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RAIN

ECO-NET

RAIN

What if Peace Broke Out?

January/February 1984

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RAIN magazine

Volume X, Number 2
January/February 1984*

**See explanatory note below table of contents*

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RAIN Magazine publishes information which can help people lead more simple and satisfying lives, make their communities and regions more economically self-reliant, and build a society that is durable, just, and ecologically sound.

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Note to Librarians
(and Other Date-Conscious RAIN Readers)

We've already anticipated your question: "If the last issue of RAIN was for October/November and this one is for January/February—what happened to December?" Well, nothing, really. The fact is, more than a year ago our issue dates and our actual production schedule got slightly out of sync. This one-time date shift is merely a painless method to move us officially back into "real time." We're not skipping an issue, our volume and issue numbers continue in unbroken sequence, and the length of your subscription remains unchanged. —JF

LETTERS

Dear RAIN:

Thanks for subscription information and the women's issue [RAIN IX:4]. I much enjoyed Margaret McCrea's article ["Women and Spirituality"] and have bought all the books she lists on page 12.

I'm a little old lady living on social security, so I have to subscribe at poverty rates. I can see that RAIN is a product of love, and I am turned on to *that*.

Love,
Ramona Berine
Los Angeles, CA

Dear RAIN:

You are very important to me. You give me courage for the future. You give me wisdom for the present and insight to our past. I want you to continue doing what you do so very well. Keep it up!

Howard L. Pazdral
Portland, OR

To the Editor:

I would like to comment on Tom Bender's article "Is Socialism the Answer?" [RAIN IX:5]. In his article Bender asserts that socialism, as it exists in the world today, has many of the same problems as capitalism, public ownership doesn't always work, and a transformation of values is essential for changing society. I substantially agree with these points.

However, Bender's analysis of socialism is just half of the picture—wholly focused on the economic relations of society. An emerging view of socialism, which I call democratic socialism, emphasizes not only the economic arena but also the inter-relationship of economics and the social sphere—relations among women and men, democracy, social justice, and equality of opportunity. This view of socialism asserts that promoting values of feminism and grassroots democracy is as important as reorganizing the means of production.

Public ownership by itself is certainly not the answer—it must be combined with democratic management and worker and community control. Nowhere in Bender's discussion does he talk about quality of work and control over the workplace by workers—essential ingredients for my socialism.

A radical transformation of values is necessary. However, I don't believe that the positive values of cooperation, mutual respect, full realization of human potential, compassion, and unity can flourish in the milieu of a capitalist society. Capitalism and "free enterprise" promote competition, not cooperation; hierarchy, not equality; and decision making based on profit, not on meeting human needs. Yes, we need a radical change—and patching up capitalism is not sufficient.

In my view countries that are "socialist" have made a serious error by adopting centralization as the primary method of organizing the economy. Appropriate economic scale, combined with community and worker control, is necessary for protecting the environment and meeting people's needs, including the basic need to participate in decisions affecting their lives.

Democratic socialists have accepted the challenge of working for a view of the world that is thoroughly democratic, incorporates a feminist analysis, and recognizes the insights of the appropriate technology and environmental movements.

Our vision cannot just be concerned with spinning the wheels of production. Economic relations shape the social and cultural spheres, but the reverse is true too. We need radical changes on all fronts—economic, social, cultural, and personal. One place I find theory for incorporating this understanding into viable political action is among democratic socialists.

Beverly Stein
(National Executive Committee,
Democratic Socialists of America)
Portland, OR

Dear Rainmakers,

Yes, indeed, I have been tardy in my renewal—thanks muchly for the reminder. But what really got me off my duff was spying your Special Anniversary Issue on the shelves at Puget Consumer's Co-op, leafing through it to see what goodies you'd packed into this gala edition, and running across my own comments about *Zen and the Art of Motorcycle Maintenance* in your summary of RAIN's favorite books.

I'm working on an article for *In Context*, your fascinating new progeny to the North, and I'd love to do something more substantial than subscription letters for RAIN, the granddaddy of 'em all. In fact, a suggestion: how about "Zen and the Art of Motorcycle Maintenance 10 Years Later," a 1984 review of the (perceived) progress of appropriate technology in light of the 10th anniversary of the publication of Pirsig's seminal classic, using Pirsig's own standards of *Quality*?

Sound intriguing? Give me some bounce-back, if you think so. 'Till then, send me that Anniversary Issue post-haste. I can't wait to digest the rest.

Many Happy Returns,
Drummond Reed

RAINDROPS

RAIN staff meetings have, for the past several months, borne an unfortunate resemblance to Boy Scout gatherings. It was certainly never our wish to become, even momentarily, a nearly all-male staff, but Nancy left us last spring for health reasons (see her report below), and Ann departed in September to pursue an M.A. in Urban Planning with a concentration in community development. Both remain close to RAIN, Nancy serving on our Board and Ann functioning as our all-purpose advisor. But somehow, without the daily infusion of their considerable talent, energy, and good humor, things just aren't the same. . . .

The good news is that we are adding some exciting new talent and moving back toward gender balance. Sara LaBorde, our new intern, recently received her M.S. in Natural Resources/Environmental Education from the University of Wisconsin-Stevens Point. She has taken on some of the tasks connected with our administration of the U.S. Department of Energy's Appropriate Technology Small Grants Program for Oregon. By the time you read this, our new editor, Tanya Kucak, will have arrived from California. Tanya previously served on RAIN's staff in 1981 during the production of our book *Knowing Home*. She has since worked as an editor with *InfoWorld*, a weekly computer newsmagazine. She has one of those typically eclectic Rainmaker backgrounds: food co-op organizer, solar activist, geologist, stained glass artist, and magna cum laude graduate from Princeton. Her interests are easily as broad as RAIN's, but she lists her particular passions as "words, rocks, and architecture."

I'll be leaving RAIN, for the second time, shortly before this issue goes to press, but in the usual manner of Rainmakers emeritus, I'll be standing by, watching RAIN's continuing evolution with parental pride, and helping out as needed. I'm sure all of us in the extended RAIN family—subscribers, contributors, and former staffers—can look forward to much stimulating reading in issues to come. —JF

In *A Bitter Fog* (see review in RAIN IX:5) Carol Van Strum points out that we all carry in our bodies the burden of indiscriminate use of herbicides and pesticides. Too, we are subject to any number of environmental poisons—in our soil, water, or air. Because of these and other factors, including diet, stress, genetic tendency, food additives, and/or corporate drugs licensed by the Environmental Protection Agency without proper investigation, one out of four people will deal with cancer before the end of this century.

Having cancer has been both a frustration and a challenge in my life. It has also afforded me momentous insights that would have otherwise been unavailable. Among the many messages of love and healing I have received in the last six months, this one holds a special meaning for me: "It seems we have a responsibility to fight for freedom on any level we can, and my dear sister, you have the opportunity to do this in a profound way."

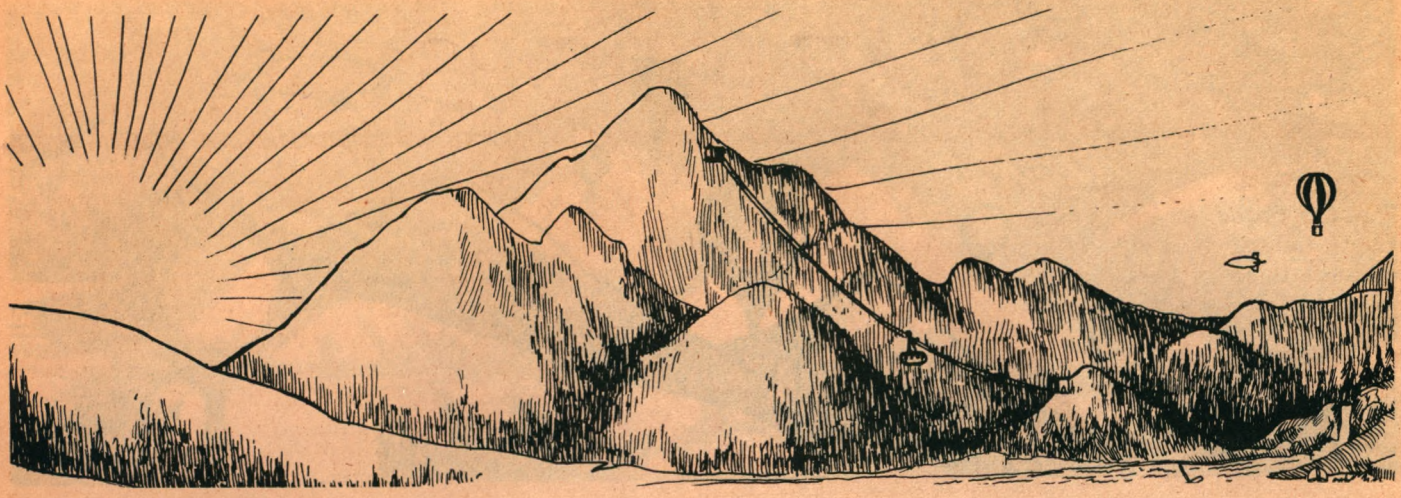
It is an opportunity for all of us. Like the insects that evolve so rapidly they can outlive the effects of the toxins used against them, we are called on by cancer to transform physically as we transform politically, socially, and spiritually. I have thought about East Indian mystics who walk through fire knowing they will be unharmed. These are rites of purification. We heal together, all of us. We walk through fire to heal ourselves and the world. —Nancy Cosper

Nancy would like to thank the RAIN readers who have sent their good wishes since we mentioned her illness in our June/July '83 issue. She is feeling better now, and remains active in RAIN affairs.

UPDATE: The RAIN Reader Survey

We received an excellent response to the reader survey that went out with our August '83 *Sprinkle* newsletter. We'll be reporting in detail on the results of that survey in our next issue, but in the meantime, your many thoughtful comments and suggestions are already bringing changes to RAIN. A number of you indicated an interest in our financial situation or expressed your willingness to help out by paying more than the usual cost of a RAIN subscription, so we are preparing a detailed financial report to appear in our next issue, and we are establishing two new subscriber categories—Contributing and Sustaining—with this issue. (See page 39.) Many of you also told us you would like to see more news in RAIN about interesting developments in your particular area of the country, so in our next issue, we plan to initiate a regular "Guest Bioregion Report" to complement our "Pacific Northwest Bioregion Report."

Thanks to all of you who took the time to send us your praise, criticism, and constructive comments. Look for our article on the survey results in the March/April RAIN. —JF



BRIDGING HEMISPHERES: Peace Through Communications

AN INTERVIEW WITH JOEL SCHATZ

In the February/March 1983 issue of RAIN, we printed letters from Oregon Senator Mark Hatfield and A. Khudiakov, press-attache for the Union of Soviet Socialist Republics' Mission to the United Nations, supporting Joel and Diane Schatz's peace visualization project. The project's objective, as we have mentioned before in RAIN, was to create a poster depicting "what the world would look like if peace broke out." (See detail from poster on our cover.) Joel and Diane organized a series of workshops to determine how people from many walks of life envision peace, and in August they visited individuals and groups in the Soviet Union to find out how people there imagine a peaceful world. They returned shocked and ecstatic. Their preconceptions of what people's feelings might be were shattered, and the Soviets' desire to improve direct *communication with Americans overwhelmed their hopes and expectations. Enter telecommunications. For what emerged from their trip was a will and a way—a communications medium, besides their first peace poster, for both imagining peace* and *creating it. RAIN intern Than James and I took a drippy Oregon afternoon to discuss with Joel what he and Diane discovered. —KN*

RAIN: What did you learn from your inquiry into what the world would look like to the Russians if peace broke out?

Schatz: We went there to negotiate arrangements to conduct formal peace visualization workshops which we could document on videotape. In the process, we also sampled a lot of opinions from Russians on their version of peace, and it was virtually identical to the kinds of information we've been extracting from people in North America. People there would like fresher food, improved medical care, better schools, certain kinds of consumer goods to make life a little easier, less alcoholism. It was obvious there are certain universal kinds of human needs that drive the Russian people just as we're experiencing them in this country. There's no difference, really. They go about it in a different way from a government standpoint, but the fundamental yearnings and dreams seem to be the same.

RAIN: You were also involved in trying to establish telecommunication links between Russian and American groups. What was their response?

Schatz: There was a uniform, exuberant response. Literally everyone we approached with the possibility of extending computer conference networks from the U.S.

into the Soviet Union jumped at the opportunity. We asked people on the Soviet State Committee on Publishing, on the Soviet Peace Committee, on the Soviet Women's Committee, on the Committee on Youth Organizations, and on the Institute for U.S.A. and Canadian Studies whether they would be interested in exchanging information on a daily basis with people in the U.S. vis-a-vis the peace issue, and they all want to do that. In fact, I have here what may be one of the first messages out of the U.S.S.R. by computer. It talks about a biochemistry computer conference scheduled for December.

Our major interest in the linkage was for peace projects to be implemented by these daily changes.

"We talk about the freedom of individual choice. They talk about freedom *from* poverty, freedom from illiteracy, freedom from illness."

RAIN: What other instances point to their readiness to telecommunicate?

Schatz: The interactive video exchange via satellite—a space bridge—which occurred in May 1983, linking the US [Rock] Festival in San Bernardino, California, and Moscow, was played on Soviet television to an estimated 130 to 150 million people. It was a half-dialogue-and-half-music exchange. The dialogue was between astronauts, politicians, educators, school children. It was an unscripted, uncensored exchange followed by an exchange between rock bands. Music from a Soviet band was broadcast in San Bernardino by large screen, and images of American rock musicians were broadcast in studios in Moscow. All live, interactive broadcasts. It concluded with the first transnational jam-session of good jazz in history.

Another [exchange] took place in July 1983 in San Diego. It was a film festival, focusing on children's films. It was really successful. We obtained English translations of reviews of this that appeared in Soviet newspapers. Mr. Gromyko personally congratulated the director of Gastlordio Studios for the success of the satellite exchange.

RAIN: Why have you chosen to focus on computer exchanges?

Schatz: While space bridges are a wonderful, powerful, group-oriented experience, they are very expensive. Space technology isn't at the stage where people can afford interactive video daily, whereas computer conferences can be maintained at a fraction of the cost. It's also the kind of network that enables groups to do serious work, to exchange scientific reports, to actually hold problem-solving conferences, to use electronic mail. There's been a long tradition of exchanges with the Russians in the arts, the sciences—astronomers and meteorologists, for example. There are millions of exchanges each year between Soviet and American ham radio operators. They will simply facilitate communication instead of having to travel, or make expensive phone calls, or suffer the agony of mail delays. Why do [the Russians] want to talk? I think what prompts them most is survival.

RAIN: What historical factors influence their deep feelings for survival?

Schatz: They're preoccupied, almost daily, with memories of World War II. Men wear campaign ribbons on the outside of their suit jackets. Fresh flowers are found on military memorials all over the cities every day. A young bride and groom will leave a wedding ceremony and will place fresh flowers on military monuments.

When they threw out the tsar in their big revolution, there were some who really wanted to redistribute the wealth, but there wasn't a lot to distribute, except for some palaces and paintings. It seems like what they're trying to do is first satisfy the basic needs.

You see, when we talk about freedom in this country, it's with a completely different set of semantics than when the Soviets talk about freedom. We talk about the freedom of individual choice to do what we want to do. They talk about freedom *from* poverty, freedom from

illiteracy, freedom from illness. This relates to their whole history of being mauled century after century by outsiders as well as by their own leaders.

There's been a transformation within the country since the Second World War. At the end of the war, the ethic was self-sacrifice; everyone was expected to do without for the good of the motherland. Now all that's been changed into something like self-improvement, into producing more, into improving the standard of life—more color TVs and so on. People are producing food in Russia for private profit on plots owned by the state. They get a greater yield per hectare. There's not a simple dichotomy between capitalism and socialism.

RAIN: What impressions did you pick up about their views of American culture?

Schatz: When it comes to peace, they can't imagine how we can have a world at peace unless such basic needs as food, medical care, literacy, and employment are first satisfied. Russians seemed aghast at the behavior of the U.S. They view us as the wealthiest country in the world. They can't understand why we have so much surplus and overlook the poorest members of our society. They quote figures quite accurately: three million homeless in the U.S.; 10 to 12 million out of work; millions without medical care. I don't think that what they're doing there is so much a function of Marxism as it's a long-standing motivation for survival and lifting themselves out of the fields.

RAIN: Have plans for the peace poster changed since your trip?

Schatz: Well, we've put some additional things on it. We put a space bridge on, and we've got a lot of high-tech communication symbolism— particularly linking First and Third World—to speed up the flow of quality information to places that need it the most. This peace poster is based mostly on the perceptions of Americans. The next peace poster will be a composite of American and Soviet images of peace, with more Third World connections built into it, since most of the global population is living in poverty. There seems to be a real competitive thing going on between Ronnie and Yuri when it comes to the Third World. We want to address that.

A lot of things made sense to us, having spent three weeks there, in terms of [Soviet] attitudes toward Third World countries. There's a tremendous identification with people who are trying to redistribute wealth. They look at something like the arms race and say openly: "We can be accused of a lot of things, but at least we're not fueling the arms race to make gigantic profits for certain individuals." That's one difference between the motivation to build more weapons between the two cultures. I think Mr. Reagan has it wrong, calling these people evil; I would prefer to call them frightened.

