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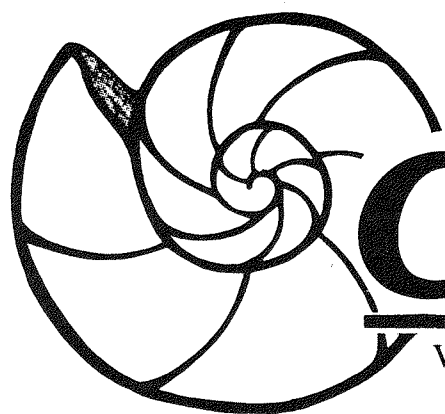
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University of Southern Maine

CURRENTS

Volume 1, Number 18

August 22, 1983

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A Unit of the University of Maine

Reno Appointed Associate Provost

Stephen J. Reno has recently been appointed to the position of Associate Provost of the University. The post was created last year to allow the provost's office to give more attention to the increased demands of new academic programs as well as to serve existing ones better.

In making the August 1 appointment, Provost Greenwood said, "Steve has shown his ability to maintain a close and effective working relationship between the provost's office and those programs reporting to him. I am confident his work here will continue to benefit all of us at the University."

While serving as acting associate provost this past year, Reno worked closely with the Core Council and Core Director to strengthen the curriculum, to revise program description and to increase the number of courses satisfying the Core requirements. In addition, he oversaw the formation of the Faculty Graduate Advisory Council (a faculty body to advise the provost

on graduate affairs); worked with the Committee on the Changing Roles of Women and Men to develop further the Women's Studies program; and assisted in broadening access to the International Study and Exchange program.

In his new post, Reno will work to ensure that the newly established Office of Graduate Affairs "...efficiently serves both the needs of the students and the administrative operations of the graduate programs." He hopes that by cooperating with the Graduate Council there will be a strengthening of the graduate programs, greater coordination and planning among them and a higher visibility for our graduate programs generally."

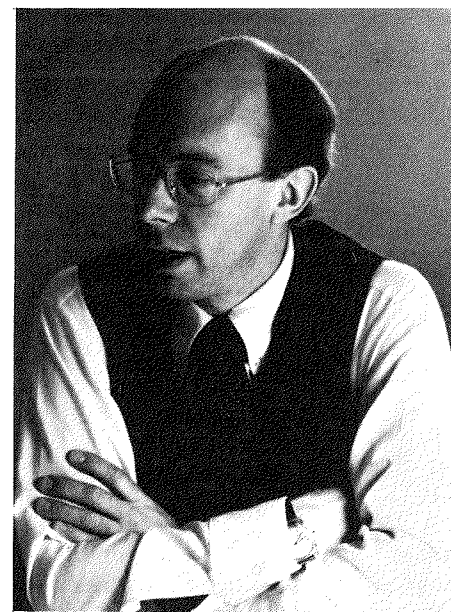
In the area of Women's Studies, Reno points out the need for "a broader participation across the University in the objectives, curriculum and activities of the program."

Through such efforts as the degree program review and professional development, Reno hopes to assist

faculty in "discharging their responsibility for the curriculum, its continuing review, evaluation and improvement."

Dr. Reno came to USM in 1980 as assistant to the provost, and served from 1981-82 as interim university librarian. He formerly held the posts of associate professor of religion and associate dean at the University of Leicester in England, visiting scholar at the Harvard Center for the Study of World Religions and a faculty position at the University of California, Santa Barbara.

He has written the entries on "Amerindian Religions" for the new *Penguin Dictionary of Religions*, to be published in October, and has just completed the manuscript of a book on the Indians of Central Massachusetts. Reno also tries to teach a course each semester. He says his course, "Patterns in Comparative Religion," provides the "vital contact I need with the students, who, after all, are the ones we are really here to serve."



Stephen J. Reno

Keller Named Assistant Dean

Marjorie C. Keller, R.N., has been appointed assistant dean and associate professor of nursing for the University of Southern Maine School of Nursing-Orono Extension, with offices located at UMO.

Currently completing her doctoral dissertation at the University of South Carolina in Columbia, Keller holds a master's degree in nursing with a medical surgical specialty from the Medical College of Georgia. She earned a B.A. degree in sociology from MacMurray College, Jacksonville, Illinois, and a diploma in nursing from Western Pennsylvania Hospital School of Nursing, Pittsburgh.

