FREE SPACE FINDER

VOLUME #1 ISSUE #20 OCTOBER 2-16, 1970 P.O. BOX 984 SANTA CRUZ 95060

10¢

Friday 2nd

***moon in scorpio, 3:36am*
plant leafy annuals, grains

mahatma gandhi born 1896
groucho marx born 1898

there's a workshop on non-violence at the quaker center in ben lomond...

FLICKS:"devi' & 'the music box' at cabrillo college theater 8pm free

Sat. 3rd

emily post born 1873

BIG sur folk festival at monterey county fairgrounds 1pm & 8pm ticks: $3.50-5.50

open house at the warehouse 4617 soquel dr, soquel

CHILDREN'S films--czech, russian & french--cabrillo col. theater. series $1. 11am

BLACK cultural extravaganza -habari nairobi dance troupe black artists & fashions at cabrillo col., forum build. 8pm donation $2.

Sun. 4th

*moon in sagittarius, 12:32pm

sputnik launched in 1957

radical films at stevenson dining hall ucsc, 7:30pm free

Mon. 5th

Lecture: 'stitchery for all ages' at cabrillo, rm.450, forum building $1 8pm

radical films-speakers at cowell dining,ucsc 8pm free

Tues 6th

moon in capricorn, 7:11pm
plant annuals

radical films-speakers from movement for democratic military--cowell dining, ucsc 8pm free

Wed 7th

2nd quarter of the moon

PLANETarium show:'project apollo' cabrillo planetarium rm. 706 8pm free

FILM:'amerika'; speaker-janet weiss(revolutionary union)--crown dining ucsc 7:30

Thurs 8th

moon in aquarius, 11:26pm

good clean fun at the bull's eye, 430 washington st., in monterey

FILM:'palestine' & speakers crown dining ucsc 7:30pm

Fri 9th

cervantes born 1547
john lennon born 1940

FILM:'mafioso' & 'night owls' cabrillo theater 8pm free

Sat 10th

the kerala kalamandalam kathakali kompany present the 'mahabharata' stevenson dining hall, ucsc, 8pm $3

good clean fun at the bull's eye, 430 washington st, in monterey

Sun 11th

moon in pisces, 1:31am
plant annuals, grains

SEVEN COMIC one-act plays at cabrillo theater 2:30pm 50¢

an introduction to taoist ways of energy release----- taught by gia-fu feng, at cabrillo, rm.1117, 9:30-1:00 $10/three sessions

Mon 12th

WOMEN'S liberation orientation meeting at 513 center st. s.c., 8pm free babysit.

exhibition & sale of original graphics(picassochagallgoya) 10am-4pm bay tree bookstore ucsc

Tues 13th

moon in aries, 2:13am

Wed 14th

full moon
gather mushrooms

moon in taurus, 3am
plant potatoes & roots
oscar wilde born 1856

Thurs 15th

EVERY:

TUESDAY--city council meetings at city hall, center st. 7:30pm keep 'em on their toes!

1st & 3rd TUESDAY--group zazen with soto zen priest at 8pm 513 center st.

LAST WEDNESDAY--of the month--women's liberation general meeting, call 426-9694/info

