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**RAIN**

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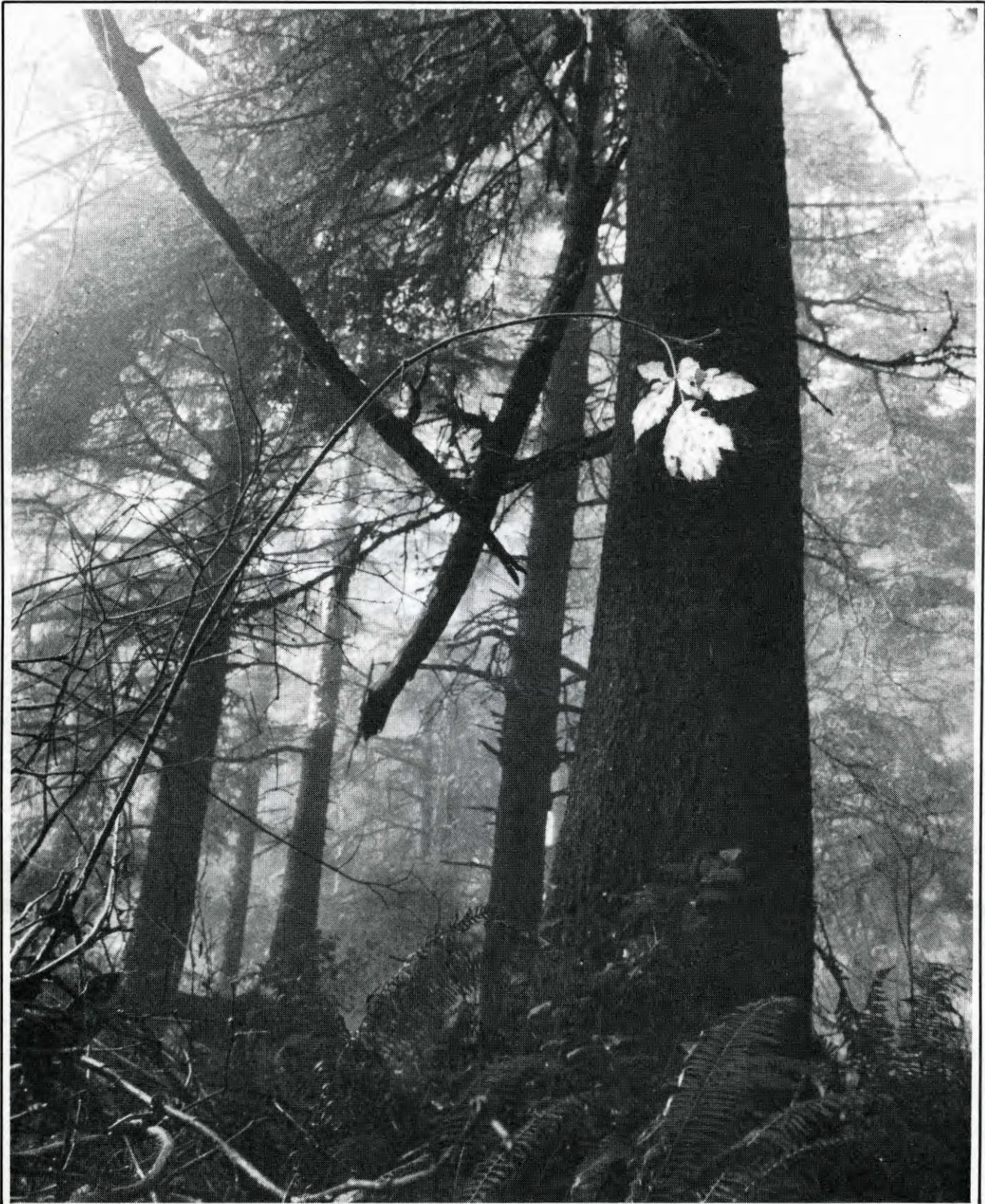
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# RAIN

NOVEMBER 1980

- Karl Hess/ Tom Hayden
- Fireplace Retrofits
- Global 2000



Volume VII No.2

\$1.50 No Advertising



# LETTERS

*You've been terrific . . . both your donations and your encouragement have been much needed and appreciated. We're still needful, however, and some distance from regaining solvency. The crunch is very real and very immediate. We may need to skip an issue or two. We are also considering some form of advertising to give us the steadier base most magazines rely on. In the meantime, yes, we're desperate, not just slightly pinched. We could really use your help. —RAIN*

Dear Dew,

Good to see you again, especially after this dry summer. Sorry to hear of your financial woes. Enclosed you will find my renewal check and if you can send a bundle of flyers I'll see to it that our solar van, NE Coastal Power Show, distributes them (we are in dire need of free lit on alternates and nukes, if you have any suggestions).

Now for the back-talk.

I wish the letters were back at the back or the middle. I want to hear from you, not from the readers, at least first. It is also so ORDINARY. About Steve Baer: I admire the man very much and he has been very generous to me in a previous incarnation but it is plain to see from his writings and pronouncements that he has an authoritarian bent. If you talk to people who have worked with him they will confirm this. Recently, Solar Lobby printed an enthusiastic article about Mr. Baer in which he complained about OSHA interfering with his small business. It was your regular "Republican" rap.

Byron Kennard's little tap-dance on rhetoric was a little too arch for my tastes. I never called myself or anyone doing what we are supposedly doing *appro tech*. I thought it to be a bogus term from the start. I don't think we have to have a name for it. Some things are better left unsaid. I can see *appro tech* for defense though and have been seriously thinking on it at the edge of my mind since I heard Tom Eastler talk about the depletion of essential elements to the Maine Organic Gardeners and Farmers conference in '76. He

was in the Air Force, involved with Civil Defense and a geologist at Univ. Maine, Farmington. I think farmers markets and community gardens and food forests and solar collectors are not only renewable energy devices but also civil defense measures. I think defense means not only against war, nuclear or otherwise, but also against the eruption of volcanoes and earthquakes and tidal waves and epidemics and hurricanes. An integrated food, energy and transportation system will go a long way to making our cities and towns defensible against all of these things. It will give us greater "self-reliance" and bring us into Biblical compliance with the need to store the harvests of the good years in preparation for the bad. In this time of war and the rumors thereof it would behoove us to point out these cooperative and communal forms of taking the power back to ourselves, of bringing the circle closer, of making the supply lines shorter. Imagine the VFW planting trees or doing workshops on energy conservation as part of civil defense. For those interested in monitoring the military I would suggest *The Defense Monitor* from Center for Defense Information, 122 Maryland Ave. N.E., Washington, DC 20002.

One other thing about the military: military spending if done carefully can have positive repercussions on the civilian sector. Does anyone remember the two government reports of three years ago that said a half-billion spent by the military now on photovoltaics for remote generators presently using diesel fuel would mean 50¢/watt solar electricity by '84? I am sure that there are a lot of possible *positive* interlocks like this. We shouldn't be afraid to look for them even if we are extreme pacifists.

On permanence I would like to point out that again we should be looking for interlocks and concatenations. If New England's second growth pine forests were gradually replaced with deciduous hardwoods we would expand streamflow rates by up to 50% because hardwoods transpire moisture much less than evergreens. If we are also planting carefully we could probably be channeling the wind away from our towns and thus reducing our heat loss due to wind chill while we direct those same winds towards our

windmills. To say nothing about the impact on wildlife and flora. If we aim towards permanence we must aim for an almost impossible complexity. But still I don't even see these kinds of second order possibilities taken into account. Recently, I had a bumper-sticker made up that says, "Expand the Biosphere." As far as I am concerned that says it all.

I do little or no barter but a hell of a lot of cooperatives and farmers markets and gardening. My vocation used to be solar organizer/carpenter; now it is only carpenter. I registered as a Republican to vote for (hah) Anderson in my state primary. I probably heard about RAIN through CoEvo Quart or such. I've lived here for 3 years now and about 8 years in Mass (en masse).

Glad to see you guys are still ecumenical in your views and ideas even though being progressively invaded by the Amherst mafia. Hope you don't give up on the city as *New Roots* always seems to have.

Love,

George Mokray  
Cambridge, MA

Dear Rainpeople,

Just a note to thank you for your superior reviews of our books in the Aug./Sept. RAIN, and to cast my personal vote in favor of what you seem to be doing. I don't know what to think about RAIN's financial problems, for our experience here runs dead against the conventional wisdom in your Raindrops editorial. We bust our heads to put out the best magazine we can, spend the spare money editorially rather than on marketing ploys, and charge the readers what it turns out to cost—no deals, no discounts. We'd have the same size editorial hole without any ads because it's all subscriber based, and believe it or not, we're prosperous. The difference is probably in the scale of it all (now near 200,000 circulation) although the economics worked fine at 40,000.

Best,

John Kelsey, Editor  
*Fine Woodworking*  
Newtown, CT

*Our economics would probably work fine at 40,000 too—but that's a long way from here!*  
—Rainmakers

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## RAIN

### Journal of Appropriate Technology

RAIN is a national information access journal making connections for people seeking more simple and satisfying lifestyles, working to make their communities and regions economically self-reliant, building a society that is durable, just and ecologically sound.

RAIN STAFF: Laura Stuchinsky, Mark Roseland, Carlotta Collette, John Ferrell, Kevin Bell.

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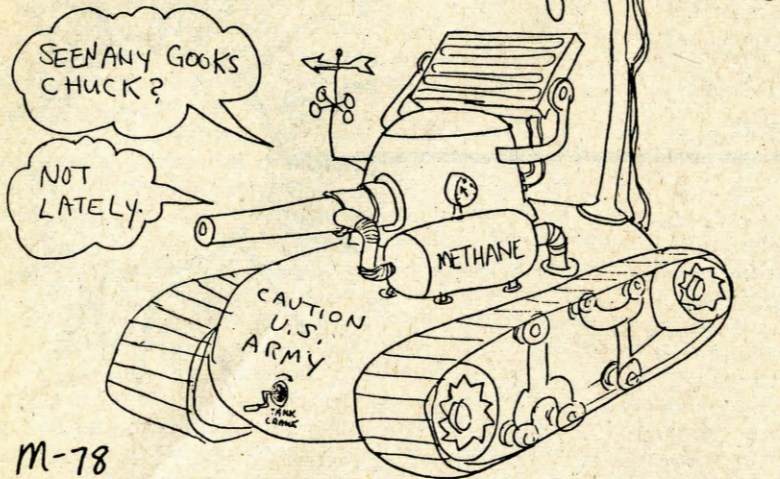
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Dept. of Ecological  
Warfare Bulletin #29-6



## The M-78 Solar-Powered, Wind Electric Tank, with M-17 Methane Gun

Dear RAIN,

I just read Byron Kennard's piece in the Aug./Sept. issue in which he comments on the incredible concept of "appropriate technology for national defense." Good grief—my most morbid fantasies are coming true! Enclosed is a copy of a doodle I drew on the back of an envelope in 1975. I thought I was just being a smart-aleck, not prophesying a whole new concept in warfare. Truly, an anthropologist from another planet would have to pronounce our culture totally insane.

Peace,  
James B. DeKorne  
El Rito, NM

Dear RAIN,

Looks like we're going to have wind-powered a-bombs: hold the launch until a windy day! Rather than waste-to-energy it looks more like energy-to-waste, everywhere. War as if people mattered.

Warm Regards,  
Sam Sadler  
Eugene, OR

Dear RAIN,

I was much saddened to read the latest Raindrops. You guys are appreciated a lot more than you think, I am sure. There I was a few years ago, a fat cat at the top of the government pay scale as Chief Scientist at one of NASA's laboratories. Like all engineers I know, the system doesn't bother me and I don't think about the system beyond what I get from TV by osmosis. So here comes RAIN. Holy Lord, did that open my eyes! I knew there was something wrong with us technocrats, but getting a hold of it was like trying to put a fishing worm up a wildcat's ass.

So I am sure that there are a lot more like me out here, and I don't see how there is any way that you all can assess the impact that you are having. Give us a little credit. There

are a few of us inside the Government/Corporate complex who could have sat down and written the Tom Bender article, "Evil" in context from our own internal feelings (but not, of course, with his skill). We feel helpless inside the system and fantasize about coming out to the Rainhouse and sweeping the floors.

I think in response to the sad news in Raindrops, that your readers will appreciate it if, in case you can't keep your head above water, you give us as much advance notice as possible so we can pitch in more to help out.

Respectfully,  
Nelson McAvoy  
Greenbelt, MD

Dear RAIN

We just saw your review of *Permaculture I and II* in the August/September issue and wanted to let your readers know that The Rural Education Center is the distributor for Bill Mollison's books in the Northeast. We ship copies of *Permaculture II* to both individuals (\$10.95 ppd.) and bookstores.

The American reprinting of *Permaculture I* is due to go to press by October 15, 1980. Once it is finished, we will be selling that also.

Susan Stepick  
Associate Director  
Rural Education Center, Inc.  
Stonyfield Farm,  
Wilton, NH 03086

Dear RAIN,

My husband argues that RAIN doesn't advertise because advertising, i.e., pushing material goods into the consciousness and desires of people, is the antithesis of the goals of RAIN—trying to make do with as little buying as possible. That is true and noble, but even as self-sufficient as we are, we still *have* to buy many items. Many of these items are available locally, but we don't hear about them. I believe you are being os-

trich-like and I would even enjoy seeing advertising in RAIN.

Sincerely,  
Barbara Fisk  
Tracyton, WA

Dear RAIN,

The appeal made on the pages of the Aug./Sept. issue of the magazine reaffirms the convictions which I expressed to you in an earlier letter.

When all of these fine organizations are experiencing the SAME problems, it is apparent that you all need to do something to resolve it, TOGETHER. What is the horror of working together? Cooperative activity is advocated continually in the pages of the magazine; surely you believe what you write (?).

Go on as you wish, but it gets a little heavy to be continually asked to support an activity which could be made more efficient by thus using the contributor's money more effectively. Here is my \$25, early, for a two-year subscription. Hope this helps in the cash flow problem. I earned almost \$6,000 last year, but I want to see RAIN expand; I will do what I can to get more subscribers.

