-structure for the foam, along with an industrial sewing machine to piece it together.

Drury initiated a design competition in foam housing for the class, choosing winners in each of three categories of building: dome, tent-like, and cellular. The winner and runner-up in each category were charged with actually building the winning design. The only stipulation of the assignment was that the structure be large enough to live in.

On the plus side, the foam is rigid, watertight, and insulating; because it is easily sawed or cut, there is a maximum flexibility in placing doors and windows (although security clearly presents a problem). So far at least, the foam seems to weather well, although it must be painted since its molecular structure breaks down when exposed directly to sunlight. At present, though, there are still a number of drawbacks: the foam is not fireproof and it is difficult to attach anything to a foam wall. Also, it is virtually impossible to apply the foam evenly or to conform the depth of a layer of foam to predetermined measurements.

For the visitor, the foam structures have the joy of the unexpected. One person said after emerging from the foam houses, 'The material seems so organic—it's almost like walking through someone's intestines.'

Land page 43

Friends ...

It is my opinion that Strout and United Farm Catalogs should only be taken in the context of 'fantasy' (re: pg. 43, Fall Cat.). During the last two years I have helped develop a computerized real estate search service in Vermont, New Hampshire and Maine. I am no longer in the business (nor any other for that matter. I'm back in school) and I've no stake in the matter at all.

However ...

I have spent a great amount of time talking to brokers all over New England, and, although there are undoubtedly some fine people in both organizations, their general reputation is very poor. The two major complaints are misrepresentation and the advertising of already-sold properties.

For your education, I would suggest that you investigate Previews, Inc., 20 Kilby Street, Boston, Mass. (international) (expensive properties) and The New England Real Estate Clearing House (New England—the outfit I was with until this year) in Box 474, Woodstock, Vermont 05091. The Clearing House charges a small fee which varies according to the amount of information requested, and as long as Harry Ames is running the place I personally will refund the fee to anyone not satisfied with the results.



Government Printing Office quickens page 44

Instead of 2-3 months it now usually takes 2 weeks or less to receive publications of G.P.O., thanks to the new U.S. Government Printing Office Bookstores in Washington, D.C., Chicago, Kansas City, and San Francisco. The store carry 1000+ titles in stock, and what they don't have at hand they can have sent from DC very quickly. A long-awaited boon.

U.S. Govt. Printing Office Bookstore
710 North Capitol Street
Washington, D.C. 20402

U.S. Govt Printing Office Bookstore
Rm 1463 14th floor
Federal Office Building
219 S. Dearborn St.
Chicago, Illinois 60604

U.S. Govt Printing Office Bookstore
Rm 135 Federal Building
601 East 12th St
Kansas City, Missouri 64106

U.S. Govt Printing Office Bookstore
Federal Building
450 Golden Gate Avenue
Rm 1023 Box 36104
San Francisco, California 94102

Ching discount page 61

The \$6.00 *Ching* (Baynes-Wilhelm translation) is available for \$5.25 postpaid from

Shambala Booksellers, 2482 Telegraph, Berkeley, CA 94704.

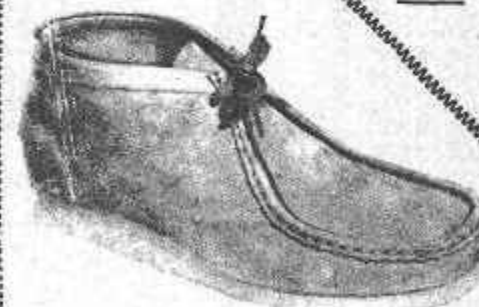


41. Sun / Decrease



above K'EN KEEPING STILL, MOUNTAIN
below TUI THE JOYOUS, LAKE

Wallabies page 49



IN THE NEW LL BEAN CATALOG, THEY HAVE SOME SHOES MADE BY CLARK'S OF ENGLAND, WHICH ARE CALLED WALLABIES. YOU DON'T HAVE TO GET THEM FROM BEAN; YOU CAN GET CLARK'S SHOES IN MOST FAIR-PRICED SHOE STORES, NOW, BEING A PUCE, I AM OF COURSE A FOOT FREAK. HOWEVER, I AM A FOOT FREAK WHO WALKS AROUND ON CONCRETE FLOORS FOR MUCH OF THE DAY, AND AFTER THE FIRST COUPLE OF HOURS, I USED TO Wince AND GASP AT EVERY STEP. THEN... I FOUND WALLABIES! THEY ARE SORT OF LIKE Moccasins, EXCEPT THEY'RE BUILT ON A LAST, HAVE CREPE SOLES, AND A STEEL ARCH SUPPORT. THE UPPERS ARE MADE OUT OF VERY PLIABLE GLOVE LEATHER. THEY ARE THE MOST COMFORTABLE SHOES I'VE EVER WORN, WILL TAKE A SURPRISING LOT OF TROUGH WEAR, AND ARE A STEAL AT \$22. GET YOURS TODAY! ROLAND

New Suggestions

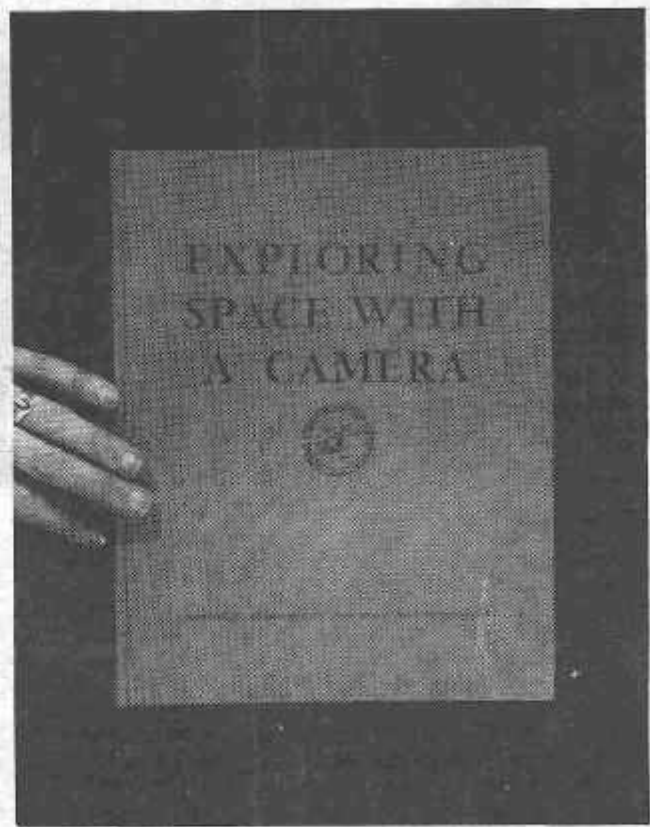
Exploring Space with a Camera

The Gemini photos book (p. 5, Fall CATALOG) is purer, but this new book of pictures from NASA really is better for understanding the whole systems of Earth, Earth-Moon, and Solar System. All of the outstanding photographs, color and black & white, up through Apollo 7 are here in one family album, with unusually complete information on what can be discovered in the images. It's NASA's bid for your interest in next steps in the real space odyssey. It's convincing.



A band of Great South Ocean the vicinity of the Nile Valley and the Red Sea. "Such cloud bands," says Kenneth M. Mason, Chief, Space Operations Support Division, Environmental Science Services Administration, "normally occur on the equatorial side of the core of a strong westerly windflow known as the jetstream, in which winds of 100 knots or more routinely more than 200 knots are common. When seen in less detail in weather-satellite views, these cloud bands are particularly useful as indicators of the direction of the upper-level wind. In the foreground small cumulus clouds are aligned in rows."

GEMINI XII



Exploring Space With a Camera

NASA SP-168 (1968 O-292-583)
1968, 214 pp.

\$4.25 postpaid

from GPO bookstores on p. 6 of this Supplement

or WHOLE EARTH CATALOG

John Holt suggests

We have just heard from Mr. John Holt who is out in Berkeley this winter, that he would like you to consider including in your catalogue a hand operated washing machine, invented by a Mr. Richard Walton of Boston. Mr. Walton developed it for use in underdeveloped countries, and it retails for something like \$2.00, and Mr. Holt thinks it would be a good addition for you. In case this idea should appeal to you and you would like further information about the washing machine, you may write to Mr. John Halstead, Colgate Company, Colgate Palmolive Building, Park Avenue, New York, New York who is in charge of marketing it in the United States.

Mrs. John Hughes
Secretary
Boston, Massachusetts

J. Baldwin suggests

there is a beginner's basic fix-it car book that gives basic principles and trouble shooting that just about anybody can understand. It is 'Motor Trend Basic Auto Repair Manual' \$3.95, Petersen Publishing Company, 5916 Hollywood Blvd., Los Angeles, California, 90028. A really great catalog of car parts, not all of them above suspicion as far as usefulness goes, but on the other hand very complete and especially good for older cars, is the free Automotive Parts and Accessories Catalog from J. C. Whitney & Co., 1917 Archer Avenue, Chicago, Ill., 60616. They stock parts for such things as model A Fords and Borgwards, Jeeps and VW, and offer used parts as well. Also, it often happens that certain auto parts and equipment can be used for other things. Weatherstripping, for instance. Any large catalog such as this, and the big one (I don't remember the name of it, but a phone call to a trailer lot would get it.) used by trailer and mobile home buyers has many useful things for minimum dwelling.

J. Baldwin
Carbondale, Illinois

Larry Greisel suggests

Recommended high fidelity (stereo) components:

AR turntable	(\$78 list)
AR amplifier	(\$225 list)
AR-3a	(\$250 list)
or speakers	
AR-5	(\$175 list)

KLH-18 FM tuner (\$116.95 list)

Shure pickup M75-E (\$15.95 discount)

source: Electronic Values, Inc.
200 West 20th Street
New York, N. Y. 10011

Recommended sources:

The N. Y. discount mail order houses which advertise in the back pages of hi-fi/stereo magazines. Generally discounts of 20-25% are available.

Reasons for choosing components in this price range: With these components, sound quality will, in my opinion, be limited mainly by the acoustic properties of the listening room, and by the quality of the sound sources (records & FM stations)

Reasons for choosing AR: best sound for the price (attested by numerous reviews); liberal guarantee policy (5 years on speakers, 2 years on amplifier, 1 year on turntable) covering parts, labor & shipping both ways plus shipping cartons if needed; design philosophy of simplicity, coupled with an advertising policy of advocating scientific method & measurement (rather than excessive/meaningless specifications, decorator values, or the proliferation of useless controls); AR's popularity assures maximum maximum discount & resale value.

Reasons for choosing KLH: good guarantee policy (2 years parts & labor); servicing held to a minimum through transistorized circuitry & 'lifetime' tuned i.f. transformers (eliminating professional alignment at \$15 a throw); petite size.

Reasons for choosing Shure: Phone pickups must be replaced every five years (if the diamond needle becomes worn (400-1000 hrs. of use) before this time, it's more economical just to buy a new pickup). The price is usually cut in half, one year after a new pickup is introduced, so it pays to buy last year's technology. Currently the good sound just happens to be Shure.

The Summer-Autumn (2) issue of Stereophile Magazine rates the Shure M-75E as very close to the best pick-ups available (the Shure V-1511, Ortofon SL-15, and Decca Mark II, at \$45 up discount prices), in sound quality; and immune to the Decca & Ortofon hum problems.

Larry Greisel
Ft. Lewis, Washington

Dr. Hip Pocrates answers

We plan to carry your Grove book in the Spring edition. What other medical books would you recommend and possibly consider reviewing. You know the sanitation scene at places such as Morning Star; you know the food freakiness. Many of the communes are delivering their own babies. We can use solid information on nutrition, sanitation, emergency medical treatment & first aid, medicine chest stocking, etc.

WHOLE EARTH CATALOG

(Dear Dr. Hip Pocrates costs \$5.00 from Grove Press or WHOLE EARTH CATALOG)

I'll give some thought to other medical books. One useful book might be—believe it or not—the Boy Scout Handbook which has information on sanitation, first aid, etc.

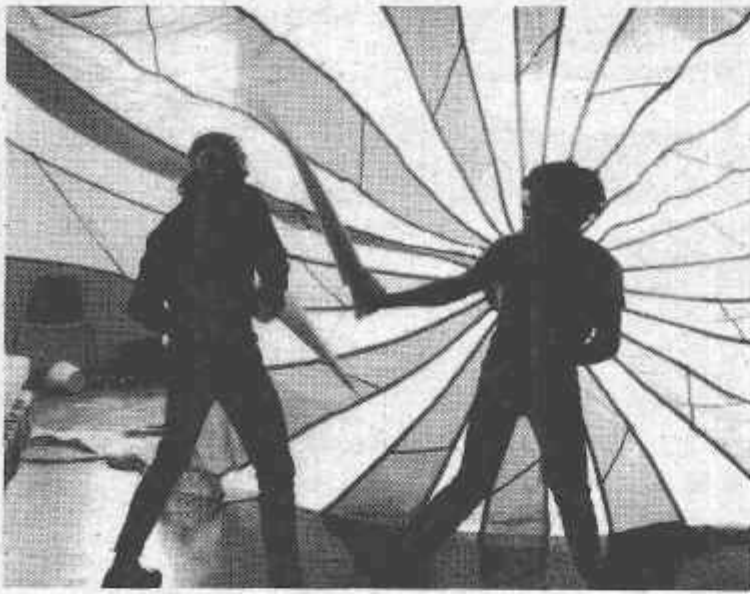
Gene Schoenfeld
Berkeley, California

Rick Klein suggests

last summer spent building, etc., this year begin to grow our food expand & center with this land. now the sun is moving north again—our 1st winter over—deer coming back up the mountain. people are literally pouring into the area, land being bought, plans PLANS & confusion, feeling of change felt by everyone. yet here one is constantly brought to the realization IT cannot change or be touched, watching the mountains erode.

do you know about Edible Native Plants of the Rocky Mountains. good guide with excellent illustrations (line drawings by Japanese artist) details for positive identification, recipes & uses for each plant (quite specific—how to make rope or leach acorns) 375 pages. taking the book on hikes i was astounded at the number of plants that were in the book, that could be USED. while it only deals with one area the book is far more a potential tool than any others on the same subject.

Rick Klein
Questa, New Mexico



Boffers

This technological breakthrough in personal interaction was developed at home by Jack Nottingham. At last we have a better weapon for intimate warring and gaming than words. A set of boffers is two foam swords—superbly designed, two foam hand guards, two goggles with ear protectors. With these you can flail or duel with no possible harm but maximum satisfaction in striking and being struck. SwishhWHAPI everyone winces, but it's just a big suuna and a nice massage on the neck. The sport is subject to all the skills of aikido, karate, what-have-you, minus having to pull your punch. It's pleasant exertion and delightful for human relations. Foam is good social connective tissue.

The heavier boffers, better for beginners, cost \$10 per set. The lighter, \$8 per set. Order from Jack Nottingham, 190 Emmet Ct., San Francisco, CA 94110.

Ron Brooks suggests

- 1) Structural Potential of Foam Plastics in Developing Areas, U of Mich. \$5.00 or \$8.00
This ref. was given to me by an architect we picked up way last May going from Medford to Eugene. I haven't seen it but it looks well worth looking for.
- 2) Ethnopharmacologic Search for Psychoactive Drugs, 1967. U.S. Public Health Service Publication No. 1645 for sale Sup. Docs. U.S.G.P.O. \$4.00. pp. 468.
Proceedings of a symposium held in San Francisco January 28-30, 1967.
There are sections on history; Piper methysticum (Kava); Myristica fragrans (nutmeg); South American snuffs; Ayahuasca, Capii, Yage; Amanita Muscaria (fly agaric).

Ron Brooks
Seattle, Washington

Lloyd Martin suggests

- Fortunes in Formulas—\$3.95, Books, Inc.
- E. S. Kraus, Nevada, Mo.—home wine-making supplies
- Handbook of Chemistry and Physics—\$12.50, Chemical Rubber Publishing Company
- Printing as a Hobby—\$3.95, Sterling
- Brewing Better Beers—
- Wiring Simplified—\$.65 from Park Publishing
- How to Build Your Own Furniture—\$1.50 from Harper
- Structure Systems—Praeger
- King Karol, NYC — mail order discount records
- PI-CRAFT trimaran plans
- Make Your Own Sails — Macmillan

Lloyd Martin
San Jose, California

Alan Ritch suggests

- Zipf, George Kingsley.
Human Behavior and the Principle of Least Effort, New York 1965. LC 65-20086
indefatigably interdisciplinary
Irreverent infuriating
but where else can you find a book which contains:
a table of 'voiceless aspirated fortes and voiceless unaspirated lenes stops in present-day Paipingese' (p. 101)
a discussion of 'Death as an economic convenience and not as a biological necessity' (p. 236)
and the application of logarithmic functions to anything and everything that can be quantified from Joycean vocabulary to obituary notices in the N Y Times not to everybody's taste perhaps not to anybody's taste but in his own way Zipf is as mavericky as B. Fuller

Alan Ritch
Laguna Beach, CA

Queries

Roland Jacopetti is curious

I think the whole scene is tantamount to a sort of community in print, with the crafty taciturn old bastards hawking and spitting into the fire, and occasionally laying one on us out of the experience store. 'Sheeeeeeit, son, you talkin' geodesic domes ... hell, I recollect me and Bucky once ...'

For years, people have been telling me about great deals in lots of surplus jeeps. The way it goes, you buy about twenty jeeps for about \$200 a piece. What you get is twenty jeep bodies with chassis, and twenty jeep engines in their original crating, in cosmolene. You clean off the cosmolene, install the engine, buy four tires and wheels, and you got yourself brand new wheels for only a few hundred. Once, I got into one of these deals, but it fell through. Is this all a mythological scene, or is there a grain of truth in it?

What does anyone know about state or federal summer housing? There's a bunch of beautiful houses on Rocky Point, just south of Stinson Beach. I heard that they were government summer houses, and can be rented by the

public for very little, except that there's a very long waiting list. Anybody know?

I heard about a Swedish stove that claims to be able to heat a five-room house on one stoking of wood for 48 hours. ???

Is there a good book on how to make leather clothing? In particular, shearling coats are very groovy, but very expensive. Surely you could make your own shearling coat for less than \$150.

How many people have had far-out experiences on Mount Shasta?

How many people know about the work that has been done by Delawarr Laboratories in England?

Roland Jacopetti
The Ski Hut
1615 University
Berkeley, California 94703

Other People's Mail

Aphrodisiac

5 March 1969

Dr. Carl Djerassi
President
Syntex Research Center
Stanford Industrial Park
Palo Alto, California 94304



WHOLE EARTH
CATALOG DIVISION

Dear Dr. Djerassi:

Enclosed is a draft of the cover of the March Difficult but Possible Supplement to the WHOLE EARTH CATALOG, to be sent early in April to our 500 or so subscribers as well as several dozen bookstores. The reference to Syntex may be of interest to you.

If inconvenience is caused by our report, I apologize. However the rumor preceded our notice of it, and identifying it as a public rumor rather than public fact may be helpful. Any reply you care to make we are glad to publish along with the rumor and this letter.

Whether the rumor be true or false, it is maintained by desire for its truth and will probably continue until it gets what it wants: an effective aphrodisiac on the public market. The human advantages and legal disadvantages of such a drug are doubtless well-considered by you. What I would like to particularly stress, and it is the main purpose of this letter, is the public need for a double-function Pill -- a combination aphrodisiac and birth control pill.

To put the proposal in perspective familiar to you but perhaps not to CATALOG readers I'll quote part of Paul Ehrlich's prologue to his book The Population Bomb.

The battle to feed all of humanity is over. In the 1970's the world will undergo famines--hundreds of millions of people are going to starve to death in spite of any crash programs embarked upon now. At this late date nothing can prevent a substantial increase in the world death rate, although many lives could be saved through dramatic programs to 'stretch' the carrying capacity of the earth by increasing food production. But these programs will only provide a stay of execution unless they are accompanied by determined and successful efforts at population control. Population control is the conscious regulation of the numbers of human beings to meet the needs, not just of individual families, but of society as a whole.

Nothing could be more misleading to our children than our present affluent society. They will inherit a totally different world, a world in which the standards, politics, and economics of the 1960's are dead. As the most powerful nation in the world today, and its largest consumer, the United States cannot stand isolated. We are today involved in the events leading to famine; tomorrow we may be destroyed by its consequences.

World famine versus heavy governmental controls over sex behaviour is no pleasant choice. If technology such as yours can design around the problem and encourage personal incentives to population control, there might yet be a pleasant choice. The public consequences of a cheap, legal, effective aphrodisiac would no doubt be wild and woolly, putting the psychedelic furor in the shade. But surely a revolution of pleasure-fiends is preferable to world conflict between starving populations. It's not that simple, I know, but before the Combination Pill can be realizable, some laws and attitudes are going to have to get out of its way. Clear-choice public discussion may help.

Perhaps the Combination Pill could be called Make Love Not War.