Keller has held faculty posts at East

Carolina University School of Nursing, Greenville, N.C.; the Medical University of South Carolina College of Nursing, Charleston; University of South Carolina at Spartanburg School of Nursing; and at the Passavant Memorial Hospital School of Nursing, Jacksonville, Ill. Active in professional activities, she has received a grant for a summer conference on ethics in nursing.

In making the appointment, Audrey J. Conley, dean of the School of Nursing said, "With her personal and academic qualifications, Marjorie Keller will be a tremendous asset to nursing education at USM."

An Official Record

The Maine State Legislature recently passed a resolution authorizing the University of Maine to develop an official state atlas.

This will be Maine's first official atlas in over 80 years. First, however, \$65,000 must be raised to cover research and printing costs. Project organizers hope to raise the funds from foundations and other public and private sources.

"An Atlas of the Resources of Maine" will use maps, text and illustrations to detail Maine's people, geography, and economy among other things. It will be available for use by libraries, schools, public agencies, researchers, economic development groups and private citizens.

Carl E. Veazie, senior economist at the Center for Research and Advanced

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Heart of the Matter

All members of the university community are encouraged to participate in the second annual "Corporate Walk/Run for Heart" on Saturday, August 27.

Lifeline sponsors the non-competitive walk/run for the Maine Heart Association to promote awareness that the risk of heart disease can be reduced by regular fitness programs.

This year's walk/run begins at 8:00 a.m. at our Portland gym. It is part of a national fitness and running program to raise funds for educational research programs for the American Heart Association. Lifeline is also seeking participants who find sponsors to pledge money for each kilometer completed.

"I want to encourage and invite all University employees to participate in the Corporate Walk/Run," says James V. Sullivan, director of the Employee Health and Recreation Program.

The route for Corporate Walk/Run for Heart is a 10 kilometer (6.2 mile) circuit along Back Cove, beginning and ending at our Portland gym.

For more information, contact Marjorie Podgajny, Lifeline Exercise Specialist, at 780-4170.

Mutual Benefits

Businesses in the Greater Portland area are reaping the benefits of our Job Development Program and at the same time students are able to ease the cost-crunch of a college education.

Last year, 320 USM students found employment with Ventrex Laboratories, Public Cable, Eastern Securities Systems and the Maine Center for the Blind, to name just a few. The aggregate earnings of students in the program was \$427,627.45 for the 1982 - 1983 academic year.

Deborah D. Avery, USM job development specialist, is pleased with the success of the past year. "Employers utilizing this service are very satisfied with the overall performance of USM students. It seems the students are the best promoters of the program," she says.

The Job Development Program was established in 1981 by the Office of Counseling and Career Development.

Breakfast of Academicians

President Woodbury invites all faculty and professional staff to breakfast at 8:00 a.m., Thursday, September 1, in the Gorham Dining Center.

At that time, he will introduce new personnel and offer brief remarks concerning our University. Activities will conclude by 10:00 a.m.

Science & Technology: In Search of Values by Roy Gallant

EDITOR'S NOTE: In his keynote address to the 25th Annual Spring Conference of Industrial Education and Technology, held on the Gorham campus last March, Roy A. Gallant reviewed several scientific and technological developments which resulted from research efforts of the past 10 years or more. He then asked his audience to identify areas in which they felt personal and/or social values come into play. We'd like you to have the chance to do the same by reading this edited version of the speech. The speech is especially timely since we'll soon be addressing another technological area — the computer — through our 1983-84 convocation. Roy is director of the Southworth Planetarium, adjunct professor of English and a well-known science author.

The 1970s were remarkable for political action directed against science and technology. Numerous citizens' organizations, all issue-oriented, attempted to obstruct various projects including recombinant DNA research and construction of the Seabrook, New Hampshire nuclear power plant, to name but two. The 1970s also witnessed an increase in public awareness of a number of technological developments described as "improvements"; for example, drugs that promote the growth of beef cattle, but that may cause cancer as well; and the intensive use of fertilizers that vastly increase agricultural yields, but that too often end up being major pollutants.

A growing public awareness of the ironies inherent in technological progress has made most scientists and technologists acutely aware that, like it or not, they are in a political arena, and are being held accountable for their actions.

...scientists and technologists (are) acutely aware that, like it or not, they are in a public arena, and are being held accountable...