RAIN: Does this fit in with their desire to communicate with us?

Schatz: Yes, but they're also very interested in the U.S. They need a lot of input to do what they want to do now: build a consumer society. We saw Walkmans on the street, kids with "ghetto blasters" playing Pink Floyd in public, the influence of Western clothing style.

"We ought to be the last people in the solar system to want to discourage communication with anybody."

They want everything we've got—like the rest of the planet seems to want. They're wanting to make those rewards possible but not by sacrificing people on the low end. The entire culture is integrating and coping with a history of abuse. I would say the biggest lesson we received from our visit was the need to study more of the history of the Soviet Union, to understand where they're coming from today, that [the Soviet system] isn't some diabolical plot to squash planetary consciousness.

RAIN: What are you working on, now that you've returned from the Soviet Union?

Schatz: We're creating interest in space bridges in Seattle and Portland. I would like to hook schools in both countries—have kids work on collaborative projects. I'm working on a project with a school near Portland to

do a space bridge with a school in Moscow. The City of Seattle wants to build space bridges with its sister city, Tashkent, U.S.S.R.

It's a time of enormous opportunity. What do we have to fear if we truly believe in the first amendment? The freedoms we enjoy can only be maintained by preserving the right to have free and open discussion. We ought to be the last people in the solar system to want to discourage communication with anybody, unless people feel such lack of confidence in freedom and democracy that they think they'll catch a case of communism if they talk to a member of the Soviet government.

RAIN: What do you think lies ahead for people-to-people communication?

Schatz: One of the [facets] of high technology that fascinates me is its potential for quietly and rapidly rendering international frontiers less important than they are at the moment. The first computer was made operational the same year we destroyed Nagasaki and Hiroshima. So it's kind of a race between communications and nuclear obliteration. The advent of microwave dishes and associated technologies is exciting to me as a move toward decentralized communications. Someone just called me to say a friend in Salem, Oregon, picked up a Soviet soap opera by microwave, and they taped it from a Soviet satellite that goes around the North Pole. They're now picking up Soviet television stations every day.

It's impossible not to be involved in this because it's global by definition. Ham operators in the Soviet Union and the U.S. have been talking to one another for decades without any problems from their governments. I think we'll see an inevitable opening up of communication, because there's no way for them to stop it. You can put a microwave dish inside a home and still pick up signals. You don't need fancy, very expensive equipment to do that. It's out. □ □

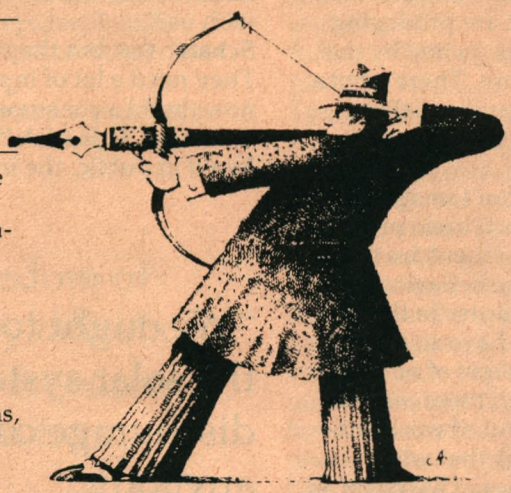
ACCESS: Peace Communications

World Policy Institute
777 United Nations Plaza
New York, NY 10017
212/490-0010

The World Policy Institute (formerly The Institute for World Order, founded in 1948) is a nonprofit educational organization that seeks to effect a shift in the American security debate away from military policies toward new policy options. Institute programs include a research and policy studies program, which develops practical alternative security proposals and recommendations, and a communications program, which seeks to inform and engage those who are concerned about the expensive, escalating arms race. The World Policy Institute has also made a long-standing effort to nurture the growth of world order education on college and university campuses nationwide. The Institute has encouraged and chronicled the growth in the number of these courses through its *Peace and World Order Studies—A Curriculum Guide*, which offers a select listing of course syllabi dealing with global problems from a humanist perspective. —TJ

The World Game
International House
3701 Chestnut Street
Philadelphia, PA 19104
215/387-0220

The World Game, founded in 1972 by Buckminster Fuller, was established as an



alternative to military "war games." In war games, specialists research, catalog, map, and analyze world data to develop and test strategies for controlling resources deemed vital to their self interests. War game strategies are based on the assumption of scarcity and an "I win—you lose" approach to national security.

In the World Game, the focus is not local security or military investment, but global peace and economic vitality. Unlike war games, World Game strategies help demonstrate how, with existing resources and technology, the basic human need problems facing humanity can be solved.

World Game has created a database of earth resources, production figures, technologies, global problems, and strategies. They use this information in conjunction with World Game maps (see access following "Exploring the Globe" elsewhere in this issue), publications, and other educational materials to enhance global awareness. They have produced over 60 programs, workshops and symposia in five countries that have been attended by more than 10,000 people from 50 states and 26 countries. —TJ

International Christian Youth Exchange
74 Trinity Place
New York, NY 10006

This organization, which is sponsored by 11 Protestant denominations in the United States, operates an exchange program for people between 16 and 24 years of age. The program allows young people from two dozen countries to stay with U.S. families for one year, attend school, and participate in community life. Similar arrangements are made for American young people abroad. —JF

Quaker United Nations Office
777 United Nations Plaza
New York, NY 10017
212/682-2745

At Quaker House in New York City, QUNO provides an informal setting where United Nations delegates can meet one another as people rather than merely as representatives of governments. The delegates are able to express their thoughts "off the record," and QUNO's international staff can introduce Quaker

points of view on the issues under discussion. —JF

American Field Service International/ Intercultural Programs
313 East 43rd Street
New York, NY 10017
212/661-4550

Provides 11-month exchange programs for high school students from 60 countries. Students live with American host families and attend local high schools in all 50 states. Costs to the host family: bed and food. The Internal Revenue Service allows families to deduct up to $50 per month as a charitable contribution. AFS also provides a modest monthly allowance to students. Criteria for host families include curiosity about others, understanding about differences, and willingness to share, love, and occasionally laugh. AFS chapter volunteers assist the student, the host family, and the school. They also conduct orientation programs, arrange visits to places of interest, and facilitate community involvement. As one host brother put it, "Having Samir [from Turkey] living with my family this year has taught me how wonderful this world really is under all its crusty politics." Write for a host family or student exchange application. —KN

Youth for Understanding International Exchange Program
3501 Newark Street, N.W.
Washington, DC 20016
800/424-3691

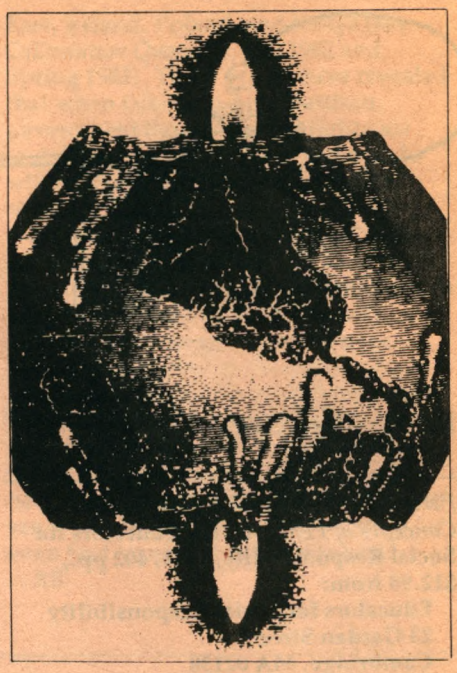
Offers six-month (January to July) and one-year (August to July) exchanges for students, ages 15 to 18. American students live with host families in South and Central America, Japan (summer only), Australia, The Philippines, and Europe. Students from these countries can also arrange to stay with American host families through the program. "Costs" to American host families: meals, bed, and tender loving care. The Internal Revenue Service allows a $50 monthly deductible during the stay. Students visiting the U.S. carry medical and dental insurance and attend local high schools. Host families in an area meet occasionally to share and work out any problems. To apply, contact the main office, and a local volunteer will visit your family. I lived abroad for a year through YFU and highly recommend their service. —KN

Esperanto League for North America
P.O. Box 1129
El Cerrito, CA 94530
415/653-0998

The Esperanto League for North America (ELNA) is the central organization in North America for a worldwide movement to propagate Esperanto, a spoken and written "artificial" international language.

Esperanto was created in the 1880s by Polish doctor Ludovik Zamenhof in an attempt to nurture greater international communication through use of a language that was both easier to learn and more linguistically neutral than traditional languages.

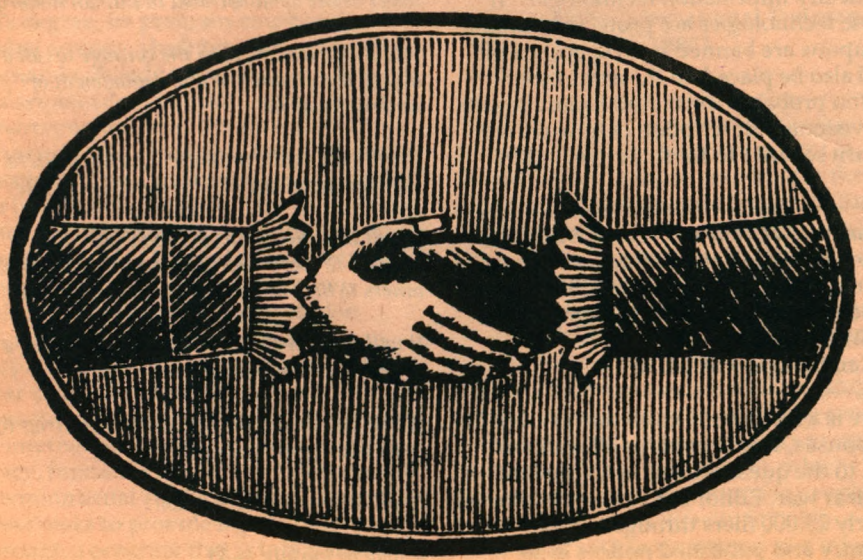
Though Esperanto has never caught on as a language of world diplomacy, it has enjoyed far greater popularity than the myriads of other artificial languages that have been developed since the late Renaissance. An amalgamation of various European, African, and Asian lexicons, Esperanto is used today by an estimated one million people in over 90 countries around the world. It ranks among the 30 to 40 most used literary languages. (The library of the Esperanto Association in Great Britain, for example, has a collection of more than 20,000 titles.) Over 100 periodicals are published in Esperanto, including an international newsmagazine, *Monato*.

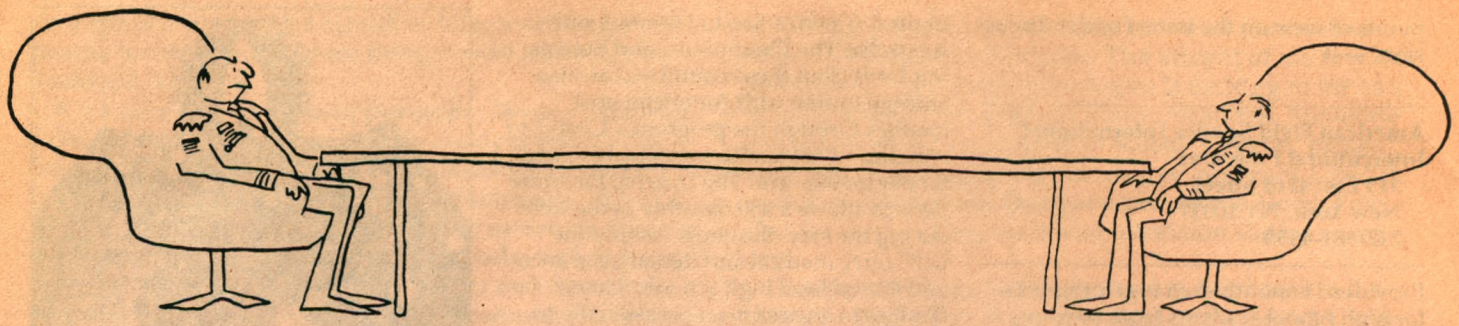


Esperanto is an easy language to learn. Proponents like to proclaim that the streamlined grammatical structure of the language allows many people to master the basics without a teacher in less than one month of study. The recommended starter books for aspiring Esperantists are *Teach Yourself Esperanto* by John Cresswell and John Hartley (available from ELNA for $4.95 ppd.) and *The Esperanto Dictionary* by John C. Wells (available from ELNA for $6.50 ppd.).

ELNA, which has 600-650 members, is the best source of information on Esperanto in this country. Besides offering over 1,000 titles in Esperanto through its book service, it also publishes a bimonthly newsletter, circulates a membership directory, and has an international travel service. (One of Esperanto's most intriguing uses is as an aid to globetrotters, and ELNA can supply a booklet listing Esperanto speakers throughout the world who are willing to put up travellers free of charge.)

Both ELNA and the World Esperanto Association (of which ELNA is an affiliate) put on a variety of activities during the year. In 1984 ELNA will hold its annual congress in Portland, Oregon, July 14-19, and the World Esperanto Association will meet for its annual congress in Vancouver, B.C., July 21-28. Detailed information on these congresses and on other Esperanto activities is available through





From: *What Will it Take*

ELNA. —Steve Salmi

***Perspectives: A Teaching Guide to Concepts of Peace*, by the Educators for Social Responsibility, 1983, 402 pp., $12.95 from:**
Educators for Social Responsibility
23 Garden Street
Cambridge, MA 02138

How do we grow beyond the simplistic rhetoric of war versus peace when we barely understand one or the other, and feel powerless in any case? How do we balance the complex inequities that promote borders and conflicts? Setting aside for the moment the global ultimatums, how do we disassemble *personal* barriers, *personal* paranoias and *personal* hostilities that compound into larger tensions? And if we accomplish any of this, despite our own cynicism, how do we communicate it to children, who have the most to gain or lose from our success or failure?

Perspectives admits to being no finished product or facile answer to the questions noted above. What it is is an outline, a set of exercises and a carefully thought-out approach to these questions. Children and teachers are encouraged to take "peace" apart, analyze its components and define it in active terms, not just as the absence of war, but as a tough and vital attitude towards life. They are urged to look at peacemakers critically—were Henry Kissinger or Martin Luther King peacemakers, each of them with their Nobel Peace Prize? What defines a peacemaker? Are we all capable of peacemaking? How can we cultivate a peacemaking stance in ourselves?

They come up with conclusions that will not be new to readers of RAIN (think globally, act locally, for example), but the detailed study enroute to these conclusions, the simple daily assessment of ideas, actions, and their consequences, will certainly increase the awareness, involvement, and, perhaps most important, the faith of anyone who participates in the activities described in this book. —Carlotta Collette

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"Whole Earth Security: A Geopolitics of Peace," by Daniel Deudney, *Worldwatch Paper #55*, July 1983, $2.00 from:
Worldwatch Institute
1776 Massachusetts Avenue, N.W.
Washington, DC 20036

After visiting the Soviet Union, Joel Schatz (see "Bridging Hemispheres" elsewhere in this issue) commented that the only fear he ever felt while there was in knowing that he was the target of an American nuclear arsenal capable of destroying that country several times over. Most of us realize that is the feeling shared by people in every single country. We're all hostage to any nation's nuclear stash.

The result is that security is no longer divisible by national boundaries; *common* security is desperately needed. Fortunately, as Daniel Deudney shows in this *Worldwatch Paper*, the basis for a planetary security system is already available: communication and monitoring satellites and terrestrial sensing networks. Relying on tremendously thorough, computer-enhanced electronics to bear governments' need for eyeing their neighbors renders nuclear weapons less important. To do this, though, space must be left for planetary information technologies. If these technologies are protected—i.e., if weapons are banned from space—a lid will also be placed on the arms race.

You probably won't find a more practical visionary description of how we can return security to Earth's crew. —KN

***What Will It Take to Prevent Nuclear War?*, compiled and edited by Pat Farren, 1983, 239 pp., $6.95 from:**
Schenkman Publishing Company
331 Broadway
Cambridge, MA 02138

Here is a fascinating collection of over 200 responses, from people of all walks of life, to the question of how to prevent nuclear war. Editor Pat Farren distributed nearly 25,000 fliers throughout the country and published notices in 50 national and regional publications, seeking answers to the question. In this book he shares the best of the nearly 1,000 responses. They are the voices of children, professionals, teachers, farmers, seniors, artists, monks, fugitives, housewives. . . . They are the thoughts that inspire, frighten, activate, discourage, empower, rattle, and pacify. We do not recognize the names of most of the authors, although there are some responses from prominent politicians, writers, and activists. Few of the thoughts are profound or offer real solutions, but they are an expression of honest concern that is heartening and moving.

This collection, divided into sections such as Fear, Hope, Education, Suggestions, Transformation, and Nonviolence, does not provide a representative view across the political spectrum. The proposals range from a nuclear weapons freeze to unilateral disarmament. There are calls for civil disobedience and anarchy. But few of the voices are from the middle of the road or the right wing.