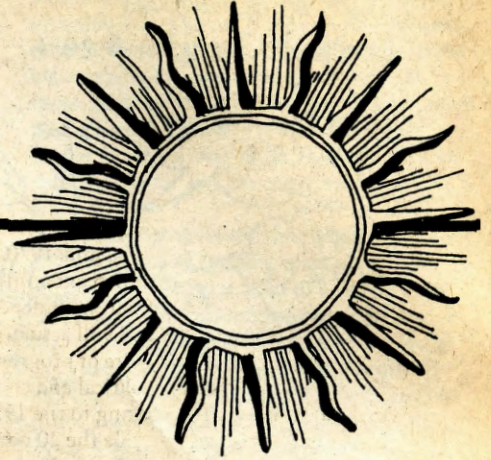
Cordially,  
D. Paul Sondel  
Washington, D.C.

*"... the horror of working together..."*  
I wonder if any RAIN readers recall The Full Circle Resource Center? Vintage RAIN stuff, that. Before there was a RAIN: Journal of Appropriate Technology there was the Full Circle. That old title has new meaning for us here as RAIN the corporation (formally the RAIN Umbrella, Inc.) grows to include The Portland Community Resource Center (PCRC). PCRC with its co-director Steve Johnson (who you'll recognize as a co-founder of RAIN) will give us the opportunity to practice locally what we preach nationally. It will also give us the mechanism for getting out more of the mass of information we have access to. We'll be able to apply successful strategies from other regions to Portland's community problems.

The growing Umbrella is only one part of our efforts at working with other groups. Over the past few months we've met with nearly all of the community-based energy and A.T. projects in the city to begin coalition-building aimed at joint fundraising, co-operative program planning, and eventually a shared space. Portland has in its community groups a wealth of information and expertise, and we figure we can make better use of all the time and energy spent competing with each other for funds and attention. Besides, as a team, we are really quite formidable. We may even find that we have clout... a cheery thought.

So, thank you D. Paul Sondel, for your wise words in 1978, and your continued company in 1980. —CC





# From the Outside in: Building the Solar Coalition

by Tom Hayden

*Western Sun, the western states Regional Solar Energy Complex, held its first "whole staff" forum this September. Consistent with Western Sun's (very posh) image, the forum was a first class affair. Tab for the day ran somewhere between \$22,000 and \$45,000 (RAIN's total expenses for 1979 amounted to \$45,307). Attending as the press, we feasted on crab and prime rib, served on J. P. Stevens (as in "support the Stevens Boycott") tablecloths, and listened to David Morris (Institute for Local Self-Reliance), Fran Koster (Franklin County Energy Plan and TVA's Solar Application Branch), Bruce Anderson (Solar Lobby and Solar Age Magazine) and several others. Denis Hayes, director of the Solar Energy Research Institute (SERI), and Don Aitkin, director of Western Sun, spoke in the morning; by lunchtime half of Western Sun's "whole staff" had deserted us. They could have invited the local solar community to their forum and at least had an audience. They could have opened it to the public, charged admission, and made money on it. I was left with the question: "Just who's trying to impress whom?"*

*None-the-less, the forum was strong on strategy, and we've been given access to tapes of the key sessions. This, Tom Hayden's opening address, seemed a good summary of the new agenda facing the solar community. We found it interesting to compare to our earlier interview with Karl Hess. In the next few months we'll be publishing several of the other forum talks, each focussing on ways to coalesce, finance, and maintain a renewable energy future. —CC*

We are meeting today as the representatives of 13 Western governors, and as the staff of Western SUN, to examine the progress being made towards the solar future, and the obstacles still in our way.

Let me describe the dilemma I see and frustration I feel, then suggest some possible ways out.

My own perspective can be illustrated best from our solar experience in California. In the past several years, we have made strides that no one would have believed possible in the beginning. We have an excellent tax credit, which has just been renewed by the Legisla-

ture. We have a new program of loans to small solar entrepreneurs, designed to begin in 1981. We have a program of "no cost" loans to solar consumers by our utilities, scheduled to begin implementation this month. There is a law protecting small businesses from utility domination of the solar market. Several millions of dollars have gone into retrofitting state buildings. The Legislature has approved a study aimed at maximum feasible solarizing of California in the '80s. To promote solar initiatives, we have the Governor's SolarCal Council, a citizens commission whose 1979 Action Plan, *Towards a Solar California*, was called the "most outstanding solar energy program" encountered by the editors of the Harvard report *Energy Future*. There is also the SolarCal Commission on Local Government and Renewable Resources, a network of more than 50 elected officials who are passing pioneering solar ordinances in Davis, San Diego, Santa Clara and many other California cities and counties. We even have a solar foreign policy, symbolized by the joint effort between California and Israel to generate electricity from a "solar pond" at the Salton Sea. It is fair to say that California leads the nation in solar energy.

And yet such a claim makes me uneasy. Our progress is ambiguous when analyzed next to the real problems and potentials we face. Solar applications have approximately doubled in California in the past four years, it is true, but the current count is only 60,000 in a state with a housing stock of over six million units (and 29,000 of the solar devices are for swimming pools). This is within a state whose solar potential is so bright that a Lawrence Livermore study in 1975 concluded that California could operate self-sufficiently on renewable, decentralized energy systems by the year 2020 even if our population doubles and economic activity triples.

In contrast, a 1979 memo by state energy commissioner Emilio Varanini suggests that a conventional energy future might require California to site 10-15 nuclear or coal plants, spend over \$75 billion, increase our water requirements for cooling by thirtyfold, abandon 20,000 acres of agricultural land, suffer much greater air pollution, and establish hundreds of disposal sites near watersheds, fault lines and populated areas. Not a scenario anyone wants, but a scenario which will be dictated by our energy consumption patterns unless we create an alternative in the immediate future.



Now let me generalize from California to the national scene. Since 1975, solar energy has made amazing progress from obscurity to a real option. There are solar panels on the White House roof, an official commitment to achieving 20 percent of our energy from the sun by the year 2000, a decent solar tax credit, a solar bank, a billion-dollar solar budget, and literally thousands of applications springing up from Alaska to Florida.

But let us also remember that President Truman's official commission, chaired by William Paley in 1952, foresaw the possibility of 13 million solar applications by the mid-1970s. The 20 percent goal actually means less than a one percent annual increase in solar usage, a snail's pace. More important, no independent solar experts believe that even the 20 percent goal will actually be reached by the end of the century, at the present rate of progress. The reasons for this are institutional, economic, political and cultural, not technical. From a technical standpoint, according to the 1979 *Domestic Policy Review*, it is possible to nearly double the 20 percent goal in the coming two decades. More disturbing, perhaps, is the fact that much of the existing budget for solar—up to 40 percent in some estimates—goes to the expensive, high-technology and futuristic "power tower" and "satellite" projects while more immediate, practical solar possibilities are ignored or short-changed. Moreover, the Secretary of Energy, in a memo leaked to the press, has projected a reduction of solar energy spending over the coming five-year period.

We are not gathered here, however, to rail at dangerously outmoded attitudes, or place the blame for solar's slow acceptance at the feet of federal bureaucracies or oil company conspiracies. There is no attitude so rigid, no vested interest so irrational, that it cannot be modified or changed when a positive alternative to disaster exists. Our task, as important as any in the nation, is to argue for, promote, and above all *create the solar alternative*.

Let me then talk about ourselves, as the advocates and architects of a solar age. We are a strange band of refugees, some from the '60s, some from the engineering and military worlds, some from business-or-government-as-usual, all drawn together by an unspoken, hardly-describable commitment to this new source of energy.

As an observer of social reform in American history, I would say that one of the most striking aspects of the solar energy story is that it has *not* really involved a typical social movement. By the usual definition, such a movement mobilizes millions of people for clear goals and includes tactics ranging from civil disobedience to electoral politics. The anti-nuclear movement is an example, the anti-war movement of the '60s another.

There are solar advocates, solar enthusiasts, solar do-it-yourselfers, solar researchers, even a solar philosophy and lifestyle. But there is no solar movement. No one, to my knowledge, has gone to

*There is no attitude so rigid, no vested interest so irrational, that it cannot be modified or changed when a positive alternative to disaster exists.*

jail for solar energy. No one has been elected to office on a solar platform.

I think certain obstacles to a strong solar movement are rather obviously built into who we, the solar advocates, are. And if we want a solar movement, we will have to consider changes in our own approach to the issue.

1. The *solar business community* (manufacturers, installers, architects, etc.) is largely imbued with a free enterprise mentality, including an ideological hostility to government and often a conservative attitude that inhibits making alliances with liberals, labor, consumer groups, the anti-nuclear forces, and so on. With some

*The possibility of a movement is being replaced by a professional bureaucracy which some might even call an elite. . . . Even if solar hasn't made it, we have.*

exceptions, most solar business people are primarily involved in solar *as a business*, are willing to sell themselves to a larger company, and see the marketplace as the arbiter of decisions about solar's future.

The problem with this view of twofold: a) solar is *not* like the home insulation or refrigerator business because it involves national security, the health of our entire economy, and profound moral and philosophical choices; and b) the marketplace is rigged *against* solar because of government decisions favoring oil, gas, coal, syn-fuels and nuclear power.

The solar entrepreneur is thus faced with a deep dilemma: to be successful in the jungle of the market, it is necessary to act with the "bottom line" as the crucial standard; but to advance the general prospects of solar, the business person has to be aligned with those who often favor government intervention, strong regulations on oil companies, rejection of the syn-fuel program, phasing out of nuclear power plants, and policies which favor the interests of consumers, workers and communities more than the multi-national corporations. The solar entrepreneur must work by the standards of cut-throat capitalism by day, and economic democracy by night, a seeming contradiction few can embrace.

2. The *solar activist* is a second party in our community caught in several dilemmas. If there is such a thing as the "solar lifestyle," or "the solar experience," the activist is living it. It is no accident that so much of the impetus towards solar energy comes from individuals who live in college towns and rural areas, adopting voluntary simplicity as an ethic, sustaining themselves on natural foods, jogging or practicing tai chi, priding themselves on their woodstoves, breadbox collectors, bicycles, backyard gardens, and reading *Mother Earth News*. Whether we call them drop-outs or ecotopians, it is clear that they are trying to already live in the future, like a new generation of pioneers creating their own environment beyond the physical frontier.

At the same time, these "solar stylers" often remain marginal, even alienated, from the mainstream of America as lived from the slums to the suburbs. And the philosophical and near-attitudinal objections of many solar activists to the bruising realities of big cities, marketplace competition, and political struggles place them at a disadvantage as a functioning force for social change. Their role is as utopians in the polluted world of Sodom and Gomorrah, waiting for the example of Davis, California, to attract the "sinners" of Los Angeles.

Somehow the solar stylers will have to decide whether it is a personal salvation they seek, or a change by moral example, or whether the larger global crisis calls on them to meet mainstream Americans half-way, at the point where idealism and self-interest converge to create a pressure for alternatives. While solar energy is a question of philosophy and lifestyle to many of us, it is also a pocketbook matter of jobs, lower prices and economic stability to others. While solar energy is a moral cause to many of us, it is also a practical matter of hard power-oriented bargaining in the halls of government. Perhaps the solar activists are numerous and confident enough today to begin broadening their appeal and sharpening their tactics. Otherwise, the promise of an idyllic experience will be no match for the blackmail and browbeating of powerful lobbyists.

3. The *solar bureaucracy* (federal, state and local energy officials, planners, research scientists, "technology transferers," etc.) arises from, and has achieved, a degree of respectability that is double-edged. Many of the new solar bureaucrats are former solar activists who have made the transition to the mainstream without compromising their values. On the one hand, their respectability is well-



earned and extremely useful. In a very short time period, the government at all levels has adopted a commitment to solar programs that must be implemented well. Solar professional associations have sprung up. Solar is being introduced in engineering, architecture, environmental and planning curriculums. The solar advocates, against great bureaucratic odds, are proving the practicality and reliability of our option in most impressive ways.

But here is the other edge. The possibility of a movement is being replaced by a professional bureaucracy which some might even call an elite. We have our conferences, our trade associations, our scientific papers just like the rest of the energy industry. We have our multi-million share of the Department of Energy budget, our government subsidies for grass-roots action, even someone in the DOE Office of Consumer Affairs to hear our grievances sympathetically. Even if solar hasn't made it, we have.

But we know that solar will never become respectable just by the counter-culture putting on three-piece suits and joining forces with an exceptional businessman or two. Making solar acceptable is not as simple as having it tested and certified.

Advocating a solar path as the *major* emphasis of U.S. energy policy is an immediate threat to certain economic and institutional interests. More deeply, it is a threat to the traditional American frontier mentality ("solar is too feminine," said one utility executive to an interviewer, while "synfuels are more macho"). Whether solar is "really" a threat, or only a perceived one, is beside the point. National priorities are determined by what powerful lobbies see in their immediate interests.

Solar advocates ought not be lulled by their newly-won respectability into thinking that solar itself is therefore on its way. Nor should solar advocates rule out the possibility of giving up that same respectability and job security in battles over energy priorities, especially if a new federal administration should throttle the solar program to a standstill.

What I'm suggesting is that we use the rules of the system as effectively as possible in pursuing our cause, but never lose sight of the larger fact that those rules are rigged unfairly to our disadvantage, and that only changes in *outer* conditions (OPEC price hikes, nuclear disasters, changing public opinion) will bring our work

## *The solar entrepreneur must work by the standards of cut-throat capitalism by day, economic democracy by night.*

within the system to fruition.

Who are the potential allies available to us in this difficult task? I have already alluded to most of them. First, there is a burgeoning *solar industry*, which is learning the hard way that, unlike Horatio Alger, they will not make it on their own. Second, there are those *energy-intensive businesses* (farming and transportation, for example) which are hard hit by rising oil and gas prices, and which share none of the windfall. Third, there are the *schools and universities* whose curriculums should begin reflecting a greater solar emphasis in the '80s. Fourth, there are the *unions* (sheetmetal, plumbers and others) which correctly assume a greater jobs potential from solar and conservation than any other energy source. Fifth, there are the *citizens organizations* (the elderly, minorities, consumers and so on) which face inflation, service cutbacks, and joblessness due to the capital-intensive nature of current energy policies.