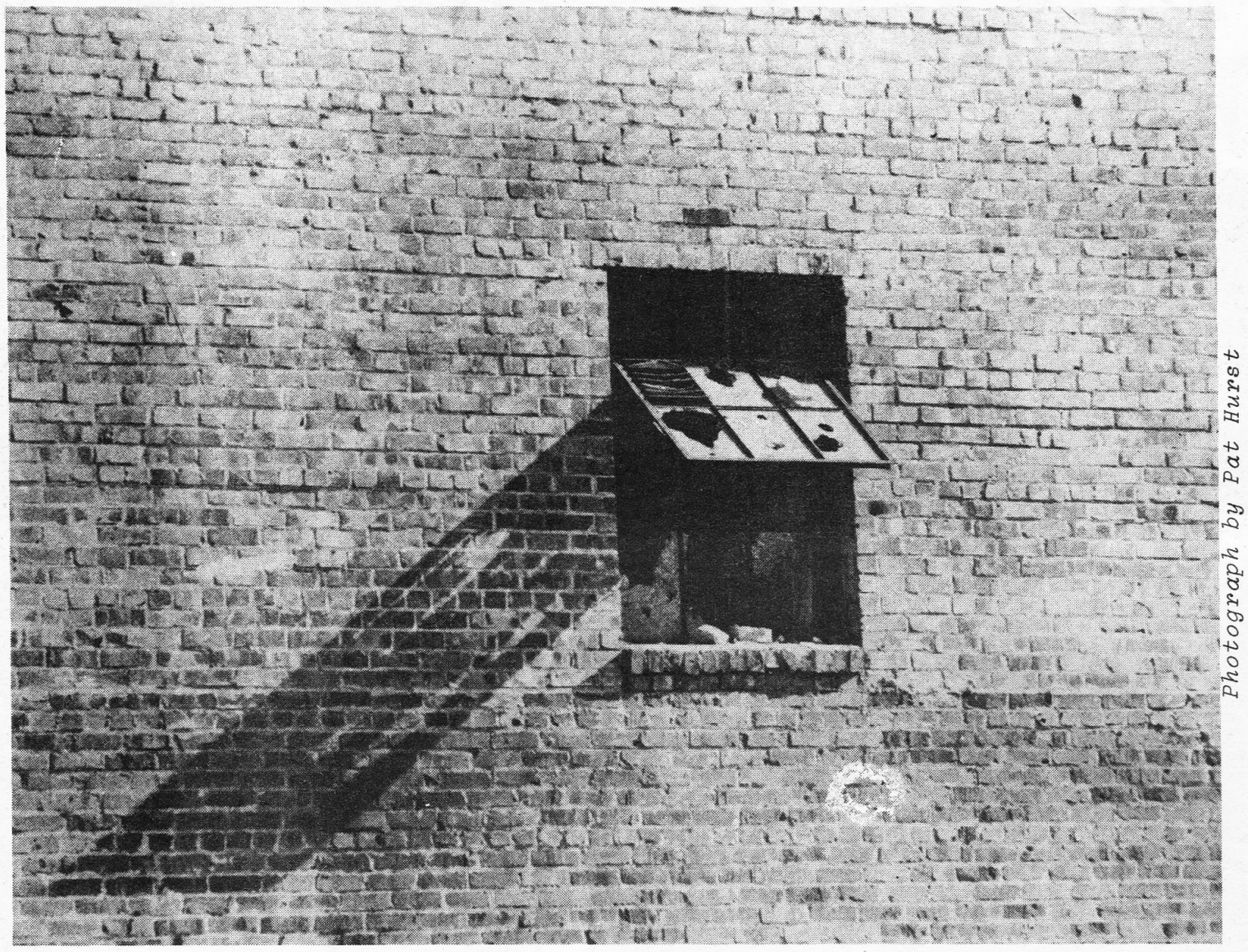
THURSDAY--welfare rights meeting 1307 seabright, 7:30pm
--draft repeal meeting 202 lincoln st. 8pm

FRIDAY --folkdance--balkan, israeli, european, cabrillo gym dance rm. 7:30pm 75¢-$1

DAY--hatha yoga classes at the integral yoga institute, 648 bayview, rio del mar at 6 & 7:30pm $1./class

and in monterey.....

NIGHT--812 cinema, quadrasonic sound & multivision!! $1.50 8:30 & 10pm; fri,&sat. midnight special--75¢ at 812 cannery row, monterey



Photograph by Pat Hurst

UCSC UPDATE

CAMPUS FOCUS BEGINS TO TURN OUTWARD

University people are beginning to realize that the college campus cannot remain isolated from the rest of the Santa Cruz community. The ivory tower concept of a college as a place of contemplation separate from the "mundane world" and the active life leads all too easily to elitism on the part of students and faculty, and anti=intellectualism in the non-campus community--neither very healthy attitudes.

Students returning to the University of California at Santa Cruz this year will notice a significant number of courses which direct their attention away from books and off of the campus. Community Studies has established an office for student-town liason. Radical activists are agreed that students should begin to focus their attention and energy to the people in the Santa Cruz community itself. There are, of course, all too many who will continue to see the university as a quiet place for "pure" thinking and research--a vision which unfortunately depends upon a leisure class supported on the backs of third worlders abroad and minorities and the white working class at home. Despite these prophets of "the old folks home and the college" (Bob Dylan), however, people are beginning to reach off the campus, out of the well warmed womb of bourgeois hegemony, and to begin dealing with "desolation row."

The notion of students relating to the community as a whole is probably pleasing to the local campus administration--they must have been getting tired of scatalogical attacks on "smiling Dean"--but it comes into direct conflict with the regents' and other state and national officials' philosophy of keeping the universities a-political (read: supportive of the imperialist, racist, male-chauvinistic status quo). The Santa Cruz campus administration set no roadblocks in the way of new courses giving students time off for election work and those dealing with local problems such as ecology and housing; but Reagan finds the distinction between social concern and political activism a thin one ("a philosophical question"--read: keep them kiddies on the campus).

The irony of all this is that Reagan is probably right (I mean correct--we know he's right): as students are given an opportunity to act upon their "social concern," it is likely to take them into political activism. This is, of course, something that the local professors don't understand or believe. They hope that students can be channeled into existing structures and that students will be "fulfilled" working in the bourgeois elections and for local established agencies.

The real question is how the liberal professors and liberal local campus administration is going to relate to those students who go out into the community as liberals and come back radicals--or at least come back liberal political activists? What is going to happen when those liberal profs are confronted by students demanding relevant courses that deal with the root problems behind unemployment, housing shortages, hungry welfare people, racism, etc., *ad infinitum?* What happens when those students demand courses taught by people who know the problems in which the students are interested--not people who have read about them? After all, there are relevant courses and "relevant" courses.