Those on the other wing will certainly find Ferren's book to be good reading and the source of some positive answers. Here is one such answer submitted by a woman from Newmarket, Ontario:

It will take sanity and cooperation on a scale never before demonstrated in human history.

It will take leaders with the courage to call a halt to the production and deployment of nuclear weapons.

It will take public pressure, and the obliteration of mass apathy and resignation to fate.

It will take thousands of people with the courage to leave their jobs–and thousands of others to help them find useful employment.

It will take a massive swallowing of pride by every over-developed nation.

It will take an attempt by hostile countries to trust and respect each other.

It will take immediate action.

It may be too late.—TJ

"A Better Game Than War: Interviews with Robert Fuller," *Evolutionary Blues*, Volume Two, 1983, $6.00, from:
Evolutionary Blues
P.O. Box 40187
San Francisco, CA 94140

Disarmament is not a realistic goal for the peace movement. In fact, peace is not the proper goal for the peace movement. This is the view of Robert Fuller, former President of Oberlin College. He argues in these interviews that nations will not disarm as long as they continue to fear each other. Peace is the absence of war, and war is a very exciting activity that humankind has practiced for centuries. Rather than directly oppose the excitement of armed conflict, Fuller suggests that we find "a better game than war."

Mo Tzu is Fuller's idea for this better game. The original Mo Tzu lived in China in the Fifth Century B.C. He and his followers would travel to sites of developing conflict and try and get opposing sides to meet and work out their differences.

Fuller defines modern Mo Tzu work as "finding what you love in what you hate." For example, the United States and Russia cannot continue to fear and hate each other. The cultures must be seen as complementary, each having an aspect of the larger truth.

To reach this level of mutual respect, the world needs nonpartisans who will travel to troubled areas and introduce different cultures to one another. These people are not representatives of any government or organization. Diplomacy is too important to be left only to professional diplomats.

Initial attempts to enact the Mo Tzu concept were carried out in 1982 by a small group that travelled to the Middle East, Ireland, Poland, and Kenya (see *CoEvolution Quarterly*, Fall 1982 and Spring 1983). These experiences revealed that when talking to a nonpartisan, government figures are less righteous and defensive, more open, and may be willing to at least look at a theoretical solution.

For Mo Tzu to really become a better game than war, Fuller says it must move from being an individual and small group activity to being a collective activity, as is war. Envision an agreement between nations in which over the course of two years a million people travel from nation to nation focusing on establishing better relationships. This mammoth, multinational "Peace on Earth Corps" would help us learn to live with our differences, see what is valuable in other cultures, even find love in what we now hate. —RB

INTERCULTURAL STUDIES

There are numerous colleges and universities that specialize in international studies, and many institutions offer some options for study abroad. Friends World College, World College West, and the School for International Training are three particularly innovative and intensive programs. Each of these requires extended foreign study as part of its four year undergraduate program and each emphasizes an integrative intercultural experience.—TJ

From: ***World College West catalogue***

World College West
Box 3060
San Rafael, CA 94912
415/332-4522

World College West is an independent, nonprofit college offering the bachelor of arts degree. Its program emphasizes global ecology, the interconnectedness of human knowledge, and the worldwide consequences of political, social, and environmental acts. The four year program includes a first year foundation in western culture and language preparation for intercultural studies. The second year intercultural program provides a perspective from which students can better understand and evaluate their own culture. This program is centered in Mexico with additional programs in Nepal and China. The third and fourth year upper division program offers a concentration in interdisciplinary majors of international development and diplomacy, human services, and international environmental studies. World College West seeks to provide a global perspective through a program that is integrated, participative, team-taught, and experience-based. It also seeks to develop the skills that will be necessary for success in an increasingly interdependent and ever changing world. —TJ

The School for International Training
Brattleboro, VT 05301
802/257-7751

The School for International Training was founded in 1964 by the Experiment in International Living in response to the demand for a professional program for people interested in pursuing careers in international operations. SIT offers a bachelors' program in international studies, which requires the development of an experience-based understanding of the international situation through extensive foreign study and internships in consort with rigorous academic concentration. SIT also offers a masters program in international management, which provides career preparation for people who want to work directly in fields associated with international and intercultural concerns. —TJ

Friends World College
Huntington, NY 11743
516/549-1102

Friends World College, a small, independent liberal arts institution, offers a non-traditional, field-work-based bachelor of arts program in international, interdisciplinary studies.

Since 1965, Friends World College students have carried out studies in over 75 countries. The college maintains its world headquarters and North American center in Huntington, New York, as well as faculty and program centers in Machakos, Kenya; London, England; San Jose, Costa Rica; Kyoto, Japan; Jerusalem, Israel; and India.

In addition to the intensive academic program at FWC, students are required to study in at least two cultures other than their own as an exposure to problems in cultures with differing political, economic, and social realities. —TJ

EXPLORING THE GLOBE: A 1:8,000,000 Replica of Planet Earth

by Than James

As Joel Schatz observes (see "Bridging Hemispheres" elsewhere in this issue), people-to-people communication through high technology is an important key to "quietly and rapidly rendering international frontiers less important." But if we are to fully realize our vision of a borderless world in which peace has "broken out," we must also learn to understand the world itself better. In particular, we must recognize how thoroughly our thinking about essential human and ecological interconnections has been hampered by misleading lines of separation on brightly colored maps and globes.

Than James, our intern from College of the Atlantic, could find no globe that provided what he felt to be "an honest representation of the earth." He resolved to create his own globe, and set out on an adventure that taught him to see a small and fragile world where our human-imposed borders and most of the fruits of our civilization are invisible, but where the natural features that have always served to connect and divide us are very much in evidence. —JF

I will never forget the time I saw those first photographs of the earth taken by the early astronauts. They stimulated my fascination with the earth and provoked me to question the conception we have of our planet. These images particularly struck me because they were so unlike the earth as I had been taught to see it. I knew the earth of maps and globes—covered with highways and cities, divided by political boundaries, and neatly partitioned by latitude and longitude. It did not occur to me at that time that from space there is little visible evidence of humankind on the face of the earth.

In these photographs I saw my planet drifting alone in a seemingly desolate universe, alive and evolving as though it were a single living organism. As Lewis Thomas describes it, "The earth, viewed from the distance of the moon, has the organized, self-contained look of a live creature, full of information, marvelously skilled in handling the sun." Each continent had a unique and diverse set of geographical features, yet every aspect of the planet I saw was thoroughly integrated with its surroundings. From this perspective I realized that I could learn a great deal about the biology and evolution of the planet, as well as how these natural features have driven human populations together and apart. This was the beginning of my exploration of earth and a journey upon the planet.

I began to search for a globe that gave an honest representation of the earth, one on which I could view the visible patterns of terrain, climate, and vegetation, unobstructed by our imaginary political boundaries, time zones, and labels. Each of the many globes that I found served as an important and useful interpretation of our planet, but none of them gave a realistic view. Finally, I resolved to create a globe myself.

The replica of the earth that I envisioned would not

just be a spherical map. The globe would give observers a perspective on their homes as they truly appear. I thought that perhaps it should be large enough to slightly intimidate and provoke its observers, yet also intrigue and invite them to explore its detailed surface.

The completed five-foot diameter globe now hangs in the central stairway at College of the Atlantic, a school of human ecology in Bar Harbor, Maine. From the upper landing one can look down upon the northern hemisphere, then walk to the middle landing and run fingers across the Sahara Desert, or spin the globe to get a better view of the Amazon River Basin. Finally, one can walk below the globe and stare up at the great ice sheets of Antarctica. Unsupported from below, the globe gives the viewer a sensation that it floats freely in space.

To look at the many sides of the globe as it spins is the nearest we can come to seeing the entire surface of the earth all at once. Our inability to see the whole earth at one time is one of the great mysteries of globes and a dilemma that world maps have never truly overcome. From one perspective, looking into the central Pacific Ocean, almost the entire planet appears to be covered with water. Apart from the scattered islands of the South Pacific, almost no land is visible. Yet from another angle, centered on the Middle East, surrounded by Europe, Africa, and Asia, we see a planet that is almost entirely covered by land.

It is the larger patterns, such as these, that are particularly prominent on this globe. Without the indication of cities, highways, and borders on it, most of us would find it difficult to find our homes, because we are so ignorant of the local geography. Although we have learned to avoid the mountains and rivers, by building tunnels and bridges, these are the features that stand out when viewing the earth from a distance. Using this representation of earth, observers are drawn to explore the source of the local watershed. By examining how the mountains and rivers divide the continents, they can learn how these geographical features led to the placement of cities and trade routes before the political boundaries and highways existed.

But I did not build this globe only for others to learn from. By designing and constructing the globe, studying and placing each detail upon its surface, I learned far more about the land and ocean formations than I could have ever learned by simply observing them. As I formed the globe and gave shape to each continent, I experienced personal revelation about the earth and its particular parts. It was often a frustrating process, but always fascinating and stimulating.

"From this distant perspective I realized that I could learn a great deal about the biology and evolution of the planet, as well as how these natural features have driven human populations together and apart."

The creation of the globe began with constructing a five-foot diameter, polyurethane-coated, styrofoam sphere. Working with numerous maps, atlases, globes, and Landsat photographs, I began to form the oceans, indicating depth with shades of aquamarine blue. This procedure impressed upon me the immensity of these bodies of water. The formation of the ocean surface seemed like an endless task. But once it was completed I was thankful that two-thirds of our planet is covered

with water, for it was the detailed depiction of the land masses that was the most tedious process.

The first of the land forms that I projected onto the globe was the continent of Australia. We North Americans are particularly ignorant of this lonely continent in the southern hemisphere. It seemed appropriate, therefore, to give it the distinction of appearing first on the globe. This smallest of continents has a magnificent diversity of terrain and vegetation. A visibly vast and barren desert covers the western portion of Australia. The Great Dividing Range stretches across the east and drops off into the forests of the eastern shore. Even at this scale, one can distinguish the tropical areas from the temperate zones. In the south, the long and massive Murray River flows into the Tasmanian Sea. The island of Tasmania protrudes into that sea and is whipped by the trade winds as they circumnavigate the southern hemisphere.

From Australia I worked my way north, forming the many islands of Indonesia and the Philippines. Though thick with jungle, this is one of the most densely populated areas of the world. Yet at this scale the presence of humans is scarcely evident.

Next I arrived in southeast Asia, a war-torn area where we have watched the blood flow and political powers shift. On this globe, however, we see that the existing vegetation is far more abundant than the areas of devastation and the borders are invisible. Of particular fascination are the major rivers of Asia, all of which originate from the central portion of the Tibetan Plateau. All share common headwaters, yet complete their various journies in very distant lands. None of them flows west, however, for they are obstructed by the Kunlun Mountains. But on the other side of these mountains, in the Karakumy Desert, new rivers emerge that perform equally unexpectedly. Some of these many rivers flow hundreds of miles and then abruptly end.

"At a scale of one to eight million, one of the only visible effects of humankind on the planet is the creation and destruction of large bodies of water."

Their waters evaporate as they traverse the desert. Though we assume that all rivers must eventually empty their waters into the sea, these cannot. Further west, new rivers form that flow toward the Caspian Sea, the largest lake in the world. It is a salt-lake from which no water escapes. The level of the Caspian Sea has been steadily dropping in recent years as the Soviet Union diverts the water flowing into it for industrial purposes. At a scale of one to eight-million, one of the only effects of humankind on the planet that we can see is the creation and destruction of large bodies of water, such as this one.

Many times during the creation of the globe I would step back to observe this emerging form. I would spin the globe slightly, my fingers skipping across the Iranian Plateau, the Persian Gulf, and the Arabian Peninsula. After I completed the continent of Africa I was particularly struck by the glorious contrast between the dry and arid desert in the north and the deep shades of the rain forest in the central portions of the continent. One of the world maps I was working with showed elevation by coloring the lowlands green and the highlands brown. This was perhaps a logical method, but in Africa the desert is close to sea level, thus colored green on this map, and the rain forests, which are at a much higher altitude, were colored brown. It was typical of the way standard maps can actually distort our understanding of the planet.

With Africa complete, I stepped forward again, with brush in hand, and crossed the Mediterranean to form Europe. After weeks of tedious detailing, I finally was confronted with my Eurocentric prejudice. As I reached the locale of my own culture, I was, of course, more familiar with the land form. I was becoming considerably more concerned about accuracy. Such prejudice was perhaps inexcusable, but it was equally unavoidable. As

I worked, I found myself stepping back from the globe to ponder this area of the world where western civilization has its roots. Ironically, no evidence of that history can be seen on the completed globe.

After completing Europe, I looked across to the other side of the Atlantic Ocean. As on the maps of the early explorers, who boldly set out into that unknown ocean without any idea of what they might find, the space that lay across that ocean remained blank.

I travelled directly west from Ireland and arrived in Newfoundland, much further north than many might expect. Still keeping the early explorers in mind, I continued north, exploring and indicating the land forms, in search of a northwest passage to Asia. In order to depict the harsh reality of the ice and tundra of the Arctic, I had to ignore the maps and globes that I was working with that showed this land in orange and green. The passage, as the explorers had discovered, was not possible, and I resumed my southerly course along the eastern seaboard of what is now the United States.

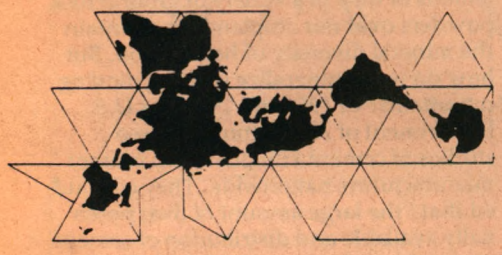
An arm's length distance from this globe represents thousands of miles into space. At that distance, I would see only vague traces of the metropolitan areas. The human-made environment that seems to dominate the northeastern U.S. is practically undetectable here. In fact, this region probably does not appear much different than it would have appeared 400 years ago.

My own experience on this planet has been limited to a tiny portion of North America. From my location on the surface of the earth, I have found an immense variety of people, places, and experiences. Yet in relation to the rest of the planet my home is quite insignificant. The entire globe is larger than I am, but I can cover most of New England with a few fingers. Mount Desert Island, where the globe now hangs, is but a tiny speck.

I ran my fingers down the coast and stopped just before I reached the Gulf of Mexico. Cape Canaveral—it is from this point that the first astronauts were lifted from the surface of the earth. The photographs that they returned with have provided us with a new vision and understanding of ourselves and our planet. Russell Schweickart, Lunar Module Pilot for the Apollo 9, described the earth from his capsule as "so small and so fragile and such a precious little spot in that universe that you can block it out with your thumb, and you realize that on that small spot, that little blue and white thing, is everything that means anything to you. All of history and music and poetry and art and war and death and birth and love, tears, joy, games, all of it on that little spot out there that you can cover with your thumb. And you realize that from that perspective that you've changed, that there's something new there. That relationship is no longer what it was." □□

ACCESS: Impressive Views of Earth

—The **World Game**, a war-game alternative founded by Buckminster Fuller (see "Peace Communications" access in this issue) has created what it claims is the largest world map. This 67' x 32' dymaxion projection shows relief, cities, and highways. World Game uses the map at seminars and conferences to enhance



global awareness. Last fall the map was presented to the U.S. Congress at which time World Game personnel illustrated the potential devastation that would follow an exchange of the 50,000 nuclear warheads that are currently available to us. They did this by scattering 50,000 1" Day-Glo bingo chips upon the map to represent the equivalent 30 miles of projected destruction that each warhead would create.

—**Rand McNally**, Chicago, IL, has produced a large variety of globes over the years. One of the most impressive hangs at the New England Aquarium in Boston. This earth replica shows no political boundaries. It does show the patterns of vegetation and the ocean depths. The elevations on this globe are severely distorted in order to show the mountain ranges and canyons that would otherwise be insignificant in scale.

—**Babson College**, a business school in Wellesley, MA, has recently restored a 65' relief map of the United States. This 1:250,000 replica shows North America as it would appear in the month of August on a clear day. The map shows mountains and farmlands but does not show political boundaries or highways. A balcony above the map gives the viewer a perspective equivalent to the distance at which the space shuttle orbits the earth. The college has recently carved off the top of Mt. St. Helens on the map to show the mountain in its new form.

Babson College also has what is supposedly the largest revolving globe. This 28' sphere is in great disrepair and has recently been dismantled. One of the difficulties with such a large globe is that from the ground it is impossible to see much of the northern hemisphere where most of the earth's land surface is located.

—At the **Christian Science Center** in Boston there is a 30' diameter globe that was designed to overcome this observation problem of large globes. A walkway passes through the interior of this beautiful stained glass globe, allowing for viewer access to every portion of the earth. It also gives an interesting perspective into space from inside the earth. This globe, built in 1934, gives a political representation of the nations of that era. Much has changed, but it provides a good historical lesson. —TJ

ACCESS: Global Resources

"Life on Earth is Getting Better, Not Worse," by Julian L. Simon, and "The Cornucopian Fallacies: The Myth of Perpetual Growth," by Lindsey Grant, *The Futurist*, August 1983, $3.50 from:
World Future Society
4916 St. Elmo Avenue
Bethesda, MD 20814

***Catastrophe or Cornucopia: The Environment, Politics and the Future*, by Stephen Cotgrove, 1982, 154 pp., $19.95 from:**
John Wiley & Sons
605 Third Avenue
New York, NY 10158

"Cornucopians" and "Limits-to-Growth People" live in very different paradigms. The future is sunny for the Cornucopians: science, applied to apparent resource shortages, will, they believe, surely prove to be the secular equivalent of the biblical loaves and fishes, providing more of everything for everyone. By contrast, the Limits-to-Growth People are chronic worriers, always fretting about *non*-renewable resources and the disasters that may result from failure to heed ecological constraints.