My point is that the transition to a conserving, solar society can and will occur through a renewed spirit of self-sufficiency among networks of people across America, almost in spite of what higher officialdom enacts or declares. There are signs of this change everywhere. Legislators I know in Massachusetts are working on a bill to create a state "SolarMass," similar to our SolarCal. In Franklin County of that state, citizens are burning wood in their stoves and

documenting the savings on their utility bills. In Fitchburg, Massachusetts, a citizen-action program weatherized one-half the housing stock in seven weeks this year. A couple in upstate New York has started their own "electric utility" by wheeling power out of the Hudson River. A Puerto Rican group in Jersey City contributes its own "sweat equity" to insulating and solarizing neighborhood housing abandoned by absentee landlords. A professor in Massachusetts hooks up a windmill and cogenerator system to a school building. A group of Navajos in Arizona, calling themselves "the

## *No one has gone to jail for solar energy. No one has been elected to office on a solar platform.*

solar savages," builds, sells and installs their inexpensive flat plate collectors (in this case, with the help of Western SUN). The first, affordable "solar condominiums" are sold in San Diego County. A Community Development Corporation in San Bernardino builds a solar hot water system for a block of ghetto housing. A farmer in Iowa makes his own hydrogen and gasohol to power his tractor and truck. A couple in Davis build and share a neighborhood solar tract called "Village Homes." And so it goes: the society based on renewable resources rises into vision through the personal efforts of its pioneers. The basic change comes on a personal and community level, and can never be taken away from above—though it can be contained. And as Americans change from passive energy consumers to active energy producers, they will daily marvel at the new possibilities concealed from them during the age of profitable waste. They will learn that solar is a lost tradition of great and ancient cultures and, for example, that the Greek playwright Aeschylus condemned the opponents of solar energy long ago as "swarming ants in sunless caves."

The odds against this transition happening without chaos and war are slim indeed. The record of nations adapting to basic change is strewn with failures. But try we must. It may be the ultimate task of Western SUN to prevent this nation's energy policy from being dominated by the modern version of "swarming ants in sunless caves." □□





Tom had some specific suggestions for a program Western Sun can implement . . .

"Public awareness has to consist of more than seminars with builders, expensive conferences, and the creation of a good library. It means *contesting the DOE rule that prohibits television advertising of solar*. Where the public interest and national security are at stake, where other technologies have immense resources for advertising, it is a legitimate function of government to subsidize ads proclaiming the merits of solar energy for the here and now. It is a signal of skewed priorities that the federal government would advertise the obligation of young men to register for the draft, perhaps in a war for oil supplies, but would not advertise the potential of energy conservation and solar for creating a new basis of national security.

In addition to television advertising, we solar advocates ought to consider employing the *techniques of mass mail* so effectively used by business and political candidates today. By these methods, we could deliver individualized messages to consumers extolling the economic advantages of solar in ways that could never be done by a standardized government pamphlet. In addition to a direct sales pitch, we could be informing the consumer of the tax credits, loans and other available incentives which are currently among government's better-kept secrets.

Without being exhaustive, here are some other priorities we need to consider if we are to reach and mobilize the public in solar's behalf:

- Western SUN needs a *presence in Washington* to lobby for our budget, to explain our mission, to identify and tap every possible source of additional funding, to make alliances with consumer, environmental, labor and business organizations already headquartered there.

- We need immediate focus on such issues as *effective implementation of the Residential Conservation Standards (RCS)*, perhaps the single greatest contact the American consumer is going to have with the solar market this year. We

perhaps also need urgent pressure to include solar and wind architecture in the *Uniform Building Code*.

- We need effective *Solar Advisory Groups (SAGs)* in each state, brought together for a regional working conference on an annual basis.

- We need the equivalent of the *Local Government Commission* in every state, with at least one regional conference of local elected officials in the coming year.

- We need similar *regional decision-makers workshops* of public utility commissions, state architects, boards of education, etc. from the 13 states. A much-needed workshop, for example, would be to explore utility conservation programs and, in particular, the California PUC's new solar loans programs.

- We need a regional meeting to explore the *investment of state pension funds* into energy-efficient, solar-equipped housing in the West.

- We need to lobby to change Western SUN's federal mandate so that *photovoltaic cells* will be considered a technology ready for commercialization.

- We need "jobs from the sun" and "save energy, save money" coalitions formed regionally to attract consumers, labor and minorities to our program.

These efforts should be aimed at formation of a broad *solar constituency* composed of business, labor, consumer, minority and environmental interests, rallied around a consensus program: a) a greater (than 20 percent) commitment to solar by the federal government in this generation, b) incentives and subsidies to the solar industry at least equal to those for synfuels, oil, gas, coal and nuclear; c) government investment in alternative energy technology similar to the Manhattan Project or NASA; d) phased-in national requirements for energy conservation in industry, agriculture, transportation, offices and residential buildings; e) maximizing of the new technological productivity and job-creation possibilities in a renewable resource economy.

## ENERGY

"Insuring the Solar Home," 1980, \$ .95 from:

Citizens' Energy Project  
1110-6th Street N.W., #300  
Washington, DC 20001  
202/387-8998

Homeowners and solar do-it-yourselfers: here's something to get your "hands on" to. Ken Bossong has written a brief report on solar and our favorite industry—that's right, insurance. The study contends that there is a cautious optimism towards decentralized solar hot water and space heating technologies emerging among members of the insurance industry. Insurance companies are wary, though, of a number of potential hazards associated with solar hardware, including those of fire, contamination of potable water supplies, damage caused by winds, lightning, hail, and freezing weather (volcanic ash too, Ken?), structural collapse of a building, and personal injuries.

Further, many insurance companies cast a

hairy eyeball at do-it-yourself installations which, they think, may pose additional hazards that would raise insurance premiums. Likewise, solar hardware sold or installed by small firms may be considered less reliable and thus cause increases in liability insurance for emerging solar businesses, whereas there is increasing support for solar hardware produced by larger companies and products which meet federal or state solar equipment standards.

The report concludes with a short resource list of publications and organizations. —MR

**The Solar Jobs Book by Katharine Ericson, 1980, 211 pp., \$7.95 from:  
Brick House Publishing Company  
3 Main Street  
Andover, MA 01810**

*The Solar Jobs Book* is not another analysis of how many jobs can be created by a transition to solar as opposed to nuclear technologies. Ms. Ericson assumes you've read one or two of those (in case you haven't she lists ten in her footnotes!). She picks up where they leave off directing you to what jobs exist, in which areas (government, private corporations, small businesses etc.) and how to train for and pursue them. She includes extensive lists of solar equipment manufacturers, gov-

ernment offices at both state and federal levels, and even non-profit groups involved in solar. Most of the lists are well organized and easy to use, the manufacturers lists being the unfortunate exception. A state-by-state breakdown would be more practical than the alphabetical listing by business title she provides. One other small criticism is that her training survey, like most educational directories, pays little attention to the solar training being provided at Area Vocational Technical Institutes (AVTI). Some of the best programs in the country are at "vo-techs" and I've yet to see a list of them. If you're looking to get started in solar and other renewable energy fields contact your own AVTI, your local colleges, and state universities. Almost every campus now offers *some* technical solar, wind, or bio-mass training. Ericson's book will be useful to career seekers and career counselors, as well as energy information providers who get frequent requests (as we do) for lists of schools, offices and solar businesses. —CC



# ENERGY CONT.

**"A Warning: E.F. Schumacher on the Oil Crisis,"** by Vince Taylor, in *MANAS*, Sept. 3, 1980, \$10/yr., \$.30/issue from: **MANAS Publishing Company**  
P.O. Box 32112  
Los Angeles, CA 90032

Schumacher buffs will fall all over themselves trying to find copies of this special issue of *MANAS*, but it's worthy of a good reading by everyone concerned with energy today and tomorrow, especially those involved in projects like *The Global 2000 Report*. Taylor, from the Union of Concerned Scientists, explains in very accessible language how the author of *Small Is Beautiful* "could consistently see clearly and accurately the unfolding of the energy crisis when almost everyone else was befuddled and confused." He cites, for example, a passage from 1961, when most people thought the world was just entering the age of limitless growth, where Schumacher wrote: "The oil crisis will come, not when all the world's oil is exhausted, but when world oil supplies cease to expand." He pegged that date to be about twenty years off, roughly 1980. Today, says Taylor, we "are in exactly the situation he described, with exactly the consequences he predicted." The morning paper gives a chilling confirmation.

Building on the late Schumacher's work, Taylor shows that OPEC oil production will continually decrease as "the ability of the international financial system to provide real returns on \$100 to \$200 billion per year of additional oil-country investments seems questionable at best." For OPEC, "oil in the ground seems far safer and more profitable than money in foreign banks." Taylor continues:

*It is not just oil scarcity that threatens the present system, but the expanding need for non-renewable resources of all kinds. Attempts to circumvent oil scarcity by substitution of other resources will soon run into other limits. . . . Efforts to prop up the present system, whether through subsidies, tax breaks, "bailouts," or (sure to come) rationing of oil products, will merely delay the day of reckoning and raise the cost of making the inevitable transition to an economy appropriate to the limits of the earth.*

Pointing to the "inescapable and unavoidable" reduction in expected, future, and real income of the industrial nations, Taylor cautions that "government action cannot cancel the loss in wealth, but only influence who is to bear it." He concludes with a thought so in the spirit of Schumacher it may cause the old man to smile even now:

*The world without reflects the world within. This ancient truth places the oil crisis, which is forcing the world into new*

*directions, in a fresh light. It suggests that rather than representing a failure of economics, the crisis reflects a change in human consciousness, a new awakening of the human spirit. Seen from this viewpoint, the unexpectedly rapid demise of the petroleum age is a cause not for mourning but for rejoicing.*

—MR

***Shining Examples: Model Projects Using Renewable Resources*, edited by Kathleen Courier, et al., 1980, 210 pp., \$4.95 from:**

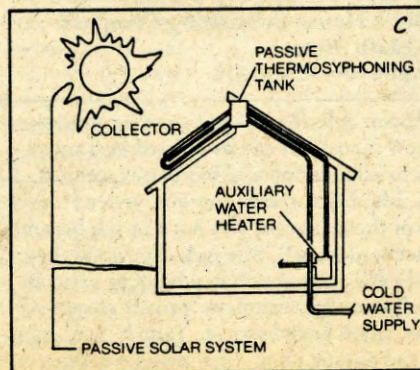
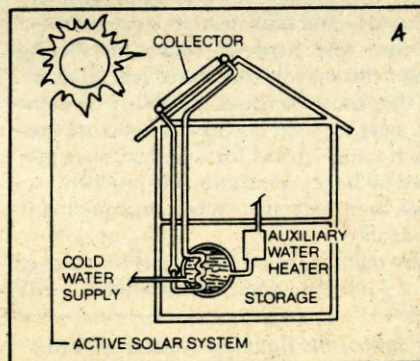
**Center for Renewable Resources**  
1001 Connecticut Ave. N.W.  
Washington, DC 20036

This book tells you who is doing what, the problems they've encountered, and where they've found their funding. Reading it will impress you with the fact that renewable energy use is no longer a function of environmental awareness, political persuasion, economic status or geographical location. The Boy Scouts have their projects, poor people in the Deep South are getting involved, and even heavy industry is starting to see the sunlight. *Shining Examples* would be an excellent resource for your local library. —Gail Katz

***Successful Alternative Energy Methods*, by James Ritchie, 1980, 191 pp., \$7.95 from:**

**Structures Publishing Co.**  
Farmington, MI 48024

If my mother was interested in using an alternative energy source in her home, this is



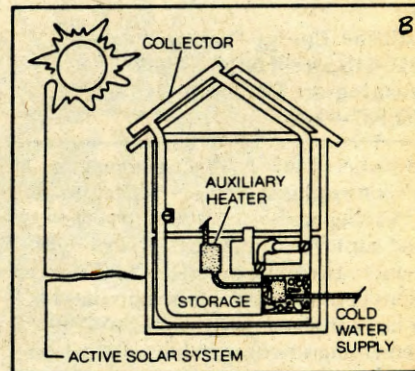
one book I'd loan her. It's one of the few books I've ever read which tries to give an energy overview and succeeds on a useful level. It starts by looking at your house as it is: where you're losing energy and where your potential lies for utilizing waste energy. It then suggests some good ways to get the house tight and efficient while stressing that this process should take place before you even begin looking at renewables. After you weatherize, you can turn to the later chapters for guidance on a range of available energy systems utilizing solar, wind, hydro and geothermal.

You could loan the book to your father, too! —Gail Katz

***Consumer Energy Atlas, 1980, 251 pp., single copies free from:***

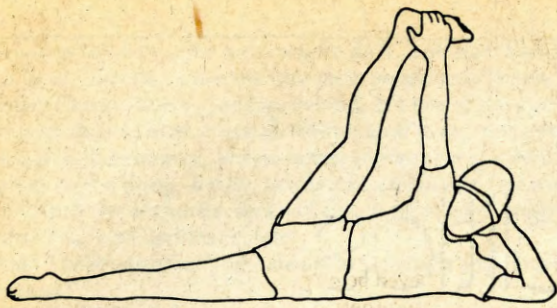
**DOE**  
**Technical Information Center**  
P.O. Box 62  
Oak Ridge, TN 37830

This document comes out of Tina Hobson's office at DOE, the office of Consumer Affairs. Tina is our ally on the inside that Tom Hayden refers to in this issue, so it's not pleasant to find myself critical of a project she sponsors. We certainly need a directory to the bureaucracy, but I'm concerned that this is so dryly presented and so complicated at first glance that it will sit on shelves all over the country while the majority of us will continue to bother the Federal Information Center staff with our questions. That may be more the fault of our laziness than the uninspiring quality of this publication. The fact is, on second glance, the *Atlas* is a basic phone book, cross-referenced by staff people, subject, and state. There are also general numbers up front including a good list of "locators" who can help you out if the rest of the book either confuses or intimidates you. We keep demanding access to the sprawl of government. The *Consumer Energy Atlas* can get us, if not in the door, at least on the line. —CC



from *Successful Alternate Energy Methods*





# STRETCHING

No physical technique I've engaged in over the last few years has been as simple to learn or as immediately and consistently rewarding as stretch. Used to limber the body at the beginning of the day, as a tension-release in the middle of some pressured work activity, or to warm up for another form of exercise, stretch is universally useful—and it feels so good! But it also tends to be ill-defined and often confused with other conditioning techniques. Good stretch is nothing like the calisthenics we used to do in high school gym, nor does it approach the body in the same way as does hatha yoga. Utilitarian and every bit wholistic, stretch has its own niche. That's why it's nice to see people in the know starting to shed some light on the subject.