Stewart Brand

SYNTEX RESEARCH

Mr. Stewart Brand
Portola Institute
1115 Merrill Street
Menlo Park, California

March 18, 1969

Dear Mr. Brand:

I think that you have given our Syntex technology too much credit. If we have developed an effective aphrodisiac, our laboratory people have selfishly kept the whole business very quiet.

New drugs are approved for use on the basis of demonstrated relative safety and efficacy. The more serious the disease condition, the greater degree of risk is acceptable. There is nothing in the present regulatory system to accommodate the idea of the validity of drug induced pleasure, erotic or otherwise.

Your proposed oral contraceptive and aphrodisiac combination will indeed be a large pill for the FDA and the medical profession to swallow even if it has the favorable social effects you attribute to it.

Yours sincerely,


Carl Djerassi

DR. CARL DJERASSI, President
SYNTEX RESEARCH
DIVISION OF SYNTEX CORPORATION
STANFORD INDUSTRIAL PARK
PALO ALTO, CALIFORNIA 94304
TELEPHONE 415 327-0110

From Ken Kern to
George Hall

Nice to hear from you again, George —

I enjoyed the WHOLE EARTH Supplement much more than the CATALOG. Actually there are only one or two items in both that I consider significant or worthwhile. But the CATALOG is a great idea, and can grow to be something good.

I built two houses here using CINVA-RAM—where the owners made the bricks using my machine. Both buildings were a success and the machine certainly has its place.



However, I cannot afford to produce the block because of the big labor factor: it is only economical for owner-builder construction. (Which is great!) I still prefer the monolithic wall, and use a Magdiel form and soil-cement mixture. All this info can be found in the 2 chapters of my book (sent under separate cover).

I've just finished a circular complex of structure (social-ahll, faculty housing, student housing) at W school, and now I am completely impressed with advantages of concrete slip-form construction (see Vol IV, page 17)...

Sincerely,

Ken

Ken Kern's book The Owner-Built Home seems to be available at \$10 from

Ken Kern
Sierra Route
Oakhurst, California 93644

SUBJECT: CINVA-RAM Block Press

Your recent inquiry relative to the CINVA-RAM block press has been forwarded to us for reply by IBEC Housing Division of New York. We are a Division of IBEC and are now acting as distributors of this CINVA-RAM press for the United States and Canada.

Attached is a bulletin which contains general information, illustrations and a brief description on the use of the CINVA-RAM press. Additional structural characteristics can be furnished upon request should you have any special applications in mind.

As you probably know, this machine is manufactured in Bogota, Colombia, by Metalibec Ltda. We are handling the complete importation of this unit into the United States and pay all the importation charges, such as customs duties, ocean freight and marine insurance, plus forwarding fees and handling charges.

Our selling price for this CINVA-RAM press is US\$ 175.00, F.O.B. our warehouse, Tallmadge, Ohio. The freight charges from our warehouse to ultimate destination will be on a "freight collect" basis. The press comes equipped with four wooden inserts to produce different types of blocks and tiles, plus an operations manual. The unit weighs 140 lbs. net, 165 lbs. gross (crated for shipment) and has a gross cubic measurement of 3.0 cubic feet each. With the cost of importation, freight, insurance, customs duties and handling charges which we must pay in bringing these presses into the United States, we are unable to extend any discounts of any kind for the CINVA-RAM block press.

Shipment can be made immediately upon receipt of your Purchase Order, together with your check or money order payable to Bellows-Valvair. Please address your order to:

Bellows-Valvair
200 W. Exchange Street
Akron, Ohio 44309

From Jay Baldwin
to
Paul Wingate

Dear Paul.

Got your card, and I'll try to tell you a bit about what I have been doing, and what I feel domes are about. There are a number of practical reasons that a dome is very good for small structures for living in. By small I mean not smaller than, say, 15 ft. across the floor for a 2/3 sphere, and about 25 ft. for a hemisphere (to ensure reasonable headroom near the walls). The sphere has the least surface area considering the contained space. Thus it can be made (theoretically) out of less material than any other shape (is most efficient), absorbs less sun heat in summer than any other shape, and rejects less heat from the interior in winter. Interesting aspects for life styles inside are raised by the fact that domes do not lend themselves well to conventional concepts of partitioning (for a true abortion-instance of this, look at the county building in Auburn), but are better suited to openness and a furniture free spacious feel. They are very well adapted to having various levels suspended from the structure, 'islands', towers, etc. here and there. Couches and all that shit just don't seem to make it. Other advantages are that, once you have made your jigs, you can mass-produce parts at a great rate with accuracy, and not much skill, and consequently a greatly reduced cost. Cleverly thought out domes are certainly, far and away the cheapest way to cover space other than with some sort of a tent. The angles are no problem at all with jigs. By jigs I mean simple stops and angle blocks so that your table or radial saw will make each part alike. What could be easier? Erection is likewise a matter of repetition, though I will freely admit that an experienced dome team will do it very much more easily. The first one may well be a beast unless you really hang your mind loose and don't try to pretend that it is a semi-spherical tract home. Disadvantages are problems of weather sealing, the shape of the space (you might not like to live in there, though I have found that most people really dig it) and you might not really need all that cubiage above the floor level. There are problems



10



March 1, 1969

Dear Difficult But Possible Supplement Editor,

I read with delicious delight the letter from that fascinating man from Texas. For a long long long long time I have searched for myself a husband. I searched and searched. And looked and looked. But I must admit that I would never find one in the Difficult But Possible Supplement. I hope that I am pretty enough for this fat roundish gentleman. Enclosed is a picture of myself that I hope you'll be kind enough to forward for me to this man for me who might want a picture of me. Thank you for all the help and assistance you have given my husband's funding venture. Maybe someday me and my sisters will come and visit you.

Bally Foster (Miss)

Getting away from the commercial. I have no dome to show you at this time. Ten domes that I have built in the bay area were of a temporary nature. One that you might have seen was the dome at the Mt. Tam. Magic Mountain Festival last June with the light show in it. Various peace domes are around the bay area, but they are the plywood things with a very coarse frequency and not very impressive except in the largest 40 ft. size where the frequency is more in scale with the whole kaboodle. They are locally distributed by Trade Tools Co. Box 30 Hayward Calif. Telephone 582-3062 or 351-1350.

As to other structures, I have worked a lot with tents (the POP TENT is a product of our office in Ann Arbor, Mich.) and very light solid wall structures, one of which is a 20 ft. dia. circular building that weighs 100 lb and can be set up by two men in 30 minutes. It is currently being used (alas) in Viet Nam (if you will excuse the expression) as a portable hospital. It is not geodesic, but is certainly synergetic. These are difficult to describe, and you might drop by here some day and gander my photos. All I have are photos, as I am not any more involved with 'being a designer'.

Take care, J.

for many people with the way that they look from the outside But I regard them as a kind of 'tabula rasa' in which you can establish just about any kind of life you want. The space is very neutral, it has no character like a cape cod cottage or victorian or 'Cannery' might have, and so instill the people inside whether they want it or not. In other words, I feel that the dome offers the best possible non-influencing space for its dwellers, that is, maximum freedom to have you rather than the building establish your style. In another way, you could regard the dome as the least de-humanizing space to live in, as it doesn't take over. They are also acoustically absolutely super. I have found that the dome, well 'furnished' (that is with a minimum of junk in it) causes people to see other people instead of things, to a remarkable degree. The greater the frequency (the more and smaller the facets, and hence the more spherical) the better it feels, particularly if the dome is translucent.

From Stewart Brand to Free You

Gurney Norman said Write what's on your mind about the Whole Earth Catalog. OK. This.

There was George Walker at Kesey's farm, waiting away in the garage on the Lotus, sculpting fiberglass fenders or some such, and his useless friend from Eugene said admiringly, "You know, George, I've never been able to do anything like that because I don't know how." "You got it backward," said George Walker. "You don't know how because you never do anything."

I occasionally get twinges, working away on the Whole Earth Catalog: "access to tools" (the tools are still mostly books). Twinges that we may be helping extend the academic fallacy into self-education. We promote books, both in the Catalog and the Whole Earth Truck Store on Santa Cruz Avenue, by carrying some 135 titles on such seductive subjects as tensile structures, village planning, camping, bee-keeping, glass-blowing, tipis, cybernetics, community, and so forth. They're approximately the best books in their areas. Watch out.

It's so easy for a person to vow "I'm gonna learn how to photograph really well," and buy Minor White's Zone System Manual from us, and read it, and get the Message, and inspiredly fiddly-fuck around with a few rolls of film, and get bored when you aren't Wise yet, and forget to do any more. A lot of motions, including 2 bucks to the Whole Earth Truck Store, but nothing has happened.

Better to take a notion, buy a Polaroid Big Swinger, blow film photographing friends, take a deeper notion about photographing what the mind sees, have at rendering that, soar and stumble a lot, and -- then -- out of desire and need put the Zone System to work.

From DJ to Tom Duckworth

[This letter refers to a newspaper column by John Steinbeck, Jr. written in '65-'67 about family gas in Korea]

I could not locate the article by Steinbeck that talked about using the gas from decomposed excrement. I do remember the article and it suggested that a family of four produced enough feces to provide gas for both cooking, heating and lighting for themselves. In addition bacteria free fertilizer was also produced. There wasn't any picture, diagram or instruction on the type of container used. It was mentioned that a minimum of two such containers were required. The idea was expressed,--as far as I can remember as--collecting the excrement, setting the container aside to allow the bacteria to decompose the feces with the resulting poison (I'm not sure that that is the right word) free solid and the gas. No length of time was mentioned.

Down, twinges, a little. There's too many glamorous, expensive camera books you could waste your heat on. Our pointing to a prime source may help move you closer to the center of camera-work. From there you can -- if you're inclined -- give the Catalog better information on what might be of use to the next guy. That's value, all around.

However if you want to start with the book (and probably end with the book), we're glad to have your \$2 anyway. Maybe we'll do something interesting with it. Chromosomes are also nutritious.

Stewart Brand
Whole Earth Catalog, Portola Institute

CATALOG costs

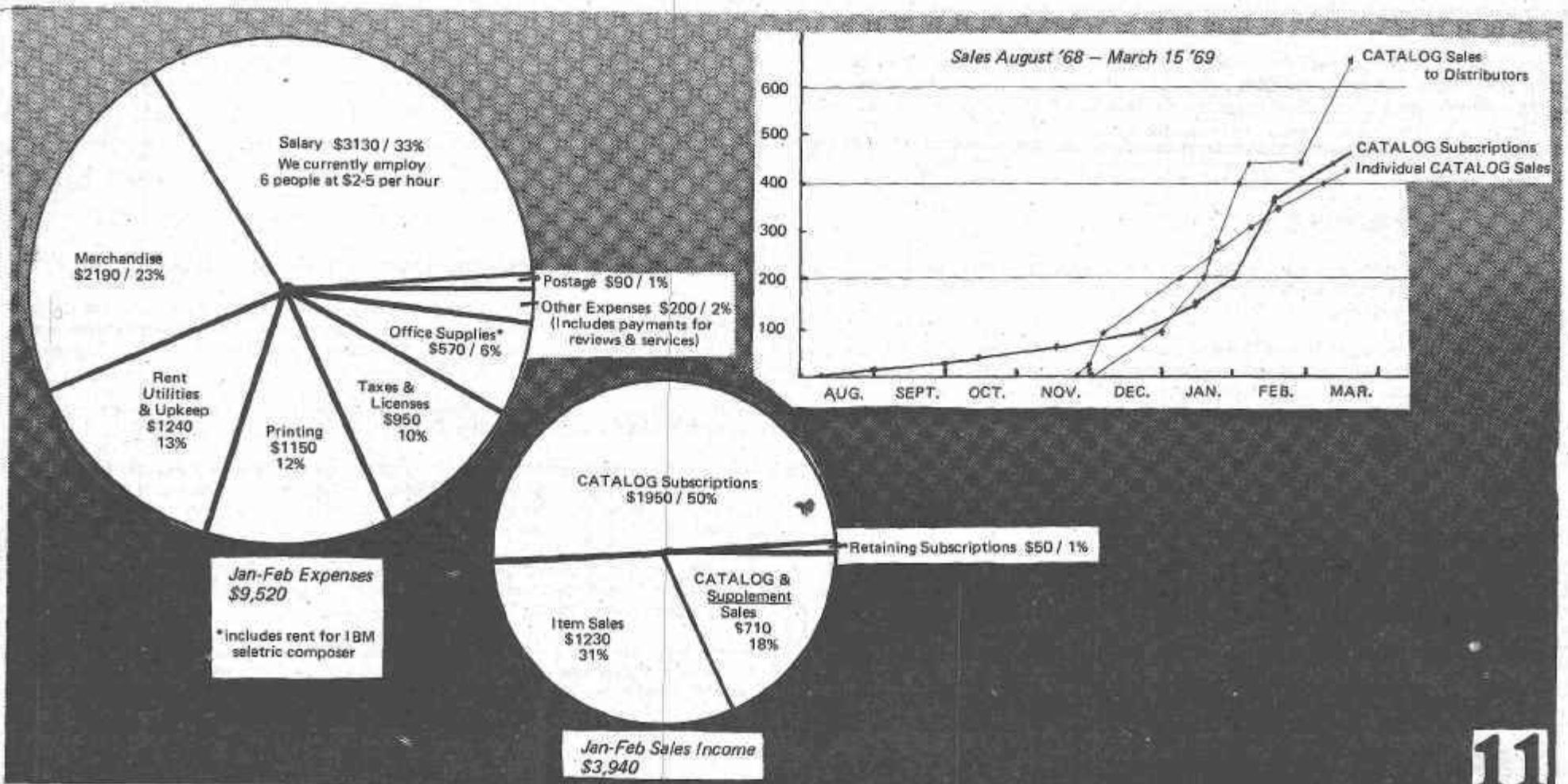
At Alloy Steve Baer pointed out the need for cost accounting on our products. Here's a preliminary rendering of our accounts.

From 1 May 1968 to 1 March 1969 I've invested \$14,800 in loans and \$3,800 in unpaid time (\$5/hr) in the CATALOG: total \$18,600. Income during that time has been \$5,997 in CATALOG and book sales and subscriptions, \$550 in fees for performances of WAR:GOD, \$846 in rent from others in our building, and \$52 in donations: total \$7,445. All income went directly into expenses, so our total spent (above minus 1 March bank balance) was \$22,913.

The cost and income pies look like this for the two months of January and February 1969 (during this time we published the January Supplement and did a second printing of the Fall CATALOG).

The key question among publishers is always "What's your unit cost?" Divide publication expenses by quantity of thing published -- that's unit cost. Obviously the greater volume you publish, the lower the cost. Starting from scratch our unit cost was high, \$4.25 for the first 1000 CATALOGS. We were fortunate and sold them all -- mostly at \$2.50 each to distributors or \$2.00 each to subscribers, some at \$3.00 each to booksellers or \$5.00 each to individuals. We printed another 1000, which took the unit price down to \$2.37. If they all sell, we'll have broken even on the 2000 Fall '68 CATALOGS.

Publishing is a numbers game. Volume. With more subscribers and buyers we're increasingly able to lower the price on the CATALOG and deepen and widen its research and its usefulness. More ain't necessarily merrier, but it permits you to keep playing.



What happens when a class plays



For numbers 1-6, see 'FACTS ABOUT THE AREA AS NOTED ON THE MAP IN THE MUSEUM' below.

by Carol Guyton Goodell, Dennis C. Dobbs, and Robert F. Hill, Portola Institute, Inc., Simulations Project

Everything you need to play this game is on these pages except people, digging tools, Salvation Army type artifacts, crude stakes, twine, and a cooperative set of friends who'll help you bury the artifacts in preparation for the 'dig'.

Just cut along the dotted lines, mount on oaktag or heavy cardboard sheets, and distribute one set of cards to each team. Additional copies of this game are available from Simulation Division, Portola Institute, 1115 Merrill St., Menlo Park, CA 94025. \$2.00 each, postpaid. © Portola Institute, 1969

Questionnaire

DIALOGUE _____ MONOLOGUE _____ BACKTALK _____ YOU NAME IT _____

Write us your reactions to Atlantis be they muscular, visceral or theoretical in nature. If you aren't the letter writing type, then how about this structured response?

I played Atlantis: _____ mentally in my favorite reading chair, _____ with adults, _____ with children, _____ other _____

Its main strength in an educational sense is _____

Its main weakness is _____

If I had been writing this game I would have _____

PLEASE SEND TO SIMULATIONS DIVISION, PORTOLA INSTITUTE INC., 1115 Merrill St., Menlo Park, CA 94025

ATLANTIS, a simulation game based on archeology TEAM _____

INFORMATION AND INSTRUCTIONS:

1. Your team of archeologists has just staked a claim for a site to excavate on the lost island of Atlantis. Previous archeologists have been digging there for ten years and have found all of the facts listed on the map.
2. The map and a few items (artifacts) are in a sort of museum. This is neutral territory and may be visited at any time, but by only one member of a team at a time.
3. You may visit the digs of other teams by invitation only.
4. You may arrange joint consultations with other teams to help form theories or compare information.
5. After you have made a find (dug up an item), place it in the Museum tagged with your stake number.
6. The worksheets are self-explanatory. Your goal is to make an educated guess about the origins and use of the area of Atlantis in which you are working as part of the class effort to piece together enough evidence to recreate the life of the people of Atlantis. In order to do this, you need to find as many items as possible, and then using all of your skills and thinking powers, reason out ways in which such an item might have come to that area.
7. The winning team will be decided on the basis of total points from the worksheets plus their contributions in the discussion sessions at the end of the game.

FACTS ABOUT THE AREAS AS NOTED ON THE MAP IN THE MUSEUM:

1. A fresh water stream from the mountains to the ocean was evidently once dammed. The resulting lake bed is clearly visible as are ditches leading off from it. Little water is there now. To the left of the lake bed is a ten foot wall which goes up to the high cliffs next to the ocean. A small rectangular foundation is inside that enclosure.
2. Near a sandy beach a maze of foundations have been excavated. Between the two groups is a deep pit filled with water. The pit is lined with stones.
3. Foundations are uncovered that reveal broad stairways leading up to a level platform the size of a department store. The remains of pillars are at the edges, and several stone slabs are in the center. A mosaic fish made of shells is found nearby, as is a sunken area surrounded by low, broad stairs all made of stone.
4. An entire forest of Redwood trees covers miles of the island. There is some scrub underbrush and a clearing the size of a tennis court. There are also some blackened tree trunks and stumps in the center of the forest, but not those of Redwoods.
5. A sunken flat space the size of several football fields has been uncovered. The entire area's floor is covered with beaten down earth. Some footprints and other tracks are visible. Nearby underwater, some brown dots stand for sunken upright logs.
6. All of these artifacts are under water (ocean). The brown spot is an island, and the blue swirls is a whirlpool.

Atlantis: an archeological simulation game



Archaeology would once have been acknowledged as a rather remote aspect of the social studies, but it is now coming into its own as an ideal vehicle for exploring the relationship between language, anthropology, and a sense of history.

In this game artifacts are buried in a specified area, in this case the beach. Teams of four or five students have been assigned to an area in which to dig, boundaries of which are set off with stakes and string.

Before the team begins the game, they are given oaktag sheets with simple sets of rules and a description of the excavations supposedly done previously in their areas. By looking at the few museum artifacts and at the excavation map for their area, the students make an educated guess as to the previous use of the land and its resources (see next two pages for forms).

For instance they might decide that the dark spots in the harbor area of the map plus the large foundations of some previous building near that water might point to its use as a port and a marketing place. This guess becomes their working hypothesis. Beyond this assumption, they might give supporting reasons how they reached this conclusion. The dark spots in matching rows out in the water might have been pilings for a long pier. This leads to questions such as what kinds of ships need long piers? Does the depth of the harbor have anything to do with the pier length?

What products might have been bought or sold? What were the imports and why were certain things imported? Was the market place open or closed? Would the answer to this indicate anything about the climate, the needs, the lives of this ancient society? Each good question or hypothesis opens up more and more avenues for later classroom discussion.

As they work at the excavation site, they find buried objects and receive points for each find. Great enthusiasm is the norm, and as a matter of fact, leads directly to the staking off of territories in which to dig so that no one would lose any fingers. The children look for clues as a sort of intellectual treasure hunt.

But digging isn't the only activity. Once the find is made the team artist draws it from several angles, the team scribe describes it in terms of its measurements, its materials and its shape. Together the team decides if the find strengthens their original hypothesis, or if it doesn't seem to fit, and therefore might generate a new hypothesis. Artifacts are deliberately chosen which could have multiple uses in an early society. They are also within the limits of the Goodwill or Salvation Army Stores where we shop for these treasures. In general we buy items that are made of natural materials. Any number of new hypotheses can be

made for each find. We have made no attempt to have a totally authentic previous civilization (such as an Aztec Village) so there is no one right answer to a summary of the data collected. For instance, this chain of seeds might possibly have been a religious symbol, a method of agricultural categorization or storage, personal jewelry, a money substitute, and so on. An equal number of points will be given for each reasonable supposition. And then additional points are given for theories which tie these guesses together with the guess for the whole area's function.