More and more, scientists and technologists alike are having to face self-imposed questions like these: "In addition to being responsible for the technical performance and safety of my project, to what extent may I be morally responsible for its long-term effects? Should I confine my concern to only its technical aspects and leave social impact considerations to others?"

When questioned, most of us would say that we have personal values that guide us in our actions. Most of us tend to follow norms laid down by our parents or loosely defined by our peers, and when we are confronted with the need to choose between this or that course of action, like a politician, we sometimes behave expediently rather than with a design that has its origin in explicitly considered values.

The 1970s ushered in the most profound transition in the history of genetics, the ability to transfer genes from one organism to another. This new biotechnology goes by the name of genetic engineering, recombinant DNA technology, and gene splicing.

With this technique geneticists have the potential ability to substitute a healthy DNA sequence for a defective one in a human egg or sperm and to be instrumental in producing a healthy infant rather than a genetic cripple.

We are living in a moment of history



Photo courtesy of Jackson Laboratories

when a major biological breakthrough has generated moral, ethical, legal, social and political issues, as well as issues about the degree of freedom required to carry out scientific research.

One face of the controversy over genetic engineering is the notion of "tinkering with human life." If we have the ability to cure an existing crippling genetic disorder, or a potential disorder carried by a couple wanting children, should we use that ability or not? Some argue that we are morally and ethically obliged to use it. Others argue that tinkering with human life, no matter what the motive, is morally "wrong." But what about parents who deliberately conceive a child when advised in genetic counseling that the odds of the child have a crippling genetic disease are high? What about the physician who is in a position to aid such a couple but refuses to for personal moral values? Is his action consistent with the ethical values of the medical profession.

Between the years 1750 and 1900 it took 150 years for the world population to double. Today the doubling time is 40 years.

Another face of the controversy involves the public at large. What influence can the public claim in the matter. Some argue that the public has a right to consent to potentially large-scale, risk-laden activities or a right to know how tax money for support of scientific research is being spent. Perhaps the largest question of all is whether human beings have the collective wisdom to assume responsibility for themselves as a species by directing their evolution through genetic engineering.

Although humans have achieved a certain degree of control over the environment, our human population requirements are fed by the same planet-wide life support systems that sustain all other populations. Many demographers feel that the world's human population is rapidly reaching crisis proportion and wonder to what extent, if any, modern technology can come to the rescue.

When we graph world population growth over the centuries, we find a curve that starts out relatively flat then

rises sharply and points nearly straight up. No known population of any species has demonstrated an ability to remain for very long on the straight-up phase, or so-called logarithmic phase, of a population growth curve. And we have no reason to suspect that humans can be excluded.

Between the years 1750 and 1900 it took 150 years for the world population to double. Today the doubling time is only 40 years, and some demographers are predicting that early in the next century the doubling time will be only 15 years. We can grimly imagine a hypothetical time when the doubling time is only one year. For obvious reasons this condition could never be maintained, let alone ever be reached.

Every year that the world population continues to increase, the risk of nuclear war, widespread famine, pandemic disease, and irreversible ecological catastrophe increases.

Can technology solve the problem?

The so-called "green revolution" of the late 1960s produced two high-yield varieties of cereal dubbed "wonder" wheat and "miracle" rice. Almost immediately it touched off controversy.

Proponents quote such statistics as West Pakistan's 1971 wheat production being 76 percent higher than its 1961-65 average and India's 1971 wheat crop doubling its earlier 12-million ton record. These statistics, like most, should be taken with another kind of grain, a grain of salt. For instance, in India wheat and maize farmland doubled from 1960 to 1969, so naturally there was a dramatic increase in yield, green revolution or not.

We are living in a moment of history when a major biological breakthrough has generated moral, ethical, legal, social and political issues, as well as issues about the degree of freedom required to carry out scientific research.

Some proponents of the green revolution also fail to point out the tremendous inputs of mechanical and chemical energy needed to achieve such high net production.

As more and more land was given over to the new genetic varieties, progressively less land was available to

pulses such as peas and beans. Staples in most low-income countries, pulses are at least twice richer in protein than the new varieties of wheat and rice.

As more and more of the traditional food crops give way to the new varieties of wheat and rice, a number of dangers of the fool-hardy practice of single-crop agriculture emerge.