I first came across Susan Smith Jones' article "Strrrrretch" two years ago and still consider it to be the best short introduction around. What good stretch is—and why you should be doing it—are explained here very nicely. The author also does a nice job explaining the physiology of stretching. The object, of course, is to increase flexibility—or the range of motion within a joint or series of joints (like the spine). By increasing the range of motion, and thus agility, flexibility encourages movement and helps retard the effects of the aging process. Without it, quick athletic movement in particular becomes much more difficult.

Interestingly, many athletes tend to either underuse stretch, or to go about it improperly. If not accompanied by stretch, those ever popular aerobic conditioners—running, cycling, jumping rope—actually lead to decreased flexibility and tightening of the muscles. Moreover, many who do warm up with stretch are still into the old "ballistic" approach—bouncing, jerking or bobbing their way through their stretches. It may look macho, but as Jones explains, a muscle that is stretched with a jerking motion responds with a contraction—the amount and rate of which corresponds *directly* to the original movement. This phenomenon, originating in the muscle spindle, is called the myotatic reflex. Not surprisingly, studies show that tension increase is doubled by the quick stretch. And injuries can result.

"Static" stretching—the preferred stretch—invokes the inverse response, inhibiting the muscle tendon reflex and allowing the muscles being stretched to relax in the process. Very simply, this kind of stretch implies a more deliberate approach, using one's breath to *ease* into the movement, and maintaining an awareness of one's physical limits. Because of this, one is less likely to exceed the limits of the muscle tissues involved. Rather than provoking soreness, good stretch remedies it. In addition, no specific skill is required—the optimum stretch is determined solely by the doer's current degree of flexibility. Yet with the static approach—and here lies the reward—those limits are gradually exceeded. It's a physical metaphor, Jones adds, for surmounting all the barriers that confine our present potential.

If you're looking for a complete exploration of stretch in all its many facets and forms, with extensive emphasis on how-to-do-it techniques, Bob Anderson's *Stretching* is just your ticket. First self-published by the author and his wife five years ago, this book is newly revised and being distributed nationally. With its appealing homespun thoroughness, *Stretching* is built solidly on the groundswell of interest in fitness that surfaced in the '70s. It promises to do for flexibility what George Downing's *The Massage Book* did for that high art.

A born-again stretcher, Anderson starts with all the above-mentioned concepts and adds his own refinements, the results of a great deal of personal experience. His two-step approach to developing a good stretch is right on the mark and should become standard technique for stretch practitioners.

He wends his way through an unending (and profusely illustrated) series of stretch combinations, not only by the muscle group areas they address, but also by a whole range of specific sport activities they will benefit most. The book gives good advice on lots of related ideas—stretching over age fifty, spontaneous stretches, special care for your back and much more. If you are at all interested in opening up your body to see what it can do for you, *Stretching* is the place to start. A real gold mine at a good price.

There's no doubt that the growing phenomenon of good stretch has been positively influenced by hatha yoga. Upon closer examination one finds that there is a high degree of similarity—indeed a kind of gray area—between the two. Some positions are identical, and this sparks the inevitable comparisons. But the different objectives of stretch and yoga really demand that they be thought of differently. Stretch is primarily to develop flexibility and its ensuing benefits; yoga moves beyond to strive for physical, mental and spiritual balance. They are like concentric circles, with stretch being more simply usable—providing ground rules for anyone, regardless of age or spiritual affinity, to bring more suppleness into their daily activities.

All of which is not to say yoga has no practical applications, or that it is not an excellent complement to athletic endeavors. It's really a question of how far one wants to go. Culturally intimidating to some, yoga can nevertheless be very Western in its pursuit of ideal form through the body's concreteness. This is something athletes seem to be tuning into, and the recent publication of Jean Couch's *Runner's World Yoga Book* makes it all the more apparent. This book is based on the system of yoga developed and taught by B.K.S. Iyengar of India—a system known for its precision-like technique and physical discipline. As a manual designed to meet the needs of physically active people, *Runner's World Yoga Book* can help athletes move beyond warm-ups and flexibility, to attain better body alignment, muscular balance and maximum spinal extension.

Couch covers the concepts of flexibility, but also explains the physiological rationale for yogic stretching—especially how it can help prevent the problem of continuous contraction of isolated muscle groups typical of athletic exertion. Readers learn how to work with specific imbalance—for example, runners who have frequently allowed their upper bodies to become tight and unresponsive—in order to free up greater physical potential.

The book's tenor is a true blend of East and West. Couch's models are runners-cum-yogis, photographed in their jogging clothes. They demonstrate poses in varying degrees of proficiency, showing what good beginner stretches look like. The author lays to rest some of athleticism's grosser myths, but still speaks supportively to her fellow athletes. In so doing, she undoubtedly opens up her audience to new and exciting turf. In short, *Runner's World Yoga Book* feels like a real breakthrough, and that feels good.

—Steven Ames

"Strrrrretch," by Susan Smith Jones, pp. 21-24, June 1978, *The Herbalist*, \$11.00/yr. from:

Thornwood Communications, Inc.  
1680 S. Main St.  
Springville, VT 84663

*Runner's World Yoga Book, Stretching and Strengthening Exercises for Runners and Other Athletes*, by Jean Couch with Nell Weaver, 1979, 228 pp., \$11.95 from: Anderson World, Inc.  
1400 Stierlin Rd.  
Mountain View, CA 94043

*Stretching*, by Bob Anderson, illustrated by Jean Anderson, 1980, 192 pp., \$7.95, from:

Shelter Publications  
P.O. Box 279  
Bolinas, CA 94924



# KARL HESS

## on personalist politics

*Without a doubt, Karl Hess is one of the most personable and provocative characters in the appropriate technology movement, of which he is widely considered a founder. Known for basement fish-farming and perhaps a dozen books, he lives in Kearneysville, West Virginia, in a house he built with his wife and two sons. Karl's life history is as varied as his ideas. For example, he ghosted Barry Goldwater's newspaper column, and during the 1964 Presidential campaign wrote Goldwater's speeches. Eight years later he was arrested in Washington, DC, for protesting the war in Vietnam.*

*Several months ago Karl visited the Rainhouse and we engaged him in the following discussion.*

—MR

**Hess:** I met a fellow this morning—a man of about eighty—who pointed out that if the Trojan nuclear plant doesn't come back on line, he'll be very worried, because that's where his power has been coming from. All he knows is that he's got a plug that electricity comes out of, and at the other end of that plug is the Trojan plant. Now, you can't very well start out by telling him he's poisoning people all over the country to get his electricity. He can't hear that. He's got to hear first that you care whether he freezes to death. That's so important! There's that line of Brecht's: "We who would change the world could not to ourselves be kind." I think that's a first step. You've got to be nice to people. Suppose you project a vision of the future in which everybody is hungry, dispirited, miserable, cold: *that's* no vision! And yet many people say that all they've heard from the counter culture are proposals that would do that: lead to famine.

**Rain:** President Carter, with his whole emphasis on sacrifice, too.

**Hess:** Exactly. And you know, a lot of people—particularly people who have been liberals and get interested in appropriate technology—take that line immediately. What they want is for working class people to stop driving. They hate pickup trucks and they hate all my neighbors. Consequently, all my neighbors hate them. So you talk to a lot of people where I live about appropriate technology, and you've got to explain what you mean or they get very upset. They think you mean Robert Redford and an Aspen ski lodge, and it's very easy for the utilities to make their attacks along those lines.

**Rain:** The intriguing part, too, is that organizations like the utilities have a better sense of how to communicate their message than we have. The utilities are the ones who are making the connection between not having power coming out of your plug and a nuclear plant shutdown.

**Hess:** That's right. And they also make that wonderful equation that you can either have a job or clean air. If that's the popular choice, then you can't immediately come out for clean air. You've got to sort of slide into it by coming out for the jobs and then explain the clean air. It tries your patience, and a lot of people, I've found, become very interested in appropriate technology when they're very young, and sort of leap into it with no patience at all. It's either got to happen tomorrow or it's all over with. Doom, doom, doom. Of course it really doesn't work that way. Everything takes more time than you think, and patience is indispensable.

**Rain:** It's hard, though, because there's a real sense of urgency in the air. Especially coming into the '80s with all that connotes about running out of time.

**Hess:** But every time you lose patience I think you also lose lis-

teners. You appear to be just running around flapping your wings.

**Rain:** Still, the movement has room for the impatience of youth as well as the patience of a little bit more wisdom. The advantage of people who are younger and impatient is the incredible wealth of energy. They don't believe in any of the obstacles, so they just go "gung ho" and they get a lot accomplished. Maybe we have to patch up a few of the things that they don't do quite right, but they do move things along.

**Hess:** And of course there's no way to stop it. I think things are actually moving along wonderfully well.

**Rain:** For whom?

**Hess:** Oh, for us. And I think it's significant that people are falling out of the political system, not voting. It's a very impressive sign. It's not a movement, but it's a symptom. Maybe the most important symptom today is the decline of television viewing, but I have yet to figure out how to get hold of any information on that except from very personal observation. Around the community where I live people are watching less.

**Rain:** Maybe we can figure out a way to use the television so that it is the teacher, the medium that people respond to. It may be that the only way to have a revolution is through the television.

**Hess:** Is there a paradox there? I think there is, in that the major feature of that medium is passivity. So, no matter what messages you get, you've got it in a passive way, and it occurs to me there is no way for it to be an inciting medium. At least I don't understand how. The inciting mediums still have to be advanced. The thing that really gets to people is one too many bureaucrats. We'll never be as effective in our wildest dreams as the bureaucrats are. Every interaction with one results in the expulsion of somebody from faith in the system. Then there's the whole underground economy, that's an astonishingly substantial thing!

**Rain:** You're referring to co-ops?

*"The thing that really gets to people is one too many bureaucrats . . . every interaction with one expels somebody from faith in the system."*

**Hess:** Barter and all unreported transactions. If I were sitting in the White House and looked out, I wouldn't be worried about mobs in the street because my mobs could handle their mobs. What would really worry me would be the direct competition, the voluntary social organization at a non-governmental level. These things should be scary to the government but I don't know if they are.

**Rain:** The government isn't very astute.

**Hess:** That's something we can count on, and it's a good and happy point. It's in the nature of a large institution that it will *not* fear anything destructive to its long-term purposes. It simply cannot hear it. You see, Reagan was right a long time ago: you remember he said "if there's gotta be some shooting, let's do it now and get it over with." He would have had Kent State episodes all over the place years before that happened. He's a proper authoritarian, he's a czar, he's a Communist, and he's right: if you're going to run an



authoritarian state, that's the way to do it. You start beating heads real quick. But that's not the way most people are. This is, after all, a fairly liberal society, and lags behind. It's one of the glories of living in this country. Hannah Arendt used to say there are a lot of fascists in this country, but no fascist constituency. I think that's the key to the thing. Really, this is still a relatively free country, and I think the authoritarians will always be behind. Hallelujah!

**Rain:** That's an optimistic note.

**Hess:** There's another point about that: why be anything but an optimist?

**Rain:** Well, there are reasons . . .

**Hess:** One of the reasons I'm optimistic is that there are now "aged hippies." When I talk to old people these days, I don't feel like I'm organizing them. I feel like I'm organizing *us*! There's a tremendous difference. The wonderful thing is we are now moving into a period when the counter culture is a generation and more deep. Whole new vistas open up. And there's a competency explosion. You finally have to go to your local hippy to get anything done well. Who would trust a short-haired auto mechanic?

**Rain:** It's not just at the hands-on level, either. Some of the best economists and designers and architects are long-haired people. What happened during the '70s when it looked as if we were half-asleep is that we educated and trained ourselves.

**Hess:** There is this whole gang of ingenious, cooperative people clustered on this continent now, and some people, when they say "American," mean *that*. To be an American now can be a very proud thing, and when you talk to people and say first, "I love this country, but I hate the government"—that's a good distinction—and make it clear that you're really not knocking everything, then it seems to me that you can make the most extraordinary proposals and people will at least listen.

*"You have to go to your local hippie to get anything done well. Who would trust a short-haired auto mechanic?"*

*This is not the first time Karl Hess has appeared in RAIN's pages. For five years he worked in the Adams-Morgan neighborhood of Washington, DC, trying to bring to life the ideas for urban self-reliance he and David Morris had written about in Neighborhood Power (1975, \$3.45 from Beacon Press, Boston, MA). He considers this experiment a noble failure, which he has ruminated upon in Stepping Stones, RAIN (V:2:18 and V:10:18), and in his book Community Technology (1979, \$2.95 from Harper Colophon Books, New York, NY). David Morris, co-director of the Institute for Local Self-Reliance (Washington, DC), appraised Community Technology quite critically in RAIN (VI:1:14). With Karl sitting in our kitchen a few months later, the temptation to drop a match to the oil was irresistible.*

**Rain:** We'd be curious to know your reactions to criticisms by David Morris of your book *Community Technology*. He basically says that your politics are too personalistic and that you ignore what he calls institution building and power building.

**Hess:** Well, I didn't ignore it. I meant to speak against it. I feel that power building in any institutional sense is to lose the fight before you start. If the counter attack to institutional power is counter-institutional power you, by definition, have lost. You've simply taken the most disagreeable features of the things that you are opposed to and have internalized them. You've agreed, in effect, to live the way that *they* live. I don't want to do that. I think that David's criticism is a decent and accurate one, but the point is, it's deliberate: it's not ignoring, but rather, taking a position. My position would be that in Adams Morgan, the problem was that finally the neighborhood moved toward the re-creation of the kind of institutions that had oppressed it.