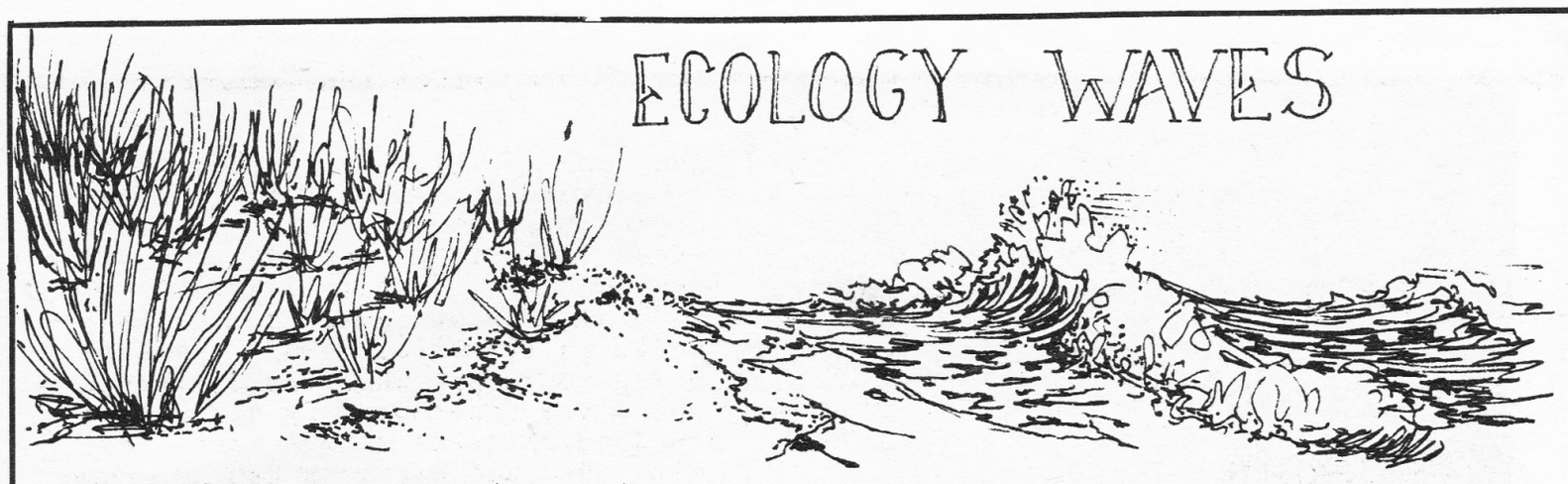
What this all leads to is the difference between the liberal and radical positions on how the university should relate to the Santa Cruz community. The liberal professors are motivated by their honest understanding that we are living in times of political crisis and that there are ills in the world that they would like to correct. But even more than that they are motivated by a fear that the university is collapsing. As more and more students become concerned with the real problems of real people the previously secure professorial armchair begins to rock. As they sit in their "rocking chairs" the professors get worried about relating to the young-uns and begin to search for ways to get their attention. When the U. of Cal. was just built here, students seemed to be into an eastern philosophy trip and the courses and texts in the book store reflected that student interest. Now students are starting to get interested in social problems off the campus and the faculty follows once again.

When radical activists suggest that people begin to focus their energies off campus it is because they have an analysis that tells them change cannot be brought about solely by divorced from action, by discussions in books in a social and political vacuum, but only through social practice--that is, direct involvement with the people that live in communities like Santa Cruz. Radicals are naturally directed to questions off the campus.

It may be that this year will see some kind of coalition between radicals and liberals on the question of student activism off campus, but when the pressure starts to come down from Reagan and his gang, and when students begin to act in a manner logically consistent with what they have learned about Santa Cruz--and that may mean action outside of established channels--the liberals will have a tough decision to make. The choice for them will be between liberalism in the old sense of broad thinking and social concern or the liberalism of bourgeois hegemony--from the people who brought you (among other things) the Vietnam War and the Corporate State.

Mike Rotkin

ECOLOGY WAVES



THESIS: Ecology activists should work outside of the "system" for the time left is short and there is much to be done, much more than the "system" can do.

The ecology movement is here to stay. It should be taking the lead in the radical movements of our times, since ecology strikes to the very heart of man's being. Instead, in much of the "movement," some potentially disastrous trends have begun.

Most of the ecology "activists" have turned their energy and attention toward conventional political means, that is, electing candidates to office and seeking environment protection and conservation legislation. Although such means are really the final step in the political process, they are perceived as the only truly effect ones. This viewpoint is nonsense, for it ignores the vital foundation of all political action in a democracy, namely, what exists in people's heads.

Previous writers in the FSD this year have clearly and forcefully shown that the root causes of the ecological crisis reside deep in the relations which exist between the men and women on this planet. These causes are systematic in nature; solutions to ecological problems also must by systema-systemic. They must go to the very roots of our political, social and economic systems; by going to the roots, they are inherently *radical*, in the original sense of that word.

It is clear that the conventional political methods in no way go to the roots of any problem. These processes are best characterized by such terms as "incremental change" and "muddling through." They alter only the thinnest surface layer of superfluous details on top of mountains of social and psychological realities. They continue to reflect the 18th and 19th century beliefs in the continual "progress" and perfectability of man. They continually and quite ordinarily contrast "what is," that is,, what they accomplish, with "what was." This encompasses the sphere of thought for the "practical" men of our time, the men who are "rational," but no longer "reasonable."