In a report issued by the Rockefeller Foundation, Carroll P. Streeter writes, "All across southern Asia (not just India) there has been a rush toward one dominant family of wheats prized for their yielding ability....All of this wheat carries the same kind of rust resistance, which means that if a new race of rust to which it would be especially susceptible were suddenly to appear, much of the wheat crop of that whole vast stretch of the world could be devastated almost overnight."

Many of those involved in promoting the green revolution have stressed that they look on it as a means of buying an additional 15 or 20 years during which the brakes might be applied to population growth. Genetic engineering may also help us buy a few more years if geneticists can alter strains of maize and wheat so that these plants use atmospheric nitrogen rather than expensive and polluting nitrogen-containing fertilizers.

...by 1995 about two billion gallons of government-licensed radioactive stew will be merrily boiling away in more than 200 tanks.

Well before the year 2000, the world's demand for food will have doubled; to feed all those hungry people will require an increase in the use of fertilizers by 100 percent and pesticides by 600 percent. What happens to the environment? Says biologist Paul Ehrlich: "Those clowns who are talking of feeding a big population in the year 2000 from make-believe green revolutions...should learn some elementary biology, meteorology, agricultural economics and anthropology."

In the absence of an effective world population control policy, the more food that is produced will keep more people alive to produce more people who will require still more food. The "dismal theorem" of the 19th century economist Thomas R. Malthus put it more candidly: Misery and starvation are the true checks on population growth.

A solution to the problem of feeding the world population adequately and equitably — neither of which is now being done — becomes increasingly remote as each new child is born. If technology eventually is to contribute to a solution, it must be preceded by a revolution in education and population control. To achieve the latter, who is to decide which nations are to be told to reduce or halt population growth? Numerous dilemmas are inherent in such a question and arise out of conflicts between rational approaches to the problem, religious-based values, and values politically and economically oriented.

Cont'd. on Page 4



Dana R. Darling

DARLING TO HEAD NEW DEPARTMENT

A man familiar with the local business/industry/education scene has been named program coordinator for the University of Maine's newly-created Department of Continuing Education for Business and Industry.

Dana R. Darling of Cape Elizabeth will work with all sectors of the business and industrial community in southern Maine to develop non-credit programs to meet specifically targeted needs. His appointment was effective July 1.

In making the appointment, William G. Mortensen, director of Public Service at USM, said, "I'm very excited about the new department and about having Dana Darling on board."

Darling sees his office as a clearinghouse, "an educational resource that business and industry can call on for anything. It is a service unit to assist employers in providing state-of-the-art knowledge for their people."

Now in the developmental stages of his new position, Darling plans to rely on personal contact with private sector leaders, rather than on surveys to determine the needs of the local business community and how to meet them.

"Involvement by the private sector in the development and operation of the department is key to our future success," he says.

Darling holds a master's degree in Industrial Education from USM, and was formerly the training and education supervisor at Pratt and Whitney Aircraft, North Berwick. He has served on the State Board of Education, and was Coordinator for Business and Industry at the Maine Department of Educational and Cultural Services from 1973 - 1981.

Cold Showers for Gorham

The Gorham Central Heat Plant will be shut down later this month for major repairs. During the period of the shutdown, no hot water will be available in any buildings on the Gorham campus. Exceptions include: the houses at 19, 24 and 51 College Ave.; the McClellan House and the President's home.

The shutdown will occur from 8:00 a.m., Saturday, Aug. 27, through 4:00 p.m., Wednesday, August 31.

If you have questions, contact Joseph P. Papa, director of Facilities Management, 780-4160.

SWEDISH IMPRESSIONS

A quartet of our industrial education and technology majors was treated recently to a smorgasbord of Swedish education, industry and politics as a result of the first exchange program between the University and Hogskolan in Sundsvall.

Celine Godine of Portland, Rob Roy of Scarborough, Robert Moody of Saco and Brian Pickett of Poland Spring experienced firsthand the cultural and political lives of their host families, and returned home with impressions and ideas they plan to implement in their own careers.

People-oriented work- place

Factories, energy plants and schools were on the itinerary, but the object of the exchange was to study the computerization of the pulp and paper industry.

"They are ahead of us as far as computers go," observes Robert Moody, "but very people-oriented in spite of the fact that Swedish industry is less labor intensive than ours. They consider people their greatest resource," he says.

Moody notes that Swedish industry seldom, if ever, resorts to management by crisis. "Management anticipates problems rather than waiting to react to problems once they occur."