It would be instructive to see how or if David, with the Institute for Local Self Reliance, has been able to resist all of the institutional problems that he once fought. I'm dubious. I'm as skeptical of that as he is of my position. Adams Morgan, no matter what he says, is not the neighborhood that it had the potential to be. It's now an upper middle class, boutique neighborhood, and it has traditional politics. I don't close my eyes to it. I object to it. He's got an organization that has become very successful, quite large, and should have practical experience in resisting that bureaucratization. How he does it will be an important revelation. I think it's going to be difficult. Like the [California] Office of Appropriate Technology, or any such thing. The intentions of the people involved in such institutions sooner or later become blunted by the demands of the institution itself. There's so much evidence about that, it's reckless to ignore it. As to whether we can get from here to there without it is, again, merely optimistic, but it occurs to me that we are doing it, that the things which endure *have* done it. There are co-ops, there are worker-managed businesses, and there are schools and other things that have endured without becoming institutionalized.

The problem is, not everyone can get from here to there at the same time, and I think we are so beguiled by the liberal notion of equality across the board that it is offensive to think that anybody gets there before anybody else, and it is troubling to think that middle class people will probably get there first. So, some people, whose concerns are for the very poor people, will naturally be troubled by that. I understand the offense that can be taken but I think the reality of the situation is that poor people generally have had a very low capacity for organizing. Most social change in the world has been change either by disaffected aristocrats or by the middle class. I think that was changing in this country prior to the Progressive era, and there were a lot of poor people then who were organizing on their own behalf, but it occurs to me it is possible to say the Progressive era stopped that and has possibly wiped it out.

The black movement (and that's a very sensitive thing in the Adams Morgan story) has generally opted for the building not of alternative, but of counter institutions, and that has been a failure. That is to say, the building of big black businesses has been like the

*"All my politics are very personalistic. You're damn right they are."*

building of anything else, and the building of community black political power, if it is done through the traditional parties, has produced politicians who are primarily Democrats and Republicans. You have lone voices now and then, like Jesse Jackson, talking about something else, which is building power at the lowest possible levels, changing the way people think (a cultural revolution as opposed to a political revolution), but the black movement continues to move along the lines of building power. Well, we'll see. I think it's a failure so far and I think it will continue to be a failure, but I'm not omniscient.

All my politics are very personalistic. You're damn right they are. In fact, I think that I would now mistrust any politics that could not be described by a person on personal terms. If they could not tell me precisely what they intended to get out of it and how they were going to live in the changed society, I wouldn't be interested in their notions of change. So that's a valid criticism, and there we are: there's the contention and I admit to everything that David said. He's very astute and knows what he's talking about. It's a choice. You make choices.

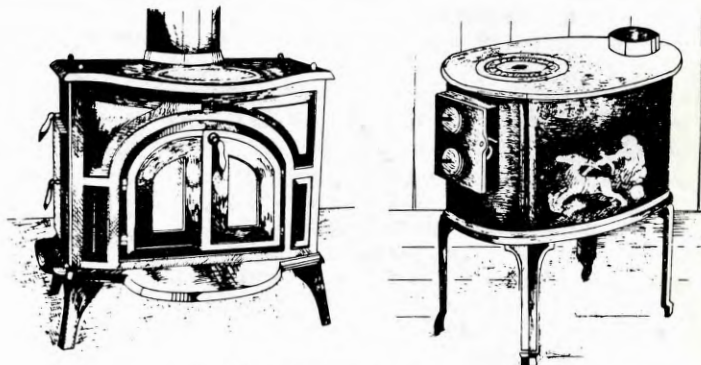
**Rain:** Those are interesting responses. We're glad to hear them.

**Hess:** It's the best response I can come up with. I learned a long time ago that I don't have the wit for universal solutions, and I'm more and more convinced of that as times goes on. My business is not the business of finding solutions, but the business of living in a community. That's a very personalized thing and very limited, and I think it should be subjected to all David's criticisms except one: that it's incorrect, because none of us know. That's what we're trying to find out. □□



# Turn Your Fireplace

*Just in time for winter, Bill Day's popular Consumer Guide to Woodstoves has been revised and is going to press right now. New features include this article on fireplace retrofits and an article on wood furnaces, plus there is up-to-date information on wood heaters, cook stoves, woodstove installation and repair, chimney care and maintenance, wood energy resources, and everything else you need to know about heating with wood. Don't wait for snow—turn to the order form on page 23 and stay warm!*



by Bill Day

Many efforts have been made over the decades to improve fireplace efficiency. They range from the "Rumford" design in masonry fireplaces to prefabricated steel air-circulating units, and a wide variety of heat exchangers intended to sit in an existing fireplace cavity. At best, the efficiency achieved by these techniques barely approaches 50 percent of the efficiency of the average free-standing woodstove.

Heat loss due to excessive air infiltration can be reduced by adding glass doors to the face of your fireplace. When the fireplace is in use, the glass doors should be opened so that radiant heat is not deflected back inside the fireplace cavity. Glass doors will not contribute a positive gain in efficiency to a fireplace, but they can prevent a fireplace from becoming a heat loss factor in your home.

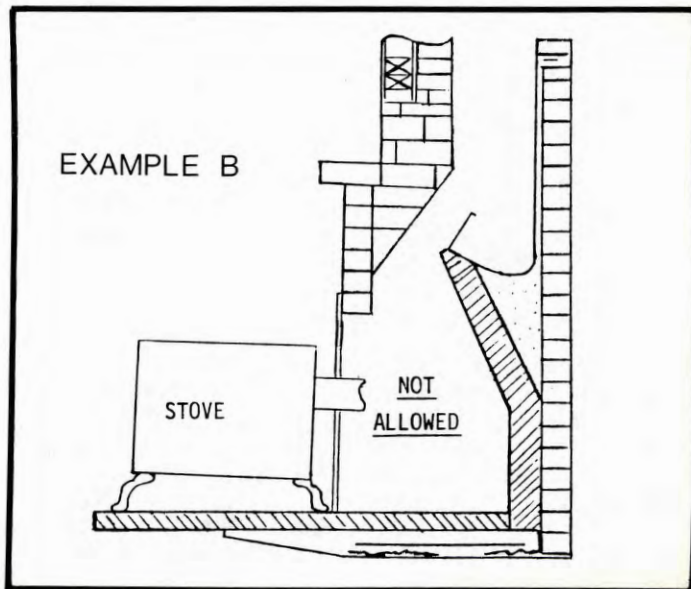
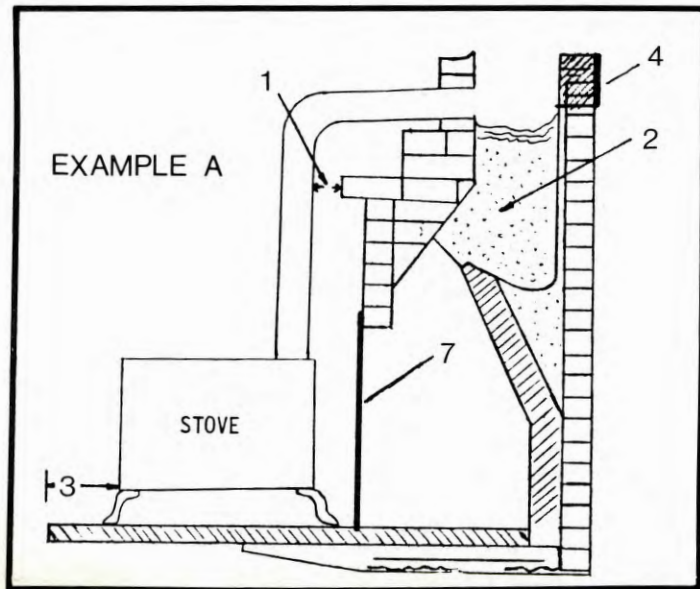
One of my greatest concerns with fireplace accessories is the lack of safety and durability in fireplace heat exchangers. These units are usually constructed of steel tubing, either round or square. The rate of deterioration of the tubing, which often doubles as a wood grate, is usually pretty rapid. If the unit includes a fan, failure of the fan motor or a temporary interruption of electrical service can greatly accelerate deterioration of the tubing. Eventual result of tube failure where a fan is involved is a spray of hot ashes and embers onto the home carpet. I recommend avoiding heat exchange contrap-

tions constructed along these lines.

Another way to utilize an existing fireplace is installation of a fireplace insert in the fireplace cavity. A significant disadvantage of this approach is that chimney cleaning is made very difficult or virtually impossible without complete removal of the unit from the fireplace cavity. Some inserts are advertised as permanent installations, designed to be bolted into place.

Chimney cleaning is a regular and necessary maintenance chore which should not be hindered or discouraged. I also have yet to find a fireplace-stove insert on the market incorporating the necessary features for efficient wood combustion. Glass windows usually leak air, and steel doors and door-frames are likely to warp (leaking more air), etc. If there is a choice, I would recommend avoiding these ill-conceived devices.

The use of an existing fireplace chimney as an exhaust vehicle for a free-standing stove is the most promising of all fireplace retrofit ideas. But bear in mind that the fireplace chimney, when used to exhaust a woodburning appliance, will require frequent cleaning. The typical masonry fireplace flue is significantly oversized for the modern airtight stove, and provisions must be made for easy and frequent chimney cleaning to remove the predictable creosote deposits that will accumulate.





# ce Into An Asset

Oregon fire and building codes, for example, permit two acceptable types of woodstove-to-fireplace retrofits. As shown here (see examples A and C) a positive, solid, airtight connection to the existing fireplace flue is required. I strongly recommend that a cleanout door be installed just above the fireplace smokesheff to facilitate regular maintenance. When installing the stove, care should be taken to maintain the required clearances from combustibles, as required by local building codes or according to manufacturer's instructions on any UL-listed appliance. To increase the net heat gain from your installation, I also suggest placing a non-flammable, heat-reflecting shield in front of the fireplace cavity. This can be made of sheet metal or asbestos millboard, and will reduce heat loss through the masonry.

Entering the chimney above the smokesheff (see Example A) appears to be the safest and most satisfactory method of connecting a wood stove to a fireplace chimney. If the brick chimney is exposed, with no combustibles nearby, a new connector pipe opening can be made with an electric drill using a masonry drill bit, and a hammer and chisel. The first step is to outline the proposed opening with a series of small holes drilled into the masonry. The next step is to carefully chisel out the center of the outline. Using mortar mix, a thimble can then be inserted and cemented in place to provide a smooth receptacle for the single-wall connector pipe.

A chimney concealed behind lath and plaster, sheetrock, panelling, or a 4-inch partition will require extra work. I recommend using a piece of *insulated* (not triple-wall) chimney material to provide adequate protection from combustibles, and verification of your local code requirements before beginning your project (see Example D).

Instead of a thimble embedded in the chimney, the insulated connector is positioned so that the inside end is flush with the inside of the chimney flue, and the outside end extends at least two inches past the wall surface into the room. Air space clearances suggested by the chimney manufacturer should be rigidly adhered to. A wall spacer is used to provide extra support and seal off the wall opening. Trim pieces are

available for cosmetic trim. Remember that the diameter of insulated chimney is larger than the corresponding size of single-wall pipe, and it will require a larger hole in the masonry.

If efficiency is an important factor in your wood-heating plans, I suggest that you weigh carefully the costs, potential benefits, and safety concerns of your planned installation. When using a fireplace flue to exhaust a woodburning appliance, I recommend the following:

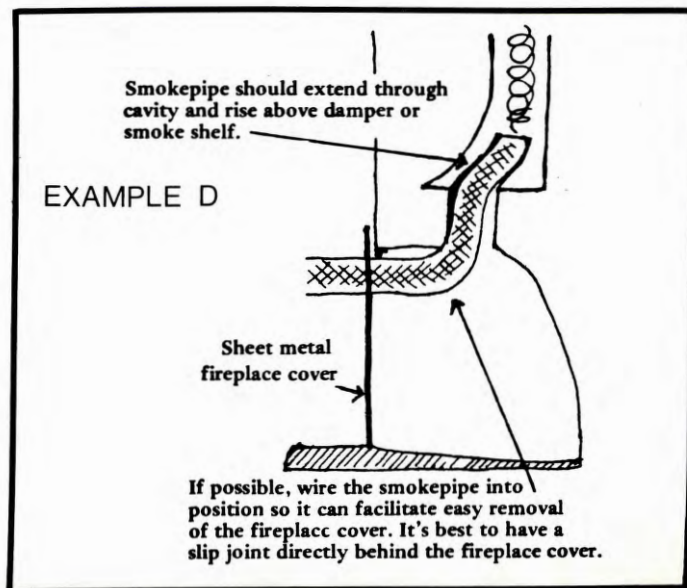
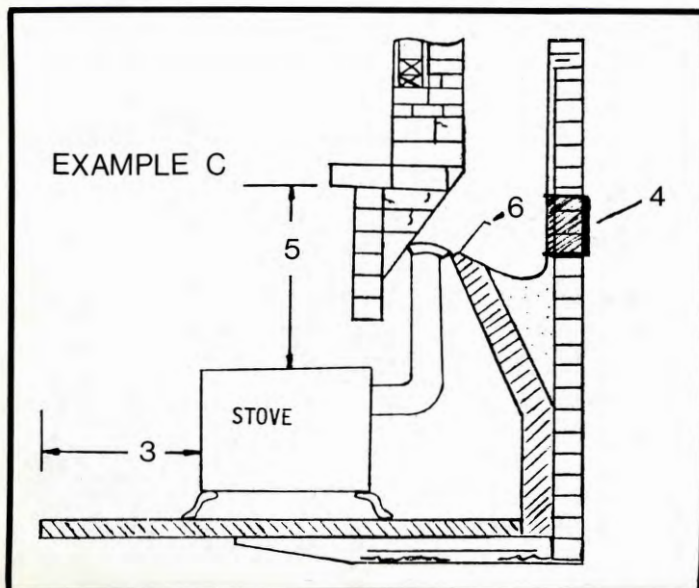
1. Carefully examine your chimney to determine its condition before doing anything else.
2. Assume that increased maintenance and frequent chimney cleaning will be required.
3. Plan ahead for an easy-to-clean installation, so that there will be little reluctance to proceed with regular cleaning and maintenance chores.
4. Avoid placing heat exchangers, stoves, inserts, or any other appliance inside the fireplace cavity. □□

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Please check with your local Fire Department or building officials to determine if your plans have their approval.