Most of us already have strong opinions about who's right and who's wrong in this debate (hint: the Cornucopians are wrong), but it behooves all of us to better understand the bases for the arguments on both sides. The *Futurist* articles by Julian Simon and Lindsey Grant provide a good starting point for such an understanding. Simon, who, together with the late Herman Kahn, is one of the best-known proponents of the Cornucopian position, describes his rosy perception of a world in which health is improving, income levels are rising, pollution is declining (at least in the United States), and there are no meaningful limits to natural resources. Grant, who was the State Department coordinator for *The Global 2000 Report*, presents an excellent critique of the assumptions and methodology of both Simon and Kahn.

Perhaps as interesting as the Cornucopia vs. Limits-to-Growth debate itself is the question of how people come to subscribe to such radically different positions in the first place. In *Catastrophe or Cornucopia*, British sociologist Stephen Cotgrove examines the broader ideologies and world views that tend to characterize people in each camp. It's an interesting analysis that can go far toward lifting readers of both persuasions beyond simplistic stereotypes of capitalist "technotwits" and radical "nature freaks." Unfortunately, it is a book that is also a good example of that disturbing phenomenon, the vastly overpriced academic study. Look for it in your library. —JF

***The Survival of Civilization*, by John Hamaker and Donald Weaver, 1982, 218 pp., $8.00 ppd. from:**
Hamaker-Weaver Publishers
Box 1961
Burlingame, CA 94010

The U.S. Environmental Protection Agency recently released a study on the effects of carbon dioxide (CO_2) buildup planet-wide. Widely publicized, the study maintains that the much-debated greenhouse effect—the trapping of heat from the increasing presence of CO_2—could soon cause polar ice to melt, sea levels to rise, and croplands to wither. EPA's culprit: the burning of fossil fuels.

This warming effect is an accurate extrapolation, but only for a portion of the planet, claim *The Survival of Civilization* authors, Hamaker and Weaver. The rising of super-heated air in the equatorial zones pulls heavier cool air down from the poles over temperate zones. As moist air from the tropics is drawn over polar regions, extra CO_2-induced cloud cover protects glaciated areas from melting in the summer and provides excess moisture and particles for precipitation. The result is accelerated glaciation.

Why is glaciation important to whole-earth health? It redeposits soil minerals that have been depleted over the centuries. Because plants cannot grow fast enough to keep pace with CO_2 accumulation and denuding of forests, polar clouds increase and glaciers advance. When CO_2 is sufficiently absorbed in the soil and ocean, glaciers retreat and plants flourish. According to the authors, the abnormally cool summers in Canada and the northern states over the past three years are, along with similar occurrences in Europe and Russia, early signs of the changes to come.

As ecologists, they aren't content recommending that we only arrest fossil fuel combustion. Just as urgent is the need for widespread soil remineralization programs (amounting to glaciation without the ice) to quadruple plant growth. In his 1948 book *The Healthy Hunzas*, J. I. Rodale emphasized that U.S. agricultural programs should spread billions of tons of a variety of ground rock powders over our croplands to maintain the mineral diversity of healthy soil. But how do we remineralize without moving mountains? In 1959 and 1963, the U.S. Department of Agriculture released studies of cement kiln dust from cement manufacturers nationwide. They concluded that "the large amount of dust potentially available and distribution of cement plants throughout much of the humid regions, where the dust could be applied to the soil without shipping great distances, makes this by-product of special interest."

Hamaker and Weaver urge readers of their book to communicate to their Congressional servants immediately the need for coordinated action. Glacial invasion or not, the need for healing the planet's skin cannot be ignored indefinitely. —KN

***Water: The Nature, Uses, and Future of Our Most Precious and Abused Resource*, by Fred Powledge, 1982, 423 pp., $14.95 hardcover from:**
Farrar Straus Giroux
19 Union Square West
New York, NY 10003

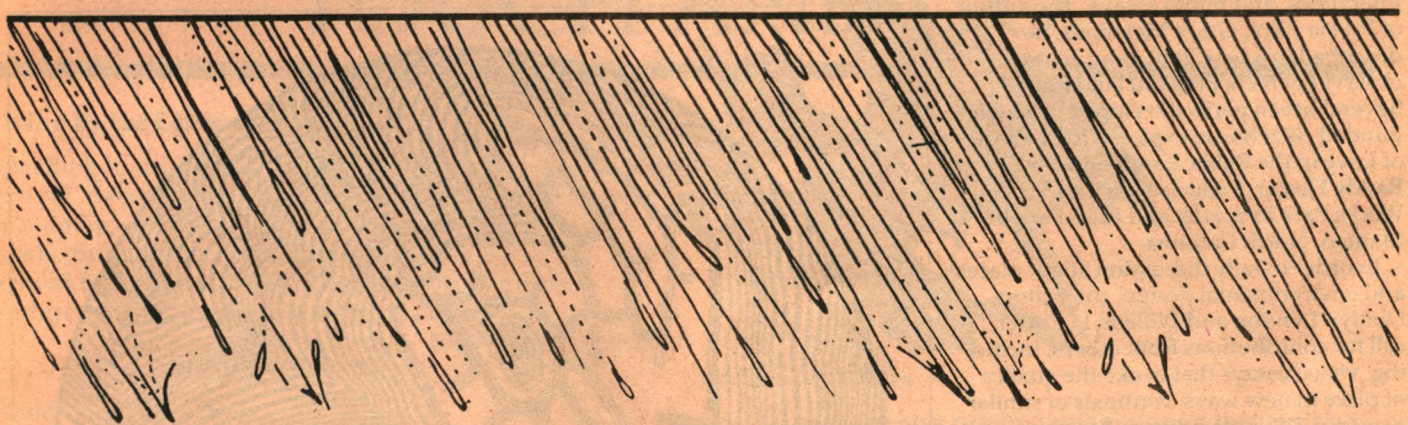
"Water Shortages: The Next Energy Crisis," by Bruce Strokes, *The Futurist*, April 1983, $3.50 from:
World Future Society
4916 St. Elmo Avenue
Bethesda, MD 20814

Water-related calamities have long been unremarkable to people in many parts of the world, but in America we have learned to expect that when we turn on the tap, "water will come out of it, and . . . [that water] will be of the highest quality." So observes Fred Powledge in a book that documents how these comfortable assumptions are being challenged by the realities of acid rain, toxic pollution of drinking water supplies, overdrawn aquifers, and looming battles over water rights. The essential water problem, according to the author, is not one of quantity; the total suppy is vast, but our waste and pollution have put the cheap, easily obtainable portion under considerable strain. Powledge can be preachy in his portrayal of Americans and their elected officials as water wastrels, but he also gives ample credit to the activists, ranging from legionnaires to political radicals, who have adopted water issues as their special cause.

Bruce Stokes' article in *The Futurist* places the water crisis in a global context. Agriculture, notes Stokes, "has a voracious appetite for water, consuming two-thirds to four-fifths of the water used in nearly every country." This appetite will grow even more voracious in the coming decades as population growth fuels food demand, and one likely result will be new calls for massive, environmentally questionable water projects, like the proposed Peripheral Canal in California. Stokes points to "a demand-oriented effort to improve the efficiency of existing irrigation systems" as a more prudent strategy to assure sustainable increases in agricultural productivity. He argues that legal reforms, a more grassroots-oriented approach to water management, and a new water ethic will all be required to balance the complex needs of present and future users. —JF

***Global Environmental Issues*, edited by Essam El-Hinnaw and Manzur Hashmi, 1982, 236 pp., $25.00 from:**
Tycooly International Publishing Ltd.
6 Crofton Terr.
Dun Laoghaire
Co. Dublin, Ireland

This volume is not what you might expect. It's not a 1982 version of the U.S. Government's *Global 2000 Report*. It exposes the nooks and crannies of threats to the ecosphere, but through problems that are likely to be shared by rural and urban areas in Africa as well as Japan. A startling chapter reveals the environmental impacts of military activity planetwide and proposes protections. Preventive measures are discussed for the worsening surface and ground water crisis. In the chapter "Tourism and the Environment," the responsibilities of public servants to "holiday slums" and the often overlooked effects of pollution and cultural homicide are examined. Share this window with your mayor or any other global village chieftain. —KN



We'll Shower You With RAIN

Our recent reader survey shows that many more people read RAIN than actually subscribe. That's flattering, but we need to increase our circulation in order to bring you another 10 years of means and dreams.

If you send us names of likely subscribers, and they subscribe after receiving a sample copy, we'll extend your subscription by *two* issues for *each* new subscriber. The same offer applies if your name and address appear along with a friend's new subscription order. This offer is limited to 500 new subscribers per current reader and ends February 19, 1984.

ACCESS: Regional Literature

***Places: A Quarterly Journal of Environmental Design*, $20/yr. for individuals, $40.00/yr. for institutions, from:**
MIT Press
28 Carleton Street
Cambridge, MA 02142

Environmental design, the field of study that is in-between architecture, landscaping, and urban planning, now has an academic voice in this journal compiled jointly by the College of Environmental Design at the University of California and the School of Architecture and Planning at the Massachusetts Institute of Technology (MIT).

The premier issue has an extensive tribute to the late Donald Appleyard, recently killed, as the journal's editors note, by a careening automobile—one of "the very devices whose rational control he had so long been advocating." Appleyard's work is explored through some of his published and unpublished manuscripts.

The issue contains articles, speeches, interviews, and photo essays. The author of *Peyton Place*, Grace Metalious, is described in a new light as an acute observer of New England landscape. Several urban parks developed by single-minded citizens are explored in "Labors of Love in the Public Landscape" by Randy Hester. Included are the Gas Works Park in Seattle and Jules Park in Manteo, North Carolina.

In order to rally discussion about places and environmental design, the editors, Donlyn Lyndon and William L. Porter, call for contributions from others, including: visual essays that evoke the quality of place in new ways; contrasts of similar places in different cultures; fantasy design schemes that reach beyond the practical into the scarcely possible; and perceptions, memories, hopes, and gripes of individuals and groups about their environments.

Here's hoping for a continuing evolution for this new journal devoted to our relationship to places. —SJ

***All Area*, $20.00/yr. for individuals, $30.00/yr. for institutions, from:**
All Area
P.O. Box 492—Canal Street Station
New York, NY 10013

All Area calls itself a journal on "method and place, which appears two or three times a year." Number two (spring 1983), is an impressive collection of material. An over-sized format with striking and clear graphic design. Wonderful photos. One photo of New York City as it went from squatty brick buildings to futuristic towers like the Empire State Building is almost worth the price by itself.

This is not light reading. I've fingered through the thing more times than I've settled down with it—even though I've marked the articles to return to knowing they will be "good for me," like nutritional yeast.

Some favorite esoteric word magicians and physicians are present. There is a long interview with literary critic/linguistic philosopher Kenneth Burke, for example, and a piece by Charles Olson.

Off in the arena of the communications era there is an intriguing, though somewhat-hard-to-follow article, "Teleconferencing, Computers, and Art," by Frank Gillette and Brendan O'Regan. Several articles follow related media/communications themes, including the "Implosion of Meaning in the Media" by Jean Baudrillard, and a long review of *The Geopolitics of Information* by Anthony Smith.

Articles on geography and place are well covered, including a review of *Beyond Geography* by Frederick Turner, and an article by Peter Berg entitled "Bioregion and Human Location."

Somewhat like *City Country Miners* (see review below), but less place-specific and more academic, *All Area* is a powerful collection of ideas. —SJ

***City Country Miners: Some Northern California Veins*, edited by Michael Helm, 1982, 256 pp., $7.95 from:**
City Miner Books
P.O. Box 176
Berkeley, CA 94701

City Country Miners is a bioregional anthology. And what, pray tell, is that? Well, it is not a collection of local writers

From: *City Country Miners*

all writing about current New York City themes. It is notes toward a definition of a place, Northern California. But not a tight academic definition. Instead, it is the experiential definitions of residents exploring the whys and wherefores of where they live.

It is concise. Most of the articles and stories are 6-7 pages or less. Many poems. Poems that surrender at least one level of meaning with the first read-through.

Most of the writing is very evidently indigenous to Northern California, being about specific places and incidents. But even in the pieces that are more general, as in the "Relationships" section, there are clues as to what bioregion we are visiting. "Riding Leathers" is a brief story of an erotic encounter between a leather-wearing lesbian and a like-clothed gay male who mistakes the former for another leather-wearing gay male. Well, the story, as they say, just wouldn't play in Peoria.

The "Places" section contains some of the strongest pieces. "What the Bay Was Like," by Malcolm Margolin, is a wonderful slice of bioregional history. "The Sausalito Houseboat Community" is a poignant story about the San Francisco Bay squatters' community told by long-time resident Piro Caro. "Letter from Mendocino" is a vignette-history of the back-to-the-land movement that moves through United Stand owner-builder battles to a place where the new pioneers are holding down county commissioner seats.

And finally, Peter Coyote takes the anthology out of the bioregion into that bordering area south:

Fifty miles south of San Francisco, the plane jerks and shudders, the seat-belt warning light goes on as the air currents–like sentries–rush off the Tehachapis shaking and frisking down the plane as it crosses their border. The great Transverse Range rolls, humps, and chasms below, dividing the open fields from the endless mega-city stretching south. Borders are protected here. Value systems change, language changes, and YOU better change if you're going to survive. Not even the plane is immune.

City Country Miners is an enjoyable reading experience, proving at least once that decentralist provinciality is sharable.

And yes, by all means send us your own bioregional anthologies. —SJ

***Fup*, by Jim Dodge, 1983, 59 pp., $3.95 from:**
City Miner Books
P.O. Box 176
Berkeley, CA 94701

Fup is a tall tale in the tradition of 19th Century California story tellers like Bret Harte and Mark Twain. But it's a little bit as if Bret and Mark had encountered a Tom Robbins or a Richard Brautigan or some outlandish 20th Century drug.

It is the story of an old man who is immortal (well, almost) thanks to some whiskey that people travel from miles away to guzzle. He is joined in the story by his multi-millionaire grandson and by a duck (Fup), who is amazing on several counts and surely must experience one of the most unique spiritual revelations to be found anywhere in the chronicles of American literature.

A good story to sit down with next to a cozy woodstove after a day of too many meetings. —SJ

TOUCH AND GO

Living By the Letter of the Law

Speaking to the Montana Mining Association, Ron Arnold, described as a former environmentalist turned anti-environmentalist, urged "shooting" environmentalists. Butte's *Montana Standard* reported, however, that Arnold backed away from that position, saying he couldn't recommend doing anything illegal.

—*High Country News*

Good to the Last Drop

According to a Dow Chemical Company report, chloracne, a skin condition caused by exposure to dioxin, is "usually not disabling but may be fatal."

—*The Progressive*

Finally Someone Is Using Widgets

The Peoples Exchange Network in Nanaimo, British Columbia, on Vancouver Island, uses the widget as a form of currency. One widget equals five minutes of time in this person-to-person skills exchange.

The More Things Change . . .

Burlington Northern Railroad and several other companies are trying to develop a coal-fired locomotive.

— *High Country News*

Hidden Messages

The Arkansas House reached unanimous agreement on an important piece of legislation. They voted 86-0 in favor of a bill that would require warning labels on records and tapes that contain hidden messages when played backward. The legislation was promoted by the Rev. Don Hutchings who has been concerned that some records have messages from Satan when played backwards.

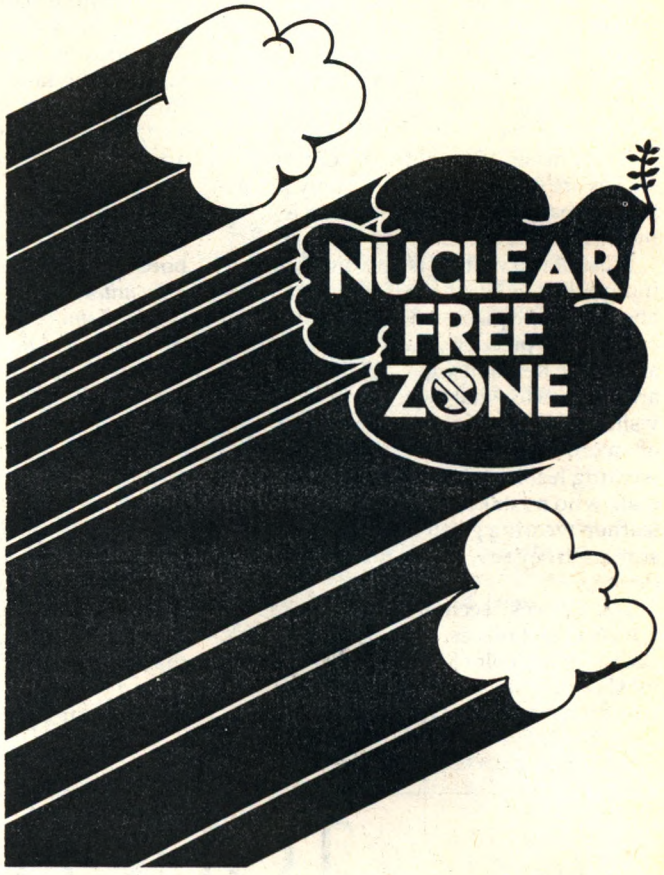
—*East West Journal*

Recession Chic

Bloomingdale's Department Store in New York City has opened a "Street Couture" boutique featuring clothes that are ragged, tattered, and spattered—the "street look." An employee explained, "Bag ladies are in. They're very popular."