This train of thought proceeds indefinitely straight ahead; it perpetuates a "flat earth" philosophy, a belief that there are no absolutes, no limits to what men can accomplish, no fixed time left to solve pressing social/ecological problems, no finite limit on the availability of natural and human resources for exploitation.

These political processes degrade man's spirit: everything is subject to compromise, there is nothing worth fighting and dying for, just play along and we'll satisfy you, too, sometime. But that sometime is now. Many things can no longer wait for the iceberg-slow processes of compromise and assimilation to work; even if there were time, there is serious doubt that they would work. Any budding politician who really proposed root solutions, radical solutions, to root-caused problems would be immediately be dismissed as impractical. Indeed, he would be. Not only impractical, but undemocratic, because the popular will clearly does not yet and may never support changes in the very roots of modern existence.

Robert Kennedy, certainly no imposing ecological practioner, once remarked in an unusually lucid moment: "Some men see things as they are and ask 'why'? I dream things that never were and ask 'why not'?" The ecology movement, in its more fruitful, truthful and creative moments, goes beyond "why not?" to "what must be.' It contrasts *what must be* to *what is* and *what can be expected;* these comparisons inherently transcend our political system. They point to the ultimate goal of an end to politics, for they introduce absolutes such as harmony, cooperation and interdependence into the discussion. Ecologists are politically unreasonable men.

These comparisons make it impossible for us to participate in the conventional political processes, but they do give us a clue to appropriate action. Until we put an end to politics, every thought (including the thought that we must put an end to politics) is political, every personal action is political, every discussion of what must be is political, in the sense that they show the possibilities and awaken the imagination to the creation of new realities. ("If my thought dreams could be seen/They'd probably put my head in a guillotine."--Bob Dylan) They change men's minds--these changes are then ultimately reflected in political action of the decisions, but only ultimately. The ecology activist must move himself before he would move others. He must help recreate a community whose basis attacks the roots of our fundumental ecological problems (environmental degradation, population growth, war, poverty, racism, the exploitation of men and women and the earth).

"The times they are a-changin"

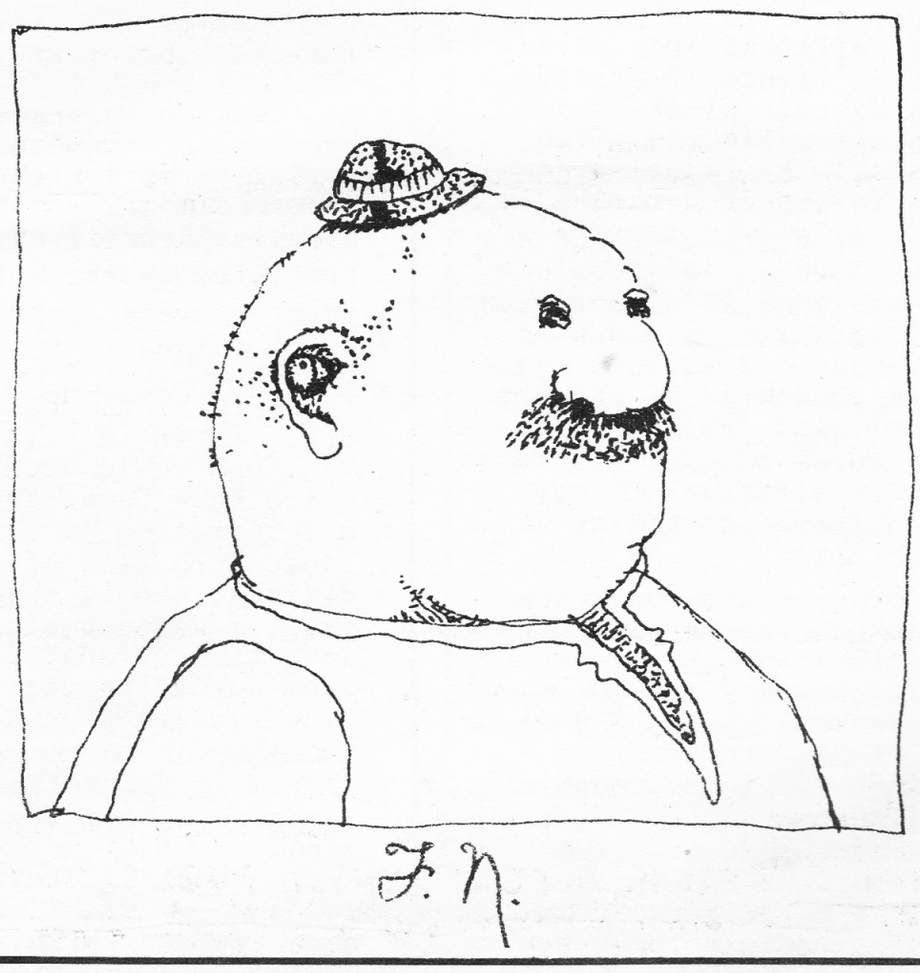
"The times they are a-changin'." Every age is an age of transition, but we are the first age where the transition could be to the end of all transition, to the end of mankind. Martin Heidegger long ago said:

The world is darkening. The essential episodes of this darkening are the flight of the gods, the destruction of the earth, the standardization of man and the preeminence of the mediocre...World is always world of the *spirit*...Darkening of the world means emasculation of the spirit, the disintegration, wasting away, repression and misinterpretation of the spirit. (*Introduction to Metaphysics*, paper, p. 37)

To enlighten or re-enlighten the world from its shadowy burden, we must clear the way, making a clearing (Heidegger, again) for the light (which is potentially there always) to shine into and upon. Heidegger has outlined four cornerstones of this reconstruction, this new structuring, this building-again; one of them is an end to the destruction of the earth. But we cannot stop there, for the world is the world of the spirit. To enable light to be cast again on man's spirit, we must re-establish the gods (but not necessarily the old gods in the old *forms*), destandardize men (to provide a renewal or rebirth of freedom, an end to our current reigning, raining, enslaving technological era), and restore preeminence to excellence (this means far more than and nothing like the hegemony or dominance of intellectuals and experts, it means unleashing the creative, the newness in every man and woman, in every new birth on the earth). These are the tasks of ecologists, sages and ages. These tasks amount to nothing less than restoring the kinship of mankind, each man and woman to himself or herself, to all other men and women and to the earth. This restoration of kinship is a fundumental condition of our being, of our becoming and of our striving to restore a healthy and creative environment to our lives.

Jerry Yudelson

Mr. In Between Is
Worried About Pollution



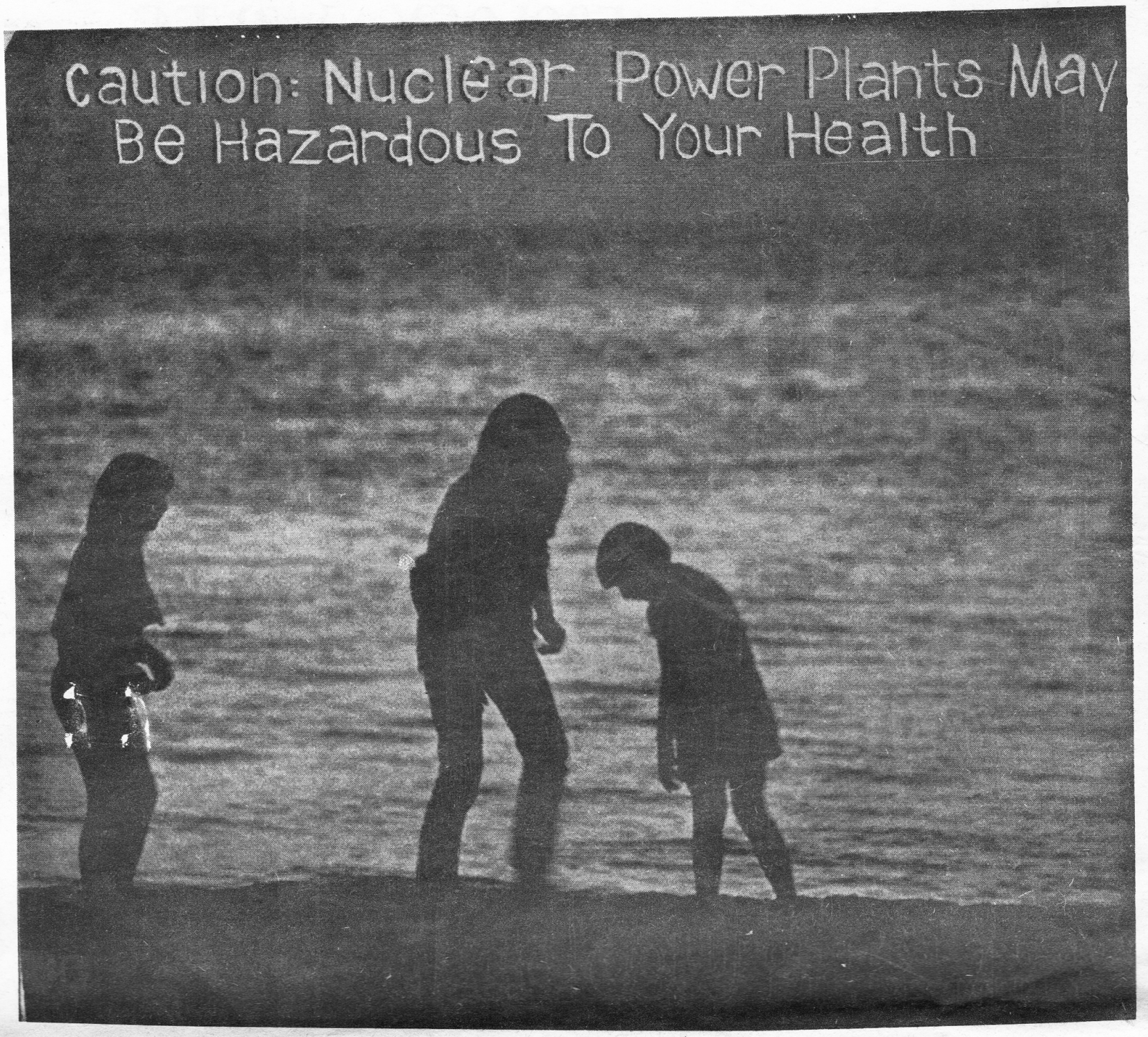
More basic than self-definition through a group is survival of species, including our own. This column is for those of you who are not oriented to organization meetings, by-laws or officers in efforts to survive.