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1. Clearance between the smokepipe and combustibles is 18 inches.
2. Fill with inert material such as sand and cover with grout cap.
3. Hearth shall be of non-combustible material and extend 18 inches beyond stove on door side and shall be a minimum of 6 inches wider than stove.
4. Recommended clean out position.
5. Minimum clearance of 36 inches between stove and combustibles (mantle) or protected.
6. Damper shall be blocked open.
7. Heat shield.





# BUILDING

**Time Saver Standards for Building Types, 2nd Edition, edited by Joseph De Chiara and John Callender, 1980, 1277 pp., \$49.50 from:**

**McGraw-Hill  
1221 Avenue of the Americas  
New York, NY 10020**

Architecture students and practicing architects generally have a volume of "standards" handy. It hardly needs a review. But if you're an owner-builder, not an architect, details such as average counter heights, closet dimensions, and the proportional sizes of various pieces of furniture will be a lot easier to look up than to figure out, once you realize the "standards" exist. Professionals will be happy to see that the 2nd edition is out with additions such as housing for the aged and handicapped, fire and police stations, and more. It's a fine addition to RAIN's Resource library. —CC

**Successful How to Build Your Own Home, Second Edition, by Robert C. Reschke, \$7.95 from:**

**Structures Publishing Co.  
Farmington, MI 48024**

This is a good book to read if you're thinking of building a code house. The book talks about some of the less obvious potential problems and design choices which an owner-builder may not be aware of. For example: does the land have access to water and sewer lines? If not, where is the water table, and is the soil suitable for a septic system? What are the pros and cons of buying plans from a plan service? Is it worth it to go with gyboard where the butt ends are beveled? What are the pros and cons of different sub floors?

The book is weak on construction details

(read *Dwelling House Construction* by Albert G. H. Dietz, MIT Press, 1971), but will help with the design process.

—Gail Katz

# COMMUNITY

**"A Proposal to Help Revitalize Eastern U.S. Inner Cities," July 1980, 63 pp., \$2.00 from:**

**World Game Laboratory: 1980  
3500 Market Street  
Philadelphia, PA 19104  
215/387-5400**

This report is a result of the efforts of eight people who worked 10 hour days, seven days a week for four weeks in an attempt to "help make the world work." They travelled an average of one thousand miles each in order to get together in Philadelphia to do this and they paid five hundred dollars apiece for the opportunity. *Why?*

*We have demonstrated that it is feasible to use existing urban housing and proven, readily available technology to significantly reduce the urban impact on the environment, improve the quality of life, and make cities more sustainable. This could be achieved through farsighted designing, planning and greater participation in producing food, collecting and maximizing energy inputs, and working together as communities rather than competitively as individuals.*

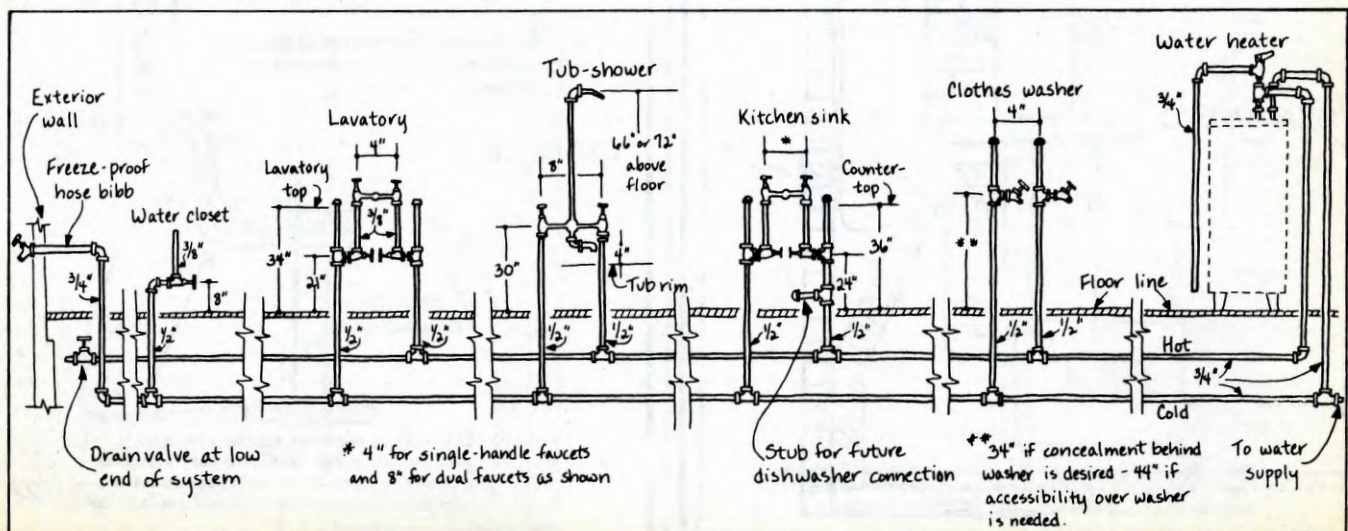
The participants studied a rectangular area of four rows of rowhouses in the Haddington section of Philadelphia, encompassing sixty houses and associated yards and walkways, bounded by sidewalks and streets on four sides. This area, roughly .1 mile x .025 mile, consists of flat-roofed two-story houses and has 170 residents whose median income in 1970 was \$11,034.

Based on a simple World Game model de-

veloped by R. Buckminster Fuller, the participants propose to completely enclose the building roofs and the courtyard area with a weatherproof spaceframe vault to a maximum height of 50 feet. Within this artificial environment would be an integrated network of component systems for water collection and storage, plant and fruit cultivation, energy cogeneration, aquaculture, poultry houses and "rabbitats" (rabbit habitats), waste recycling, food processing and preservation, and home and community level communications.

How realistic is this proposal? Total costs per household of designing, engineering, constructing and installing the system would run \$49,360. The model "would require an investment of two to three million dollars for the prototype 60-unit system. This system can generate sixty to ninety thousand dollars in savings and income annually. . . . Production models in quantity could mean houses that pay for themselves in 15 years. HUD [Housing and Urban Development] is funding urban redevelopment projects which do not have the capability of producing energy, food and monetary income. . . . Our system is affordable and is a viable option to the present state of the inhabitants of Eastern United States inner cities."

Certainly this is an interesting, thought-provoking report. Yet, one of the participants revealed in a telephone interview that seven of its eight authors acknowledged at its completion that they themselves would not live in this project they had so enthusiastically designed. There were some reservations about living in an enclosed, artificial environment of such high density, but the greater concern was that they had "created a cow." In other words, the numerous component systems in this design require such constant monitoring and attention that even the designers think it would be too much of a hassle to live there! —MR



A complete water piping system should be as simple as this sketch indicates.

from *Successful How to Build Your Own Home*



**The CRA Reporter, occasional, free from: Neighborhood Revitalization Project Center for Community Change 1000 Wisconsin Avenue, NW Washington, DC 20007 202/338-8920**

In the two years since the Community Reinvestment Act (CRA) became an active law, many neighborhood-based groups have used it to secure commitments by financial institutions to meet the development and credit needs of their neighborhoods. The debut issue of *The CRA Reporter* (July '80) features five case studies that show something in common: "a good CRA track record by a community group can generate a momentum which yields easier and further CRA victories; depending on circumstances, significant commitments from financial institutions can be won with relatively little effort. . . ." *The CRA Reporter* will be a useful information-sharing vehicle for anyone active in trying to turn "redlines" into "greenlines." —MR

**"Consumers As Producers," June and July 1980 issues of *The Reporter*, \$1.50 each from:**

**The National Center for Community Action, 1328 New York Avenue, NW, Washington, DC 20005 202/667-8970**

Although this two-part article is directed toward individual attorneys and local legal services programs, it contains a wealth of valuable information pertinent to anyone involved in a community-based organization. Blaustein makes clear that the purpose of community economic development "is not to create a few more 'instant' black or brown millionaires who are beholden to the establishment." Rather,

*The objective of the community economic development effort today is for the poor community to achieve a favorable economic base of its own, for all residents of the community. It is institution building. It reflects the humanizing, social dimension of community economic development. Only in this way can low-income communities ultimately acquire enough economic freedom to define their own long-range priorities. . . . The key to the development of a neighborhood economy is a complex struggle for economic power.*

The central purpose of community economic development, Blaustein goes on, is to promote "substantial participation by the poor in every aspect of the capital-generating power of the economy." This includes, most importantly, the development of a comprehensive strategy that connects economic development to jobs, health, housing, and neighborhood development.

In the second part of his article Blaustein outlines a general community economic development strategy, some specific ways in

which government assistance can be wisely tapped, and several steps local legal services can take once they decide to have an expanded role in economic development. All of these ideas are useful in themselves, of course, and we are further reminded that "the underlying basis for a future unified neighborhood or city (or nation, for that matter) is vastly increased 'have-not' participation in the economic activity of the total system." —MR

#### Steps to Secure Capital

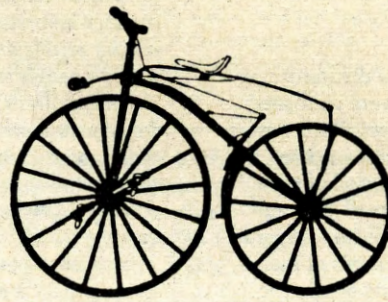
Step 1: Formation of an internally cohesive group with effective leadership. (This may take six months or more.)

Step 2: *Neutralization of opposition* from government, local and state bureaucracies, business (Chamber of Commerce), and other nonrepresentative spokespersons for poverty communities.

Step 3: *Demonstration of the ability to produce* (establishing a track record), including careful feasibility studies and planning.

Step 4: *Development of a comprehensive plan or strategy.* Underlying this last step are four sub-strategies:

- A community organization strategy
- A local government strategy (CDBG, CETA, UDAGs, etc.)
- An economic development strategy
- A technical assistance strategy



## TRANSPORT

***Understanding, Maintaining, and Riding the Ten-Speed Bicycle*, by Denise M. de la Rosa and Michael J. Kolin, 1979, 296 pp., \$9.95 from:**

**Rodale Press  
Organic Park  
Emmaus, PA 18049**

The perfect reviewer for this book would be someone who is relatively new to ten-speed cycling, has no mechanical bent whatever, and doesn't know beans about bikes. Fortunately, *RAIN* has just such a person on staff—and I can testify that if cranksets, derailleurs, and side-pull brakes are no longer mysteries to me after reading *The Ten-Speed Bicycle*, they need not be to you, either!

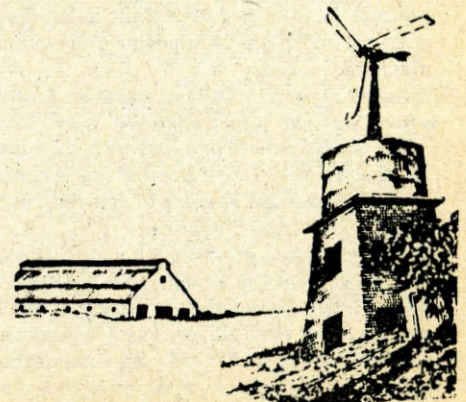
Unlike most "how-to" manuals I've encountered, this one is actually enjoyable to read. Its clear illustrations and straightforward descriptions convey a lot of mechanical detail painlessly, and its advice on what to look for in a helmet, touring bag, or leg warmer can really boost your ability to pick the appropriate products for your needs. Whether your major cycling interest is touring, commuting, or carting groceries home from the co-op, this book is a good one to have packed in your pannier. —JF

## POLITICS

***Decentralism: Where It Came From; Where Is It Going?*, by Mildred Loomis, 1980, 216 pp., \$5.00 from:**

**School of Living Press  
RD 7  
York, PA 17402**

Mildred Loomis reminds us that the "New Age" isn't very new. Sometimes called "the grandmother of the counter culture," she has more than forty years experience in movements to establish land trusts, community self-reliance, alternative education, organic agriculture, and holistic health care. While her book is too ambitious in attempting to weave together all the disparate threads of American decentralist thought in just two hundred pages, it is well worth reading if only for its chapters on the movement pioneers the author has known and worked with personally. You'll meet *Organic Gardening* founder J. I. Rodale, community land trust originator Ralph Borsodi, and whole foods nutritionist Agnes Toms. Perhaps most interesting, you'll meet decentralized technology advocate Peter Van Dresser, who accurately predicated the course of the present energy crisis in 1938! *Decentralism* puts many of today's movements for change into perspective with its first-hand recollections of some remarkable people who laid much of the groundwork. —JF









tion to world energy production before 1990. But figure in the shaky assumptions ("no changes in public policies, institutions, or rates of technological advance . . . no wars or other major disruptions"), the extensive reliance on computer modeling (see, for example, *Models of Doom: A Critique of the Limits to Growth*, H.S.D. Cole, ed., NY: Universe Books; 1973), plus the fact that all the projections grind to a dead halt at the year 2000 (it was of course after the year 2000 that *The Limits to Growth*, in its highly simple and aggregated form, suggested the appearance of shortages), and you wind up with a pretty flimsy piece of cake indeed, frosted with this honest but humbling topping:

*Many apparent inconsistencies and contradictions in the Global 2000 projections are due to the weakness of the linkages among sectors of the Government's global model. . . . The inescapable conclusion is that the omission of linkages imparts an optimistic bias to the Global 2000 Study's (and the Government's) quantitative projections. (from Global 2000)*

Writing in the June, 1980 issue of *The Ecologist* (U.K.), mathematician and futures researcher John Robinson, who in 1973 wrote articles in support of *The Limits to Growth* and has since participated in the creation of computer models for both the United Kingdom and New Zealand, describes his profession as follows:

*The development of a global model is, to date, a large-scale and expensive operation. Insofar as the tool utilized, a complicated and expensive high-technology computer, has an influence on the project ('the medium is the message'), global modeling must reflect the thinking of the high-technology school. Since alternative thinkers insist on a different emphasis, they do not*

*take part in these projects. By the very nature of the exercise, the use of global models will belong to status quo thinkers. . . . Almost all statements which purport to be based on modelling reflect simply the biases and preconceived notions of the authors. The models are largely redundant insofar as the analysis is concerned, their role being primarily that of a propaganda device.*

Conspicuously absent from *The Global 2000 Report to the President* are recommendations or even any mention of policy. Carter's most important response to the report was to establish a Task Force on Global Resources and Environment, to ensure that the U.S. government provides "special leadership" in responding to these problems at home and abroad. The Task Force has been instructed to develop specific proposals within the next few months. Supposedly the national network of concerned population and environmental organizations will have a say in the development of Task Force recommendations. It is vitally important that those whose opinions are invited not lose sight of the fact that world livability in the year 2000 and beyond is a matter not only of "controlling" populations but of production and consumption, exploitation and waste, domination and human freedom. Thankfully, the *Global 2000* authors, at least, are aware of this. One paragraph especially I hope will be widely read:

*The solutions to the problems of population, resources, and environment are complex and long-term. These problems are inextricably linked to some of the most perplexing and persistent problems in the world—poverty, injustice, and social conflict. New and imaginative ideas—and a willingness to act on them—are essential. □□*

## GLOBAL ACCESS

**"Economic Development", *Scientific American*, September 1980, \$2.50 from: Scientific American 415 Madison Ave. New York, NY 10017**

This collection of resource surveys and case studies is a good example of current mainstream thinking in the field of economic development. Written by development experts from a range of academic and cultural backgrounds (only two of the dozen or so authors are from the U.S.), this special issue is stuffed with graphs, charts, and fun facts to know and tell. With a couple of exceptions (notably the energy modeling study), the information is enlightening.