—*The Progressive*

CREATING NUCLEAR FREE COMMUNITIES



by Don Skinner

In November the people of Cambridge, Massachusetts, voted on a measure that would have made the city a nuclear free zone—i.e., it would have prohibited work and research on nuclear weapons within the Cambridge city limits. The measure went down to defeat, but the nuclear free zone concept remains very much alive in communities across the United States. Don Skinner, who was involved in a successful free zone campaign in Ashland, Oregon, describes his experience below. —JF

In November 1982 the citizens of Ashland, Oregon, voted to adopt a nuclear free zone ordinance. This vote was the culmination of an initiative drive that had begun a year earlier. It had initially involved collecting the signatures of 1,200 registered Ashland voters. The idea for an NFZ initiative emerged from mid-winter meetings of an Ashland group working with Citizen Action for Lasting Security. Six of us spearheaded the free zone drive, blending our individual resources to effectively deal with the campaign and its recurring crises. There was considerable opposition from the mayor and a member of the city council to placing the measure on the ballot. Once it was on the ballot, though, the resulting campaign engaged virtually every segment of the community in the debate over nuclear arms and energy.

The proposed Ashland ordinance would prohibit the positioning of any nuclear weapons, manufacture of component parts for nuclear weapons, storage of nuclear wastes, or production of nuclear energy within the municipal jurisdiction of the city.

The campaign to adopt this ordinance involved three major elements. The first of these elements was an emphasis on community and individual responsibility in facing the nuclear issue. The second was an effort to gain the support of influential groups—churches and businesses—within the community. Some church leaders participated by sponsoring and endorsing an advertisement requesting that people ask themselves if Jesus would build a nuclear weapon—or even a small part of one. Some businesspeople were reluctant to be openly supportive, but a large contingent gave ample support for the measure. The third element was individual grassroots organizing. This was done in part by soliciting signatures and contributions for an endorsement advertisement. We collected over 400 signatures and $1,500. The result was a very impressive advertisement on election eve, much needed funds, and considerable community outreach.

There was still considerable opposition to the ordinance. Some of the opposition was based on the wording of the measure. This problem could have been avoided if we had sought the advice of a lawyer. There

was also concern about the measure's constitutionality and about the supremacy clause of the national government. Our lawyers, by this time busily engaged, assured us that the supremacy clause could allow the national government to supersede our ordinance if it so chose, but that possible supersedure in no way made the ordinance unconstitutional.

Beyond this, the opposition focused on fear of a loss of economic latitude in attracting interested businesses—including those with non-nuclear products. There was apprehension that the ordinance would give an anti-progress, anti-business stigma to an already economically depressed area.

Despite these concerns, the measure passed by a 53 percent to 43 percent margin, and the three "liberal" female candidates who had supported the measure were elected to the city council. (There were nine male candidates who waffled on or opposed the measure.) The nuclear free zone concept had received its first test on the west coast; it emerged in fine form.

Shortly after the measure's passage, we began to receive numerous inquiries, first from other communities in Oregon, then gradually from all over the country. In response to this, we put together an organizer's booklet, *How to Make Your Community a Nuclear Free Zone*. It offers a step-by-step procedure, from drafting a proposal through the final stages of a campaign. We discuss the mistakes that we made and how to avoid them as well as provide numerous pointers. So far we have sent out about 200 of these booklets.

The nuclear free zone movement is currently taking root throughout America—previously it was a European phenomenon. In 1982 Garrett Park and Sykesville, Maryland, became the nation's first NFZs. There has also been the establishment of Nuclear Free America in Baltimore, which is the national free zone nerve center and clearinghouse. The National Free Zone Registry, which maintains a listing of individuals who wish to declare their homes, cars, gardens, etc., to be nuclear free zones, has also emerged within the past year. The Registry encourages national and international networking by putting registered free zoners in touch with each other.

According to Nuclear Free America, there are about 26 communities nationwide that have passed some type of free zone ordinance. Probably the most prominent recent campaign was the one held in Cambridge, Massachusetts. Cambridge was the first community to vote on NFZ status while contending with community businesses that had nuclear-weapons-related contracts. The measure failed last November by an 18 percent margin after an expensive anti-free-zone media blitz helped to reverse the favorable public sentiment that polls showed months before the election. Millions of dollars in defense contracts would have been lost by passage of the measure, as well as many jobs.

A gathering at the Peace Festival near Grants Pass, Oregon

There was apprehension that the nuclear free zone ordinance would give an anti-progress, anti-business stigma to an already economically depressed area.

One of the fundamental objectives of the nuclear free zone movement is to establish basic community control. Our economy is currently addicted to defense contracts, and Reaganomics has only encouraged this. When a community realizes that its long-range vitality is undermined by this addiction, the result can be a strong sense of community empowerment. In Ashland, the process of becoming an NFZ brought with it a satisfying sense that we lived in a community that was willing to say "NO" to the nuclear industry and was ready to begin an examination of constructive alternatives.

One of the most potentially viable alternatives involves the development of our bioregional identity. A bioregional approach emphasizes the need for political units whose identity is defined by the ecosystem that directly affects, surrounds, and informs the people who live in that particular region. Ideally, the residents of a community or particular environment will be the ones to make the decisions regarding that region.

It is clear that the struggle to establish bioregional

responsibility will not be advanced by the federal government or by executive fiat. Communities must assert their rights to control their living space and then join with each other to form the foundations of a viably self-reliant bioregion. By establishing a free zone, a symbolic and practical blow is struck at the nuclear culture, and community self-control is advanced. It is this dual potential that marks the nuclear free zone as a unique and invaluable tool.

Our experience in Ashland has shown that dealing

with the long range goal of developing NFZs can engage the energy of local people in a powerfully focused way. Some people have expressed the fear that an NFZ campaign might siphon energy away from the immediate goal of stopping the building and deployment of nuclear weapons, but we found in Ashland that NFZ involvement can actually serve to awaken people to the need for dealing with the more abstract and overwhelming international issues.

With the passage of Ashland's ordinance came the realization that we could build on our existing base. We began to engage a wider cross-section of the populace in developing a more potent and active peace community. Peace House, a center for peace and activism, emerged, and educational events have been sponsored for local citizens who wish to take part in actively creating a more just and sane society.

This has led to further cooperation with church and community organizations in developing the agenda for a society with peaceful priorities. Some specifics include: working with churches in addressing world hunger; confronting current governmental posturing in Central America; discussing with the American Association of University Women the prominent role that women must take in creating a more harmonious society; and developing peace programs that can be integrated into the public schools.

Perhaps most important, though, has been Ashland's developing role as a regional peace center as a result of the NFZ vote. In the past year, we have developed strong ties with a flourishing affinity group in Grants Pass. This has occurred as a result of efforts focused on converting the Litton plant, which manufactures guidance systems for cruise missiles in Grants Pass, to non-nuclear production. In June 1983, there was a 50-mile walk from Ashland to Grants Pass. This was mostly at the initiative of Ashland and Peace House. Last October we joined Grants Pass citizens in a very successful Fall Peace Festival—a three day celebration of arts, education, and action. Both the walk and the Festival culminated in demonstrations and civil disobedience at the Litton Plant. With the most recent action, we decided that we would no longer term it "civil disobedience," but rather enforcement of the Nuremberg Directives against creating weapons of mass destruction. Our first action was to make a citizens' arrest of the Litton plant manager and put Litton on trial for violation of international law. Since the legal system has not cooperated with this effort, we intend to plead not guilty to the trespassing charges filed against those who made the citizens' arrest. This litigation will keep the issue very much alive in the Grants Pass area.

Klamath Falls, another nearby city, has also initiated a peace community. In the past few months a signature collecting drive has been launched in Klamath County to put a county-wide NFZ ordinance on the May 1984 primary ballot. It is extremely encouraging to see this vitality as well as the activities in Grants Pass and Ashland. While it would be inappropriate to give Ashland's free zone ordinance too much credit in these developments, it is clear that the same desire and forces that came to fruition in Ashland have inspired neighboring communities to work toward a nuclear free bioregion. □ □

Our economy is currently addicted to defense contracts. . . . When a community realizes that its long-range vitality is undermined by this addiction, the result can be a strong sense of community empowerment.

Shortly before we went to press, we learned that Madison, Wisconsin, had voted to become a nuclear free zone. Madison is now the largest nuclear free zone in the United States.

ACCESS: Nuclear Free Zones

As Don Skinner points out in "Building Nuclear Free Communities" (see above), the nuclear free zone movement is currently taking root throughout America. Here is a listing, compiled by Don, of some of the organizations that are helping to plant the seeds.

Peace House
P.O. Box 524
Ashland, OR 97520
503/488-8789

To order *How to Make Your Community a Nuclear Free Zone*, send $4.00 to Peace House. Bulk orders of five or more copies are available at a reduced price ($3.00 a copy).

Nuclear Free America
2521 Guilford Avenue
Baltimore, MD 21218
301/235-3575

Nuclear Free America is the national clearinghouse and resource center for nuclear free zones. It works closely with local, national, and international NFZ campaigns and provides them with a variety of resources, including tactical, logistical, and legal support. Nuclear Free America also publishes *The New Abolitionist*, the newsletter of the nuclear free zone network.

Nukewatch
315 W. Gorham Street
Madison, WI 53703
608/256-4146

An educational arm of the Progressive Foundation, Nukewatch is serving as a regional clearinghouse for nuclear free zones in Wisconsin and the Midwest.

Nuclear Free Zone Registry
P.O. Box 172
Riverside, CA 92502
714/674-6576

This organization encourages individuals to make personal NFZ declarations (home, garden, etc.). It provides fundraising materials (NFZ shirts, stickers, posters), community-organizing support literature, and information on the international NFZ network.

Mobilization for Survival
853 Broadway, Suite 2109
New York, NY 10003
212/533-0008

Nuclear free zones were adopted as a major campaign of MFS in 1983.

U.S. Nuclear Free Pacific Network
942 Market Street, Room 711
San Francisco, CA 94102
415/434-2988

This organization serves as a liaison between the international Nuclear Free Pacific movement and peace, environmental, and human rights groups in the United States. The Network also works on issues of Pacific colonialism, indigenous land rights, and the Pacific nuclear fuel cycle.

ACCESS: Community Economics

***A New Social Contract: The Economy and Government After Reagan*, by Martin Carnoy, Derek Shearer, and Russel Rumberger, 1983, 243 pp., $14.95 from:**
Harper and Row, Publishers
10 East 53rd Street
New York, NY 10022

Though a little heavy on analyzing why Reaganomics is unjust and destabilizing, *A New Social Contract* does propose ways to democratize the economic institutions in our culture: banks, the Internal Revenue Service, the Federal Reserve, megacorporations, state and local governments, and others.

A point of controversey implicit to these proposals is the question of scale: at what levels of government are services and protections most appropriately delivered? In cases of civil and speech rights, the seat of authority best resides with federal jurisdiction. But what about publicly funded services, such as housing, education, and medical care? In the chapter "Local Control and Democratic Planning," the authors suggest how greater numbers of citizens could be more directly involved in local land use and economic planning. Nevertheless, a paradox seems to remain: federal income taxes continue to be more equitable for financing locally controlled services than state income, sales, or local property taxes.

This is a book that provides some valuable discussion of the kind of tough questions community economists must confront sooner or later. —KN

E. F. Schumacher Society
Box 76, RD 3
Great Barrington, MA 01230
413/528-1737

Since we published an article describing the Society's new model of community-based banking (see "Investing in the Community," RAIN IX:3), Susan Witt, Robert Swann, and others have expanded its involvement in creating new economic models. In fact, the Society's exciting seasonal newsletter gets heftier with each issue.

From the newest in community land trusts to assistance for bioregional groups in designing regional currencies, the hottest developments in appropriate economics seem to follow this organization around. Why? One reason is its seminars. The fourth one, called "Tools for Community Economic Self-Reliance," will be held in February in Chicago. For five stimulating days, 25 individuals active in worker ownership, small business, financing, and community economic development will share their problems, successes, and theories, as well as their ideas on self-financing, nonprofit/for-profit synthesis, land banks, creation of currencies, and global economic trends (whew!). If you're interested in attending, contact the Center for Neighborhood Technology, 570 W. Randolph Street, Chicago, IL 60606; 312/454-0126. If you can't attend, the Schumacher Society newsletter will fill you in. Membership, which includes the newsletter, is $25 per year.

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Based on the first three seminars, a *Handbook of Tools for Community Economic Change* has been published by Intermediate Technology Development Group (P.O. Box 337, Croton-on-Hudson, NY 10520; 914/271-6500). We'll be publishing an excerpt from the *Handbook* in our next issue. —KN

***Workplace Democracy and Social Change*, edited by Frank Lindenfeld and Joyce Rothschild-Whitt, 1982, 412 pp., $12.00 from:**

Porter Sargent Publishers, Inc.
11 Beacon Street
Boston, MA 02108

Everyone who cares about social change should read this book. It is not a spectacular piece of reading, but the topic it covers is one of the most important strategies for serious social change that we have in these hard times. Workplace democracy is, simply put, the wave of the future—and this book provides a good introduction to it; perhaps the only broad introduction available in one volume.

What is workplace democracy? It is more things, really, than deserve to be called by just one name. It is workers' cooperatives, but it is also work improvement programs in traditional firms. It is "quality circles" and kibbutzim. This collection of essays is special because it chooses to emphasize the more radical strains in the movement for workplace democracy. In so doing, the book is both a reflection of directions the movement has already taken and, hopefully, a signpost for its future course.

Workplace democracy has come a long way in the last 10 years. Before it, there was a strong cooperative movement—but it was mostly limited to consumer-run stores, farmers' marketing associations, or the occasional housing cooperative. The important change of the last 10 years—a change that was, I think, a natural development of the fresh thinking of the New Left—was a revival of interest in cooperative, or worker-run, businesses organized for *production*.

At first, this revival consisted largely of a rediscovery of successful models of the past—such as the 40-year-old plywood-making co-ops of the Pacific Northwest, or the Mondragon cooperative federation of Spain. (Both of which are represented here by reprints of early, landmark articles on their experiences.) This rediscovery came at the same time that young people were experimenting with new types of collective enterprise. Many examples of this experimentation are considered in the book, including a cooperative food warehouse, a collective legal practice, a feminist abortion clinic, and a free school. In the most recent stage, activists have tried to create complex and challenging industrial cooperatives—often through conversion of existing firms by worker buyouts, but also through careful, well-planned startup of new firms.

Mixed in with the case study essays are a variety of theoretical essays that deal with issues of legal structure, group dynamics, or economic viability. Two of the best of these are David Ellerman's "On the Legal Structure of Workers' Cooperatives" and a small masterpiece by the French socialist Andre Gorz, entitled "Workers' Control is More Than Just That."

Among the 21 essays there are a handful of losers or just plain so-so's, but there are enough classics reprinted here to make this book a basic text in the emerging field of workplace democracy. —Scott M. Androes

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Institute for Community Economics
151 Montague City Road
Greenfield, MA 01301
413/774-5933

I.C.E., which is growing by leaps and bounds, began publishing its newsletter, *Community Economics*, in the summer of 1983. The Institute's work previously focused on publishing *The Community Land Trust Handbook* (See review in RAIN VIII:9), and the newsletter carries a flavor of the community land trust model in its treatment of socially responsible investing, revolving loan funds, community employment programs, and cooperative ventures. Each issue focuses on one community land trust. News from others around the country appears as well. Since *The Maine Land Advocate* went under, this quarterly newsletter has been filling the need for reporting ideas and new developments in this growing movement. —KN

ACCESS: Energy

***Renewable Energy: The Power to Choose*, by Daniel Deudney and Christopher Flavin, 1983, 431 pp., $18.95 hardcover from:**

W. W. Norton & Company
500 Fifth Avenue
New York, NY 10110

From photovoltaic cells on American rooftops to fast-growing fuelwood trees on Third World hilltops, this study from Worldwatch Institute examines the prospects for a renewable energy future. Authors Deudney and Flavin, both senior researchers at Worldwatch, take a cautiously optimistic approach, emphasizing both the encouraging movement toward conservation and renewables during the past decade and the still formidable institutional barriers that may impede continued progress during the coming years. They devote separate chapters to the worldwide prospects for particular forms of renewable energy (solar, wood, other forms of biomass, hydropower, and geothermal), then discuss the potential for these resources to meet the varied needs of different localities. They see the likelihood of a very diverse and productive renewable energy future that will "form a strong base to support societies around the world."