Developmental Tasks

Special summer institutes for educators, tailor-made, in-service workshops for school systems and new in-service graduate courses are among signs that our Professional Development Center is alive and well in Gorham.

Director A. Nye Bemis reports that about 100 non-credit, in-service workshops were developed this past year for 24 different school systems in southern Maine.

The PDC also conducted or sponsored 155 CEU courses which attracted some 1800 participants. Thirty-seven of those organized by Vocational Education Staff Development Program served communities as far away as Caribou, Presque Isle and Skowhegan.

In-service graduate courses, approved by the COE Curriculum Committee attracted 257 educators while 28 undergraduate courses registered 294 participants.

The PDC offered a variety of institutes from 1 to 10 days in length in subject areas such as the arts, math and children's literature, as well as on current education topics including the middle school concept and educational excellence.

"The summer's seven institutes brought over 300 educators to USM," says Bemis, "and sent another 35 to study foreign educational systems."

Currents is published every other Monday by the Office of Public Information. Material should be submitted to 624 CRAS, Portland no later than Friday noon, ten days prior to publication date. Robert S. Caswell, editor, and Karen A. Kievitt, assistant editor.

Our students were impressed with the importance which Swedish society places on family life and the effect of this on the workplace.

Working couples schedule their hours so that one parent is home when the children return from school. This official government policy supports the significance of a parental presence at home at the end of the school day.

Official policy also provides 12 months release-time for new parents. When a working couple has a child, they receive a total of 12 months off from the job to care for the child. This time can be spread over the child's first five years.

Moody and Rob Roy cite the Swedish practice of continually updating equipment and plants, again anticipating problems before they arise and implementing preventive measures. "They make minor improvements along the way rather than waiting for major breakdowns," comments Roy.

Mechanized lumbering

The Swedish paper companies "have total control over the entire pulp and paper-making process," says Moody. They own the trees and do selective cutting, replacing each harvested tree with a seedling, they control water rights, own power-producing plants and sawmills.

Two-men harvesting teams go into the woods - without a saw. They have the assistance of a mechanical harvester similar to ones used in northern Maine. These machines cut one tree at a time, shearing it off at the bottom. The trees are then hydraulically lifted, limbs and all, into a stripper which removes the limbs and bark. Logs are then ready for transportation to the mill.

Swedish sawmills are highly automated, unlike American mills, say

the exchange students. The entire process is monitored on a screen in a room with a bank of computer panels, "much like an airline cockpit," says Roy. Thirty to 40 workers staff this control room.

The best cuts of wood are earmarked for the building industry and for export. Only poor quality lumber and the waste products go into paper-making.

Political awareness

Brian Pickett and Rob Roy remained for two weeks after the end of the exchange program to travel more in Sweden. They also took a hydrofoil across the Baltic Sea to Copenhagen, Denmark. Although they did not travel together, they had similar experiences.

Both men met students from other European countries and from as far away as Australia. The interest level in politics was especially high and this surprised the Americans who now sense political apathy at home.

The students are more politically involved and concerned about what we (U.S.) do. They think the next war will take place in Europe and don't think the United States sees this," says Roy.

Pickett recalls similar discussions at parties in Sweden where people particularly questioned President Reagan's nuclear weapons policies.

A new look at work

What effect will this brief time in Sweden have on the students' careers?

Robert Moody says it has changed his way of looking at people. He plans to place more emphasis on interpersonal relations, echoing the Swedish sentiment.

"I see myself adopting some of the philosophy about people and preventive maintenance. People are the greatest resource."

by Karen Kievitt

Similar Interests

A delegation from the University College, Sundsvall/Harnosand, Sweden recently found more similarities than differences between teacher training programs here and in their homeland.

Tomas Berland, Johan Frykland, Agnetta Lawsson and Ingalill Olsson, all primary education students, and Gunilla Viberg, director of vocational study and teacher of pedagogy, spent two weeks on the Gorham campus last month. They came to get an overview of American teacher preparation with an eye to the feasibility of future exchanges between the two colleges.

Agnetta Lawsson pointed out that people always ask about the differences between teacher preparation here and in Sweden. She asserts that "in some areas the preparation is the same."

Professor Viberg, however, said her country might follow Maine's lead in teacher recertification. She was most impressed by in-service programs that we offer for teacher recertification. Although there are in-service programs in her homeland, they are not required.

"Once teachers are certified, that is that," she adds.