*Scientific American* tends to stay within the realm of conventional social and economic theory, and that makes this issue all the more interesting. Many of these respected experts are saying things about development and underdevelopment that would have been unthinkable ten years ago. It's fascinating, for example, to hear the director of the World Health Organization attack the medical establishment for not promoting preventive medicine. Or consider this quote from the director of the Institute of Social Research at the University of Mexico:

*In the midst of a worldwide political and economic crisis affecting capitalism, Mexico seems to be one of the stabler countries. Only an act of intervention, which presumably could only be fostered by jin-*

*goistic groups in the U.S., can alter Mexico's course. Such a move would surely solidify the nationalist and revolutionary forces in Mexico. —KB*

***The Lean Years* by Richard Barnet, 1980, 349 pp., \$12.95 from: Simon and Schuster 1230 Avenue of the Americas New York, NY 10029**

As the worldwide scramble for resources intensifies, Richard Barnet's latest study provides a timely perspective on what the ultimate stakes are. Highly readable, tightly written, and well researched (as with most of Barnet's books, the bibliography is worth the price of admission alone), *The Lean Years* begins with a survey of what resources are available and how they are controlled. If you've read any of the several recent resource inventories such as *Energy Future* or *Global 2000*, you'll probably be familiar with some of this information.

What is unique is the clarity with which Barnet highlights the patterns of control of the world's resources. The fact that the primary causes of resource scarcity have more to do with political and economic manipulation than an actual physical shortage is not particularly earth-shattering. However, the question of who should control those resources become simultaneously fascinating and chilling. Much of Barnet's discussion of the implications of corporate and bureaucratic control of the international economy and the resurgent militarism in foreign pol-

icy is based on his earlier studies, particularly his landmark analysis of corporate power, *Global Reach*. Barnet believes that corporations are increasingly in a better position than countries to control the flow of world resources because of their ability to maintain a global perspective.

*But the guiding star by which they plan—capital accumulation and profit maximization—leads to concentration of power without responsibility. The Global Factory creates certain incentives that stimulate production—chiefly, acquisitiveness and competitiveness, but the incentives it kills—caring, frugality, and concern about social consequences—are the ones needed for global survival.*

Barnet concludes with a scathing analysis of the increasing tendency to regard human values and creativity, as well as "excess" human life, as expendable in a survival situation. It is clear that the choice is between more local control and respect for creativity, or much less than we have today. Along with a vision of the apocalypse, Barnet offers us a glimpse of the alternatives as well.

*The purpose of planning should be to enable a given population to develop a balanced and secure economy within which to achieve the quality of life that they want. The idea that certain cities, regions, or countries must be abandoned for the greater good of the world economy is unacceptable. The goal ought to be maximum self reliance of those communities large enough to survive economically and small enough to accommodate some form of face-to-face politics. —KB*



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*Aid as Obstacle: Twenty Questions about our Foreign Aid and the Hungry* by Frances Moore Lappé, Joseph Collins, and David Kinley, 1980, \$4.95 from:

Institute for Food and  
Development Policy  
2588 Mission Street  
San Francisco, CA 94110

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Expanding upon a theme raised in previous IFDP publications, *Aid as Obstacle* is an exposé of our foreign aid system, the premise that supports it, and the myth of national altruism that surrounds it. "We are saying . . . that the overwhelming bulk of official aid projects do not alleviate hunger, directly or indirectly . . . aid actually increased hunger and repression by reinforcing the power of national and international elites who usurp the resources rightfully belonging to the hungry."

IFDP, as usual, has produced a book that is both informative and highly readable. The question/answer format, similar in style to other IFDP publications, allows the authors to cut to the heart of an issue—minus the rhetoric. I'm not sure which I like better, the refreshing candor of their questions or the thorough research and thoughtful analysis demonstrated by the answers.

Each successive question guides the reader through the maze of contradiction and illusion that is our foreign aid and development policy. The book begins with the most obvious question: does U.S. foreign aid focus on the poorest countries? It continues with an examination of the large government aid agencies (the World Bank and the Agency for International Development [AID]), foreign aid programs (food aid and work programs and their relative success in reaching the hungry), and a reevaluation of our development policy (the suggestion that we terminate food aid).

While the content of much of *Aid as Obstacle* is disheartening, the overall impact is not. Continuing in the philosophy of IFDP, the authors of this publication have emphasized action strategies in their conclusion. The last three chapters are devoted to a summary of meaningful and effective ways for Americans to get involved outside of the aid establishment and make a real difference. "Just as we must confront the unjust concentration of economic and political power we have in our society, only the poor in the Third World can organize to overcome their powerlessness . . . the appropriate role of Americans is to help remove the powerful obstacles in their way; . . . built by our tax and consumer dollars." Their suggestions for us include: 1) educating ourselves to the inconsistencies around us, 2) believing in ourselves and our ability to make change happen, and 3) taking the initiative, in our communities, in addressing the problems most immediate to us. —LS

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# THE DO-GOODER DILEMMA: INAPPROPRIATE TECHNOLOGY TRANSFER

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by Laura Stuchinsky

The points raised in *Aid as Obstacle* lend a fresh perspective to another increasingly complex area of concern: technology transfer to Third World countries. In the last decade organizations such as the Intermediate Technology Development Group (ITDG), Volunteers in Technical Assistance (VITA), and Appropriate Technology In-

ternational (ATI) have formed, all concentrated on the issue of appropriate technology transfer. The concept of Intermediate/ Appropriate technology—small scale, labor-intensive, locally-produced and simple to use—has gained increasing acceptance among development economists, international government agencies, and leaders of various underdeveloped countries. With this much support from higher echelons, things begin to smell suspi-

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from *Aid as Obstacle*

cious—and indeed they are. Each month sees an influx of material on a range of programs and studies of “appropriate technology,” mostly written in highly technical language. As the field expands in all directions, trends become more difficult to follow and terminology more vague. Yet at the same time that A. T. becomes increasingly popular, the repercussions and applications of these technologies in less developed countries deserve increasingly serious attention. In light of the conclusions drawn from this recent IFDP publication, non-governmental agencies may be the only means through which outside resources may have the chance of helping rather than harming those in need.

One of the major fallacies under which most major aid agencies operate is the assumption that the poor have been “left out” of the development process and, therefore, must now be “brought in.” The problem, identified as a lack of resources, is resolved by a “humanitarian” gesture of economic aid and/or technological assistance. With slight variation, it is this same philosophy that many A. T. groups also follow. The immediate shortcoming of this analysis is its historical inaccuracy. Rather than being excluded the poor have played, as IFDP puts it, an “integral role in the development process, both as resource and victim.” It is not a question of bringing the poor into the development process but rather that the poor need to attain the power to direct development in their own interests.

In reviewing much of the work being done today in international development, it becomes increasingly clear that many A. T. groups focus on technological solutions in lieu of acting on socio-economic problems. Technology is seen as an answer to many of the problems of rapid industrialization—hunger, poverty, high infant mortality, unemployment, and scarcity of resources. This same philosophy has been applied to our own sinking economy. At heart, the development process has been defined as one of “rapid economic growth.” Increased productivity, rather than a restructuring of the economy for a more equitable distribution of resources and power, is the key. The question remains whether appropriate technologies and increased production address the root of the problem or instead focus only on the effects, leaving basic issues unaddressed.

In the past twenty years the concept of “development” has undergone some change. Initially “authors envisioned development as a linear process divided in stages . . . all countries, including the developed ones, were seen as starting from the same point and facing the same obstacles as they proceeded on the same course. Some would simply move faster than others; the others would no doubt

follow, albeit at a distance.” (K. K. Dadzie, *Scientific American*, Sept. 1980. See review this issue.) What this perspective conveniently ignored was the economically exploitive relationship that has existed, and continues to exist, between industrialized and less developed countries. Rather than benefitting from lessons of past mistakes and economic aid offered by the industrialized countries, the condition of the poorest countries has deteriorated. Rapid industrialization failed to solve, and in fact exacerbated, many of the social and environmental problems already existing in those countries. The “trickle-down, spill-over” effect never occurred. The poor got poorer, and the rich wealthier still.

The sixties and seventies saw revisions in the concept of development, still prevalent today. “Basic needs” replaced the non-existent trickle. This new approach targeted the poor in development efforts, with the same superficial diagnosis underwriting it. “Implied in the statements of top policy makers is that basic needs can be met without a fundamental restructuring of control over resources, through a shift in priorities and greater assistance from industrial countries” (from *Aid as Obstacle*). Rural industrialization, in particular, became the focus of this new orientation toward development, and intermediate technologies were the key. When the choice of technology becomes the pivotal point upon which development is based, one must ask for whom is this technology being used, and who makes that choice. The question of democratic choice, so often emphasized in A. T. literature, is an empty phrase when the rural poor—non-consumers and non-surplus producers—have little to no economic power. Unequal division of power between industrialized and less-developed countries, and between the poor and elite within developing countries, has far more influence in determining technological choice than is implied. “Technology transfer is more than just an articulation of the economic relationships between the industrialized and the underdeveloped countries. It is also an important means by which those relationships are maintained and controlled through the constraints imposed on technological choice.”

Dave Dickson’s controversial essay, “Intermediate Technology and the Third World,” is still the best on the subject even though it was published over six years ago. (*The Politics of Alternative Technology*, Universe Books, N.Y. 1974). Dickson continues his examination of technology transfer by pointing out the shortcomings of an approach which attempts to separate technology from the need for political change. Clearly and emphatically, he draws the connection between the two:

*When it becomes identified separately from the need for political change, intermediate technology becomes little more than a vehicle of economic and cultural imperialism . . . it permits the industrialized countries to impose not only cultural values and ideologies but even, as we have seen in the case of technology transfer, direct economic control over the underdeveloped countries.*

He specifically criticizes such well known groups as ITDG and VITA for their heavy emphasis on developing an entrepreneurial and managerial class, thus accentuating the polarization already existing between poor and rich. “Intermediate technologies can quickly become the seed-bed for small-scale capitalism.”

While there is definite value in many of the ideas and tools that are being developed by various A. T. groups, it is essential that their application be considered in light of the political and social context in which they will be used. Technology is not a neutral process. To the contrary, it is an expression and reinforcement of the cultural and economic patterns from which it derives. As in the case of foreign aid, inappropriate use of a valuable tool can serve to reinforce and accentuate exploitive and repressive conditions which prevent the poor from assuming the power that is rightfully theirs. Development has been seen as a matter of “things”—tools, resources, training, etc.—yet the inadequacy of this approach is evident. The example of such countries as Cuba, Tanzania, and Nicaragua lend support for a new definition of development, one that ties economic growth to a participatory, democratic process of change.



*Truly appropriate technology can only come from the demands of people by whom and for whom it is used, once they realize their own economic and political strength . . . unless the unity of technological and political practice is achieved, it is unlikely that intermediate technology, on its own; will be able to tackle the real causes of underdevelopment, nor bring about a viable solution.*  
(From *The Politics of Alternative Technology*.)

In the concluding chapters of *Aid as Obstacle* and in an earlier publication, *Food First* (RAIN, IV:1, 4, 6 and 10), IFDP published a checklist of ten questions that individuals and organizations might consider in evaluating their own program or one they are considering supporting. No organization will score perfectly on all ten, but the answers will provide valuable food for thought. The most crucial measure, state the authors, is whether the organization perceives its role as that of "going into another country to 'set things right,' or sees itself as a supporter of progressive indigenous forces already underway." In regard to A.T. groups, the question might also be asked, does the organization see its work as political as well as technical in nature, or purely technical?



from *Aid as Obstacle*

### Ten Questions to Ask about a Development Project

1. Whose project is it? Is it the donor agency's  
or  
Does it originate with the people involved?
2. Does the project define the problem to be tackled as a technical or physical deficiency (e.g. poor farming methods or depleted soils) that can be overcome with the right technique and skills?  
or  
Does it first address the underlying social, economic and political constraints that stand in the way of solving the physical or technical problem?
3. Does the project strengthen the economic and political position of a certain group, creating a more prosperous enclave which then becomes resistant to change that might abolish its privileges?  
or  
Does it generate a shift in power to the powerless?
4. Does the project focus only on the needs of individuals?  
or  
Does it help individuals who are now powerless to see their common interest with others who are also exploited, thus leading to unified efforts through which collective strength is built?
5. Does the project merely help individuals adjust to their exploitation by such external forces as the national government or the international market?  
or  
Does it encourage an understanding of that exploitation and a resistance to it?
6. Do new skills and information remain only with the leaders?  
or  
Does the project involve an ongoing educational process for all the participants?
7. Does the project, through the intervention of outside experts, take away local initiative?  
or  
Does it generate a process of democratic decisionmaking and a thrust toward self-reliance that can carry over to future projects?
8. Does the project reinforce dependence on outside sources for material and skills?  
or  
Does it call forth local ingenuity, local labor and local materials, and can it be maintained with local skills?
9. Will success only be measured by the achievement of objectives specified at the outset?  
or  
Is the project open-ended, with success measured as the project progresses?
10. Is the evaluation a one-way process by which the donor judges the recipient's performance?  
or  
Is it a two-way (if possible face-to-face) dialogue in which the recipient also evaluates the donor and they together evaluate the project?