A sense of history begins to grow within the children not only in the relation to the unfolding of their story of this old civilization, but as they become aware of the time sequence relationships of each clue they uncover. They see their finds and research as small pieces in a giant jigsaw puzzle. Although some sections fit right in, others sort of float around in their minds, not fitting the puzzle now, but available for some later archaeologists to use. And thus the practical use of museums and research laboratories becomes personally evident. I have yet to see any team throw away a find because it didn't yield immediate validation of some theory. Each find was carefully and instinctively saved for its future potential value.

All of the items which you dig up in this stake go with the area marked with the same number as your stake as shown on the map.

Before you start digging up items, make a hypothesis (that's an educated guess) about the area you've been assigned, using just the facts that are listed on the map.

A. This was probably a : _____

B. It was used for : _____

C. The reasons I think this are : _____

TO BE FILLED OUT BY TEAM:

Stake Area: _____

Members: _____
(last names only)

Division of Labor:

- Digging
Writing
Visiting Museum
Consulting
Thinking

EVALUATION: (use high, medium or low)

Group cooperation: _____
Spirit: _____
Digging Accomplishments: _____
Writing Accomplishments: _____

SUGGESTIONS FOR CHANGES IN GAME

ITEMS WHICH YOU DUG UP THAT HELP PROVE YOUR IDEAS OR GUESS (SUPPORT YOUR HYPOTHESIS). Draw a picture, guess at its uses, and then show how it fits into your theory or ideas on the page before this.

ITEM 1

Uses: _____ SKETCH: _____

Fits into hypothesis because: _____

ITEM 2

Uses: _____ SKETCH: _____

Fits into hypothesis because: _____

ITEM 3

Uses: _____ SKETCH: _____

Fits into hypothesis because: _____

ITEMS WHICH YOU DUG UP THAT DO NOT HELP PROVE YOUR HYPOTHESIS: Draw a picture, guess at its uses, and then show why it does not fit into your theory or ideas on the first worksheet.

ITEM 1

Uses: _____ SKETCH: _____

Does not fit into hypothesis because: _____

ITEM 2

Uses: _____ SKETCH: _____

Does not fit into hypothesis because: _____

ITEM 3

Uses: _____ SKETCH: _____

Does not fit into hypothesis because: _____

WHICH ARTIFACTS DID YOUR TEAM ACTUALLY FIND (LIST):

50 pts. each

- 1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

WHICH ARTIFACTS DID YOU FIND HELPED YOUR HYPOTHESIS EVEN THOUGH THEY WERE FOUND BY ANOTHER TEAM IN ANOTHER STAKE? (LIST)

5 pts. each

Table with 2 columns: ITEM, HOW IT HELPED. Rows 1-10.

BASED ON A MAXIMUM OF 150 POINTS, HOW WOULD YOU RATE YOUR TEAM IN THE GROUP DISCUSSION? _____

number yes _____ WHY
number no _____

IF YOU HAD TO WRITE A SHORT STORY WITH ITS SETTING IN ATLANTIS, AS RECREATED BY OUR ARCHEOLOGISTS TODAY, WHAT FACTUAL INFORMATION COULD YOU SUPPLY ABOUT THE LIFE OF THEIR PEOPLE? THINK ABOUT THIS QUESTION. YOU NEED NOT WRITE IT DOWN. IF YOU HAD IT TO DO OVER, WOULD YOU HAVE COME TO THIS GAME TODAY?

TOTAL POINTS: _____

BHT

Chuck Kesey runs a creamery in Oregon. Some months ago he came across a technician report that mice fed the preservative antioxidant BHT lived twice as long as some other mice who ate other stuff. Chuck Kesey straightforwardly ordered several gallons of BHT powder from a chemical supply company ('cost between 20 and 30 dollars') and commenced eating it. 'We figured that 1/2 of 1% of body weight per day made it about the same as the mice. That's about half a cricket in amount.'

Side effects reported so far. 'It tastes wonderful—absolutely no taste. It squeaks when you chew it. Listen.' [The sound of miniature squeaking doors came over the phone. —ed.]

Direct effects reported so far. 'Luther takes BHT. Luther's this aware old man we know. Makes him feel enough better that it's thrown his sex life back about 15 years.'

The following is an excerpt from *Extended Youth*, an interesting new book by Robert Prehoda (\$5.95 from G. P. Putnam's Sons, 200 Madison Avenue, New York, N. Y. 10016):

Oxidation and Free-Radical Theories

A number of scientists have speculated on the role of oxygen in the aging process. Dr. Aloys S. Tappel of the University of California at Davis has proposed an 'oxidation theory of aging.' He believes that excessive oxidation of polyunsaturated fats produces a high level of free radicals which causes molecular damage including cross-linking of vital proteins. The system within the cells that normally breaks down and excretes damaged cellular components is also impaired by the free radicals. Some damaged cellular components accumulate and become lipofuscin age pigments.

Dr. Tappel proposed a mixture of antioxidant nutrients as a preventative therapy. These nutrients include vitamin E, vitamin C, sulfur amino acids and micro quantities of selenium. Vitamin C has a synergistic relationship to vitamin E, increasing its antioxidant properties. Selenium replaces sulfur in amino acids, producing selenoamino acids which are extremely effective antioxidants. Dr. Tappel's explanation of aging can fit into an expanded cross-linking theory. The attractive feature is a preventative therapy that can be started at the present time.

A major factor in free radical formation is the presence of metallic catalysts (trace elements) within the tissues. Dr. Harman found that copper is a particularly damaging catalyst. One approach to life-span extension, therefore,

would be to avoid water with a high copper level or to take drugs which remove copper from the system. When the role of other trace elements in free radical formation is better understood, drugs can be taken to reduce them to relatively harmless levels.

The free radical theory of aging was first presented in 1956 by Dr. Denham Harman of the University of Nebraska. Dr. Harman believes that aging may in part result from biological damage caused by free radicals formed both inside and outside the cells. Free radicals are unstable molecular fragments which last only a few thousandths of a second before they react with nearby molecules and form chemically stable bonds. Free radicals are powerful cross-linking agents. The intracellular damage can be explained by the somatic mutation theory, though free radicals formed outside the cells could not cause somatic mutations.

Free radicals most likely do the greatest damage to the organism through cross-linkage, including somatic mutations caused by DNA cross-linkage. A smaller portion of free-radical damage may result from somatic mutations that are not caused by cross-linkage.

Dr. Harman agrees with Dr. Tappel that polyunsaturated fats are particularly susceptible to being catalyzed into forming free radicals. The life-span of experimental mice

was reduced by feeding them excessive quantities of polyunsaturated fats.

Dr. Harman's most dramatic experiments have employed chemicals which neutralize free radicals before they can react with the vital molecules in the tissues. These chemicals, called antioxidants, were originally developed to minimize radiation damage, which is partly caused by free radical formation.

One antioxidant, 2, 6-di-tert-butyl hydroxytoluene (BHT) was able to increase the half survival time (age at which 50 percent are dead) of mice by 50.3 percent over the controls. This would be equivalent to increasing the average human life-span from 70 years to 105 years. However, the BHT experiment is not conclusive because the controls did not live as long as they normally do, which seemed to be the result of synthetic food the mice were fed.

Dr. Harman now has experiments under way that should correct the dietary deficiencies and provide conclusive evidence of the anti-aging effects of antioxidants. There are some new antioxidants that promise to be as effective as BHT. These experiments are extremely important because they promise to provide the first effective anti-aging therapy that could easily be taken by the general public.

The Thomas Register of Manufacturers (see local library) lists 42 manufacturers of antioxidants. Some advertise BHT, for example Catalin Corporation, One Park Avenue, New York, N. Y. 10016.

That's all we have on the rumor. Skippy but promising. Of course BHT may devour your genes or neurons or something. BHT is a common food preservative.



Luther



Chuck Kesey

More on Getting By Without Money

Disassociation with the economic bag of any society is difficult unless you are very rich or a Trappist monk. This article is for those who have no savings, no inheritance no trust funds and no desire to remain in a money-oriented rut (there are so many other ruts to explore).

What I have to offer here is not all-inclusive—just merely information that I have acquired firsthand as my family (wife and 2 kids) and I have tripped along.

When we first started on the trip, our first concern was food—a needless concern in this country—we went to the local grocery store and asked for the vegetable and fruit discards. Everyday in this country grocery stores—all of them—throw away about 4 garbage cans full of edible food. Food that is 'spotted', 'overripe', 'bruised', or ugly. The quality and quantity of the throw-away food depends very much on the type of ownership of store and its clientele. One man operations or family owned stores keep everything—chain operated stores throw away good food all the time. The easiest way to get vegetables from a store is to ask for them. Sometimes you score, sometimes not. The store I got vegetables from gave me enough to feed 31 people, 10 chickens and start a good compost pile—2-3 boxes everyday. Stores catering to the elite of this society have the most throwaways—no blemishes or bruises allowed—but they tend to be selfish with their garbage. Stores like Safeway, etc. are best bets.

Another source of food is Government Surplus Food obtained from your local welfare office. In Santa Cruz County (Calif.), a married man with 1 child earning less than \$200 a month is 'entitled' to 20 lbs. of flour, 3 lbs. of oatmeal, 5 lbs. of corn meal, 1 lb of bulgar, 3 lbs. of rolled wheat, 3 lbs. of rice, 5 lbs. of butter, 10 lbs. of powdered milk, 3 lbs. of lard, 2 lbs. of dried peas, 1 lb. of peanut butter, 5 lbs. of cheese, plus canned vegetables, dried fruit and fruit juice.—each month. These foods are good trade items—we traded for eggs and non-food items.—examples—made arrangements with a group living on a farm. They didn't 'qualify' for welfare food but had an abundance of barnyard stock. We traded. We had food,



another made sandals. We traded. We had cornmeal, someone raised a lamb—we had meat, they had meal. The best way to trade is to give it all away—when it's time, it will come back.

Next to tree food, you need cheap food. Most bakeries sell day-old bread—we used to get about 13 loaves of french bread and 5 dozen rolls for \$1.00. (This helped feed the chickens too.) Egg Ranches sell flats of eggs below market value—we got cracked eggs for less than 1¢ each (cheap enough to feed the dogs, along with the canned welfare meat). Also, farmers markets and flea markets are good places for cheap good produce. Most important of all—bulk purchases of wheat and rice are very wise investments.

Cheap clothes are available at the Goodwill, Army Surplus Stores, Rummage sales and Flea markets. Rent is the real

bummer and we never solved it completely until we moved into our camper. However, rent can be lessened on a trade for rent basis. I got 3 weeks free rent in agreement to clean up the house I was moving into. One friend got a big house for 3 months in exchange for repairs. Another got a year's free rent—the first 6 months in exchange for repairs and the last 6 months in trade for a sculpture he did. With the camper, rent is not the problem it once was.

I built my camper for about \$125.00. I got nearly all of the lumber at the city dump and at construction sites (you could start a lumber company from their scrap pile). The stove in the camper came from a trash pile and I traded a window for the sink. The icebox was given to me. The \$13 foam rubber mattress on our bed cost \$5 at the Flea Market. Four of the five tires on my truck were free—I got them from behind the Santa Cruz County auto maintenance building. They use tubeless tires and they don't repair them. They throw them away—it's covered by taxes. Service stations and department stores sometimes throw away usable tires.

Transportation is hard—mostly luck. I've been given 1 car, 1 truck and I bought an excellent running car for \$20 trade.

Medicine. In emergency, go to the county hospital, look for trade situations. I know of a dentist who did work at cost or trade for long-haired people. Another friend worked at a Veterinary Hospital to pay for his dog's operation. Look behind the doctor's office. I found 700 tranquilizers at the dump.

Tools and furniture may be gotten at Goodwill, flea markets and rummage sales.

If you look around, you may be able to find a mechanic who will work for exchange of things other than money—there are lots of things you can do.

You don't have to be rich to drop out—but it helps.

Tom Duckworth

Earth National Park

This ad appeared recently full-page and a third in *The New York Times*, and thereby hangs a furor in the Sierra Club. Upon its publication Dave Brower, Executive Director and hard driver, was immediately unplugged from further financial energy. At this writing the whole question of Brower, Club, Earth hangs high and weird.

By The Late John Brockman

John Brockman, though dead, is in his late twenties and agile in New York. The following are early-draft excerpts from his book *By The Late John Brockman*, to be published hard and soft cover by Macmillan in September 69. The text is an interpretation of recent work in cybernetics, brain-study, and art. It proposes that man is dead, replaced by a superior being—once he learns this—called invisible.

In the study of invisibles we are concerned with activity integrated on the neural, the brain, level, i.e. the present. Thus, when discussing information we are talking about how the brain responds to the present, direct experience. This response is always effected without consent and awareness. There is no choice. Information can be considered as a direct order to the brain which will be executed. Upon a change in the operation of the brain we will take that change as a measure of information. There is no information unless there is change. Thus we look to effect and work backwards.

Man never realized that in talking about the state of consciousness, he was dealing in considerations of the interpretation of the ordering and arrangement of the direct experience of the brain. The ordering and arrangement are a continual functional happening. The ordering and arrangement are all that is actually happening. Nothing else ever happens. The ordering and arrangement are to be measured in terms of information.

Neural activity is a multiplicity of simultaneous operations functioning in a continuum. The basis for the system is frequency modulation. The system is a non-linear oscillation of rhythms. The transaction is the synchronism of frequencies. All that a man can consider in terms of humanity: his life, his goals, his past, his future; all gone, all over and done with. All that is happening is what the brain is doing.

It was all invisible to man. The clash of generations, the crashing down of institutions, the divisiveness, it was all invisible. Man never knew what was happening. To the invisible it was a question of non-synchronization of frequencies, where certain brains were unable to adapt to new rhythms of the information received within parameters consistent with continuity. It became a question of phylogenetic suicide, invisible: out of phase. To man: out of mind. Who's crazy?

New Sierra Club publications advance this urgent idea: An international program, before it is too late, to preserve Earth as a "conservation district" within the Universe: a sort of...

"EARTH

I. The Moon, Mars, Saturn... nice places to visit, but you wouldn't want to live there.

ANY MOMENT NOW, Man will find himself hurtling around in an Outer Space so enormous that descriptions of its size only boggle the mind. (One attempt has put it this way: The size of the Earth is to the size of the known Universe as a germ is to our entire solar system.)

Yet, we already hear excited talk of locating, out there, a planet that duplicates the natural environment on Earth, i.e., trees, flowers, water, air, people; you get our meaning.

The fact is that if we do find such a duplicate Earth out there, it may be some thousands of years from today. Until then, the only place in the Universe that will feel like home is Earth, unless your idea of home life could include setting up house on space platforms, or the Moon or taking your evening walk with oxygen helmet and space suit.

We haven't got used to thinking about it this way yet, but, as Astronaut Borman pointed out—for us people, Earth is a kind of inhabitable oasis in an unimaginably vast desert.

Also, Earth is a strange sort of oasis, in that quite apart from providing us what we need to live—water, air, sustenance, companionship—this oasis actually grew us and every other life form. We are all related.

Darwin, during his famous Galapagos journey, found all life on Earth—from plankton to people—to be part of an incredibly complex interwoven and interdependent blanket spread around the globe. There is no loosening one thread in the blanket without changing the stresses on every other thread, or worse, unraveling it.

So then, if it is life on Earth that most of us are stuck with for the next little while, we had better consider the consequences of what has recently been going on here.

II. Toward a more Moon-like Earth.

There was not enough oxygen to support the existence of Man. It wasn't until green plants and certain ocean plankton had evolved that the natural process was begun by which oxygen is maintained in the atmosphere—photosynthesis.

Man, one would think, has a stake in assuring that this process continues. Consider then, these bits of news:

In the U.S. alone, we now produce the equivalent of being pined over at a rate of one million acres per year and the supply is increasing. This means a continuous, billion acreage, are being planted.

The oceans have become the dumping ground for as much as a half million substances per year which are used to keep the plankton so that can survive them.

Now, because of water, fumes, and oil emissions, there are roughly one hundred times as much carbon

being added to the atmosphere as is being used and replaced in our atmosphere by carbon dioxide and carbon monoxide.

The result is a kind of Russian roulette with the oxygen supply. Dr. Laurent C. Cole, ecologist, Cornell University, New York, has said this:

When and if we reach the point where the rate of combustion exceeds the rate of photosynthesis, the oxygen content of the atmosphere will decrease. Indeed, there is evidence that it may already have begun to decline around our largest cities.

There is a bright side. If we should continue what we're doing, overpopulation will cease to be a problem.

Sterile

In only 25 years, traces of DDT have found their way into the average American in the extent of eleven parts per million. They are also found in animals, birds, fish and recently, in notable quantity, in the fatty tissues of Antarctic penguins. If you wonder about the consequences, similar pesticides have already made sterile a species of hawk and owl in England. Here is the way it works: insects eat sprayed plants, small birds eat them, and then big birds eat them. By that time, the insecticide has been concentrated many fold and the big birds are in big trouble. Now, if we humans were in the habit of eating owl and hawk...

Axide from the toxic effects on Man and other animals, pesticides like DDT and newer more vegetative chemicals eliminate whole populations of certain bacteria and pest organisms.

However, and here is the shocker, no one in the world knows where or when a particular pest, which other organisms may be eliminated by insects. Some one had better find out.

If some pesticide, herbicide, or defoliant should be inadvertently killed too many of the nitrogen-fixing organisms—those organisms that enable living things to make use of the nitrogen in the atmosphere—the life on Earth could end.

It is that dependent and fragile.

Rampant Technology

The Aswan High Dam was dreamed up to protect the Nile from overflowing its banks as it had year after year throughout history. It was thought such a great idea that countries used for the honor of helping build it the U.S. foremost among them. The goals were electricity and year-round irrigation, thus greater productivity. No one, including the U.S., thought much about certain side effects, which may ultimately prove the most important.

Since the natural floods have been halted, life-giving nutrients that were formerly delivered to the land and the Mediterranean sea are now piling up in a reservoir above the dam, unusable. As a result the Eastern Mediterranean saltine bubble is already doomed.

As for the land, the fact of silting, plus the water logging caused by old irrigation, plus salinization may actually decrease productivity. Newly irrigated lands have the same fate in store.

A particular snail has begun to thrive in the water retention canals. The snail hosts a worm which causes schistosomiasis, a debilitating, often fatal disease. In one region around the dam, the incidence of this disease used to be 2%. It has now risen to 7%.

At Aswan, we may also see repeated the acid development at Kariba Dam, East Africa. At Kariba, tad of hyacinths and weeds have spread over much of the reservoir's surface. It has been estimated that if the growth should cover just 10% of the reservoir, Aswan the plants could actually transpire into the desert an enough water to steal all flow into the lower Nile.

Looking at the bright side, again. In a few centuries the dam will fill up with silt, and end its usefulness. Then, the river will flow right over it, creating a huge, perhaps lovely, waterfall. Tomorrow will cause the sea.

More Improvement

Environments are improving things every where.

In Alaska, a \$2 billion dam is proposed to be built power for homes, cities, industry, which would flood wilderness and reduce the size of Lake Erie.

In Brazil, engineers propose an Amazon dam which would flood a great area as big as Italy.



NATIONAL PARK"

How You Can Further the Idea of "EARTH NATIONAL PARK"

1. Write Mr. Nixon.

A new administration is coming to Washington, and with it the greatest opportunity in history for, on the one hand, far-reaching conservation programs, or, on the other hand, irreparable, irretrievable, and perhaps disastrous destruction of the environment. We urge you therefore to write Mr. Nixon to forward this coupon to him.

MR. RICHARD M. NIXON, President-Elect
The White House, Washington, D.C. 20520

Dear Mr. Nixon:

I respectfully urge that you publicly commit yourself and your administration to a program of world leadership in conservation thinking. To wit:

(1) Considering the state of things, and the imminent dangers, issues relating to world conservation should no longer be relegated to afterthought status, but should rather be publicly stated as among the critical issues of our time—perhaps the most critical.

(2) Nations should place high priority on the development of programs for the economies of peaceful stability. Exhortations for a "vigorous growing economy" by international leaders should be placed in the context of an Earth of fixed size. Only so much growth is possible before the natural balance is destroyed and all growth will stop.

(3) Nations should each establish centers for the advanced study of ecosystems—looking into the scientific of how everything fits together.

(4) Nations should have a "Plan for the Interpretation of Nature"—an educational program to help remind people about natural law and order.

(5) Nations should cooperate in an immediate program for preserving the last of the Earth's irreplaceable wild areas within a framework of world heritage trust. They should also cooperate in reclaiming as many as possible of the places not overtly ruined. The scientific, technical, and artistic aid of all countries will be needed, at well your leadership.

Thank you.

Name _____
Address _____
City _____ State _____ Zip _____

2. Write your congressmen.

The most effective way to present your views is in your own words by personal letter. Or, in lieu of that, send your analysis and representatives the following message. It is vital that we all be heard from in some fashion.