While here they met with several members of the COE faculty for information on curriculum and content in subject areas. Although the students were receptive to the idea of studying here, semester exchanges for primary teachers might be difficult because the Sundsvall/Harnosand academic year is slightly different from ours. Nevertheless, the mechanism is in place for student exchanges in the industrial education area. The first such exchange will occur next spring.

Favorably impressed but cautious, Viberg put it this way: "We've had so much information in such a short time, we're satisfied, but it's difficult to sum it up. We'll do that on the way home."

There was, however, one area where our guests had already formed an opinion - American coffee. "It's just brown water," Viberg says as the others laugh in agreement. "We always added instant coffee to make it stronger," adds Bergland.

by Karen Kievitt

Managing the Surplus

Garage sales, a computerized office equipment inventory and a gift of \$50,000 in laboratory equipment are among the successful property management efforts reported by Samuel G. Andrews, executive director for Budget and Institutional Research.

Just completing its first full year of operation, the Office of Property Management has successfully completed a computerized inventory of office equipment. Next on the agenda is the identification and tagging of classroom and office furniture. "It is a time-consuming effort, but one that is badly needed," says Andrews.

The two garage sales held last year netted over \$8,000 for the University. Another one is scheduled for late October. Andrews feels the garage sales allow the University to make use of currently non-productive assets while enabling the selling departments to generate some funds.

Through contacts with state, federal and industrial surplus agencies, OPM has obtained a van for \$100 and Industrial Education received laboratory equipment from Bell Laboratories valued at \$50,000. "All we had to do was pick it up," says Andrews.

"Through the work of coordinator Phil Libby and the cooperation of members of the campus community,

Presidential Review

Chancellor Patrick E. McCarthy has announced that Dr. Garry D. Hays, president of the Higher Education Assistance Foundation and former chancellor of the Minnesota State University System, and Richard T. Ingram, executive vice president of the Association of Governing Boards of Universities and Colleges, will be visiting the University of Southern Maine and the University of Maine at Orono in late August and early September as part of the regular University of Maine Board of Trustees process on the review of college presidents.

They will be talking with various people on campus regarding the office of the USM President: its campus responsibilities, its relationship with other campuses and its interaction with the Chancellor's Office and the Board of Trustees.

• *Official Record* from page 1

Study, and Sherman Hasbrouck, environmental specialist with the University of Maine at Orono Land and Water Resources Center, are project directors. They are working with an advisory committee consisting of representatives from USM, UMO, the University of Maine at Farmington and state agencies.

"It's a project that Sherman (Hasbrouck of UMO) and I have been contemplating for a number of years," said Veazie. "Existing information about the state is scattered in a number of different locations, so it makes sense to pull all this together and communicate it more effectively."

The last comprehensive Maine atlas, said Veazie, was "Stewart's Atlas of the State of Maine," published in 1901.

the office enjoyed a successful first year and initiated a number of new goals," says Andrews.

Currently OPM has many items for sale to departments including refrigerators, mirrors, typewriters and a learning system. For a complete list of items for sale or if your department has surplus items, call Phil Libby, coordinator of Property Management, 780-5425.

Campus Note

Marshall Scholarships applications are now available in the International Studies Office. If you know of students who would be interested in applying, the deadline for applications is Oct. 22, 1983. For more information, contact Carol LaMontagne, 780-5315.

What We're Doing

CAROL L. DAVIS, assistant professor, Human Resource Development, was a participant in the Maine Biological and Medical Science Symposium at Colby College. She was a co-presenter of "Family Resources: Coping with Stress Associated with Amniocentesis."

MARY LOU DYER, assistant dean, School of Law, has been elected board president of the Maine Civil Liberties Union.

ROY A. GALLANT, planetarium director and adjunct professor of English, has signed a book contract with Macmillan for a book dealing with questions asked by young people and by adults who come to see planetarium shows. Gallant also has been offered contracts for three books (for Franklin Watts), one dealing with fossils and their formation, another with the occurrence of ice ages and another with "lost civilizations."

ROBERT J. GOETTEL, director, Center for Research and Advanced Study, presented testimony in Boston to the Intergovernmental Advisory Council on Education to the U.S. Secretary of Education. The subject of his presentation was "The Federal Role in Education." He also served as a panelist at the American Educational Research Association Annual Meeting on the topic "Perspectives on Program Evaluation from the Governor's Office and the State Education Agency."