While still a minority, there are a growing number of organizations who exemplify the philosophy of A.T. and development described above. These groups take a more progressive stance in considering the objectives of their work. Most of these groups focus on communities rather than individuals, depend upon a growing network of local people for the success of their work, and measure that success by its long-term effects: who will this work benefit and how? Will it enable the poor to gain more economic control of increase their exploitation? Some have made the choice to work only in more progressive countries, reasoning that in these countries their efforts will more likely benefit those most in need. This list is by no means exhaustive . . . it is a beginning of a network of people and organizations that we hope to extend in coming months.



**Economic Development Bureau**  
 234 Colony Road  
 New Haven, CT 06511  
 203/776-9084  
 Director, Idrian Resnick

This group has already created for itself a well-deserved position of respect among progressive international groups. Acting as a consultant, E.D.B. conducts a "class analysis" before accepting work in any country. This preliminary research, done with and through a network of local contacts that the Bureau has developed, enables the organization to choose work consistent with its philosophy of aiding those most in need. Its emphasis is on community development through democratic and collective decision-making. Its goal is to provide technical information combined with social analysis that will enable local people to develop strategies appropriate to their situation, and develop the skills to aid others in turn.

**Oxfam-America**  
 302 Columbus Ave.  
 Boston, MA 02116  
 Project Info: Leslie Tuttle  
 Development Education:  
 Haley Wander

While principally a non-governmental aid group, Oxfam-America supports self-help projects in a number of developing countries. Recognizing the limitations of working through a dictatorial government, the organization has recently adopted a policy of working only in countries with a commitment to democratic systems. Oxfam-America supports an organization in Bangladesh called the Bangladesh Rural Advancement Committee (BRAC), which focuses on organizing and education as a means of empowering Bangladesh's poor. To contact this group, write: BRAC, 3 New Circular Rd., Maghbar, Bangladesh (more information on BRAC is also available in *Aid as Obstacle*).

**Dialogue**, published by **International Voluntary Services, Inc.**; distributed free, contribution of \$1.55 per copy requested from those able to pay, from:  
**International Voluntary Services, Inc.**  
 1717 Mass Ave. N.W., Suite 605  
 Washington, DC 20036

The Winter/Spring '79/'80 issue on community and cooperative development has two articles I find to be of particular merit. The first describes the history of Bolivia's cooperative movement—its problems and successes. The second discusses an innovative community agriculture training center in



from *Aid as Obstacle*

Ecuador's Amazon. Each article is printed in three languages, French, Spanish and English, to allow for maximum circulation. This issue is the fourth to date and I'm looking forward to seeing what future issues will look like.

**New World Agricultural Group**  
 John Vandemere  
 Division of Biological Sciences  
 University of Michigan  
 Ann Arbor, MI 48109

NWAG is a technical research group with six centers scattered through the U.S., Canada and Mexico. Though its three year project in Mexico is winding down, it's my guess that the group will retain a strong presence in the field of international development—both in its research and consultant capacity. NWAG's research presents a valuable counter-perspective to the conventional aid establishment view of development. Its bibliography includes two studies of AID-type development projects in Mexico, and its negative impact on cultural and economic patterns. At present the Ann Arbor group is devoting most of its attention to the subject of "intercropping," particularly as it may apply to the farmworker/cannery/farmer disputes currently being waged in that part of the country. NWAG expresses an interest and commitment to "the Third World people at home as well as abroad."

**American Friends Service Committee**  
 National Office:  
 1501 Cherry St.  
 Philadelphia, PA 19102

This well-known and broad-based group has been supporting progressive causes, both nationally and internationally, for years. One project that AFSC has supported on the international scene is a Bangladesh organization called Gonoshasthaya Kendra. Supported by a number of other progressive foreign groups, Gonoshasthaya Kendra's work has included village-based programs such as an agricultural loan service to sharecroppers, to enable them to gain more independence from exploitative creditors, a health insurance system based on village paramedics, and training for women in skills usually reserved for men—carpentry, plumbing and blacksmithing. More information on this group can be found in *Aid as Obstacle* or from AFSC.

**Yumi Kirapim**, published jointly by the **Dept. of the Prime Minister, Office of Village Development, and the South Pacific Appropriate Technology Foundation**; inquire for price:  
 P.O. Box 6937  
 Boroko, Papua, New Guinea

Published in three languages—English and two local dialects—*Yumi Kirapim* is a monthly journal on appropriate technology. Written in simple and practical language, the journal covers such topics as transportation, local food processing, developing small scale industries, and the changing role of women in Papua, New Guinea, society. It's refreshing to see an A.T. journal from a developing country that is written both by the community and for the community. This is genuine A.T. at work.

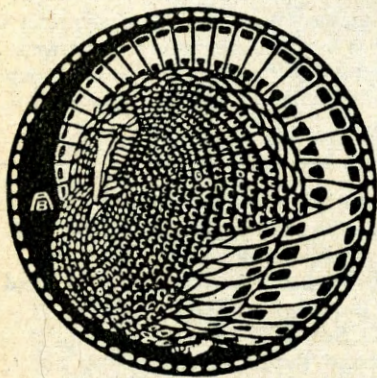


# RIGHT

Austin, Texas, will be the site of a conference to be held December 11-13, focusing on alternative state and local energy officials, policy analysts, and representatives of citizens' organizations and community groups to discuss methods of supporting conservation and solar applications at the state and local level. For more information contact Becky Glass, Energy Project, Conference on Alternative State and Local Policies, 2000 Florida Avenue N.W., Washington, DC 20009, 202/387-6030.

A seminar on "Non-Profit Management Skills for Women Managers" will be offered in Seattle by the Public Management Institute November 13-14. Sponsor for the event is the University of Colorado, Boulder. For further information contact the Center for Conference and Management, 970 Auroro Avenue, Boulder, CO 80302, 303/492-8356.

The University of Detroit will sponsor seminars on "Bookkeeping for Nonprofit Organizations," November 10-11 in Raleigh, North Carolina, November 13-14 in Dallas, Texas, and November 20-21 in Los Angeles, California. Topics to be covered include: preparing better financial reports; analyzing bookkeeping systems; meeting tax requirements; and human relations techniques in bookkeeping. Contact Division of Continuing Education, 4001 W. McNichols Road, Detroit, MI 48221, 313/927-1027.



DONALD MACQUEEN, WHEREVER YOU ARE—We can't locate your address, so we're extending our thanks here for your generous donation.

"Island Energy Self-Sufficiency as a Model for Regional Energy Planning" is the theme of a National Conference on Renewable Energy Technologies to be held in Honolulu, Hawaii, December 8-11. The event will be sponsored by DOE, the Hawaii Natural Energy Institute, and the University of Hawaii at Manoa. For information contact Donni S. Hopkins, Hawaii Natural Energy Institute, U. of Hawaii, 2540 Dole Street, Holmes Hall 246, Honolulu, HI 96822, 808/948-6379.

"Solar Greenhouses for the Owner-Builder" will be the theme of a seminar to be held November 3-7 at Ghost Ranch, New Mexico. Topics will include basic solar principles, greenhouse design, materials options, construction and gardening. Event will also include construction of a portable greenhouse and tour of greenhouses in the area. Contact Bill Lazar, Solar Sustenance Team, P.O. Box 733D, El Rito, NM 87530, 505/581-4454.

A symposium on the medical consequences of nuclear weapons and nuclear war will be held at the San Francisco Civic Center, November 17-18. For details contact Physicians for Social Responsibility, P.O. Box 144, N. Beacon Street, Watertown, MA 02172.



NASCO (North American Students in Cooperation) will hold its Fourth Annual Cooperative Education and Training Institute November 7-9 in Ann Arbor, Michigan. Theme of the event is "Co-ops: A Working Alternative." Topics to be discussed in workshops include: developing small housing co-ops; how to start a buying club; using volunteers effectively; stress management/burn-out; legislative issues for co-ops; and women in co-ops. For additional information contact NASCO, Box 7293, Ann Arbor, MI 48107, 313/663-0889.

Detroit will be the site of two alternative energy seminars to be offered by Jordan College: "Commercial and Industrial Solar Installations" (November 10-12) and "Community Solar Programs" November 13-14). A seminar on "Solar for Educators" will be held on the Jordan College campus in Cedar Springs, Michigan on November 6. For further details contact Linda Bouwkamp, Energy Programs, Jordan College, 360 West Pine Street, Cedar Springs, MI 49319, 616/696-1180.

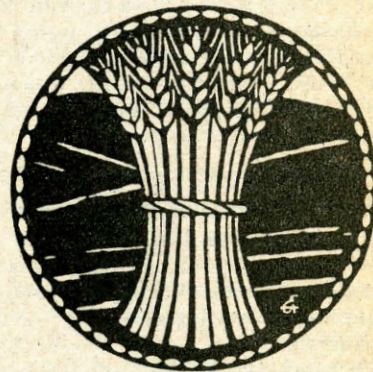
A Passive Solar House Design Workshop will be offered November 15 by the Domestic Technology Institute in Evergreen, Colorado. The session will cover basic passive design and construction techniques with special emphasis on architecturally integrated mass storage walls, cooling techniques, attached greenhouses, and solar "envelopes." For details contact D.T.I., P.O. Box 2043, Evergreen, CO 80439, 303/674-1597.

The Photovoltaics Advanced R & D Annual Review Meeting will be held November 18-20 at Colorado Springs. Event will include discussion of progress in DOE photovoltaic programs. Contact SERI, Conferences Group, 1617 Cole Blvd., Golden, CO 80401, 303/231-7361.

A forum entitled "Acid Rain: An Issue That Won't Go Away" will be held on December 12 in Arlington, Virginia. Discussion will center around what is known and not known about the causes and effects of acid rain and what regulatory actions will be taken now or requested of Congress in the future. For further information contact Robert Nash, The Energy Bureau, 41 East 42nd Street, New York, NY 10017, 212/687-3178.

The Institute for Social Justice will offer a condensed version of its one-week Organizer Training Seminar, November 20-22 in Columbus, Ohio and December 4-6 in New Orleans, Louisiana. Seminar will emphasize basic principles and skills of community organizing, with focus on building and maintaining organizations, models of organizing, research, and developing issue campaigns. Contact Institute for Social Justice, 628 Baronne, New Orleans, LA 70113, 504/524-5034.

"A Primer on Biological Farming—Towards a Sustainable Agriculture in Virginia" is the title of a conference to be held November 8-9 in Wirtz, Virginia. Featured speakers will be Eliot Coleman of the Coolidge Center for the Advancement of Agriculture and Arnie Voehringer of the Graham Center. Contact Patti Nesbitt, Virginia Assoc. of Biological Farming, Rt. 2, Box 374, Strasburg, VA 22657, 703/465-8742.



**Corrections:**

Our apologies: the price for *A Report on the Food System in Oregon: Recommendations for a State Food Policy*, reviewed last month, is \$7.00 per copy. The price of the report was still being negotiated as we went to press and was inadvertently left out in the last-minute madness.



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REVISED

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Bill Day

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No matter how you split it, wood is re-emerging as an important factor in home heating. To help insure the wood energy transition is one committed to safety and efficiency, wood stove consumerist Bill Day has closely monitored the availability and reliability of these products. His newly-revised and expanded *Consumer Guide* is a compilation of his articles in *RAIN*, covering the selection, installation and repair of woodstoves, wood cookstoves and wood furnaces. Included are helpful notes on fireplace retrofits and chimney maintenance. Essential reading for those of you interested in this revitalized energy alternative.

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## URBAN ECOTOPIA POSTER

Diane Schatz

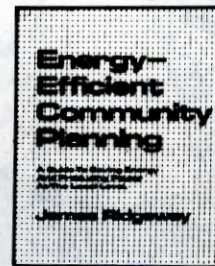
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## SUBURBAN ECOTOPIA POSTER

Diane Schatz

22"x30", 1976, \$3.00

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As we become more active in changing our communities from energy wasters to energy conservers and producers we can learn much from strategies that are already developed and operative. Ridgeway describes several model cities effectively organized to face resource scarcities with comprehensive policies and appropriate tools. Good models like these are tools in themselves.

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“Most rainmakers never lasted very long; they flashed across the horizon and soon burned themselves out. Occasionally one died on the job.” *The Rainmakers*



from *The Rainmakers*

CHAPPIE. "This is great. Maud wants me to take her to the foot-ball game. I'll just buy a thunder-shower and knock out the whole business."

*The Rainmakers: American "Pluiculture" to World War II*, by Clark C. Spence, 1980, 181 pp., \$15.95 from: University of Nebraska Press 901 N. 17th St. Lincoln, NE 68588

Of course our original attraction to this book was its title. It actually has little to do with our kind of rainmaking (except for the importance of luck and magic), but it does provide an amusing and instructive look at that stubborn streak of the American character which won't allow for leaving nature and the weather well enough alone. Ranging from distinguished scientists to outright charlatans, the "pluiculturists" of the nineteenth and early twentieth century were a colorful lot who always found welcome in a promised storm. Their chemical concoctions, strange apparatus, and confident manner brought drought victims reassurance, and occasionally (or so it seemed), moisture. Most spectacular of all the rainmakers was Charles Hatfield, who, in 1916, promised the San Diego City Council that he would fill the municipal reservoir "to overflowing." His release of chemicals into the air was followed by a heavy downpour, a collapsed dam, and scores of fatalities. When he demanded his promised \$10,000 fee on the grounds that he had sure enough filled the reservoir, the City Fathers refused. They decided that, in this case at least, rain was an "act of God." —JF

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