We're not all at the same place, but it is time to come together. If those of us who see the interdependency of life can't throw off prejudice, suspicion, competition and censorship towards each other--then there really doesn't seem to be any hope. We need to self-consciously build an accepting environmental movement rather than a rejecting splinter of insecure groupings.

We hope readers will consider themselves a coastal coalition of individuals who want to protect and preserve his near-Eden and the life forms which now, and hopefully, will inhabit it. The only one who can truly speak for you is yourself. You can do this through your life-style and through your politics. We hope to be able to supply you with enough background and information on environmental issues to enable you to be effective if you choose to speak out politically--whether to those who make decisions in your name or at critical hearings and meetings where a number of voices may do some good, or in organizing associates for more effective action.

Following is an excerpt from the excellent publication of the Scientists' Institute for Public Information, *Environmental Cost of Electric Power*, put together by Dean E. Abrahamson, Assoc. Prof. of Anatomy and Laboratory Medicine, University of Minnesota. He is also President of the Minnesota Committee for Environmental Information. Before going into medicine, Dr. Abrahamson took his master's degree in physics, and had experience with reactor technology. The booklet can be obtained from S.I.P.I., 30 East 68th St., New York, N.Y. 10021

-- Dorothy Cope



Nuclear Power Plants: Unique Features

Nucleur power plants are a new and still experimental form of power production. As Sheldon Novick has reported in a recent letter in *Science*, "only 17 civilian nuclear power plants and one military plant, at Hanford, Washington, had been completed by the end of 1968," in contrast to the hundreds of fossil fuel plants. "Of these, five had...been shut down...as impractical or unsafe by that time; a sixth, the Fermi reactor, was never made to operate properly and finally suffered an accident which took it out of service; a seventh, the Humbolt plant, has operated within allowable radiation release limits only by reducing power output. The remainder have had various degrees of difficulty and another was shut down in 1969. Only two reactors have gone into operation since (1968)." Research reactors on university campuses and various reactor experiments conducted by the Atomic Energy Commission are not included in these figures as such reactors are usually quite different in purpose and design from central-station power reactors.

Nuclear fueld power plants have one distinct advantage: they produce none of the noxious and sometimes poisonous air pollutants for which fossil fuels are well known. However, nuclear power plants produce radioactive wastes. Fossil fueled plants do discharge some radioactive wastes in their effluents, because all fossil fuels contain some radioactive materials and these radioactive materials and these radioisotopes are released when the fuel is burned. Compared to a boiling-water nuclear reactor, however, the quantity of radioisotopes released by a coal fired plant is of minor importance.

Living things have always been exposed to ionizing radiation. Man is now exposed not only to natural background radiation, but to radiation produced by medical and dental techniques, television and other electronic devices, and radioactive wastes from other sources. These other sources. These other sources include nuclear reactors for generating power; products of the nuclear fuel industry; hospitals; research institutions; industrial uses of radioactive materials; and fallout and venting from peaceful and military testing of nuclear explosives.

Radioactive wastes are discharged from nuclear reactors both during normal operation and during accidents. A major accident would be a catastrophe of a magnitude never before experienced by any industry. Such an event is not expected to occur often, if at all. Yet, even though nuclear plants are designed to minimize the chances of an accident, there is still the possibility that one could occur. The releases which have been occurring during normal operation of reactors do not cause much risk of damage to each individual who is exposed; however, a great many people are exposed for a long time. Probably the net effect from normal operation exceeds that of a single large accident.