Dear Mr. Congressman: I support the view that if our civilization is to be preserved in anything like its natural state, there must be a radical reorientation of our national goals. We must move from a goal of material accumulation and economic growth to a goal of ecological balance and environmental preservation. The damage to the environment and to all life on Earth from plans to people are now too great to ignore. I urge you to act.

3. Support those few organizations that are working toward the international goals stated herein.

There are many organizations working constantly to stop the degradation of the Earth's environment. All are important. We urge you to write them and involve yourself in their programs. For a list of these national and international organizations, with details on their aims, mark the appropriate box on the coupon at right.

The Sierra Club itself has both national and international programs. We are a non-profit, primarily volunteer organization, founded in 1892 by John Muir and dedicated to Thoreau's thesis that "in wilderness is the preservation of the world."

The Club currently has 50,000 members around the world, and has offices in San Francisco, Albuquerque, Seattle, Washington, D.C., Los Angeles, New York, and now, London. In addition to such efforts as this, promoting conservation causes through advertisements, publicizing and films, the club has an extensive program of outdoor activities and wilderness trips.

If you wish to join the Club, learn more about activities, purchase books or magazines, or give conservation support, or make a donation, kindly use the coupon at right.

The Sierra Club Foundation (see coupon below) is a separate organization devoted solely to scientific, literary, and educational work. Contributions to the foundation are tax-deductible.

Mr. Edgar Weisberg, Treasurer
Sierra Club Foundation
Mills Tower, San Francisco, California 94104

Dear Sir:

I believe that a publishing project of the magnitude of the Earth's Wild Places has never before well require a major capital investment if it is to serve its good purpose. Enclosed is a tax-deductible bill for this purpose. Enclosed is:

Name _____
Address _____
City _____ State _____ Zip _____

SIERRA CLUB BOOKS

Sierra Club Exhibit Format publications have been called "the most beautiful books in the world" by several distinguished reviewers. They have received frequent honors for design and graphics, and also the 1964 Carey-Thomas Award as "The outstanding achievement in creative publishing in the United States." (All the series in 1964 by 1967, printed on high gloss paper, in gravure or full color lithography.)

International Series

The prototype publication in our anticipated international series on the Earth's Wild Places is called *Galapagos: The Flow of Wilderness*. It is about the islands off the coast of Ecuador that revealed to Darwin, for the first time, an understanding of the flow of life.

Some one hundred books are planned in this series, all of them concerning Earth's still untouched places where there remains the possibility of learning about organic diversity, the genetic pool, the Earth's thin, irreplaceable biosphere—to learn enough about natural systems so that we may ultimately be able to educate even some hardened engineer friends and send them off to your work without fearing that they'll do us all in while they work.

Several organizations are cooperating in this series. The board of editors consists of representatives of four organizations in England, Switzerland and the United States, including the Sierra Club.

Mr. William S. Trevisan
Sierra Club
Mills Tower, San Francisco, Calif. 94104

I would like to join the Sierra Club. Here is \$14 to cover first year's admission and dues.

Please send further information about the club's conservation activities and wilderness programs, as well as including a complete book catalog.

Please forward a list of other organizations working toward similar goals.

Here is my contribution of \$_____ to help the work of the club. (As the IRS has ruled that the club's conservation program involves substantial legislative activity, dues and contributions are not deductible—unless the courts or the Congress clarify the law, or you make your check out to the Sierra Club Foundation, which does not involve itself in legislative activities. See lower coupon at left.)

Please send the books I have checked, for which I enclose \$_____ (Note: Purchase and distribution of books is of major assistance to the club's conservation efforts. Members or applicants are eligible for cash discounts if payment accompanies order: under \$20, 15%; \$21-\$40, 25%; \$41-\$50, 33%; \$51 and over, 40%.)

RECENT EXHIBIT FORMAT BOOKS

- Galapagos: The Flow of Wilderness*, Eliot Porter, Loren Esley, Jani Milton, Kenneth Brower, and others. Two volume prototype to the international series, revealing the importance to man of the diversity of the earth's wild places. \$45.
- Central Park Country: A Lane Within Us*, By Mitchell Nabeq and Reta Johnson. \$25.
- Red California and the Geography of Hope*, Eliot Porter and Joseph Wood Krutch. \$25.
- Everest: The West Ridge*, Thomas Hornbom, and photographs by American Explorers. \$25.
- Yellow Wilderness: As Long as the Rivers Shall Run*, Philip Hyde, Stephen Jett. \$25.
- Kauai and the Parklands of Hawaii*, By Robert Weisberg. \$25.
- Glacier Bay: The Land and the Silence*, By Dave Rubin. \$25.
- In Wilderness Is the Preservation of the World*, By John Muir. \$25.
- Gentle Wilderness: The Sierra Nevada*, Photographs by Richard Krampton, text by John Muir. \$25.
- This Is the American Earth*, by Ansel Adams and Nancy Nashall. The first Exhibit Format Book—One of the great landmarks in the history of conservation.—Justice William O. Douglas. \$15.
- The Place Not One Knows: Glen Canyon of the Colorado*, By Eliot Porter. \$24.
- Yosemite: Island Paradise of a Century*, By Eliot Porter. \$25.
- Hemlock and the River: The Great Grand Canyon*, Francisco Leal, Philip Hyde, and others. \$25.
- Verdant Coast: Pleistocene of the Red Sea Coast*, Illustrations, Robinson Jellies. \$25.

AMONG OTHER TITLES:

- The Riparian World*, By Paul Ehrlich. Every citizen has a role to play. Professor Ehrlich points out, unless we do, we die. \$5.95.
- On the Coast*, Photographs and hand-colored text by Terry and Reta Brownell-Holman to the unadorned grandeur of the land and sea in the spirit of Thoreau that lives in the club's bestseller, *Sierra Club*. \$9.95.
- All the books are available in hard cover and loose format with an insert of use available at Sierra Club's Mountain Book House.

Name _____
Address _____
City _____ State _____ Zip _____



In Southeast Asia, a series of proposed Mekong River dams may do for Laos, Thailand, and Vietnam what Aswan is doing for Egypt. Every country should be spared such improvements.

III. A wildlife preserve where we are the wildlife.

The speed with which our world is being altered is so rapid that there is no cataloguing it: it is everywhere... forests are gone, hillsides eroded and bulldozed, waters filled, and air and water polluted. The implicit assumption is that Man is the Master of Nature, and that losing a wild place or species or plant is of no great importance to us, and never mind the esthetics. But as we have shown, tinkering with the natural order of things can be a dangerous business, for there is a need to think of the organic wholeness of nature, not man apart from that. Man's cavity notwithstanding, he is inextricably intertwined with everything on his planet and therefore must proceed with a degree of caution, until, at last, he has the option of actually leaving Earth.

If, before then, we should so alter our environment that we rid it of ingredients we need for life, then we will merely pass the way of other life forms that have become extinct for one reason or another. And, as bombing a thought as it may be, Nature might scarcely miss the people. Things might eventually get back into their own pattern, the natural order reviving. Plankton might evolve; oxygen might re-form in the atmosphere; grass might

grow through the pavement and among tumbled columns as it has before.

With all this in mind, you may see that we, the 70,000 member Sierra Club, the groups we work with, and the critical publishing project you see outlined at right, are not so much proselytizing on behalf of Nature. In due course, Nature will take care of itself.

Our motives are more selfish, in fact. They are on behalf of our very own lives and the lives of our children who, we feel, have not only the right to live but also the right to live in a world that maintains the natural order enough to continue to feel like home.

We find therefore, that it is not tenable to confine our activities to local crises in the United States. The problems are everywhere and are doubling by the decade.

And so, we have embarked upon an antidotal new international publishing program to export the view that it is now the entire planet that must be viewed as a kind of conservation district within the Universe; a wildlife preserve of a sort, except we are the wildlife, together with all other life and environmental conditions that are necessary constituents of our survival and happiness.

If you wish to participate and support this approach, general means to do so are suggested at the right.

Thank you.

David Brower, Executive Director
Sierra Club, Mills Tower
San Francisco, Calif. 94104
or
15 E. 53rd St., New York City.

ALLOY

New Mexico is the center of momentum this year, and maybe for the next several. More of the interesting intentional communities are there. More of the interesting outlaw designers are.

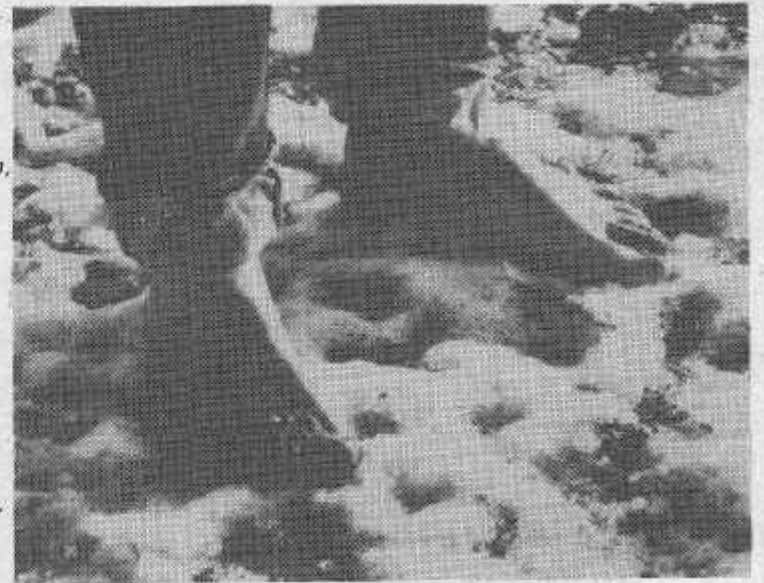
ALLOY was their first programmatic gathering. Conducted at an abandoned tile factory near La Luz, N.M. between the Trinity bomb-test site and the Mescalero Apache reservation, the conference lasted from Thursday to Sunday, March 20-23: the Vernal Equinox.

The event was initiated and organized by Steve Baer with Berry Hickman. Ray Graham donated the use of the land. Baer had in mind a meld of information on Materials, Structure, Energy, Man, Magic, Evolution, and Consciousness, so he invited individuals with amateur or professional interest in these areas to take responsibility for their coverage in the discourse. He also invited

performances by Libre, Drop City, Bill Pearlman's theatre group from Santa Fe, and the Whole Earth Truck Store.

150 people were there. They came from northern New Mexico, the Bay Area, New York, Washington, Carbondale, Canada, Big Sur, and elsewhere. They camped amid the tumbleweed in weather that baked, rained, greyed, snowed, and blew a fucking dust storm. Who were they? (Who are we?). Persons in their late twenties or early thirties mostly. Havers of families, many of them. Outlaws, dope fiends, and fanatics naturally. Doers, primarily, with a functional grimy grasp on the world. World-thinkers, drop outs from specialization. Hope freaks.

Among the voices here are J. Baldwin, Lloyd Kahn, Steve Baer, Dave Evans, Gandalf, Berry Hickman, Stewart Brand, Steve Durkee, Peter Rabbit, Dean Fleming, and brother anonymous.



How can you exchange with 150 people?

It can't get out of control because it already is out of control.

No one wants to be an audience. You can talk if you give them a dessert at the end. You need some way of recording it, otherwise it devolves into an endless circle of rap.

The mike is a ploy to create structure. It doesn't have to be plugged in.

Everybody's assuming the human potential is a static thing.

We're in some incredible bind that we can't even move around enough to know that we're in it. Maybe the only way you can get in the right place is by rattling. If this thing we're doing isn't a big rattle, I don't know what is.

The whole system is going the wrong goddamn way. We're not investigating what we should be investigating.

These relationships between people have not been based on some kind of appreciation of what the structure of the world is.

We want to change ourselves to make things different.



Materials



J. Baldwin talking

One way of getting a design is by asking the question: How do you use the new materials you have?

There are new kinds of cardboard that approach plywood in strength.

You can stamp out houses like cardboard toys, really cheap. A cardboard house for a family of four would cost \$35 for the shell.

So a \$35 house breaks down in five years...

With cardboard you can do large things quickly, can do 3-D sketches without drawing plans.

Cardboard is cardboard, not plywood, so if you're going to make something out of cardboard, treat it as cardboard.

A temporary structure only needs to meet certain building codes.

You can buy foam crusts really cheap, like 50 cents a pound.

Check out the Encyclopedia of Modern Plastics. McGraw-Hill publishes it.

You could program a structure with built-in squishy places.

Ferro-cemento weighs over 10 pounds a square foot.

The curing is very delicate. It has to cure for like a month.

As it cures it contracts or expands. Concrete will cure under water.

It's fantastically strong stuff. An F-C boat hit a rock going at 12 knots and it smashed the rock.

Have you heard about Maybeck's experiments with gunny sacks? You dip them in concrete and lay them up on the screen like shingles.

The price is starting to come down on foam. The gun is getting better. The fire resistance is getting better.

We've been using silicon car wax on any surface we don't want the foam to stick to.

These foam buildings. They very slowly flow.

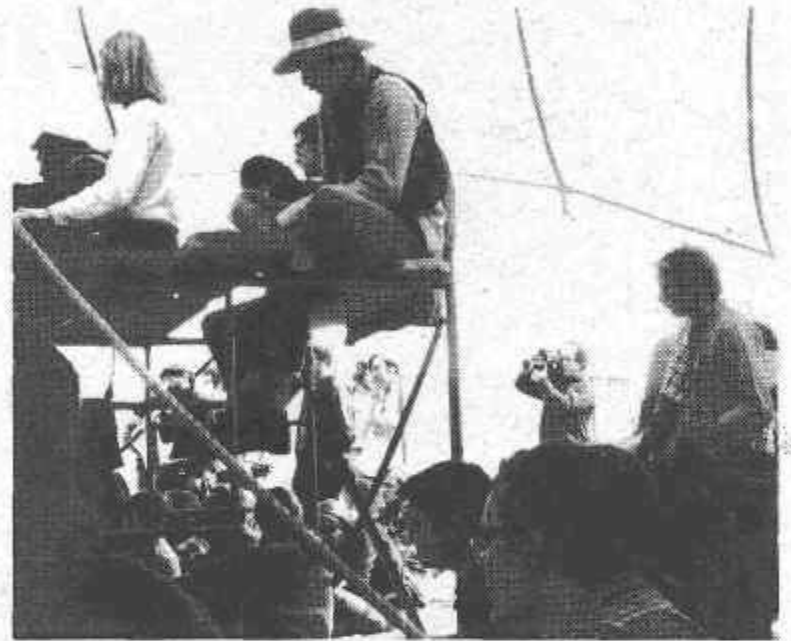
Union Carbide can be scrounged for materials

With Bini-Shell technology you can inflate your foam dome from the ground.

If you want to find out about tape, don't ask 3-M; find a man who's taping something together. Manufacturers are the last to find out about their products. Once you've tried something you can sell the information back to them.

As the temperature changes the tape walks.

Black builder's poly lasts 10 times longer than clear poly.



Lloyd Kahn speaking

Structure, energy

Everyone at first feels this kind of awe for domes and things.

When you talk about energy you talk about the sun. It's difficult to talk about the sun because we're in it all the time. You have to feel it in order to utilize it. One of the real characteristics of energy is that it comes in lumps, and it takes a bunch of people to trap it.

Glass isn't clear. It isn't.

What do you mean the sun doesn't go around us? It's obvious it goes around us.

I have a particular joy in dealing with things like this.

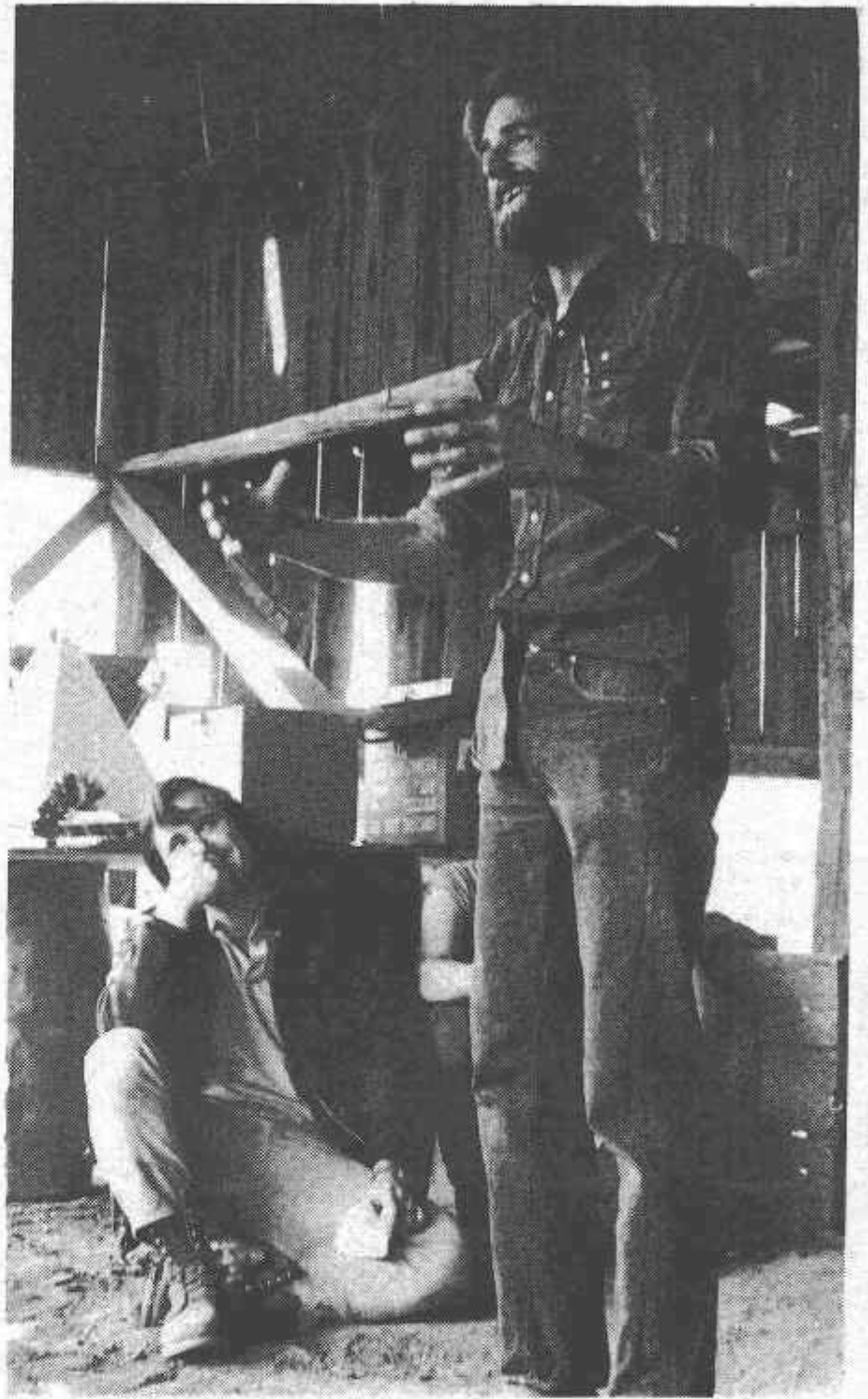
All your parts have to be in accordance with those sacred lines or it won't fit together. The sacred line is no more than an agreement. It's very helpful if you can describe those things ahead of time.

You can't patent geometry but you can patent linkages.

We want to have a factory. We want to put this cost-rose on everything we produce. What it cost us. How it was made.

If you can just see into something. You don't need expensive equipment, that's for sure.

Here I am bullshitting you all. I don't have a bicycle. I also don't solar heat my house. And I don't live in a dome. I think maybe I'll sit down for a while.



Steve Baer talking



I'll tell you anything you want to know and show you anything you want me to show you about domes, but you probably won't build it because you're too lazy.

What sort of research do we do to use the technology in order to improve our own minds?

We are trying to develop computers that will help human beings to develop computers. The human and computer work symbiotically.

A lot of what goes on in our heads is dictated by what goes on outside. And what goes on outside is subject to our control.

We think there's a whole world open to the human being where he can represent outside himself the symbols and patterns he needs so he can get where he wants.

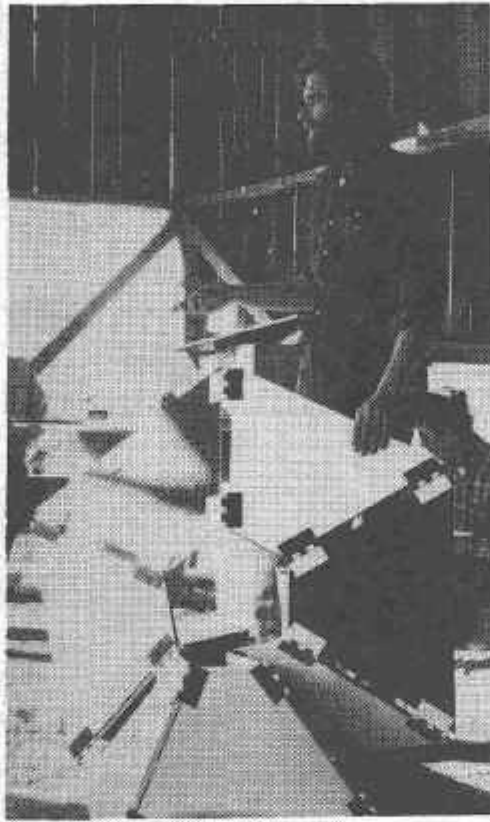
We've got a new technology for representing symbols.