The authors' prescriptions for removing institutional barriers to renewable energy development are likely to have a very familiar ring to many of RAIN's readers, and the same holds true for their points about the potential social advantages of a decentralized, solar-based future. Nonetheless, their book provides us with an excellent global overview of renewable energy technologies and the policy issues that surround them. —JF

***The County Energy Production Handbook*, by Annette Woolson, 1981, 96 pp., $11.50 ppd. from:**

National Association of Counties Research Foundation
440 1st Street, N.W.
Washington, DC 20001

We live with a diversified economy. Goods are produced in a given location and exchanged for money. That money is traded in turn for goods produced elsewhere. An area is economically sound if the cash influx exceeds the cash outflow, and if money passes through many local hands before leaving the region. For many communities, energy is the major resource that cannot be locally produced.

In the last 10 years, local governments have explored different means of decreasing this cash drain by decreasing energy

consumption. This book discusses some of these options and cites case studies from different communities.

Options available on a city or county level will vary with state laws. Methods that have been successfully used around the country include:

- changing building codes;
- screening for energy conservation as part of the process for permitting new construction;
- giving tax breaks for conservation;
- providing capital for retrofits in the form of low interest loans;
- restructuring public transportation to decrease the use of private automobiles;
- producing energy in hydro or resource recovery plants.

This book is slightly dated, but it is still a useful tool for local energy planners.—Gail Katz

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***Solarizing America: The Davis Experience*, by Edward L. Vine, 1981, 153 pp., $9.95 from:**

Conference on Alternative State and Local Policies
2000 Florida Avenue, N.W.
Washington, DC 20009

One of the earliest and most successful attempts to implement energy conservation on a local level through government regulation occurred in Davis, California. This case study documents the steps taken in making this project work.

Davis is a college town in the Sacramento Valley of California. In the early 1970s a group in Davis recognized energy as a critical planning issue on a local level. Campaigning on this issue and several related environmental issues, three members of this group were elected to the city council. Once in a position of power, the group hired a consultant to draft a building code that would minimize energy consumption in single-family and multi-family dwellings by utilizing the principles of passive solar design.

The most interesting aspect of this project was the human element. At the inception of the code revision, builders, developers, and some city officials were hostile to the idea of an energy code. Review meetings, education about the new code, and compromise produced an atmosphere close to neutrality by the time the code went into effect. Time and experience created a positive attitude in most of the people originally opposed to the code. —Gail Katz

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***Least-Cost Energy: Solving the $C0_2$ Problem*, by Amory B. Lovins, L. Hunter Lovins, Florentin Krause, and Wilfrid Bach, 1981, 184 pp., $17.95 hardcover from:**

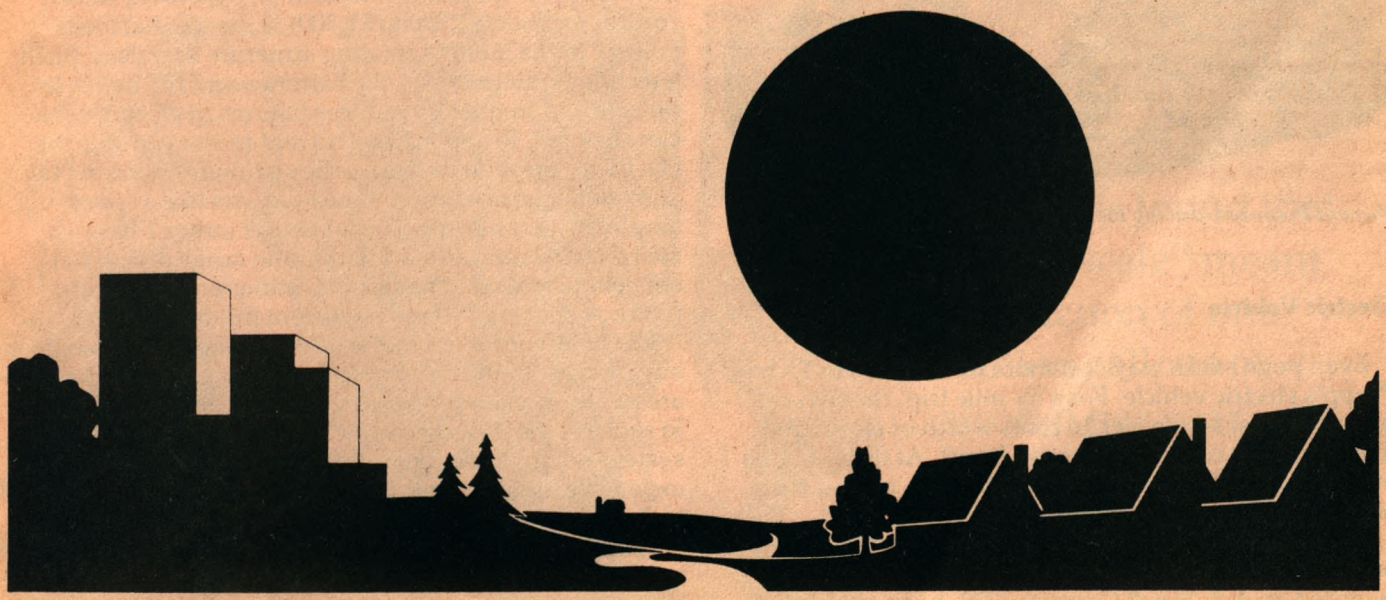
Brick House Publishing Company
34 Essex Street
Andover, MA 01810

This study, published two years ago, has taken on new significance in light of recently released reports from the U.S. Environmental Protection Agency and the National Academy of Sciences. Both reports predict dramatic changes in global climate patterns during the coming decades as a result of carbon dioxide ($C0_2$) buildup in the atmosphere. The reason for the expected increase in CO_2: continued heavy reliance on fossil fuels worldwide.

The Lovinses and their colleagues (Krause is a fellow energy analyst and Bach is a climatologist) firmly reject the premise that we are trapped in a "no exit" lane of fossil fuel dependence. The authors believe that immediate global commitment to a "soft" energy path (efficiency improvements combined with environmentally benign renewable energy sources) could drastically reduce the rate at which CO_2 is added to the atmosphere and at least postpone serious climatic effects by many decades. Furthermore, they conclude that such an energy strategy is the only one that makes any longterm economic sense.

As is usual with a Lovins energy study, *Least-Cost Energy* is buttressed with an impressive array of statistical evidence. Although the book is quite accessible to the lay reader, its method of presentation is obviously calculated to make an impression on the climatologists and energy planners who are still operating under what the authors believe to be outdated and dangerous assumptions about the future. The transition to a soft energy path, they emphasize, must be "short, purposeful, and direct."

Is there a realistic hope that this transition will be accomplished in time? The authors put their faith in grassroots action. They are fully aware of the obstacles presented by cultural conditioning, institutional inertia, false price signals, and vested economic interests, but they still believe that "at least in the Western democracies," the energy problem is being rapidly solved—"but from the bottom up, not from the top down; central government may be the last to know." —JF



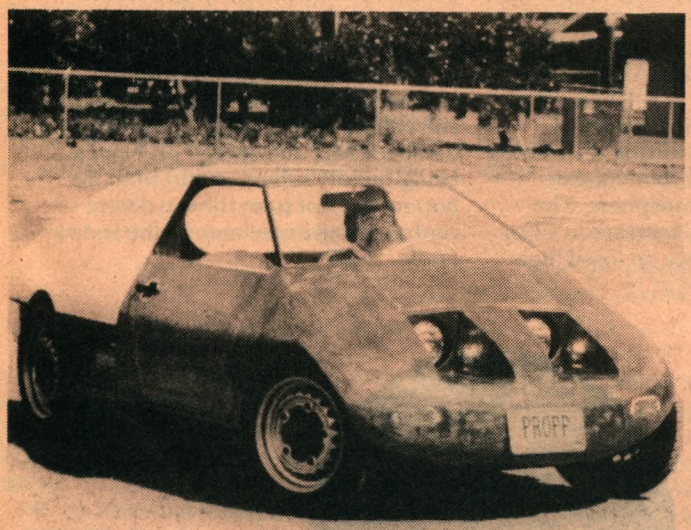
From: *Energy Production Handbook*

TINKERING AND INFORMING: Appropriate Technology in Action

by Kris Nelson and Ann Borquist

People undertake energy-conserving projects for a variety of reasons. Some, like Cynthia Stull, seek a more cost-effective, yet renewable fuel for heating. Some, like the Association of Oregon Recyclers, have ecological concerns as well. Others prefer to empower project innovators and the public with information on appropriate technology. And a few, like Richard Propp with his electric car, just like to tinker at energy-efficient designs.

Whatever the individual reason, the desire to try out non-fossil-fuel-consuming technologies underlies all of them. Such was the basis for the creation and awarding of the U.S. Department of Energy Appropriate Technology Small Grants. As the last in a series of five articles, we describe four A.T. Small Grants projects in Oregon. —KN



Richard Propp test-driving his aerodynamic electric car.

Electric Vehicle

Even pogo sticks may cost more to "fuel" than Richard Propp's electric vehicle. For a 55-mile trip, the two-person car uses a meager 16 cents worth of electricity (based on two cents per kilowatt hour). At three-tenths of a cent per mile, he's left filling stations, carbon monoxide, and OPEC far behind.

For nine years, Propp has fiddled with and tested, built and rebuilt his electric vehicle. When he was awarded an A.T. Small Grant in 1979, he knew what he was after: an ultra-light, battery-powered car that would be simple to operate and maintain, inexpensive to use, adaptable to the energy needs of long and short trips, and suitable for production. He pioneered innovations with battery use, the motor-transmission system, and the body design.

Using the chassis of a 1956 Volkswagen Beetle, Propp minimized the car's weight—the most effective way to reduce energy use—in two ways. First, he constructed the body with fiberglass and foam. Second, he installed 12 batteries that deliver 12 volts each rather than the more commonly used 18 batteries that deliver six volts each. This cut the battery weight by some 480 pounds. Moreover, the batteries are situated so that any number can be removed or added according to the trip's approximate distance.

Although he contends he "didn't do anything magic," Propp devised a drive system that maximizes operating efficiency. He discovered that his motor ran most efficiently between 1,800 revolutions per minute and 3,000 rpm. Other electric cars are designed to operate between zero and 4,000 rpm, far beyond the range of energy efficiency. He designed the transmission, an automatic belt system similar to those found in snowmobiles, to automatically select the gear ratio that keeps the rpms within the optimal range of efficiency.

The motor was modified for efficiency and ease of maintenance. It operates without an expensive silicon control rectifier ($1,000 to $1,500), a device that feeds voltage to the motor's rotating armature in pulses. Such a rectifier system causes the batteries and the motor to pulsate and frequently induces failures in electric vehicles. Instead, Propp's direct current motor controls the electricity through its field—the stationary portion that surrounds the armature. "The field acts like a speed amplifier," says Propp. It enables the motor's base speed (1,800 rpm) to start within the range of optimal efficiency, whereas the silicon rectifier engages the motor at zero rpm—below efficient operation.

His field-controlled motor affords other cost-saving advantages. It utilizes simple transistor circuits. These are easily checked for malfunction and are inexpensive to replace. Most electric vehicles using a silicon rectifier system require pulse circuits that must be tested with an expensive oscilloscope. The replacement cost is also high.

Propp's attention to energy efficiency is most evident in the vehicle's streamlined body. It closely conforms to the principle that a vehicle should "open up" the air and

then "close" it with little disturbance. "A racy shape at lower speeds," says Propp, "is blunt in front and flat toward the end, like a teardrop. A wedge is not streamlined at lower speeds." The air rushing past his vehicle creates a minimal disturbance far to the rear, nearly eliminating drag. Performance tests confirm his innovations. At 40 mph, the vehicle requires four and three-fourths horsepower. A mid-sized compact car requires 12 to 13 horsepower at 50 mph.

Except for a broken chain, his electric car has been trouble-free. Using all 12 batteries at an average speed of 40 mph, the car will travel 48 to 50 miles. A comparable electric vehicle, a converted VW Rabbit made by Southern Coast Technology, one of the most efficient on the market, travels 20 to 30 miles at 35 mph.

Despite its superior performance and low cost (but many hours of labor), Propp sees places for improvement. One drawback is the initial cost of batteries. Another is in the weight of the steel-bottomed VW chassis. He would use fiberglass and epoxy throughout the vehicle's shell without steel supports. Propp calculates that the weight reduction would be significant without compromising strength. (Richard Propp, 1935 Orchard Avenue, McMinnville, OR 97128.)

Alcohol Production for Farm and Home

Given the fuel needs of a small farm, what could be more practical, if not idyllic, than producing one's own alcohol for home and farm use? For the Stull family of Dallas, Oregon, developing a cost-effective distillery for heating their greenhouses—where they grow miniature roses—became a process of discovery, from choosing feedstocks to modifying equipment.

While small-scale stills are available for farm use, the Stulls found that "small-scale" meant production of one million gallons per year. They were interested in a size between small-scale and a moonshiner's five-gallon-per-day model: one that averages 50 gallons in 24 hours. This form of "intermediate technology," they realized, had not yet been pefected or made cost-effective.

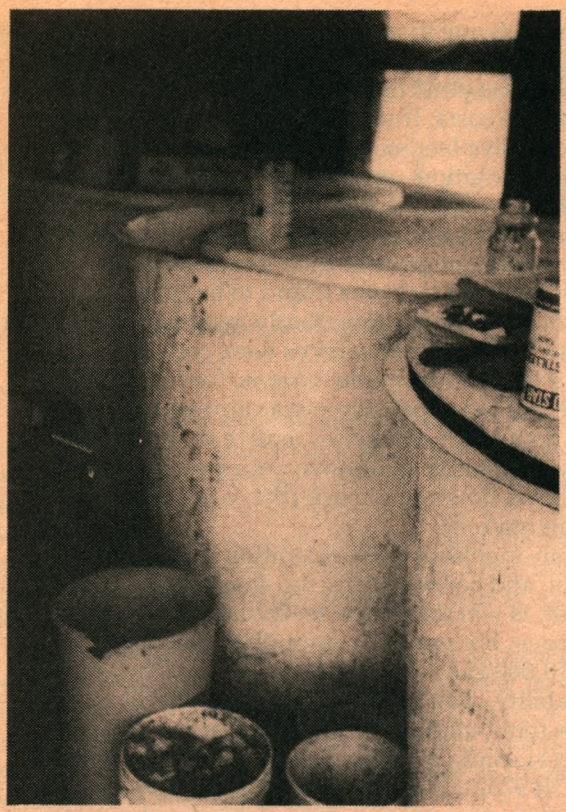
To minimize costs, their still was designed to use the most inexpensive feedstock—the source of the sugar used for fermentation—and conserve as much energy as possible. Through extensive research, they found that fodder beets provide the best source of sugar, but the beets would not grow in their heavy clay soil. The next cheapest feedstock was found to be corn sugar waste from canneries—abundantly available in the Willamette Valley. Other sources were considered, but turned out to be undesirable. Grains, for instance, must be heated first (an expensive extra step) and converted to starch. Jerusalem artichokes, native to the Northwest, are nearly impossible to remove once planted and are tricky to break down into mash (the sugar "feed" for yeast fermentation).

A seldom-mentioned consideration in choosing feedstocks, and consequently the appropriate still equipment, is whether those feedstocks will require storage space. For example, enough fodder beets to produce 10,000 gallons of alcohol per year (the approximate capability of an intermediate size still) fills a 25-by-15-square-foot building. (For further information on fodder beets, contact Pacific Seed Co., 123 SW Second, Albany, OR 97321; 503/928-5868.) On the other hand, the Stulls discovered that soft drink bottlers have inexpensive waste corn syrup available year-round. This makes it possible to avoid the storage problem.

Other cost-cutting measures were taken by improving the still's energy efficiency. "A first step," recommends Cynthia Stull, "is to insulate the building well where the still is housed." Another effective method involves recirculating the hot, spent beer—the product left after distillation—back through the unfermented mash. This way less energy (gas, wood, or electricity) is needed to heat the mash to a constant 80 to 85 degrees for proper fermentation.

Cynthia Stull and her continuous-energy still and cooling column.

The Stulls found that "small-scale" meant production of one million gallons of alcohol per year.



The Stulls' 600-gallon fiberglass fermentation vats waiting to be "fueled" with chopped sugar beets.

Energy can also be saved through the water cooling system. Large quantities of water are used to cool the hot, alcohol-laden vapor as it rises from the boiling beer up the condensing column. "When we realized how much water a still takes, we installed a water cooling tank with a capacity of 1,200 gallons," says Stull. "This way, we didn't need 220 volts to pump water out of a well." Instead, a small, circulating pump is used.

By using carbon dioxide, a by-product of the fermentation stage, they reduced their total costs further. Knowing that their roses would thrive on carbon dioxide, the Stulls constructed a pipe system into their greenhouses, and roses were ready for sale in less time. The greater sales helped to offset the cost of the still.