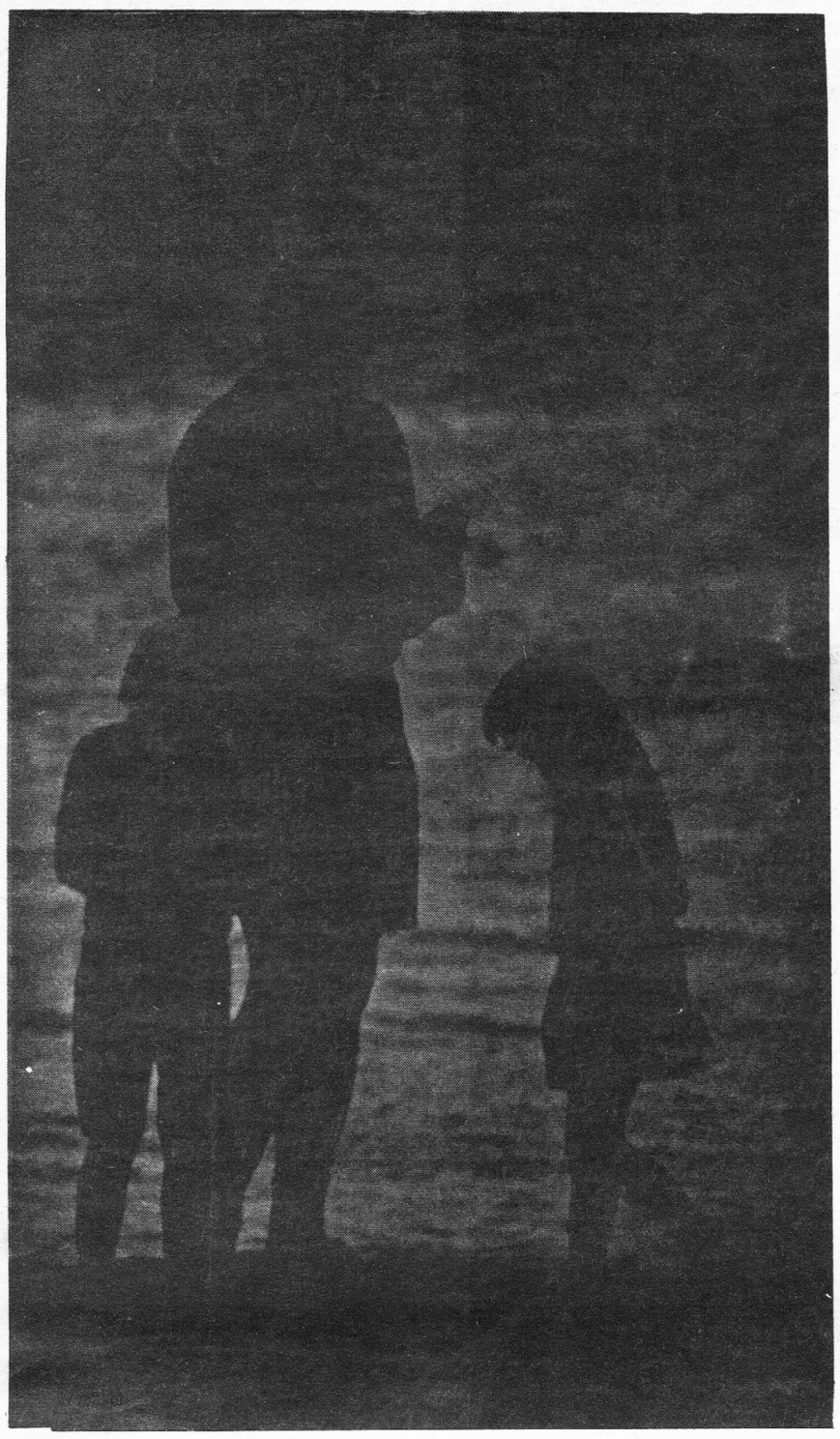
In addition to the wastes released or available for release at the plant location, there are various wastes produced at other stages of the fuel cycle, both before the fuel reaches the nuclear plant and after it has been removed. Uranium mining entails risks both to miners and to the area where the mine is located, as large mounds of uranium tailings are sometimes left out in the open, and to be blown and distributed by the wind and by nearby streams and rivers. The processing of the raw ore and the fabrication of the uranium fuel are other parts of the cycle where radiation exposure can occur. After the fuel has been used in a nuclear plant, there are still dangers associated with transporting the highly radioactive spent fuel, as well as the reprocessing of the used fuel elements.

RADIATION HAZARDS

Basic to the consideration of heatlh hazards from any toxic material and to the establishment of any meaningful standards for allowable exposure is the effect on health to be expected from a given exposure, and the question of whether there is a threshold--an exposure below which the material has no ill effect.

In the cases of ionizing radiation, it is generally accepted that there is no threshold. Although all the evidence is not yet available, the Federal Radiation Council has adopted a prudent assumption that a thresh old does not exist, and that "...every use of radiation involves the possibility of some biological risk either to the individual or his descendants." (Had a correspondingly conservative approach been taken with other more common pollutants much of the current ecological crisis might have been avoided.)

The estimates of risks associated with exposure to radiation are often expressed in the number of cases of a particular kind of physical damage per rem of radiation exposure per



Photography by Joe Czarnecki

million people exposed. A rem is one of the units used to measure the quantity of radiation exposure. There are other commonly used units for exposure--including the rad and the roentgen. Although these units are not interchangable in the technical sense, for purposes of the discussion here they may be thought of as being numerically equal to the rem without introducing serious error.

Units of radioactivity and radiation exposure are not as familiar as are, for example, units of length, mass or time. For that reason, discussion of radioactivity and the risks from exposure to ionizing radiation are frequently confusing--and the units can be confusing even to works in the field if they are indiscriminately mixmixed during the same discussion. For our purposes it is necessary to consider only two units--the curie and the rem. The curie is the unit used to describe the *quantity of radioactive material*. For example, a given nuclear reactor might discharge 5,000 curies of tritium (the radioactive isotope of hydrogen). This radioactive hydrogen would mix with the other hydrogen present in the environment and a certain amount of it would mix with the other hydrogen present in the environment and a certain amount of it would find its way into plants and animals--and in fact would distribute throughout the biosphere, including man.