So all of your thoughts that you had are in there just as you had them when you had the flash.

You've got to know when to stop going in little bits and save yourself up and make a big jump.

Geology means earth logic.

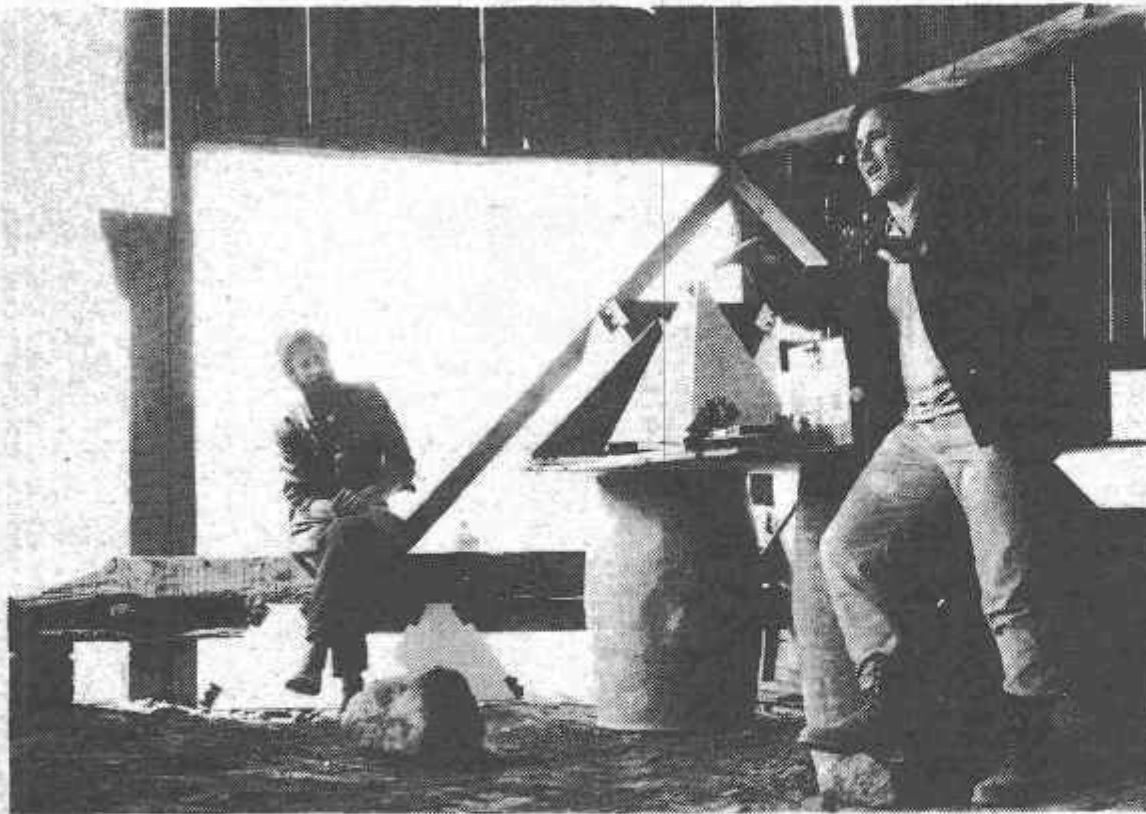
Money is the way that I can easily transfer my energy to you. Economics is the study of transfer of energy in the society.



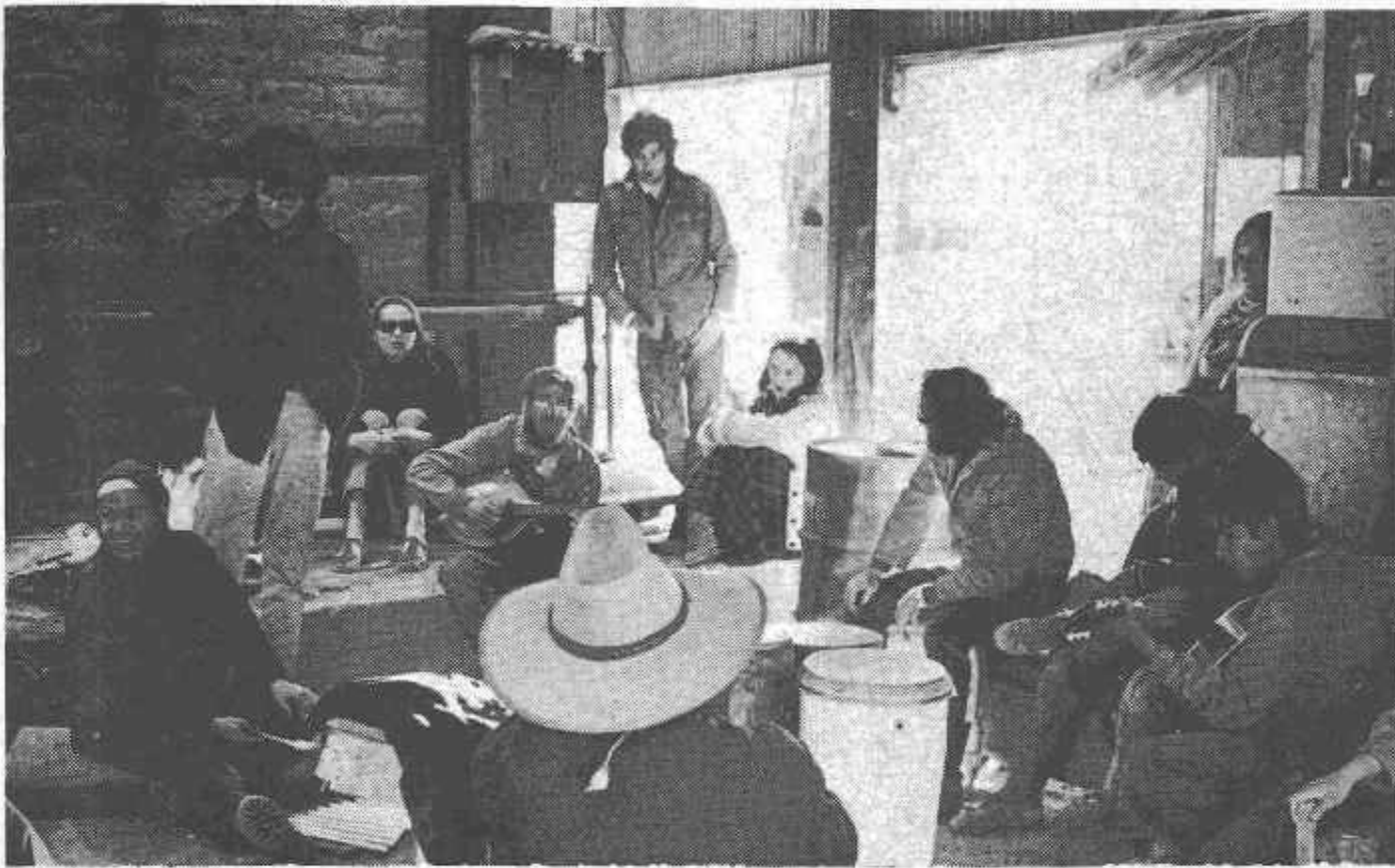
It does different things.



Robert Frank filming



Deve Evans talking



**Man,
Evolution,
Consciousness**

Trust is the reality of the road being cleaned, the trash being emptied.

We're after profit. But we're after the kind of profit we're getting here. Think about what the word profit means for five seconds.

I want to get in and find out what money means. It can make you nervous.

Money makes the transfer so easy that the transfer itself becomes an obsession.

I pray for money.

Kesey says he used to cast his bread on the waters. Now he's saying you got to pick your waters.

How are you going to get money? The thing is that it's fluid. It has to pass between bodies. It doesn't have to be held onto. We're in a transitional world. I've tried to prepare the best water for money to float on.

I smoke therefore I am.

We were brothers before we were dopers.

You can get flashes all kinds of ways. I got a flash once when my parachute didn't open.

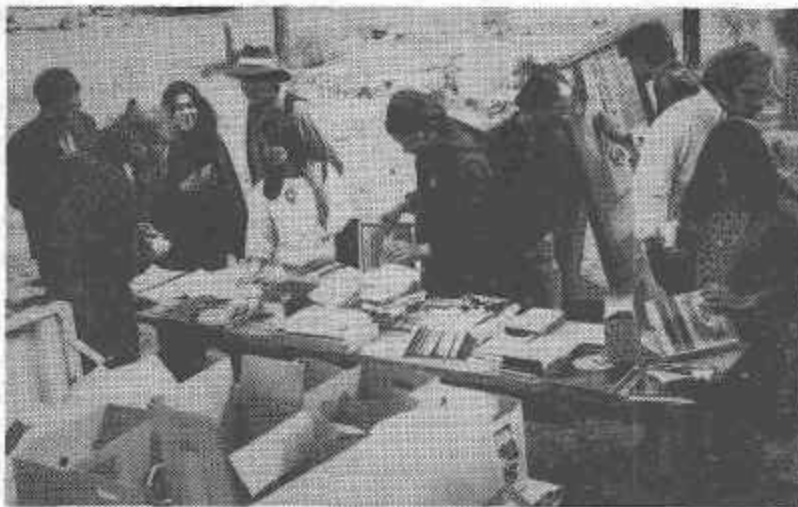
You can use dope as a pure design tool.

You don't have to take dope to do things.

You're just saying that there is in reality no guarantee that life will continue. The right to live is a fiction. It's a pretense at a political reality.

Try to understand that although we are different we are all trying to do something. People won't stick with it. This is the tough point. This is the hinge. What are we really doing together. Is it connected? Where is it connected? How is it connected?

Is it possible to be able to have access so that one person is not the only person in the position to know or to do things?



We're involved in an action-reaction game. A lot of the talk is empty cups pouring themselves into one another. Like this. Or what if your cup is full and you try to pour water into it? Look. We assume that we know everything, rather than emptying our cup. Teach me, for I know nothing.

Magic is the manipulation of matter by unseen forces. You can see unseen forces if you want to take the time. How many people here could build a car? How many could refine gas? Could you take care of yourself on the lowest, simplest level? Before we go solving the world's problems. I think it's important to know right where we are on this ground.



Steve Durkee blowing helium bubbles

If you've got to junk everything that's been written in order to find yourself in the world, do it.

Am I this 6-foot body or am I something else that could exist beyond it? If we could get enough information maybe we could go beyond the flesh envelope.

You've got to be dissatisfied. You have to know that it's not good enough. It's not giving the juice, you know? The other thing is you have to know there is a possibility. You can grasp the living rod.

The sly man takes the pill. The problem with that is you may be the sly man who opens the door, but there may be nothing there when you open it.

There's a lot of people who want the Apocalypse. Instead of looking at it as the death force, there's a possibility of the emergence of something new, a re-shuffling of the deck.

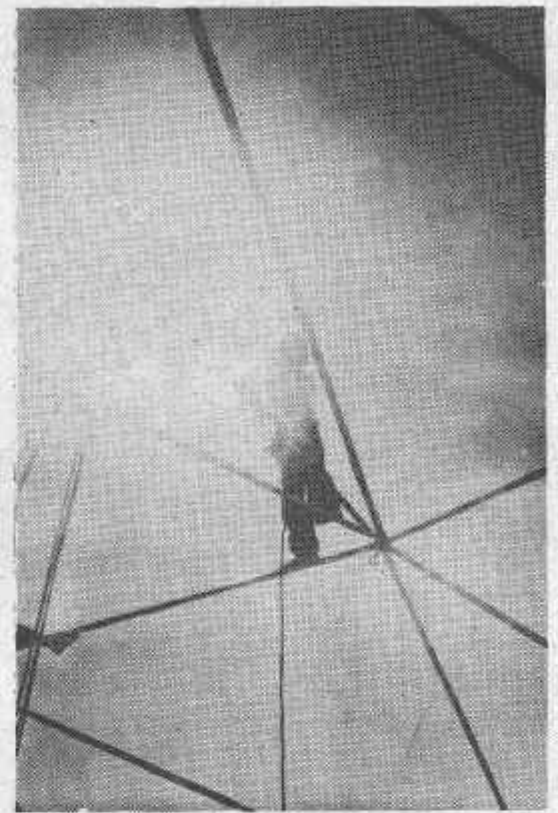
In times this turbulent the world is ready to follow any man who feels good.

Evolution is at work here as strongly as anywhere.

The main design element of evolution is variability. The times are wierd and a lot of the old forms are hanging on stiff and tight. All of us are going out and trying different things. Each community has its own notions of how to do its own civilization. The more communities the better. Big ones, little ones, urban, rural, travelling, money, no-money. With a lot of them happening, some sets do better than other sets.

You can study the evolution of man by the evolution of his tools. You can study the evolution of tools by the evolution of man.

There's a paradox. Isolation leads to over-specialization. But you have to isolate yourself somewhat in order to make your scene different than the others. Maybe it's a balance. Maybe discrete mixing events like Alloy can help.



You can randomize your behavior a little. Everybody has a notion of who they are, their character, and all their decisions converge toward that notion as if they meet at the grave. With some decisions, why not flip a coin?

Take the path you haven't taken before.

That was the Holy Grail step. When the knights left the Round Table in search of the Holy Grail, each man entered the forest where it looked most impassible to him.

Whatever frightens you, do it. That fear is a valuable key.

Evolution is any dynamically self-organizing system. The process improves itself without external influence. Everything's inherent. Every misfit carries some of the load of making the whole more fit.

Evolution and cybernetics are going to come together. This is the edge of knowledge right now, and it's right at the heart of education, and the schools don't know it.

There you are sawing away on your violin, and every now and then you catch a piece of the symphony. The trick is, when that happens, not to drop your violin.

Intention is a wierd thing in evolution. I don't think anybody understands it, but we're doing it a lot. We're increasingly putting our finger in the pie, and we are the pie, and the finger, and the putting.

It's all those choices that we make. Then we give those to the next people.

If you want to try a new way, you've got to build something. We could get together and build a place, like a camping place, a campsite. And when we finished, give it to the state.

Information Pool

The prime resource of an evolving population is its gene pool — there lies the basic successful patterning plus the variation store that through recombination permits change and more perfect fit.

ALLOY tried out a panmictic sampling of its own cultural gene pool by gathering and here publishing certain information from the conference participants. Instructions were: define yourself as a resource, throw in a piece of information — philosophical or technical — that you consider useful to others, put your address if you want to.

Free copies of this Supplement have been sent to everyone who gave their address. What of the information pool is useful? See for yourself.



NARCISSUS AT THE FOUNTAIN

Science & Survival, Barry Commoner
The Careless Atom, Sheldon Novick
Environment - publication of St. Louis Committee
for Environmental Information c/o Center for
the Biology of Natural Systems, Washington
University, St. Louis, Mo.
Peter Montague/3015 Mackland, NE
Albuquerque, N.M. 87105

Marc Waggoner
2303 Steel Apt 3
Houston, Texas

Danny Lyon 1915 B Wentworth, Houston, Tex.
Photographer. Grip.

Pat Donaldson
620 Rio Grande
Alb. N Mexico
or 3250 Frommerd.
N Vancouver, B.C.
Canada

We can share our experiences in
getting contracts from city
governments.

M. Van Arsdale
Rm 215 P.E.R.A. Bldg.
Santa Fe, N.M.

Stop arguing — co-operate
Awareness is correctness. godlike
childlike allasame
digit?

How may I serve you.
Harbinger,
frontiers of
science etc

Synapse (NOW)
a.c. 415-548-2766
PO Box 153
Mill Valley, CA 94941

Has fear of impermanence and
instability nurtured the discipline
of rational thinking at the expense
of emotional feelings?

Rational thoughts are logical and
predictable because they can continually
be re-created in one's mind by
going through a process of thought.
Thus, they are stable.

Jack Foley
221 8th St.
Downers Grove, Ill.

emotions are irrational, irregular
and completely unreliable or predictable.
Fear has probably led men to follow
their rational thoughts instead of
natural impulses.
I have finally found that listening to
my natural feelings leads to good
productive things.

Bonny Dickinson
5877 Nina Place
St. Louis, Mo.

Lorien — 10 Mi N. of Quesada
Box 435
Rancho de Taos, N. M.

Co-op General Store
starting in Taos, if
you live in that area,
check it out.

Douglas Harper
109 Marion Ave.
Sausalito, Calif
94965

brother, John
hippie — franciscan monk
mendicant (road bum)
disciple of Jesus

Tom Thompson — LLANO COMADO
hot springs (custodian)
organizing another conference there

I talk a lot about Fuller & McLuhan
& interrelation thereof. I have a
subscription to AD mag. I was trained
as an architect, worked for Irving Renewal
and now teach art history at S.I.U. I
have slides of architecture & other stuff
in U.S. & Europe, also Habitat/Expo.

Bill Dickinson
Box 98
Gardner, Colo.
Student of
design & construction
Ex-med. student

Bill Charkin
RFD 1 - Box 156A
Carbondale, Ill 62901

Artist, photographer, handy man of work

Robert Frank 203 W 86th St.
info: on film — NYC

Stephen Rodefer - Box 594, Comales N.M.
Photograph limp penises

Jay Baldwin
SIU Design Dept.
Carbondale
Illinois 62901 till June.

From Vancouver, B.C., Can. Hope
maybe at some point to get land
from B.C. Gov't (lease) on one of
the coastal islands. Presently in
Albuquerque. I know VW very
well & have done all phases of repairs.
Norris Donaldson
620 Rio Grande Blvd
Albuquerque, N.M. 87104

"GET IT ON"

Joy Brown — 15 Jones St. NYC 691-4496

Chris West Pilar Hill RFD Taos N.M. 87571
God is Love is Light is Radiation is Life - Respect Life
Faith in that that created all, Love

Louise Friedel
Box 533
Placitas, NM.

Leather (split cow), tanned & dyed, 25¢/ft²
C.O.D. any quantity from
Weldon Leather Co, Benecia, Calif.

Know Weaving
Sources
Dying — Looms —
Not Professional.
Barbara Durkee. Box 444 San Cristobal

Lisa Johnson — 820 Holman —
— Jackson 32412 — Houston — Texas

Medard Gabel
RR1 Box 46
Cartersville, Illinois 62918

Autonomous Dwelling Unit

Von Kaksemeyer
51 Howland Ave
Toronto 4 Ont.
Canada

Writer, photog, contact for Rochdale,
planning community in Ontario. Will
set up resources & communications
for educational stuff in general

Bill Fischer 220 Alvarado Road Berkeley
Media/Everything is - Do

I now understand much more
about organizations & change in
organizations. What new orgs go
thru & little of why. Also know
Federal government & its way —
both good/bad. resources. Design
and maintenance of productive
system. Literature on the above
Dick Reed 1731 20th NW
Washington DC 20009, (202) 265-2078

Skip Whitson (Felipe Galdon), Editor of the Astral Projection
Psychedelic mushrooms of Oaxaca, Mexico P.O. Box 4383
Albuquerque, N.M. 87105
Availability of newspaper
Availability of info. on painting things
Ability to promote anything relative to the hip movement

Phil & Judy Hawes
129 Kearny
Santa Fe, N.M. 87501
Phil-City planning, architect, jeweler,
Contracting License
(see yellow sheet on
Las Animas Inc.)
can teach
Judy-French, sewing hula

Roy Swanson Puppet Theater
Box 536
Corrales
N.M.

Roy & Nancy Swanson (Leather & Sandal)
P O Box 536
Corrales, N. Mex.

Lloyd & Sarah Kahn
Burns Creek
Big Sur, Calif 93920

History of 19th & 20th century outsiders
Ray Graham
La Luz, New Mexico

Michael Marshall
#1680 So. Humboldt
Denver, Colorado

Autobiography of Papago Indian Woman, ed Ruth Underhill
beautiful as teachings of don Juan. [Memories of American
Anthropological Ass. 1934 (?)]. Should be reprinted, short
60 pp of indian mouth

Tony Magar LIBRE 10 years of STEELWORK
community interested in developing
NEW TECHNOLOGY & (LIFE STYLES)
INTERESTED IN HAVING A THEATRE
WORK SHOP FOR ALL KINDS OF
(SEMINARS), (COMMUNICATIONS CENTER),
LOVE.