Perhaps the most significant factor in determining cost-effectiveness, nonetheless, is the choice of stills. Here is the objective: squeeze an optimal quantity of alcohol, at the optimal proof (usually 170), out of the least amount of feedstock and energy, with the least labor, while minimizing by-products like stillage (the nonfermentable residue from fermentation of the mash). The Stulls learned by experience; they found that a batch still—where fermentation and distillation occur in a single vessel—forces the temperature of the boiling mash to rise as the alcohol in the mash vaporizes. At this latter stage, the proof of the alcohol decreases.

"There is a point," states Cynthia Stull in her grant report, "where the value of the alcohol being produced drops below the cost of the energy to produce it. If you can make or purchase a continuous-running still, you eliminate many of the problems you will encounter with a batch still. Because you are constantly feeding the continuous-running still with fresh mash, rich in alcohol, both your proof and flow rate of product will remain high."

As for the cost-effectiveness of intermediate-scale alcohol production, the Stulls report mixed results. Presently, the cost of electricity and feedstock roughly compare to the cost of gasoline; they aren't yet able to cover labor expenses. Cynthia Stull is, nevertheless, optimistic: "When gas costs $1.40 to $1.50 per gallon, alcohol production becomes cost-effective, including labor," she says.

Figures such as these, along with a series of valuable tables for figuring mash dilutions, sources for purchasing equipment, and recommendations for avoiding problems, are clearly laid out in Cynthia Stull's 74-page report, "Fuel Alcohol: The Road to Independence," available free from RAIN. (Cynthia Stull, 2175 James Howe Road, Dallas, OR 97338.)

Developing Recycling Programs

As landfill space becomes increasingly scarce, and as the cost of virgin materials rises, more municipalities are turning to recycling programs. In many cases, however, accurate information on developing the most functional residential recycling system, or recycling operation at disposal sites, is not readily available.

The Association of Oregon Recyclers (AOR) sought to meet this need with their U.S. Department of Energy A.T. Small Grant. AOR hired Resource Conservation Consultants, a Portland-based organization, to perform extensive research on recycling programs in Oregon. The results of this research were published by AOR in a manual for establishing new multimaterial recycling systems or improving existing ones.

The manual's first section describes features of programs throughout Oregon, from innovations in collection vehicles to elements of a successful promotion effort. A table shows the extent of residential collection services in Oregon. Also in this section, of potential value to any recycling group in the U.S., are descriptions of uniquely successful recycling or collection programs in El Cerrito and Palo Alto, California, and Boulder, Colorado. The Palo Alto program, unlike the other two, maintains a composting/wood recovery system at the landfill site. The composted material becomes landfill cover that will eventually serve as soil for a park planned for the site.

Section two outlines recycling operations at disposal facilities in Oregon. It concludes with a discussion of a landfill recycling facility in Nottingham, New Hampshire, where items that are reusable are sorted and made accessible to the public. The facility's success has also involved creative marketing. Before recyclables are sold, they are accumulated in large quantities so they can be sold at the higher bulk rates, and materials are jointly marketed with rural recycling programs in the area.

Marketing considerations, promotional strategies, and details about collection equipment are discussed in the manual's third section. In section four, technical

assistance resources are listed: organizations, reference documents and materials, numerous manufacturers—from glass crushers to can flatteners—end users (mainly Oregon-based), and paper, metal, fiber, and glass brokers.

Since the Oregon Legislature recently passed a bill that calls for all cities with populations above 4,000 to establish residential recycling services by 1986, this manual is apt to be used widely. It may also serve as a model for other states or regions intending to augment the effectiveness and scope of recycling programs. (Association of Oregon Recyclers, P.O. Box 10051, Portland, OR 97210.)

Community Resource Center

Where can home owners find up-to-date information on how to save money on energy bills—without spending a major part of a paycheck on fancy conservation devices? The Appropriate Technology Resource Center, now housed in the Coos Bay Public Library, is a good place to start.

The Center was established in January 1981 by the Southwest Oregon Community Action Committee (SWOCAC) in North Bend, Oregon, with the help of a U.S. Department of Energy A.T. Small Grant. It received an additional USDOE grant to continue a second year. The Center emphasized outreach to low- and moderate-income households and provided information, education, training, and technical assistance to individuals, groups, libraries, and schools. Resource Center topics included low- and no-cost methods of home energy conservation; renewable energy technologies; backyard greenhouse and breadbox solar water heater construction; and more.

During this first year, the Center organized workshops for low-income families on techniques of planning, installing, and monitoring two simple, low-cost (under $1,500) appropriate technology projects: a solar greenhouse and a breadbox water heater. Families at both sites received construction materials at no charge and were asked to monitor the performance of the projects in return. The greenhouse and the water heater continue not only to save energy and dollars for the households that installed them but also to serve as models for the communities in which they are located.

Low- and no-cost home weatherization techniques were the focus of workshops during the Center's second year of service. SWOCAC staff also organized special workshops on how to make Roman shades and other types of window insulators.

In order to contribute to the development of appropriate technologies in southwestern Oregon, the Resource Center developed performance standards specific to the area's geographic and climatic conditions. These standards were based on data collected on projects installed during the training sessions. Data collected on the greenhouse constructed during one of the workshops included air and water storage temperatures, insulation values, and utility bill impacts. Solar experts will be able to use the information to determine the effectiveness of similar systems and to evaluate how much energy (and money) a greenhouse actually saves. The breadbox solar water heater has also been monitored for its heating efficiency and for its corresponding impact on utility bills.

Development of a local solar "index" is just about completed. The index will measure what proportion of a four-member family's hot water needs could be met by solar energy in the course of a given day. For example, an index of 75 would indicate that 75 percent of the family's hot water could be provided by the sun on that day. The goal is to have this information announced daily by local radio and television weather reporters. Such information should prove very effective in impressing people with the potential contribution of solar energy.

A major problem that the Center addressed was the lack of public knowledge about the need for and availability of appropriate technology development. In order to heighten public awareness, SWOCAC advertised widely through the public library system, the local solar energy association, and traditional media. Special publicity on workshops by the local press and interviews on local talk shows gave the Resource Center good public exposure. Mass mailings and pamphlet distribution also increased the public's interest in the project.

There were a number of positive results from the SWOCAC Appropriate Technology Resource Center project: an alternative energy organization was formed; renewable energy information was provided to hundreds of people; several houses became active solar demonstration projects; and many people received tax credit assistance.

A major problem the Center addressed was the lack of public knowledge about the need for appropriate technology development.

March 1983 marked the end of the funding period for the project, so the Center moved its collection to the Coos Bay Public Library where it continues to have a positive impact on the many people who use that facility. In fact, "many more people use the collection here than at our original site," says Carol Shininger, former SWOCAC staff member who now works at the library. Carol has placed the "Energy Collection" in a special section of the library and has installed signs and posters pointing out its location. (Jeff Manley, SWOCAC, P.O. Box 427, North Bend, OR 97459; Carol Shininger, Coos Bay Public Library, 525 W. Anderson, Coos Bay, OR 97420.) □□

PACIFIC NORTHWEST BIOREGION REPORT

Catherine Johnson

Northwest Ramble

A rich mix of **NEW ECONOMIC RESOURCES** will be "fertilizing" rural and urban Northwesterners and their projects this spring. The Puget Sound Cooperative Federation (2407 1st Avenue, Seattle, WA 98121; 206/292-8313) is expecting to begin a loan program in March to assist small, cooperative businesses. It is also developing a support system to turn fledgling businesses into worker-owned cooperatives. . . . The Washington Small Farm Network (19 E. Poplar, Walla Walla, WA 99362; 206/529-4980) is operating a "user-friendly," low-interest lending system for small farmers and has prepared a 60-page, free management manual, covering marketing, production, and finance. . . . The Community Exchange Barter Network (206/632-1285) is putting traders in touch with traders through its monthly directory *ACCESS to Goods*. Listings are free; subscriptions 25 cents per issue. . . . **MAP LOVERS** should find the Oregon Landsat Mosaic a thrill. It's a composite of 74 satellite photographs with either lines of latitude and longitude (black and white) or roads, towns, counties, and waterways (three color). The cost is $13.00 ppd. ($12.00 in Oregon) from ERSAL, Oregon State University, Corvallis, OR 97331. . . . **THE WASHINGTON NETWORK DIRECTORY** can put you in touch with over 1,500 social change, A.T., and human growth organizations, services, and resources. Send $10.00 to Network Publications, 2462 60th S.E., Mercer Island, WA 98040. . . . On the **FUTURES FRONT**, an unusual bouquet of school, business, nonprofit, government and community leaders in Gresham, Oregon, recently worked out guidelines and goals for directing the town's future. Veteran futurist Robert Theobald facilitated the project. For a summary of their ideas, contact the East County Futures Program, P.O. Box 696, Gresham, OR 97030. . . . And recommendations from the **CRITICAL CHOICES '83 FUTURES CONFERENCE**, held in June in Portland, are compiled in a 21-page report. Send $2.50 to Columbia Willamette Futures Forum, 0245 S.W. Bancroft, Portland, OR 97201. . . . A **TELECOMMUNICATIONS TECHNOLOGY** group formed after the Portland-area Critical Choices '83

conference. It will be meeting monthly from January through June to assess the impact—positive and negative—of communications technology on its city. The group hopes to use computers to exchange notes and compile a database of communications activities around Portland. For details, write Columbia Willamette Futures Forum (address above) or call 503/225-0112. . . . To control those extra **PERSISTENT SLUGS**, Six-Pak City Recycling in Seattle has discovered an effective technique: designer slug traps. Complete with glitter, a rundown on the sex life of slugs, and instructions, they sell for $6.50 ppd. (1113 N. 128th, Seattle, WA 98133). . . . The **OREGON HIGH DESERT MUSEUM** and its director, Donald Kerr, were recently given pats of recognition by the Environmental Education Association of Oregon. Condensing the natural and cultural history of the arid West into living exhibits and educational programs, the Museum is located on the edge of the high desert, four miles south of Bend (59800 S. Highway 97, Bend, OR 97702; 503/382-4754. . . . If you would like to **CREATE OR IMPROVE A PARK**, community garden, or playground, but don't quite have all the steps down, including financial strategies, contact Self-Help in Neighborhoods Everywhere, 2723 12th Street S.E., Salem, OR 97302; 503/370-9570. The group has helped organize some 13 such self-help projects in Salem. . . . Thanks to the **OREGON ENVIRONMENTAL COUNCIL**, the Oregon Legislature passed a residential recycling bill in July 1983. It calls for communities with over 4,000 residents to develop curb-side collection services for cost-effective recyclables by 1986. (See "Tinkering and Informing" elsewhere in this issue.)

Earthbank Off and Funding

Out of the conference "Building a Planetary Village," held at Chinook Learning Community, Clinton, Washington, in June 1983, Earthbank Association was formed. The group has developed a revolving loan fund and a 10-page list of socially responsible investments (see "Choosing the Future: Social Investing," RAIN IX:5). The directory is being distributed to Association members to guide investments. "Any small venture that's community-connected can apply, and we'll put them in touch with lenders," explained coordinator Carl Winge.

Although the Association's board is still developing plans for attracting lenders, Earthbank's first loan has already been made to *In Context* magazine (see review in Northwest Publications). The Association is gathering signatures of support to establish an Earthbank credit union on southern Whidbey Island in Puget Sound.

The coordinating group is planning a conference to work out ways of tailoring a cooperative banking system—like that of Mondragon in Spain—to the maritime Northwest. It will be held May 8-13, 1984, at Chinook Learning Community. To get the whole scoop, or to inquire about becoming a member of Earthbank Association, contact Carl Winge at P.O. Box 87, Clinton, WA 98236; 206/321-1886.

Barter Network Grows

Barter projects, even well-organized ones, often come up against a common problem: many people don't know how to trade so that *all* participants get the greatest benefit. The Hello Pages Barter Network in Eugene, Oregon, is educating the public to trade effectively while developing the local non-monetary economy.

Upon receiving a seed grant from the National Self-Help Resource Center, the coordinators created a computerized card catalog of subscribing traders. Subscribers pay $20.00 per year on a sliding scale or trade services. They list their names, telephone numbers, what they have to trade, and what they want. Other subscribers call the Barter Network with requests and are given a name and number to call for the item or service. After a trade has been made, the participants call the Barter Network to update their listings.

To help people learn how to trade, the project is using two methods. One involves free Barter Better Workshops. People actually act out trades, from common ones to those with unusual twists. The other method involves local cable access television. A half-hour program gives tips, demonstrates fun trades, and includes "network" news.

"The first year, we're operating as a community service," says coordinator Baruch Bashan. Part of that approach means asking local businesses to make donations in trade for a business tax deduction and to set up subscriptions for their employees. "We're trying to help people get what they need without spending money," explains Baruch, "by putting them in touch with other trading partners." For tips on initiating such a network, or for investment information, contact Hello Pages Barter Network, 357 Van Buren, Suite C, Eugene, OR 97402; 503/342-7878.

NW Group Affirming Changes

Readers of RAIN responded enthusiastically to The Communications Era Task Force project proposal, mailed to you in September. The Spokane, Washington, based group, coordinated by futurist Robert Theobald, has developed a broad document that serves to capsulize fundamental cultural changes and recommends ways to bring them into wider public settings. Five copies are being sent to each respondent so that signatures can be gathered in affirmation of

the document's guidelines for change.

"Individuals, groups, and decision makers will have something they can refer to. So many people are talking this way in private—about the implications of basic value shifts—but not in public," observes Martha Shannon of Spokane. In March, a published version of the document will list the number of signatures by state as well as by a cross-section of people who signed it. The policy guide will then be distributed to signers and decision makers to help steer planning and legislation. Those who have not yet responded and are interested in circulating five copies for signing should send $10.00 (if that's a problem, send as little as $5.00) to The Communications Era Task Force, P.O. Box 3623, Spokane, WA 99220; 509/327-5596.

Plutonium Fever

In November, the U.S. Department of Energy (DOE) reportedly completed the renovation of a nuclear plant that could reprocess spent fuel from commercial reactors into weapons-grade plutonium. The DOE also appears to be eyeing the area surrounding the plant, located on the Hanford Nuclear Reservation outside of Richland, Washington, for a nationwide high-level waste repository.

The reprocessing plant, known as PUREX (Plutonium-URanium EXtractions), "is a key facility in the Reagan Administration's plans to make 14,000 new nuclear bombs by 1990," said Chuck Bell of the Hanford Oversight Committee. In 1969, the Oregon Board of Health found that because of the then-operating PUREX plant the nearby Columbia River contained more radioactivity than any other known body of water in the world.

In 1982, two counties downstream from Hanford passed resolutions calling for a delay in the restart of PUREX until further environmental studies could be done. After expressing exasperation with the lack of responsiveness of other governmental bodies, Gina Maduro, a spokesperson for the Hanford Oversight Committee, said she thinks direct actions such as civil disobedience may be the most powerful tools to stop the PUREX plant and Hanford waste dump from opening. Hanford Oversight Committee, 814 N.E. 40th, Seattle, WA 98105; 206/632-0500.—Steve Salmi

New Funds To Serve Eugene Food System

Struggling small farmers in Lane County, Oregon, have reason to sharpen their pencils and plan ahead. After a year of planning, the Association for a Regional Agriculture Building the Local Economy (ARABLE) expects to begin receiving deposits and investments in February. Loans will be made soon thereafter.

ARABLE's depositor-directed financing emanates from a model project called SHARE, or Self-Help Association for a Regional Economy. It was developed by the E. F. Schumacher Society in Great Barrington, Massachusetts (see access information on page 23). At the hub of ARABLE are its producer-consumer associations. They reduce risk on loans, lowering interest rates, because members' deposits act as collateral on loans to other members.

Both local food retailers and growers are eligible for loan assistance. The three types of funds available are only administered by a host bank, not directly dependent on it. The cooperative investment program includes a trust fund to assist community-related projects.

ARABLE coordinator Thomas Forster feels the effort could bring new character to the local agricultural economy: "By expanding this to include all participants in the area's food chain, they can have greater control over where investments go. That means more jobs." For more excitement contact ARABLE, P.O. Box 5230, Eugene, OR 97405; 503/345-1218.

Community Net Working

Computer access. For many, including nonprofit organizations, it remains a dream. Developing the financial and technical resources necessary to make use of computer services still requires tremendous effort. By sharing computers and expertise already available, however, computer access can be made real. Community Communications Services, a Seattle-based cooperative, is beginning to do just that.

It functions cooperatively in that members teach each other how to use the computer resources. For a $20.00 fee (or fair exchange), members learn how to do word processing, recordkeeping, and other functions and are assisted in choosing microcomputer systems. Other member services include typesetting by remote computers, mailing list and membership records management, and access to a "Community Resource Directory" database. (See *A Quiet Place* under Northwest Publications.) Members can use the equipment for a couple of bucks an hour, and database access is free or low cost.

Steps are being taken to provide a publicly owned and operated information exchange. As an electronic bulletin board, it would allow groups and individuals to enter and retrieve messages, news alerts, and data at any time from numerous community-access terminals. Unfortunately, such militant schemes require money (although not billions). So Community Communications will move ahead as finances and energy allow. Community Communications Services, P.O. Box 12173, Seattle, WA 98102; 206/329-3804.