After the radioactive hydrogen, the tritium, became incorporated into living organisms, the organisms would receive a certain exposure to ionizing radiation because of the decay and radioactive emission of the tritium. This *exposure* can be expressed in the units rad or rem. Finally, the resulting risk to the organism can then be determined by combining the known exposure with the known risk to the organism can then be determined by combining the known exposure with the known risk for that exposure. At present, the standards for allowable exposure to ionizing radiation are under intensive discussion and proposals have been made to revise the standards downward. The principle hazards are genetic damage (i.e., damage to future generations), tumors, and shortening of life span.

The waste disposal practices of the Atomic Energy Commission were recently reviewed. In 1955, at the request of the AEC, an Advisory Committee on the Geological Aspects of Radioactive Waste Disposal was established by the Division of Earth Sciences of the National Academy of Sciences-National Research Council. This Committee submitted its final report to the AEC in 1966. It formulated three general principles for the disposal of radioactive wastes.

1. All radioactive materials are biologically injurious. Therefore all radioactive wastes should be isolated from the biological environment during their periods of harmfulness, which for the long-lived isotopes exceeds 600 years.

2. The rate of generation of radioactive wastes is roughly proportional to the rate of power production from nuclear-fission reactors....The committee reasoned that no waste=disposal practice, even if regarded as safe at an initially low level of waste production, should be initiated unless it would still be safe when the rate of waste production becomes orders of magnitude larger.

3. No compromise of safety in the interest of economy of waste disposal should be tolerated.

The report of the Committee has not been released by the AEC in spite of repeated requests [The paper was released as this book went to press.]. The Committee's conclusions are, however, summarized by M.K. Hubbert in *Resources and Man*, who concludes that with the exception of high-level wastes that all three basic principles are likely being violated at the AEC's own nuclear installations. If AEC is charged with the protection of health and safety, has been lax in its handling of radioactive wastes, what will the practice be when wastes are managed by commercial firms whose historic purpose is to maximize profits and which have traditionally released all the waste that the law or public opinion permitted.

It may in fact be the case that commercial power reactor operators intend to release only a small fraction of the radioactive wastes which would be allowed under present AEC standards, but in the history of the utility industry there is little to inspire confidence.

Nuclear plants contain vast quantities of radioactive materials. While it is true that the small nuclear power stations for which we have operative experience have not resulted in large exposures to ionizing radiation, there is little assurance that without changes in the regulatory structure the new, large nuclear power plants will not release large quantities of radioactive waste during normal operation.

The various sources of radiation exposure cannot be considered separately, particularly since the various uses of ionizing radiation are growing. This suggests the need for a "radiation budget" which sets forth the maximum allowable exposure from each source of ionizing radiation. One such budget, directed toward genetic exposure, has been proposed by Dr. K.Z. Morgan and is set forth in adapted form in Table 7.

Even if the discharges are well-regulated and are relatively small for each plant, the number of plants is expected to become large, and therefore the total amount of radioactivity to which a region is exposed will be greater than that released from any one plant. It is estimated by the Atomic Energy Commission that by the year 2000, power generation in the U.S. will be about equally divided between nuclear and fossil fuel plants. If power production continues to grow at the present rate, serious problems can be foreseen. Nuclear plants and the associated fuel processing facilities will be producing 470 million curies of krypton 85 annually. This represents an increase in radiation exposure of about two millerems per year, or between one and two percent of natural background radiation. This figure assumes that the radiation is diluted uniformly in the world's whole atmosphere, which will certainly not be the case. In the United States, exposures will be somewhat higher, perhaps ten times as much. Other long-lived radionuclides, particularly tritium, will make their own contribution to radiation exposure. And various plants and animals will concentrate radionuclides in their tissues, causing exposure under some conditions to be higher than these predictions. In 30 years, radiation levels may be high enough to cause serious and unforeseeable effects on the world's living things, including man, unless technology to control radioactive effluents is developed.

Major Accidents

Although the probability for a major accident is small, the consequences could be catastrophic. We will not consider them here except to note that the damages could be *several billions of dollars* and the persons involved number in the thousands or tens of thousands. Those interested number of the thousands or tens of thousands.

Many persons have strongly recommended that power reactors be located underground. This would permit them to be located near metropolitan areas. It would simplify the considerations of a major accdient; for example, access to the reactor would be more easily controlled, many meteorological variables would be eliminated, and more time would be available to evacuate the population in the case of a major release of radionuclides. Underground location would also make reactors much less vulnerable to disruption. A 1,00 megawatt (electrical) power reactor, at the end of one year of typical operations, contains in its fuel as much radioactive material as would be produced by a 50 megaton fission bomb. Were the reactor to be disrupted, for example by civil disturbance or war, and the radioactive material released to the environment, the consequences would be disastrous. Not that the reactor could or would explode as would a 50 megaton bomb--such an event is simply impossible in today's reactors--but the radioactive material released to the environment could approximate that released in such an explosion.