East Hill School
Chester - Vermont 05143

a small community school (20 kids) High
School — run by the kids — for the
kids anyone wants to reach —
go visit — very good people
NO DOPE

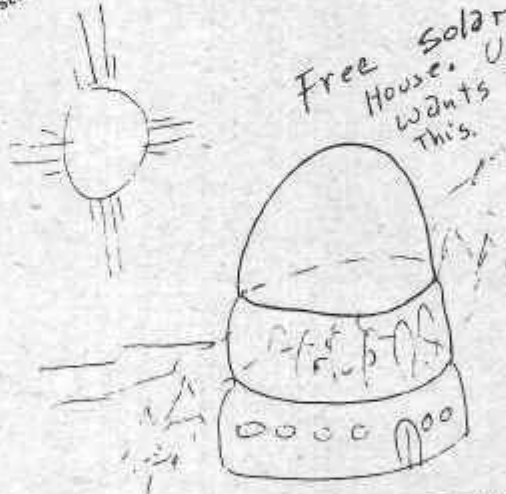
DROP CITY
r.t. 1 box 125
Trinidad, Colorado 81082

community - extended family
live in dome structures,
always open to visitors & travelers
It'll mess your mind
Solar Heater in use

'The One Experiment' - arts, philosophy,
communication. If you have
something to present we'd like to help
you present it - working toward
understanding.
in Albuquerque

Marge Fowler 344-9807
Anna Borden 256-3287
Jackie Hiltz 256-2445
Allan Merovitz

Free solar
House. U.S. Govt
wants to build
this.



HUD - Dept of Housing Urban Development
seeks new ideas, & the development of
these, on Housing People. It takes
18 months for research Projects to be
Granted. They have large budget.
apply directly to HUD in
Wash. D.C.

Ulysses Grant
RFD 29
Placitas

Free Time, Good hands, can help with financial planning, money management. Interested in improvement in communications, like Synapsa etc.

Larry Wolken
27 Coolidge Rd.
Allston, Mass 02134

Communications to & from & with The Boston Area

A pair of hands strong body some experience in building lights & electronics like Radio Transmission

Gandalf
harmony, mystery knowledge? warmth, hunger

Quite a bit goes on vibrationally. Now it often takes just a few words to confirm the vibration. A day will come when those words won't be needed. When that happens, many changes will no longer happen.

I can produce and provide some metals and build steam engines

Steven Yakish
Marquez N.M.
or P.O. Box 701
Arroyo Hondo, N.M.

Jon Karsemeyer,
51 Howland Ave.
Toronto 4, Canada.

Contact with Rochdale (sort of) desire to gather tapes, photos, movies for presenting report to Engineering firm, students, friends, freaks, etc.

Also can write, draw, Was appointed Neumolog for the T.U. of T.

I would like a button

PLEASE

But the other stuff's more important.

LAND IN COLO. CAN BE OBTAINED WITH MINING CLAIMS UP TO 160 A. per claim

Ghost town given to my people by police. Marquez, N.M. - Working towards total self-support. 66 miles east of Albuquerque - not on map - ask for it. Good place to trip on solar-powered steam turbines for power, light, heat - domes - need resources of all kinds. Jeff Mullins 1049 Stanyan St. S.F. Cal. 94117 or P.O. Box 701 Arroyo Hondo, N.M.

Live person trying to make changes... Love mountains, flesh, sounds, designer now of childrens soon peoples play yards.

Draw Langner
2180 Bryant St.
San Francisco, CA. 94110
At 56099

Solbar & Sunstick are sunscreens for U.V. for lips and skin in desert, snow, etc...

General Store-Earth's Soul
Box 5931 Carmel Cal. 5th & Junipero
Budd-Empty Cup-Few Drops of Organic Natural Being-
Bag-Organic Foods-Once Fisherman Comm.-Natural Builder
Mechanical-

David Evans
27855 Moody Rd
Los Altos Hills
California

I have my hands on a wild technology and a bunch of concepts that seems to work for computer-heads and people who are rediscovering at stage 1.

Richard Fox 210-15 23 Ave Bayside N.Y.
There are many things the commune movement can take from the evolution and development of kibbutzim

Susan Homer 819 Chavez Rd NW, Los Ranchos de Albuquerque 87107
Read The Strange Life of Ivan Osokin by Ouspensky

UNDERSTANDING OF COLOR, COLOR RELATIVITY, THE POWER OF COLOR IN OUR DAILY LIVES.

I am remembering so many things that I had forgotten - would like to be in touch - I know a little about gardening, dance & art - Ruth Thorne-Thomson 715 S. Rawlings Carbondale, Ill.

BOOK SPEAKS WITH HIS HANDS

Kurt, Emily, and Seth Fiedler
Applied Life,
Box 4265 Albuq NM

I am learning to be a child. Can we play? → → →

DEAN FLEMING LIBRE

Jay Beckwith

I am a designer. I can take a problem from 1 dimensional talking to 2 dimensional drawing and then 3 dimensional objects, structures, etc. Also know some about plastics, photography and am finding out how much the world is worth

Parsons School of Design, NYC N.Y.

Michael Rosenthal, 359 W. Broadway N.Y.C., N.Y. 10013 (212) 925-7975

Bob McElroy, Valley Forge, Pa 19481
Banana Peel Domes, Organic Farmstead Surplus Center, Omaha, Nebraska Free catalog of useful surplus equipment and supplies tools, water system hydraulic, electrical, etc components.

Dan Leahy
4225 Kotze St.
Schiller Pk., Ill. 60176

Judy Douthit, Libre
sewing, painting, building, writing typing, filming, cooking, dancing, playing music, thinking

for chicks - knowledge of some designing/sewing, methods that make groovy sturdy clothes quickly. Also Color Theory-light, electromagnetic spectrum shit. Xon Michele Drop City

Bob Lander
P. O. Box 593
Placitas, N.M. 87043

Can communicate w-words/some organizational ability/good hunter & fisherman/social game recognition/ can sometimes raise money/dope

Peter Rabbit
Libre
Gardner, Colo 81080

Gary Ellis
8243 Hartford St.
Houston, Texas 77017

707 996 2601
Pigs & Fishes

Aoxomoxoa Box 206 Boyes Hot Spgs LIVE RAP INTO TAPE etc etc reply etc

Sebastian Schroeder
2124 Eton SE
Albuquerque 87106
Architect

JACK'S SONOMA
AWNING CHEEP
CONDUIT CALIF

conc. ideas techno geologic lif communo 2 get flo & mix & liver than pen paper does likewise w/film rotary collage. mail from com to com big mix pages to combine song form to store numbers dome formulas.

Annie Helmuth & Lois Brand
568 Santa Cruz
Menlo Park, CA 94025
(Whole Earth)

OKOMOXO
BFI Powder for Jackitch.
SCHEMATIC FRAMEWORK for Domes & Assembled with Scotch Wood Joins - TV Antich Structures

Las Animas, Inc.
129 Kearny
Santa Fe, N.M.
- Pres. Phil Hayes

Planner, Architect, Coordinator
Student of Mysticism, Psychology

Function completely on all levels at all times. One of our levels is visual order - Art - Linda Fleming Libre Gardiner, Colo.

When to be patient, active, passive - I can only wait to see.
Joe Bonner
Whole Earth Catalog

Work on your nonobstructed interior space.
Pigs & Fishes
P.O. Box 206
Boyes Hot Springs
MUTUALLY EXCLUSIVE SYNDROMES CAN BE INCLUDED BY NEW ACCOMMODATIVE STRUCTURES.
INCLUDE

V.P. Jim Bowie
V.P. Warren Denning

cinematographer, enthusiast, economics, bookkeeping.

Tres. Roy Wallace - mason

A profit making corporation whose goals & purposes embrace the spectrum from physical to spiritual survival.

We are equipped and interested in doing the following:

Tom Duckworth -c/o Whole Earth
Connie Duckworth c/o Whole Earth Truck Store
typing-friendly smile-

Robbie Justin

Eating Sleeping Fucking getting high farming, eating

Work on yourself work on US
Look at what is taboo. (S, bosses, ruled) Why? Why?

We are finding that work is a sufficient reason for itself. energy-effort
THERE IS NO WASTE.

Logging - saw-mill, logging truck, oats, skill, wholesale & retail outlets, solar heating & cooling, experimentation, composting, waterless toilets

Construction - planning, Architectural Design, Contracting

Arts & Crafts - Gallery, leather work, silver, painting

Gardening - interest in composting, organic gardening, hydroponics for flower raising to sell, mushroom culture, solar greenhouses, health food store.

Geologic - mining & prospecting capability

Pants with elastic in the waistbands & bell bottom legs are very comfortable, fit lots of different shaped people, are very easy to make & very cheap (no zippers) - while we're still there (Neshama Franklin - 2193 Divisadero S.F.)
come & see us - we'll feed you if possible).

The New Buffalo
Box 778 Arroyo Hondo NM 87513

Wholesale Foods - Trinidad Colo. (Italian name) Bros. (New Buffalo is into farming-adobe-stability-old ways-God's way.)
Tapees - Sacramento Tent & Awning Co. Sacramento
Colorado Tent & Awning Co. Denver
10, 12, 14, 16, 20-ft. tapees \$70-100
New Buffalo sells pies
New Buffalo sells poles for tapees. \$40
Tapees are highly portable, can build per set fire for heat, very groovy homes.

Know your dancing everyday. Listen to your desires, whims, DO IT.

Electronic engineer, Mechanical Eng., Chemists, Education, Palaeoecology
Ecological studies & development of small high subsistence level communities, coordination & maintenance of a communication 'node' for integration & dispersal of useful information
Spiritual advancement.
Maintain selves in condition of harmlessness.

Morey Margolin Trinidad Co.
Student & or teacher of literature and hitchhiking
Cheap lumber 2x4 or 2x2 - Culls - Cimarron, New Mex
Sawmills about \$10 a unit cheap lumber from culls in any sawmill



Extra

Dave Evans, Steve Baer, (& Steve Durkee)

Dear Steve,

Things looks great for alloy — but after seeing the translation of my last hand-written epistle, I've decided I had better type my letters to you! I will be working on my structures session in earnest in the coming few weeks, and will let you know how things take shape — I will need your comments and suggestions as I get notions about format, content and so on. But more of that in a later letter.

I couldn't resist writing to you about a few things you mentioned in your letter. The first is your side comments about language. Do you realize the importance of the problem of not being able to separate the left foot from the right to be able to decide which one walks fastest? I got myself hung on this one several years ago and haven't been able to get off the hook since. After going out of my mind at first I discovered this is one of those things that keeps philosophers in work (and has kept them in work for thousands of years, in one form or another) and for some strange reason this made me feel better. No doubt you were making side-comments on an iceberg you have been working and worrying over for years too, but if not, you might be interested to hear a bit more about what I mean. Not being able to sever the right from the left foot is the same sort of thing physicists named the Heisenberg effect, but the meaning of this effect somehow doesn't transfer well out of the environment of physics (observers and experiments sound a long way from language hang-ups). But the Heisenberg effect is a beautiful way to go about describing language hang-ups. After all, if we only know about an environment in terms of the formal and informal symbols and structure of a given language, how can we use that language to find out more about the environment?

How come that the dictionary is useful? Each word is described only in terms of another word, or other words, and there is nothing but words in the dictionary! All I can say in the fact of this little beauty is that somehow evolution — mutations — creep into the system — the good ole human mind makes a leap into who knows where for who knows why and adds a new thing to the language (only a small part of language is spoken or written). Finally other parts of the language (eg existing words) are bent a little to piece together an explanation of this new freaky thing — but they are never the same as before, and because some words are bent, others get bent, until the whole flopping thing is bent out of its mind, and that in itself is a new thing so the whole process keeps going. Probably even settles down to a sublime steady state; that steady state seems to get a boot in the bum every now and again — then there is an abnormal amount of generation of new freaky stuff — when old concepts, symbols, images, metaphors, attitudes -the whole bloody mess- no longer works, and the whole system explodes and bombs around until a new higher-energy steady state is reached. I think that such a time started in the United States a few years ago and is in full stride now. At this stage of my life I must admit I do not understand language, I can only marvel at the whole thing — somehow it works — somehow we can use our language to tell us that our language needs

a shake-up. Isn't that fantastic! It is to me, anyway, but some of my math and computer science friends accept it as part of their bread-and-butter. They find it quite everyday to be able to construct a language (a meta-language in fact) from scraps of english-and-math-and-wierdo symbols and make it describe itself and then make it describe other languages that in turn can be compiled into a language that drives a hunk of electronic computing stuff. Whats wierder, that computer can be used to help write the metalanguage, or re-write the metalanguages (which, of course, automatically re-writes the lower level languages). And the whole bloody mess was NOT driven by steam. After all, if I said a equals a, thats all right. But once I start saying a equals b, b equals c, d, c equals c, and d equals d, then we have a little language that describes itself. But how can something describe itself? Steam?

You might guess that a lot of my work at the Institute is woven around this whole question, but in a very pragmatic rather than philosophic manner. We are working on developing a system to enhance our ability to design and develop the system we are working on, which is, of course, to develop ways to enhance our ability to develop a better system that in turn will ... You might recognize the theme — same as setting up an intentional community (or thats how I understand the motivation for at least some intentionals). We make no bones about this parallel — in fact we call ourselves a community. The thing that really thrills me out of my gourde is that in our community (and it is actually a farce to call it this at this time) has integrally within it an energy source — the computer. I say this is a source in the sense that to my mind the computer is the greatest example of a man-made technology that man does not yet know how to use to make him a better person. There is energy latent in a system of man-and-computer that we have a reasonable chance of tapping and even of harnessing. Bob Bassara might be interested in all this — I am looking forward to rapping with him about language (and structure).

Steve, I hope I didnt give the impression I 'discovered' flow in structure and structures. Every architect and artist has been onto this since the year dot. Only somehow few have been able to really make flow the way that building and things are perceived and interpreted. There are a few notable examples in architecture (see later), but I know of very few examples of (say) organizational structures that one feels and 'sees' primarily as flow. Maybe Haight-Ashbury was primarily flow at one stage, if you were shortsighted. One architectural example of flow sticks in my mind. Perhaps it is a brassy example, but I think I experienced the best feeling of flow (ie flow as the primary communication between the building and me) in the TWA terminal at Kennedy Airport. As you come from a San Francisco flight towards the terminal, you are forced (thats how it feels) to walk into this roundish white-and-red tunnel made out of concrete. The tunnel goes up over a hill (and round a steady curve, I think) and you KNOW the walls and roof are closing in on you. Because of the curvature horizontally and vertically, your forward vision is restricted (you cant see the pipe of light at the end of the tunnel), and you soon start to feel that you are going to be absorbed into the concrete walls and suffocate as the walls and ceiling close in. This feeling gets better and better (or worse and worse if you dont dig Saarinen) as you keep walking. (Gets better if you know the architect is really working you over, and you start reacting and jostling as if sparring with your best mate). Just as you feel the last of your poor suffocating body being absorbed into the walls (you have been reduced to 7 3/8 inches in

height by now), you burst out into a great big bright sunny wonderful room — the terminal itself. I had been forced into a tube that got lower and lower, and refused to let me see up, out, ahead or back, and then, as I was finally being molded through a nozzle, I was suddenly jetted into a slow-motion gravityless space. As you see this thing really got to me (And it was 8 months ago — this is the first time I've tried to write about it.) At that time, to me at least, that structure was beauty as composed flow. The structure had complete control of me. As I have said this is probably a pretty coarse example. I am sure that a great artist can have the same impact on a person viewing his canvas at a purely intellectual level, without any effort being expended on the part of the person experiencing the flow. My greasy engineers mind adds another dimension to the experience as well — what happened to me in that tunnel and terminal is the same as what happens to every drop of atomized fuel in the engines of every TWA plane — it is forced into a tube, compressed until it nearly expires and then jetted into the great blue yonder. The analogy is too vivid to deny it might have crossed Saarinen's mind. I wouldn't be surprised if the interior dimensions of that tunnel fit some neat exponential mathematical function designed to flick the alpha rhythm and bomb your brainwaves. Architectural psychology.

Steve, I am putting a lot of thinking time into how to carry out the structures session. You must feel something of a hard-nosed line coming through my letters — I am trying to devise a way to run the structures thing so that is not present. I realize I am going to have to do a lot of the generating of things in the session if we are to get anywhere past where most people are right now, but obviously a lecture-type thing would be a disaster, a lead balloon. Maybe I'll pull a Kesey and pull hidden strings to control the show without being too obvious about it. Will let you know more in the next letter.

By the way, Jean points out that your little old man on the Joe Pyne show was probably putting up the same idea for currency that Skinner devised for Walden Two — credits for work and other goodies. Can see no reason why not. Money is only necessary in a society without total trust and honesty. Trouble is trust and honesty have to be total before money becomes unnecessary as a temporary storage place for these qualities. That reminds me of another wild kick I've been on — the generalized notion of storage. Turns out if you start to think about the notion of storage the way that a child might think about it, storage concepts become quite wild. Things in storage are things (energy) in transit. Only reason we need storage is because the means and things we have for transmitting and receiving things (and non-things) are not up to scratch. What would be the use of memory in the brain if we had far-out mechanisms for compiling flash-like world-states in a flash? We would only need better ways for receiving and decoding and encoding information stored externally. (see Moran — 'The Theory of Storage')

More before long

Regards to all Baers

Dave Evans

MAGIC BASICALLY IS THE MANIPULATION OF MATTER OR PHENOMENA THRU THE AGENCIES OF UNSEEN OR UNOBSERVED FORCES- IN, OF, OR BY ITSELF MAGIC IS NO THING: YOU CANNOT SEE IT, FEEL IT, TOUCH IT, SMELL IT: YOU CAN, AT CERTAIN MOMENTS, SENSE THAT IT IS BEING EMPLOYED OR INVOKED- IT HAS FOR CENTURIES BEEN ASSOCIATED WITH MYSTERY; THIS, SUPERFICIALLY, NO LONGER HOLDS TRUE- IF ONE TAKES A VERY CAREFUL LOOK AROUND YOU WILL BE ABLE TO SENSE THE PRESENCE OF MAGIC IN MANY 19TH CENT- AND MOST 20TH CENT- ARTIFACTS- REGARD CLOSELY YR- PHONOGRAPH: A 12" VINYL DISC IMPRESSED WITH A SPIRAL GROOVE REVOLVING AT A SET NUMBER OF RPM'S TRACKED BY A DIAMOND NEEDLE RELAYING CHANGES IN THE GROOVES THRU VARIOUS MULTI-COLORED WIRES CONNECTED TO PRE AMPS AMPS TRANSISTORS MAGNETIC OSCILLATIONS CAUSING A FIBER CONE TO VIBRATE THE SOUND OF WHAT? OR TAPE RECORDERS W/YR- VOICE CAUSING DISCREET MAGNETIC DISTURBANCES ON ACETATE TAPE SPINNING OFF SPOOLS THRU HEADS- STORING FOR INSTANT REPLY OR ELECTRIC LIGHTBULBS WITH THEIR TINY FILAMENTS BURNING IN A FLASH WITH A PARTIAL VACUUM- THE OLD ALCHEMISTS DREAM- OR RIP OFF THE BACK OF A TRANSISTOR RADIO- & OBSERVE THE LITTLE FAMILY SILENTLY AT WORK BRINGING YOU PAUL HARVEY & THE NEWS FROM WHERE? OR YOUR T.V- OR YR- NEW NYLON SHIRT MADE FROM COAL OR SELISIUM ATOMIC CLOCKS VIBRATING CRYSTALS LOOSING A SECOND A BILLENIUM- ITS ALL AROUND US MAGIC- SORCERY- ALCHEMY

'BUT BUT THE 'SCIENTIST' KNOWS-' YOU SAY OR THE 'ELECTRONICS ENGINEER' OR THE 'CHEMIST' OR OR OR DO THEY KNOW & WHAT DO THEY REALLY KNOW? THEY CAN EXPLAIN THE PHENOMENA- OH YES THIS WORKS BECAUSE THIS IS CONNECTED TO THIS AND WE ARE UTILIZING THE ENERGIES CONTAINED IN THE --- BUT WAIT WHAT ABOUT THOSE UNSEEN FORCES AND UNOBSERVED AGENCIES- 'OH THEM OH YES I HAVE THE FORMULA RIGHT HERE ABRACADABRA10 - SHAZAM! OPEN SESAME

OH THE NAMES HAVE ALL CHANGED WE HAVE 'STATE OF THE ART' NAMES FOR THESE OBSCURE DISCIPLINES AND ESOTERIC FORMULAE BUT IS IT REALLY ANY DIFFERENT FROM THE ARCANIC WORKSHOPS AND TOWER LABORATORIES OF THE POPULAR IMAGED MAD MAGICIAN-

MY FRIENDS, ONE DAY WE SHALL AWAKE AND FIND THAT WE HAVE BEEN TAKEN OVER, THE BALANCE TIPPED' THE BALL GAME OVER OUR BIRTH RITE OF THIS PLANET EARTH SOLD; TRADED AND LOST TO BUY TIME 'TIME' TIME SO WE WONT HAVE TO FACE THE DREAD SPECTOR MILLIONS UPON MILLIONS OF DEVICES WHOSE REASON FOR BEING WAS TO SAVE US WORK AND TO GIVE US THE TIME WE NEEDED TO DO WHAT- TO SERVICE THE DEVICES TO CREATE MORE TO SPEND OUR TIME OUR PRECIOUS TIME INVESTIGATING THEIR ARCANIC PROPERTIES- ALREADY THE DAY DAWNS- CONTAMINATION; DESPOLIATION OF THE LAND; POLLUTION OF THE AIR AND WATER OF OUR HOME; WHOLE CORES OF CITIES WHERE THE GREATER MAJORITY OF SPACE HAS BEEN GIVEN OVER TO THE CAR (WHO TAKES WHO DOWNTOWN) CONCENTRIC CIRCULAR SKELETONS OF THE NEW BREED SWEEPING OUR SKIES IN