New Tool Library

To assist residents in southeast Portland with gardening and home repairs, a low-cost tool lending library will begin operation this winter. The project will make available $5,000 worth of tools, from hammers and saws to hoes and garden supplies. Joining Multnomah Community Action Agency in the effort are Southeast Uplift (a neighborhood center) and several neighborhood associations. Jim Lehman, coordinator, plans workshops on tool and home repair. MCCAA, 4420 SE 64th Avenue, Portland, OR 97206; 503/777-4761.

NW Publications

In Context: A Quarterly of Humane Sustainable Culture, **$14.00/yr. from:**
Context Foundation
P.O. Box 30782
Seattle, WA 98103

This periodical, just a year old, stresses that it is not merely a publication, but also a process, a project—one that explores "what a human sustainable culture is." Each issue grapples with a theme, a facet interplaying with the vision of a sustainable culture: community and the planetary village economics in an intelligent universe; rediscovering the North American vision; and peace. The articles, essays, graphic art, and poetry are pieces of critical thinking, striking the conceptual core rather than conveying nitty-gritty how-to information. *In Context* can be a tool for transporting individuals to their "next step" and can inspire organizations to adopt new strategies. *In Context* is a worthy project that deserves our attention, contemplation, and support. —Mimi Maduro

The Smallholder, **$8.00/6 issues, quarterly, from:**
The Smallholder Publishing Collective
Argenta, B.C. V0G 1B0
Canada

Our northern neighbors, many holed-up snug around toasty stoves now, must be in the habit of jotting down how-tos and shareable news. *The Smallholder* is largely composed of letters and submissions from its readers (RAIN readers take note). Personable access—home-grown A.T. and reviews—for the homesteader. —KN

The Portland Metro Media Guide, **1983, 12 pp., $3.95 ppd. from:**
The Center for Urban Education
0245 S.W. Bancroft
Portland, OR 97201

As an update to the *1982 Oregon Media Guide* (both books are available for a total of $7.50 ppd.), this annotated directory is a must for any Portland group or individual involved with getting the word out. All new listings for cable TV stations, plus radio, commercial TV, and newspapers. —KN

Northern Oregon Cascades Topographic Atlas, **by Madelynne Diness, 1983, 106 pp., $12.95 from:**
Flying Pencil Publications
P.O. Box 19062
Portland, OR 97219

Nowhere else will the Northwest backpacker, climber, cross-country skier, fishing enthusiast, or explorer find a more detailed, fully indexed compilation of topographic maps—94 in all. Covering Broken Top in the Three Sisters Wilderness to the Columbia Gorge (Washington side included), and the western foothills of the Cascades to the Deschutes River, it sites 245 trails, 987 streams, 339 lakes, 189 springs, and 44 waterfalls. A watershed of information for discovering home. —KN

From: *Siskiyou County*

Siskiyou Country, **$8.00/yr., bimonthly, from:**
10394 Takilma Road
Cave Junction, OR 97523

Though bioregional thinking and models still seem to be crawling around on all fours, and sometimes it appears that its advocates are very shy and scattered, this heartwarming magazine feels like a neighbor just around the watershed. Not yet a year old, it's concerned with the integrity of the landscape, the largely rural communities, and the cultural growth of the people of southwestern Oregon. Issue six (August 1983) featured articles on what it means to live in the Siskiyou Mountains watershed. —KN

A Quiet Place, **$5.00/yr., quarterly, from:**
Box 12173, Broadway Station
Seattle, WA 98102

A nice, thoughtful little newsletter covering cooperative and community-enhancing efforts around the Puget Sound. With the fourth issue, due out this winter, the second "Community Resource Directory" (see "Community Net Working" elsewhere in this section) will accompany short articles, poetry, and tidbits on land trusts, communications, local economics, and related topics. Subscribers are also entitled to 20 lines in the Directory. Each listing is stored for one year in a computer database and can be accessed in print or selectively searched by keyword or category. —KN

ADVERTISING

CLASSIFIEDS

SINGLE PROFILE NEXUS creates a nationwide network of cultured singles. P.O. Box 19983, Orlando, FL 32814.

FUTON: An all-cotton sleeping mattress. Sales and Classes. Terri Treat, 503/246-4182.

CONDOMS, FOAMS, CREAMS, AND JELLIES. Large variety at discount prices (5-50%) from alternative, non-profit organization. Write to Zero Population Growth-Seattle, Dept. R, 4426 Burke N., Seattle, WA 98103 for descriptive mail order form.

INDEPENDENT POWER: Solar-electric systems work and are cost-effective for homes beyond the power line. ARCO power panels, lighting, batteries, etc. Informative brochure $1.00. Homestead Electric, Box 451 R, Northport, WA 99157.

"ECOLOGICAL USE OF THE LAND." A CLTs guideline for relating gently to the earth. $2.00 ppd. to Herb Goldstein, P.O. Box 517, New Freedom, PA 17349.

COMPOSTING TOILETS DON'T POLLUTE. Excellent for Custom Homes, Custom People. Dealer Inquiries Invited. Send $2.00 to: CTS, Route 2, Dept. R, Newport, WA 99156. 509/447-3708.

NOW: Young man wishing to participate in the creation of integrated living systems involving appropriate technology. I'm only open to projects that are environmentally responsible and aiming at greater self-sufficiency. Want project to express integrity and be learning experience out of which I'll be building my own living center. Room and board required only. Experience in geodesics, construction, and woodworking. For right job will travel to anywhere in North America. Contact: Ken Lay, c/o Box 959, Point Roberts, WA 98281.

SUNLIGHT COULD SAVE YOUR LIFE, by Zane Kime, M.D. The most detailed work on sunlight to appear in one volume. The definitive work on the subject. Sums up the most vital knowledge on sunlight related to all aspects of health. For example, sunlight properly employed can lower high blood pressure, lower high blood sugar, decrease total body cholesterol, strengthen physical fitness programs, increase resistance to infection, prevent some of the chronic degenerative diseases commonly plaguing western civilization. "The scope is spellbinding. Recommended to everybody interested in living longer and enjoying better health." (John Ott) "A must for anyone interested in the natural remedies God has given us to use." (Weimar) "Should be read by every physician and layman." (Jay Hoffman, Ph.D.) 315 pages. $9.95 postpaid. Or send SASE for free brochure. Sunlight, 11022 SE Stephens, Portland, OR 97216.

WORTHY WORK

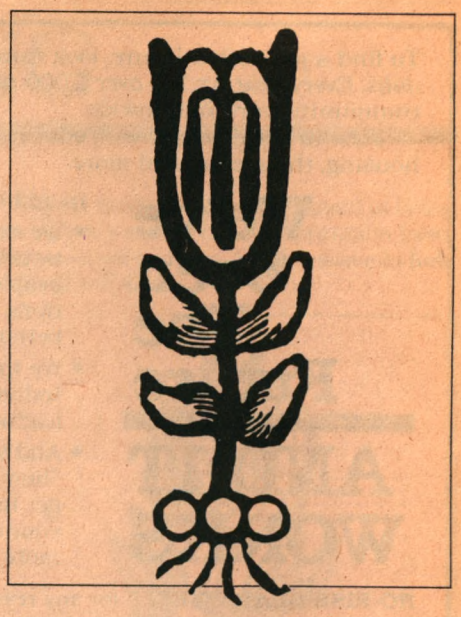
RAIN INTERN PROGRAM: Rain has an on-going intern program which enables staff interns to gain a thorough knowledge of magazine publication and resource center operation. The work is a mix of activities including promotion, library and office maintenance, information requests, publicity, and local educational or organizing efforts. Applicants must be self-motivated and able to work with minimum supervision; technical skills are appreciated though not necessary. A three-month commitment is required. Benefits include a stipend of $40 per week and the excitement of being in touch with the latest information from around the country. Send resume to Rob Baird at *RAIN*.

RAIN Advertising Policy

RAIN accepts both classified and display advertising. Classified ads cost 30¢ per word. As a special service during these times of high unemployment, work-related ads (see "Worthy Work") are only 15¢ per word. Prepayment required.

All ads are accepted at RAIN discretion. The advertising of products and services in RAIN should not be considered an endorsement. RAIN is not responsible for product or service claims and representations.

For information on display ads and a rate sheet contact: RAIN Advertising Dept., 2270 NW Irving, Portland, OR 97210; 503/227-5110.



CALENDAR

SPREADING THE WORD

In our effort to more widely inform people about RAIN, we are requesting that those groups for which we list upcoming events make our brochures available to the event participants. We'll send the sponsoring group up to 40 brochures when the magazine is mailed. We enjoy getting the word out for upbeat efforts. We hope you will too. Gracias.

The North American Nutrition and Preventive Medicine Association will sponsor the fifth annual **Health by Choice** conference, April 27-29, in Atlanta, Georgia. Nationally and internationally recognized leaders in preventive medicine will present the most recent developments and new findings in vitamin and mineral therapy, amino acids, essential fatty acids, exercise, medical self-care, and stress. Programs will be offered for physicians/health professionals, and the public, as well as workshops, films, and a health and fitness exposition. For further information contact: Bonnie Jarrett, NANPMA, P.O. Box 592-Colony Square Station, Atlanta, GA 30361; 404/475-0582.

The California-based Steering Committee for Sustainable Agriculture will sponsor the fourth annual **Ecological Farming Conference**, to be held Feb. 15-17 at Pacific Grove, CA. Topics at this year's conference, entitled "Toward a New Farming Culture," will include nursery production, soil fertility management, aquaculture, biological weed control, animal husbandry, and greenhouse management. Registration fee is $90, which includes lodging for two nights and six meals. Contact the Steering Committee for Sustainable Agriculture, P.O. Box 1394, Davis, CA 95617; 916/753-1054.

The American Solar Energy Society (ASES) will offer two major energy conferences in 1984. The **ASES Annual Meeting and Solar Technologies Conference** is slated for June 5-9 in Anaheim, CA. Topics covered will include solar architecture and construction, engineering, biomass conversion, and wind energy conversion. A meeting of the Solar Energy Industries Association will overlap the ASES conference. The ASES **Ninth National Passive Solar Conference and Exhibition** will be conducted Sept. 25-29 in Columbus, OH. Papers for the conference are being solicited, with abstracts due in March. Contact Karen George, American Solar Energy Society, 1230 Grandview Avenue, Boulder, CO 80302; 303/492-6017.

Tilth, the Northwest regional agriculture association, will sponsor a one-day symposium on **extending the growing season**. The symposium, to be held in Corvallis, Oregon, Jan. 28, will cost $7.50 for non-members and $5 for Tilth members, with reduced fees for students and seniors. For more information, contact the Willamette Valley Chapter of Tilth, Rt. 1, Box 67, Sheridan, OR 97378.

A **Permaculture Design Course** will be given January 20-27 by Dr. John Quinney, research director of the New Alchemy Institute. This course is co-sponsored by the Maritime Permaculture Institute and will be conducted at the Chinook Learning Community on Whidbey Island, WA. The fee is on a sliding scale from $115 to $160, plus $50 for food and $50 for lodging (or $10 camping). For further information, contact Chinook Learning Community, P.O. Box 57, Clinton, WA 98236; 206/321-1884.

The **Alaska Alternative Energy Conference** will be held at the University of Alaska, February 10-13. Workshops, presentations, and exhibits will focus on practical energy systems (wood, solar, methane, photovoltaic, wind, geothermal); finance; building and retrofitting; energy information and assistance; and energy policy. Contact Jim Olney or Will Snyder, Alaska Alternative Energy Conference, P.O. Box 73488, Fairbanks, AK 99707; 907/452-2390.

RUSH

Hat in the Ring—Futurist and author Barbara Hubbard has taken on the precedent-setting task of running for Vice President as a Democrat. She feels that the office of Vice President could become a sorely needed communication and research center of long range goals and positive options. Barbara believes "there now exists the good will, intelligence, resources, social systems, and technologies to surmount hunger, disease, ignorance, and the threat of war." So far, 25 Positive Future Centers nationwide are working to get the word out. For information, contact The Campaign for a Positive Future, 298 Belvedere Avenue, Belvedere, CA 94920; 415/435-1418.

Working Papers for Food Co-ops—Four training manuals for the use of managers and boards of directors of food cooperatives have been published by the National Consumer Cooperative Bank. The papers are "Direct Charge Food Cooperatives: The Experience in Ontario"; "Member Equity"; "Cooperative Food Wholesale Database"; and "Computer Assisted Food Depots: A Critical Examination." The papers may be purchased for $1.75 each or $5 for a set of four. Mail orders to Box 32, the Co-op Bank, 1630 Connecticut Avenue, N.W., Washington, DC 20009.

Rodale Health-Care System—Robert Rodale, publisher of *Prevention* magazine, has launched a nationwide campaign to reform the U.S. health care system. His "People's Medical Society" aims to educate members about options, encourage competition to hold down fees, shift emphasis from illness to wellness, and redefine the doctor/patient relationship. According to Project Director Charles Inlander, 25,000 people have paid $15 membership fees since April 1983, with 1,000 joining each week. For more information, contact the People's Medical Society at 14 E. Minor Street, Emmaus, PA 18049; 215/967-2136.

Boycott of the Month—*The Grapevine*, a quarterly newsletter that provides information on national and international boycotts, also offers a monthly ready-to-print column. The column mixes up-to-date information and background descriptions of boycotts with a reader-participation question-and-answer feature. The column costs $25 per month from The Grapevine, 217 S. Hyland Street, Ames, IA 50010; 515/292-2875.

Good Things from England, Part One—*Resurgence*, a British journal of the human spirit, has been spearheading the "small is beautiful" movement for the last 15 years. A special offer to RAIN readers—a free copy of the special May/June 1983 issue, "Thoughts from America." The issue includes articles by Robert Rodale, Gary Snyder, and Peter Berg. One year subscription to *Resurgence*, $20. *Resurgence*, c/o Rodale Press, 33 East Minor Street, Emmaus, PA 18049.

Good Things from England, Part Two—The Radical English Movement now offers three services to the global movements for social change: alternative English courses for activists who need a better command of English to extend their sphere of action; a *Radical Clippings Monthly* with news from the British left press; and the *Global Alternative Address List*, which

includes contact information for over 3,500 social change groups, periodicals, bookshops, and publishers. The Radical English Movement, 14 New Road, Hebden Bridge, West Yorkshire, HX78AD, United Kingdom.

Trucking by Bicycle—A 12-page booklet is available to show you how to build a heavy-duty, flexible load carrier for your bicycle. This illustrated booklet also gives plans for a child's seat that attaches to the carrier and for a simple device that supports canvas bags on either side of the rear wheel. $3 ppd. from Bob Pierson, 318 Gaskill Street, Philadelphia, PA 19147.

Microcomputer Database—Volunteers In Technical Assistance (VITA) has joined in a joint venture with a California firm to compile a database library for microcomputers to be used and distributed in developing areas. The focus will be on appropriate technology projects that can be applied to local needs and resources. Those interested in sharing expertise in computers and/or A.T. projects can contact Ron Swenson at EcoSystems, Inc., 147 S. River Street, Suite 205, Santa Cruz, CA 95060.

Profitable Nonprofits—Partners for Livable Places has published *Enterprise in the Nonprofit Sector*, a book that profiles the experiences of 11 nonprofit organizations in developing income-producing ventures to supplement traditional fund-raising drives. The publication is intended as a resource guide for nonprofits considering or already involved in entrepreneurial activities. The book is available for $7 from the Publishing Center for Cultural Resources, 625 Broadway, New York, NY 10012; 212/260-2010.

Nonprofit Computing—The Center for Local and Community Research has launched a newsletter, *Using Personal Computers in Nonprofit Agencies*, to help organizations use this new management tool. The newsletter covers professional development; generic uses, such as accounting; and specific uses, such as client recordkeeping and program planning. Contact the Center for Local and Community Research, Hotel Claremont Bldg., Berkeley, CA 94705.

Strong Foundations—The Foundation Center has published *Corporate Foundation Profiles*, a detailed analysis of more than 230 of the largest company-sponsored foundations plus summary financial data for more than 400 additional corporate foundations. The center also publishes the widely used *Foundation Directory*, which describes more than 4,000 private and community foundations. Contact the Foundation Center, 888 Seventh Avenue, New York, NY 10106; toll free 800/424-9836.

Avoiding Fund-Raising Pitfalls—The Taft Corporation has published *The Thirteen Most Common Fund-Raising Mistakes and How to Avoid Them*, by Paul H. Schneiter and Donald T. Nelson. The 95-page booklet is designed for nonprofit agency executives and board members. The paperback booklet can be ordered for $14.95 from the Taft Corporation, 5125 McArthur Boulevard, N.W., Washington, DC 20016.

Neighborhood Development—The Urban Institute has issued a summary research report on *Neighborhood Organizations and Community Development* by Sue A. Marshall, Neil S. Mayer, and Jennifer L. Blake. With a grant from the U.S. Department of Housing and Urban Development, the researchers found neighborhood development organization projects were highly successful in producing intended results, although housing, energy, and community development efforts were more successful than others. The summary report is available free while supplies last from Sue Marshall, The Urban Institute, 2100 M Street, N.W., Washington, DC 20037.

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