DISTANT EARLY WARNING SYSTEMS WARNING OF REMOTE CONTROLLED CHEMICALLY PROPELLED METALLIC BIRD-TUBES COME TO RELEASE IN A BLINDING FLASH THE NEW AGE: THE CORE SEED OF MATTER OPENED AT LAST HUMAN'S FIGHTING HUMANS KILLING DESTROYING MAIMING THE FLESH OF OUR BEINGS AND SIMULTANEOUSLY GIVING BIRTH, ENGENDERING, NURSING THE SPECTOR IN OUR MIDST- THE NIGHTMARE AND TRAGEDY OF THE SORCERER'S APPRENTICE- WHERE; HOW; WHY HAS & IS THIS OCCURING? REMEMBER THE SORCERER'S APPRENTICE- THE APPRENTICE DECIDES TO USE WHAT LITTLE HE KNOWS TO GET A JOB DONE; A JOB GIVEN TO HIM BY HIS TEACHER BUT FOR WHICH HE NO LONGER HAS 'TIME' WANTS A SHORTCUT - IN THE BEGINNING EVERYTHING GOES FINE- BUT SOON THE JOB IS DONE BUT THE APPRENTICE CANT REMEMBER THE 'WORD' WHICH STOPS HIS MAGNIFICENT LABOR SAVING DEVICE CONTINUES TO DO A JOB ALREADY DONE- HELP WHAT TO DO- HE SEIZES AN AXE TO DISMANTLE THE DEVICE AND EACH TIME HE HITS IT THE DEVICE SPLITS MULTIPLIES GEOMETRICALLY EXPONENTIALLY MORE AND MORE AND MORE DEVICES EACH CONTINUING TO DO THE JOB ON AND ON 'CHAOS CAOS CHAOS- CAN HE REMEMBER THE 'WORD' THE MAGIC 'WORD' WHICH WILL TURN IT OFF SHUT IT DOWN THE JOB IS DONE BUT THE DEVICE CANT QUIT- THIS IS WHERE WE ARE- ITS GROWING ALL AROUND US A CANCER AND FUNGUS- WE ATTEMPT TO GET AT IT REPORTS THINK TANKS SEMINARS ENDLESS MAN HOURS WHAT CAN WE DO WITH IT THIS BEAST IN OUR MIDST- WE TALK OF COEXISTENCE WHEN ALREADY THE NOXIOUS FUMES OF THE CAR MAKE AREAS UNINHABITABLE FOR DAYS NEXT WEEKS SOON SOON FOR HOW LONG- BILLIONS SPENT ON WEAPONS OH THEY CALL

THEM SOPHISTICATED STATE OF THE ART DELIVERY SYSTEMS BUT THEY ARE WEAPONS FOR KILLING FLESH WARM MAMMAL FLESH AND IT DONT MATTER IF YOU ARE A WASP A GOOK A SLOPE A CHINK A DIRTY COMMIE WHEN IT HITS YOU YOUR DEAD= MACHINES DO NOT DISCRIMINATE OR THE BILLIONS SENT TO LOFT THE GIANT METAL BIRDTUBES INTO SPACE WITH THE TOKEN INTEGRATION OF THREE MEN SITTING ALOFT ON THEM- OUT THERE INTO THE VACUMN OF SPACE= DO YOU KNOW WHAT LOVES A VACUMN TO LIVE IN NO NOT MAN BUT THE MONSTER THE MACHINE; ESPECIALLY ELECTRONIC DEVICES LOVE A VACUMN THEY ARE AT HOME IN IT NO 'DIRT' DIRT IS FOR US MAMMALS NOT SOPHISTICATED ELECTRONIC COMPONETRY AS THEY CALL IT

PARANOIA? SURE WHY NOT BUT WHERE DOES IT STEM FROM A NEGATIVE VIEW OF WHATS HAPPENING YEAS PRETTY NEGATIVE= THERE ARE OTHER MORE POSITIVE VIEWS BUT THESE POSITIVE VIEWS ARE HELD BY A MINORITY WE ARE ASLEEP DREAMING MOST OF US WE MUST AWAKE TO WHAT WE ARE CREATING PERHAPS FROM THIS AWAKENED STATE THE RELATIONSHIPS WILL CHANGE

FLASH BACK TO THE METAPHOR THE SORCERER'S APPRENTICE= THE APPRENTICE TO WHOM? WHO IS THE MASTER MAGICIAN AND WHERE IS THE MASTER MAGICIAN= AFTER ALL WE LEARNED THE LITTLE WE KNOW FROM THIS SOURCE= THE QUESTION IS HOW DO WE GET IN

TOUCH WITH THE SOURCE OF OUR KNOWLEDGE AGAIN= FOR US TO CONTINUE TO FLAIL AWAY AT THE 'OLD LABOR SAVER' AND CREATE NEW ONES TO EASE THE SITUATION AND COVER PAST MISTAKES IS NOT 'REALLY' GOING TO CHANGE THE SITUATION= ITS SYMPTOMATIC MEDICINE= TAKE A COUPLA ASPRINS TO MASK THE PAIN= WE MUST FIND A PREVENTATIVE MEDICINE GO TO THE 'HEART' OF THE SITUATION BACK TO THE SOURCE FOR THERE IN LIES THE WORD SAY THE WORD AND YOU'LL BE FREE SAY THE 'WORD' WHAT WHERE ARE THE UNSEEN FORCES THE UNOBSERVED AGENCIES WHICH ARE THE BASIS OF THE MANIPULATION OF MATTER THIS MAGIC WE ARE ALL INVOLVED IN= ANYTHING ELSE BUT THIS SEARCH FOR THE NITTY GRITTY OF THE PROBLEM IS A FURTHER PALLIATIVE ANOTHER DRUG TO LULL US DEEPER DEEPER INTO SLEEP OCCUPYING OUR TIME; ENERGIES AND CONCIIOUSNESS WITH NON ESSENTIALS, DREAM BOATS, PIE IN THE SKY TUTTI FRUTTI

THIS IS WHAT I WILL ATTEMPT TO CONFRONT AT ALLOY= FIRST OUR PREDICAMENT BY ATTEMPTING TO MAKE VISIBLE SOME OF THE MAINIFESTATIONS OF THOSE UNSEEN AND UNOBSERVED FORCES SECOND TO ATTEMPT TO ILLUMINATE SOME OF THE PATHS TO THE SOURCE WHERE IN DWELLS

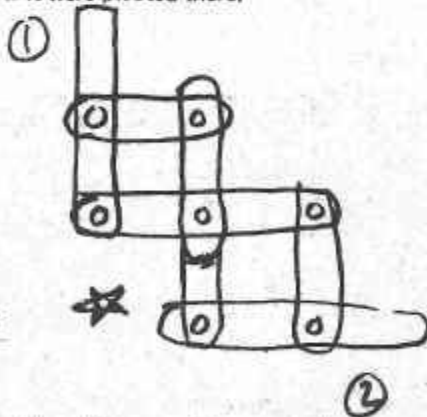
THE MASTER MAGICIAN

Dear Dave -

Here is something from Steve Durkee concerning Alloy that arrived the day after I sent you that other stuff. Also a description of an expanded cookbook.

I have just been working on a problem that I had always considered to be hopeless - searching for the multiple universal joint - something that could be used for space frames - free form space frames. The whole problem is

hinging things so that they all rotate about that central sacred point. Now I am very surprised because it looks as if it really isn't so difficult - The hood on a car is hinged with a linkage that creates a centerless rotation - you don't need anything there at the pivot pt. it just rotates as if it were pivoted there.



1 and 2 act as if they were pivoted at the star

In the dome cookbook there are diagrams and pictures of some hinge joints we used to connect panels to one another - the dihedral angles could be anything - the hinges rotated to allow any angles between the different foci planes. The problem was that the hinges had to be set back different distance for different angles - Shit this is all too complicated to go into now. It probably won't work anyway. I've been playing with cardboard & ba? linkages all day - and my minds beginning to wiggle like they do. I'm going to try and have one of these made by March. Christopher Alexander talks about the need for this multiple connector - what I see wrong with that type of planner is they don't work on any of the problems they describe. They don't even want to help.

See you
Steve

Steve:
re your joints
it kills me
that you have to struggle for
so long
with cardboard
better than probably anyone
while
there
exist
computers and stuff
with displays and stuff
that make the job trivial
and open new wild things
for
a brain
like yours

It would be trivial for
you to learn to write
a program/programs
that would let your mind
go wild exploring the joint
problem
or any like it with members
movements joints, stresses
and so on

trouble is it is hard
to remain
with a free
roaming emancipated soul
and
have
this tooling on tap

the price is usually
an
institutional
straight jacket
work
stiffed by
having
to interlock
with a pile of dead
shit
from 10 years ago
to satisfy
the place where
the money
comes from

With joint problem
you could
program x movements
of joints you select
with the mouse and bug
you could add
delete
move
replace
shit - you name it
joints connectors
surrounding structures
you name it
call up movements
constraints
you name it
and set the mechanism going
watch it
shit its no bloody good
change something

watch it
watch graphs of behavior not
obvious
to
the eye directly
(some graphs really help your ole
eye
when it
goes back
to
the
thing
specially dyamic graphs)
then start to
see
the reasons why
the
guts
straight thru the cardboard and pins shit
and
dust
straight into its heart
Za
ZAM ZOOM
brain click
tick tick
try this
new joint
beautiful simple why didnt I see it
before
Oh
it isnt worth going on
indiscriminately setting people on fire
with
this
stuff

Technology to do it
has existed since '60
Ivan Sutherland
started it
but still
you dont
get a bash at it
other shits with bent backwards brains
do

Dont even need sophistication
of
our system
AHI is way out building basis
for systems that
must work for someone
working
at a display
all day integrated
this must be done whole systems
biggest problem in fact

symbiosis
Still,
now,
right now,
there exists
computer-graphic
systems that would blow your
distractions
those shitty things
that interfere
with your brain
living hands-on with the

stuff you're designing inventing
neednt mean you lose grip
on the real structure
I argue working with cardboard
leads toward this
faster than working with
less tangible symbol systems
for
some people least
Trouble
is
that institutional forms
around these symbol systems
screw and stifle
almost everyone being
processed

God
see
how
we have bastardized
the meaning of process
tin of beans graduate school

brains
for
sale
not
worth
a
shit

Out of
tin cans
come PhD processed meat
useless

bridge-playing programs
keep the real world away
at bay

Would Baer be a better Baer
with one no

Baer
keep going
keep struggling with cardboard
no shit
even with this
super
technology
will touch you
for a while
machines machine-like people
with pea brains
in steel jackets
wont touch you
for a
while

When do you use the stuff
without
getting killed
bureaucrat
super technician aerospace IBMized
not
you!

Dave

THE LAMA FOUNDATION IN CONJUNCTION W/STEVE BAER HAS MADE A DECISION NOT TO RE-PRINT THE DOME COOKBOOK IN ITS PRESENT FORM BUT, RATHER, TO USE IT AS A STEPPING STONE TO A NEW LEVEL OF PUBLICATIONS TO BE KNOWN AS: ULTIMATE COOKBOOKS OF FEAR BASIC STUDIES. WE ENVISION, AT THE PRESENT TIME, THAT THESE ULTIMATE COOKBOOKS WILL CONSTITUTE A WHOLE SERIES OF PUBLICATIONS RANGING ACROSS A BROAD SPECTRUM OF IDEAS, INNOVATIONS, TECHNIQUES & FORMS IN WHICH WE WILL ATTEMPT TO FOCUS UPON & REVEAL THE INTERCONNECTED, INTERRELATED & INTEGRATED NATURE OF DIVERSE AREAS & DISCIPLINES.

IN ORDER TO MATERIALIZE THESE COOKBOOKS IT WILL BE NECESSARY TO CALL UPON THE SERVICES & TALENTS OF MANY PEOPLE SO THAT THE VERY ACT OF PUTTING TOGETHER EACH COOKBOOK WILL BECOME IN ITSELF A MEDIUM FOR THE EXCHANGE, HYBRIDIZATION & AMALGAMATION OF EMERGING THOUGHT & PRACTICES. IN THIS WAY, HOPEFULLY, THE PROCESS WILL BECOME AS MEANINGFUL & VALID AS THE FINAL PRODUCT.

THE FIRST PUBLICATION WILL DEAL WITH THE TECHNICS & EPISTEMOLOGY OF NEW STRUCTURES. WE HAVE MADE A TENTATIVE LIST OF BASIC AREAS OF CONCERN AS WELL AS OUTLINING THE NEEDS OF HUMAN RESOURCES.

WE HAVE USED A LINEAR STEP FORM TO OUTLINE THESE AREAS & NEEDS AS A GENERAL INDEX FOR THOUGHT & AS AN AID TO SEEING. THE COOKBOOK ITSELF WILL BE ORGANIZED ON MORE FLUID & ANALOGICAL LINES & LEVELS.

NEEDS:
PHOTOS OF NEW STRUCTURES - CONSTRUCTION PROCESSES
DETAILS - MATERIALS IN USE - PEOPLE AT WORK

DRAUGHTSMEN
EDITORS - CONCEPTS - FLOW - GRAPHICS -

PLEASE WRITE TO US
LAMA FOUNDATION
BOX 444
SAN CRISTOBAL, N.M.
87534

STEVE BAER - ALLOY
BOX 422
CORRALES, N.M.

cont.

TECHNICS

- ZONES
- FERROCONCRETE
- BINI SHELL
- GEODESICS
- MIT JOINT ROBE
- SOLER'S EARTH CATS
- ENGINEERING
- INVESTIGATION OF NEW MATERIALS
- HYPER PARABOLOID STRUCTURES
- AIR STRUCTURES
- NOMADIC - YOU CAN TREE IT WITH YOU
- HARDWARE - SOFTWARE - NOWARE - AWARE
- ERISTOLOGY
- PATHWAYS & ORIGINS OF MATERIALS
- HUMAN MACHINE
- MACHINE HANDINGS
- "FUNK" TIONALISM
- MOUVEY - SOURCES & USE
- FLOW CONSTRUCTION

- PEOPLE COOPERATIVE EFFORTS
- HIRING
- ECOLOGY
- EMERGING LIFEWAYS IN RELATION TO NEW STRUCTURES
- COMMUNITIES - CAN YOU DO IT ALONE - WHY OTHERS
- CO-OPS - TEMPORARY ALLOWS
- HUMAN USE OF MACHINES & TOOLS
- WHERE & HOW TO USE THE TECHNOLOGY & "STATE OF ART"
- NATURAL FORCES - FREE POWER - LIGHTNING THE LEAD
- EMPLOYMENT OF HI-LEVEL DROP OUTS - OPPORTUNITIES
- BRING IT ALONG - WE NEED YOU - ARE YOU INTERESTED?
- POSSIBILITIES FOR NON-"DEFENSE" INDUSTRIES
- META & MEGA PHYSICAL ASPECTS & REAL ATTRACTIONS
- YOU ARE NOT ALONE - CAN WE 'WORK' TOGETHER?
- ENVIRONMENT & GEOGRAPHY
- HI ENERGY LOCATIONS & US LOWENERGY LOCATIONS
- BIBLIOGRAPHY
- PROCTOGRAPHY
- THIS IS A BEGINNING - WHERE ARE WE GOING? -
- WHERE CAN WE GO?

Information Exchange

What do you want to know; what do you want to share; on these, and other, subjects?

Community

Homesteading:

- Planning a Homestead
- Building & Construction
- Maintenance & Repair
- Soil
- Gardening
- Animals
- Food Storage & Processing

Health:

- Food & Nutrition
- Exercise, Work, Posture
- Sex

Human Relations

Land Trust & Tenure

Money, Exchange & Scrip

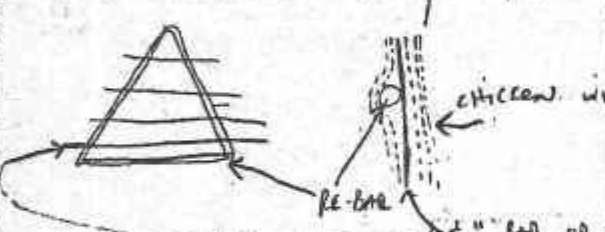
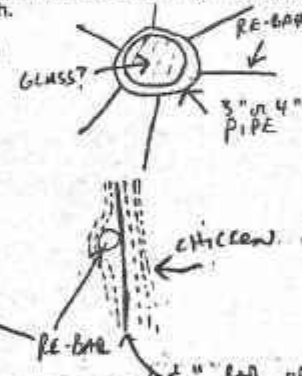
We are now developing a group of experienced persons to whom to submit your questions for answers. Send all questions (and anything you want to share) to: Elizabeth Rauh, Editor Information Exchange Heathcote Center Freeland, Md. 21053

From Lloyd Kahn to Steve Baer

Dear Steve...

The idea of domes of ferro-cemento appeals to me for these reasons
 -silicon is the most abundant element on earth's surface
 -the idea of cutting compound angles, bevels, then covering with something that's going to leak has always seemed too hard.
 -it ought to be cheap, strong, waterproof, and best of all it's a monolithic substance so the dome will be all of one piece.
 Here's how I plan on doing it: first pour floor and leave rebar sticking up at dome-strut-intervals. (Floor could also be of F.C., with airspace under-would avoid disadv's of most conc floors. But that would be a later development.)

Then frame dome with either 1/2" rebar or 1/2" conduit. (Have written to Jay Baldwin-also just before yr. ltr. came, asking him details of connectors on conduit dome he built). Rebar could maybe be welded at hubs
 Like burn holes in pipe, weld steel in each hole, maybe let center of pipe be glass.
 Then wire 1/2" steel (or bailing wire, or coat hangers) to frame at 3-4" intervals (boats are 2" spacing) -enough to hold the mesh from sagging. Then the layers of mesh-chicken wire, or hardware cloth - 16 gauge with 1/2" mesh.
 Boat bldrs use 6-8 layers of mesh, both inside and outside reinforcement.



Anyway lots of just plain trying it to be done here, to determine how much and where and what kind of wire to use. Try different combinations on When it's all set, here's what I like about it: You've got your form. You just plaster it. Mix is:
 -2 parts sand-sharp fine silica sand that passes thru No. 8 sieve
 -1 part cement - No. 5 portland
 -replace 15-20% of the cement with a POZZOLAN (Not pozzolith or any brand having calcium chloride). The pozzolan 'reacts with free lime in concrete to form insoluble silica gel, strengthens concrete and reduces permeability.' There are various types of pozzolan: fly ash, diatomaceous earth, others.

USE AS LITTLE WATER AS POSSIBLE AND MIX IN MORTAR MIXER. It's got to be well mixed, no lumps. Then you put on gloves, and slap it on. Another guy on the inside makes sure you don't miss any spots. If you do he shoves wire thru to show you where. Put poly sheet on ground to catch surplus for re-use. After a section is complete, trowel. It's of course best to get a bunch of people working on it so you can do whole thing in one operation, but they say cold joints are o.k., as long as joint is roughened, moisturized and a wet-to-dry epoxy resin applied.
 Then cover with poly or burlap bags and keep moist at least 7 days any rust on wire or steel should be wirebrushed before mortaring. A big factor seems to be dry mix. Can put elec conduit and water pipes right inside the framework. I plan on trying to get as thin as possible - maybe 1/4", with more mortar around re-bar, like ribs. Boats are 1/4"

Another reason I am excited about this idea, is the attitude on the part of the boat bldrs on the coast here who're doing it. They are all infected with the enthusiasm bred from working on something new and exciting. Another ltr. I had mailed - just before yours arrived was to a guy in Sacto who has a firm 'Fibersteel' asking him for some dope. I plan on visiting his plant next trip north. He is building boats, and docks of F.C. On drawing board is 225' ocean barge, and 900 ton floating drydock, and he is said to be collaborating on a book on F.C. for home building. Also when in S.F. we're going to see a sculptor who's supposed to know more about F.C. than anyone else.

As far as exoskeletons go, seems that F.C. would be simplest with integral skeleton but maybe you've got something else in mind. I was thinking of spraying plastic on inside for insulation, after.

ONYX suggests

Publications Onyx Recommends:

1. The Explorer's Trademark Log
P.O. Box 1667
Annapolis, Maryland 21404
3.00 1 yr 7.00 3 yrs
5.00 2 yr 50.00 life
2. Gokey Sportsman
Gokey Company
St. Paul, Minn.
expensive but lots of stuff much unusual
a few real bargains like hand-made-to-order boots for \$35.00 and they are great. Wear forever.
3. There's a jewelry book by a guy named Oppi Untract that is something else.
4. Aircraft Catalog
Aircraft Tool & Supply Co. Inc.
215 Park Avenue
Hicksville, New York
There may be a better one but I've never seen it.
Costs about \$1.00
5. Leonardo Sideri
1809 Gough
San Francisco, Cal.
Phone 415-771-5475
Leonardo is one of the world's great catalog collectors and information traders. He is wonderfully personable and willing to exchange.
He may also be reached @ S.O.M. architects in S.F.
6. Fisher Scientific Co.
like Van Waters & Rogers but bigger
See Thomas Reg. for address, etc.
7. The three Pillars of Zen
by Phillip Kaplean Beacon Press \$2.45
is there a better book on Zen?
8. Cohn Musical Instrument Co. Catalogue - full of all kinds of nifty little goodies basically for musical instruments but most highly adaptable...
See Thomas Reg. for add.
8. Ascot Chang Co., 34 Kimberley Road, Kowloon, Hong Kong
Custom made to measure shirts by mail starting @ about \$4.00 each. No minimum order. Wild fabrics sometimes-cat. is a swatch book. Free.

ONYX is taking form and since function follows form, its function still a bit unclear,

ONYX published the first broadsheet in October 1968; a copy is enclosed. We are giving the first 750 of 1500 away free but most are gone. We will send copies to those who request them for free until 750.

We are not (so far) oriented toward making money so much as we are interested in communicating. We plan to send out broadsheets as long as we can afford to, hopefully expanding our mailing list as we go. The third broadsheet is on the boards. The broadsheets will describe our projects and themselves. The third sheet will describe the Daily Earth Chronicle (a megasculpturetemporarydwellingmonument) and other projects. The fourth is shaping up to be a cooksheet.

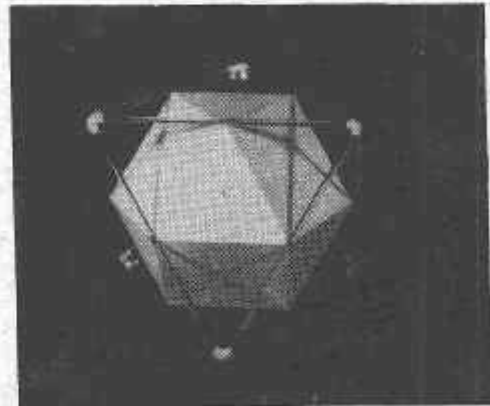
ONYX 406E83/2BNYC10028USA

\$100 UNDERSTANDING

If there's something you want to say and you think Careers Today is the place to say it, it may be worth \$100. That's the minimum we pay for any articles, reviews, drawings or other editorial material you send in and we publish. Do it and mail it to Arlyne Lazerson, Research Chief, Careers Today, Del Mar, Calif. 92014.

Jim Nugent suggests

IN BUILDING MODELS OF POLYHEDRA, DOMES, & ZONES OVER THE PAST FEW MONTHS I'VE RUN INTO A NUMBER OF INTERESTING MATERIALS & SOURCES OF INFORMATION AND SUPPLIES. TO BUILD THE STICK MODELS IN PHOTOS 1 & 2 I USED 1/8" EXTRUDED ACRYLIC ROD (COPE OR CADCO) AND VINYL JOINTS THAT I CAST MYSELF TO EXACT SPECIFICATIONS. THE VINYL (COPE CO-FLEX PLASTISOL #14) WAS HOT DIP COATED ON JIG-BENT BRASS RODS. THE VINYL MENTIONED IS VERY SIMILAR TO THE COATING FOUND ON THE HANDLES OF SO MANY TOOLS.



FOR ABOUT FIVE DOLLARS AND SOME TIME, ANYONE CAN PRODUCE HIS OWN SET OF HIGHLY ACCURATE JOINTS & STICKS FOR MODELING PURPOSES. I'VE ALSO BEEN PLAYING WITH SOAP-BUBBLE MODELS AND HAVE RUN ACROSS A PLASTIC (JOLI FORMAFILM) THAT WILL FORM THIN TRANSPARENT

Handwritten signature or mark.

FILMS ON WIRE FRAME MODELS. USING THIS PLASTIC I'VE BEEN ABLE TO PRODUCE PERMANENT MODELS OF TENSED INTERIOR, ZERO VOLUME POLYHEDRA AND ALSO TO PRODUCE MINIMUM SURFACE SKINS, HYPERBOLIC PARABOLOIDS, HELIXES, AND MOEBUS STRIPS. THIS PLASTIC MATERIAL SMELLS LIKE, LOOKS LIKE, AND TASTES LIKE AIRPLANE CEMENT BUT IT COMES IN 1 PINT CANS FOR ABOUT \$3.00. ABOUT THE ONLY "ADEQUATE VENTILATION" FOR THIS ABOUT OF AROMATIC SOLVENTS IS OUT DOORS WITH A STIFF BREEZE.

FOR SPHERICAL TRIG & MODELS OF DOME INTERIORS I'VE FOUND THE TRANSPARENT 'PLEXIGLAS' HALF SPHERES LIKE IN PHOTO 3 & 4 TO BE EXCELLENT. THEY ARE AVAILABLE MOST PLACES IN LOCAL KITCHEN UTENSIL SHOPS, BUT CAN BE PURCHASED DIRECT FROM THE MANUFACTURER (MASTERCRAFT MEDICAL & INDUSTRIAL CORP.).

ANOTHER INTERESTING PLASTIC IS FOMECOR WHICH IS A 1/4" SANDWICH OF STYROFOAM BETWEEN TWO LAYERS OF PAPER. BECAUSE OF ITS LIGHT-WEIGHT, LARGE SIZE, AND VERSATILITY IT SHOULD BE GOOD FOR BUILDING VERY LARGE STRUCTURES. THIS MATERIAL IS DIFFICULT TO LOCATE. IN THE MIDWEST, AT LEAST!

IN BUILDING ROTATIONAL TRANSFORMATION POLYHEDRA MODELS (JITTERBUG NETWORKS AS BUCKY CALL THEM) I'VE FOUND BRASS TUBING TO BE INVALUABLE ESPECIALLY WHEN MATED WITH SUITABLE SIZES OF ACRYLIC ROD. BRASS TUBING AS SMALL AS 1/16" OUTSIDE DIA. IS AVAILABLE (K&S ENGINEERING, KEMTRON, MILLED SHAPES, & SPECIAL SHAPES) ALONG WITH SHEETS, CHANNELS, ANGLES, AND STRIPS.

FINALLY A NUMBER OF PLASTICS THAT SOUND USEFUL, BUT THAT I'VE NEVER TRIED MYSELF ARE SOLD BY MAIL ORDER BY COPE OF ILLINOIS AND THE NATIONAL CADCO COMPANIES. CADCO PUTS OUT A FREE CATALOG AIMED AT INDUSTRY WHILE COPE'S FREE CATALOG IS AIMED AT HIGH-SCHOOL SHOP TEACHERS AND TINKERS. CADCO'S CATALOG HAS EXTENSIVE CHARTS OF PHYSICAL PROPERTIES IN SCIENTIFIC LANGUAGE WHILE COPE TRANSLATES THIS INTO POPULAR MECHANIC'S MAGAZINE'S TYPE OF RULES OF THUMB.

JIM NUGENT
CARBONDALE, ILL.



One of the overhead lights was out, wrapping much of the parking lot and its cars in darkness. So much the better. I went down the rows of cars until I came to a new Ford. None of the General Motors or Chrysler makes would do. Detroit was making it rougher for hard-working car thieves, I guessed.

The Ford I'd selected was unlocked, and I had no key. This is where preparations paid off. From my pockets I removed two wires with alligator clips on each end of the wires. I opened the hood, attached one clip to the battery post and another to the 12-volt side of the dropping register along the side of the engine mount. Then with the other wire I jumped a line from the battery post to the starter solenoid. I worked the accelerator clip to move fuel to the carburetor, touched the second alligator clip to the solenoid, and the engine coughed immediately into life. Good; the automatic choke was holding the engine fast enough to keep it from faltering. I removed the wires, closed the hood, and climbed in. The headlights went on as I pulled the knob. As I expected, neither the radio nor the turn signals operated; they were linked directly to the ignition system that I had bypassed.

Foam Housing-----

There are three ways of applying rigid urethane foam, pouring, frothing and spraying. One of the simplest methods for structures is to stretch a membrane over some supports or blow up a large weather balloon and then spray it with 2 or 3 inch thickness of foam. Then cut windows and doors, paint the surface to protect the foam from ultra-violet rays. To figure costs, go on the basis that fire-retardant foam costs \$.45/lb and in spray applications, has a density of 2 or 2.5 lb/cu.ft. Thus \$.08/board foot.

THE BEST BOOK ON FOAM HOUSING is Structural Potential of Foam Plastics for Housing in Underdeveloped Areas, published by the Architectural Research Laboratory, U. Michigan Ann Arbor, Mich. \$5.--

Another source is Mobay Chemical Co. Foam Chemicals Group Pittsburgh, Pa. 15205 Ask for brochures and series on Urethan in Building.

Some of the main suppliers of foam are: PPG Industries, Berkeley, Torrance, Pittsburgh, etc. Reichold Chemical Co. White Plains, Azusa Isocyanate Products Wilmington, Del. Cook Paint and Varnish, Milpitas, Calif, Houston, etc. CPR Division, Upjohn Co.

So far these people have been very helpful in getting serious people started with foam. Student architectural types have an entre that cant be best.

People who will spray foam include insulators, roofers, painters and others. You might have to kind of dig them out.

In Salt Lake, The Ernest Wilson Co. In San Jose, Calif., Infinity International 1740 Almaden Rd. (408)269-8760

If you have some interesting designs and get in early enough, we may spray foam for you just to get some experience if you pay for the material.

Any other questions, call Ron Swenson 777 No. First St. San Jose, Calif. (408)294-3232

Of local interest

ESALEN INSTITUTE

Compressed Time	June 5	San Francisco
One evening workshop with Stewart Brand	\$10 per person	5-11 P.M. with dinner break

Multiply time by 1/12. An hour passes every five minutes. It's meal time every half-hour or so. Night is brief and oddly restful. Altogether it's an unborring, unhurried experience in which more (and different) accomplishment is possible than in normal time. This evening will be paced by clocks, sounds, lights, meals, and social cues to contain the events of a weekend.

Stewart Brand has worked on two exhibits (Astronomia, IBM's permanent exhibit on the history of astronomy at the Hayden Planetarium in New York; We Are All 1, USCO's environmental art human be-in at the Riverside Museum, New York in 1966), has made two sound-slide-film shows ('America Needs Indians', 'WAR:GOD'), and has organized two high energy public events ('Trips Festival' in San Francisco; 'Whatever It Is' at San Francisco State College). At present he heads the Whole Earth Truck Store and Catalog Division of Portola Institute in Menlo Park, California.

The Use of Tools

David Evans, Stewart Brand and Whole Earth Catalog staff.	May 23-25	San Francisco
	\$45 per person	Begins 8 PM, Fri., May 23

If a major dynamic of human evolution is the interaction of man and his tools (Washburn and others say it is), then it's worth investigating some of the new modes of tool use - from the satisfying do-it-ourself labor of intentional communities to the intense experience of living and working on-line with a powerful computer facility.

David Evans is currently a Research Engineer in the Augmented Human Intellect Research Center of Stanford Research Institute. His interests are in planning and design methodology (particularly the role of highly interactive computer systems as aids in planning and design processes), in technological forecasting, and in studying the process of change in a technological society. He holds an MS in Engineering-Economic Planning, and an MA in Economics, both from Stanford University, and is now completing a Ph.D. in Civil Engineering.

Stewart Brand (above). Access to tools is the function of the WHOLE EARTH CATALOG, published by Portola Institute. It is a periodical which gives evaluation and purchasing information on a broad range of tools and techniques associated with independent education: grain grinders, calculators, design texts, tips, film manuals, dome plans, lab equipment, buckskin, electronic gear, cybernetics theory, methods of learning, etc.

for location and reservations: Esalen Institute P. O. Box 31389 San Francisco, CA 94131 Phone: 431-8771

WHOLE EARTH TRUCK STORE

On The Road



Truck Store at ALLOY

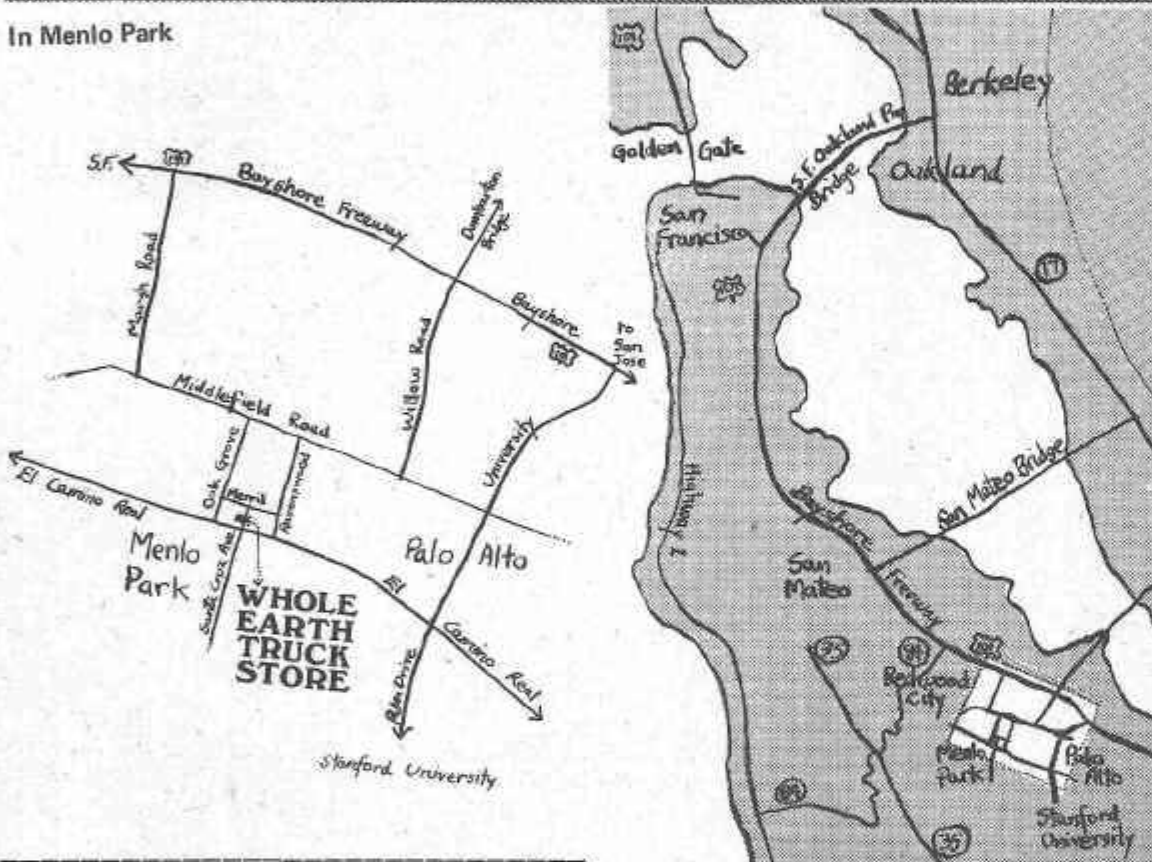
The initial fantasy behind the CATALOG was for a truck store out in the boondocks carrying tools and information among the intentional communities, schools, and so forth. The actual CATALOG took dominance gradually because it could reach more people more economically. But we couldn't shake the truck store. It was a superb excuse to flee the city and visit friends where there was dust and stars and calluses and some odd new shapes looming up.

Last winter Tom Duckworth joined the scene with fanatic intent to take on the travelling Truck Store. The trip to ALLOY kind of changed his romantic bubble. He found out that the Truck Store is not only feasible but fun — the road, the communities, the customers are really there and really delightful. And the problems that occur can be managed. So.

This summer a truck stocked with Duckworths and the contents of the WHOLE EARTH CATALOG will be on the road. The attempt is for the activity to be self-supporting, for sales to cover Tom's expenses. Additionally he'll be carrying gossip, rumor, love, and other free information. He will be gathering whatever might add to the Truck Store and CATALOG's usefulness.

If you're in a scene that could use a visit by the Truck Store this summer, let us know. The form below may help.

In Menlo Park



A major research source of ours is the Menlo Park Whole Earth Truck Store, which stocks most of the items in the CATALOG. We see who's buying what. We hear complaints and suggestions. We try out items that might be in the next CATALOG. We have a place where friends can come and see what's happening.

Hours: Monday-Thursday, 11 am - 6 pm
 Friday, 11 am - 9 pm
 Saturday, 10 am - 3 pm
 558 Santa Cruz, Menlo Park, CA. 94025
 Phone: 415 323-0313

Visit by Truck Store

The Whole Earth Truck Store wants to roll. ALLOY injected the adrenalin, and now... if you want a visit we need to know:

When this summer is best for us to come by? When shouldn't we visit?

Where are you? Details please, map preferably. (This information will be confidential unless you specify otherwise)

Phone?

Mail address:

Who should we ask for?

How many are you?

Other scenes nearby

Things you especially want us to bring

Thank you

send to:
 Whole Earth Truck Store
 558 Santa Cruz
 Menlo Park, CA 94025

Subscription

send to: **WHOLE EARTH CATALOG**
 Portola Institute
 558 Santa Cruz, Menlo Park, California 94025

amount enclosed

- \$5 One issue of CATALOG ___ Fall ___ Spring
- \$8 One year subscription: two CATALOGs and four Supplements
 starting ___ Fall CATALOG ___ Jan Supplement ___ March Supplement
 ___ Spring CATALOG ___ July Supplement ___ Sep Supplement
- \$25 One year Retaining Subscription
- \$100 One year Sustaining Subscription



The Whole Earth Catalog is one division of **PORTOLA INSTITUTE, INC.** Other present activities of the Institute include

Computer education for all grade levels



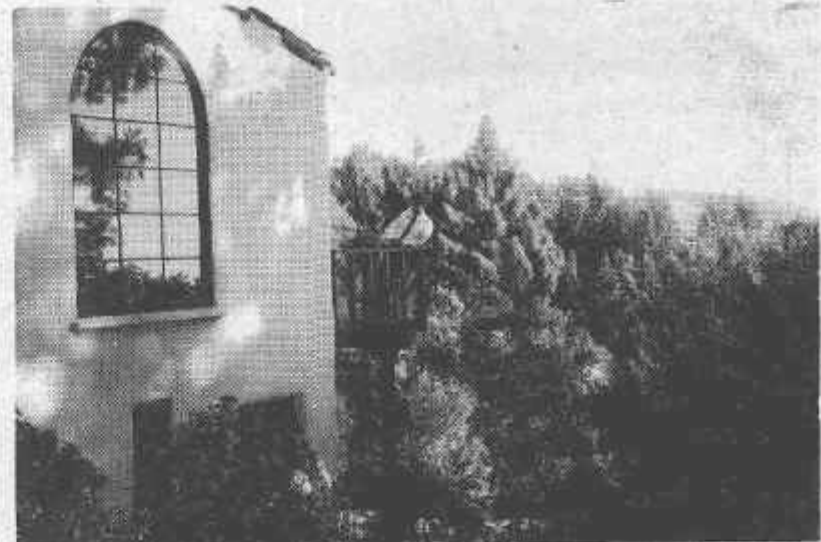
Robert Albrecht, two members of the Computer Club, and two Commodore calculators.

Simulation games for classroom use



Dennis Dobbs, the Pacific ocean, and a class on the beach of simulation Atlantis.

Ortega Park Teachers Laboratory



Ortega Park Teachers Laboratory, one teacher, one student, and 70 acres of redwoods.

PORTOLA INSTITUTE was established in 1966 as a nonprofit corporation to encourage, organize, and conduct innovative educational projects. The Institute relies for support on private foundations and public agencies, to whom specific project proposals are submitted.

Because Portola Institute is a private organization with no need to produce profits or guarantee "success", it can experiment with new and unusual educational projects that would be difficult to administer within more structured organizations. For this reason the staff and facilities of the Institute are deliberately kept small and flexible.

Within its framework a wide variety of projects dealing with innovative education can be created as people with ideas are able to interest people with funds. New projects are always being considered, both within the existing divisions and programs, and within as yet unexplored realms of the learning experience.

More information on Portola Institute, please. Especially

zip

The presence of the world is in us all the time. You don't need television or newspapers to know about the war. You can feel it.

Love is joy.
Joy is love.

The framework is made of fencepost pipe they cut to size at the factory. We flattened the ends in a vise and bolted them together. The frame for the whole dome cost about \$180.

It's amazing that a hundred hippies could come together and even eat at all.

Catch-22 says you can't live in a temporary structure.

Except temporarily.

So there she was with a 2-day-old baby hanging off her tit directing the construction of the dome.

There's some far-out pitfall beyond that solution.

You know it isn't working for them when they give it away for people to try out.

If there's one thing we're good at, it's painting stuff up.

The world is one big blank working out its destiny as fast as it can.