BRIAN C. HODGKIN, director, Graduate Engineering Program, was a member of the steering committee for the Ninth Annual Maine Biological and Medical Science Symposium at Colby College. He also was one of the participants in the presentation "Dipole Moment of In Vivo and Isolated Perfused Rabbit Hearts."

JAY C. LACKE, director, New Enterprise Institute, recently appeared on "Community Eight," a public affairs program on WMTW-TV, to discuss the institute and the small business climate in Maine and the nation.

• *Science* from page 2

The recent and shameful occurrences at the United States Environmental Protection Agency have raised several questions about the honesty and wisdom of those charged with protecting the public from various forms of industrial pollution.

As we continue to develop technologically and industrially, the owners and managers of our paper mills, factories, smelting and power plants, to name a few, knowingly or inadvertently release toxic chemical substances into the biosphere.

The nuclear industrialist is generating long-lived radioactive products that must be destroyed or contained in isolation until their period of toxicity ends. To date we have not demonstrated an ability either to destroy or safely contain these deadly wastes. The problem here is not one of

technology; rather it is a moral problem technologically induced.

Some 80 tons of plutonium-enriched uranium fuel in a Maine Yankee type reactor each year produce more radioactivity than 1,000 Hiroshima type bombs. Plutonium is perhaps the strongest carcinogen of all.

Upward of about 100 million or more gallons of lethal radioactive waste are now held in more than 200 tanks by the federal government at its Hanford, Washington facilities, in South Carolina, Idaho and Illinois.

The U.S. Public Health Service estimated that by 1995 about two billion gallons of government-licensed radioactive stew will be merrily boiling away in more than 200 tanks. While some of the radioactive materials will require containment in isolation for centuries, plutonium wastes will require nearly half a million years.

The inability of the scientists and technologists to agree on the issues involving safe storage of radioactive wastes has engendered public confusion and debate: For example, does the current state of knowledge in the physical sciences allow us to reliably predict geologic activity over the next half million years? Do geologists accurately understand the long-term heat-resisting properties of salt, shale, the deep ocean floor, or ice of the Antarctic, all of which places have been considered as storage tombs? We do not have reliable answers to any of these questions.

By the year 2000 our grandchildren will be faced with looking after six billion curies of strontium-90, one curie of which is lethal to a human being. Tens of billions of curies of other isotopes, stored in the unstable nuclei of atoms will linger for hundreds and hundreds of thousands of years. What would we think of an ancient civilization, now extinct, that left us such a legacy, a civilization lacking a technology capable of protecting future generations from the deadly wastes it irresponsibly generated, and heedless of its own children yet to be born? Would history books look kindly on such people?

Public alarm over the problems posed by disposing of the radioactive wastes generated by the nuclear industry may ultimately bring an end to nuclear power development in this country.

Fall of an Empire" published in the Winter 83 issue of the "Caribbean Review". He was recently elected to the board of the World Affairs Council of Maine.

MARGO WOOD, assistant professor of education, is the recent recipient of a \$1000 Annie Ryder Fellowship, awarded by the American Association of University Women, to continue her doctoral studies at Boston University in 1983-84.

ROBERT L. WOODBURY, president, USM, was a commencement speaker at Castleton State College, Castleton, VT., and at Oxford Hills High School, South Paris, Me. He also was the keynote speaker at an honors day ceremony at North Yarmouth Academy.

ROBERT B. LOUDEN, assistant professor of philosophy, presented a paper, "The Importance of Being Intuitive" at the American Philosophical Association Western Division meeting in Chicago. He also presented a new version of his USM convocation talk, "'Women's Values'?" to the 40th annual meeting of the Maine Philosophical Institute.

MARILYN A. MacDOWELL, serials assistant, Gorham Library, was named Big Sister of the Year at the annual meeting of Big Brothers/Big Sisters of Greater Portland.

ROBERT S. MATSON, Assistant professor of chemistry, was one of the participants in the Maine Biological and Medical Science Symposium at Colby College. His topic was entitled "Phenobarbital Induction of a Bacterial Cytochrome P-450 Fatty Acid Monooxygenase."

JO-ANNA MOORE, director, USM Arts Education Institute, spoke on "Integrating the Fine Arts into Elementary Education," at a community arts program for Auburn teachers and staff, K-3.

HAIG H. NAJARIAN, professor of biology, is the author of "Patterns in Medical Parasitology," (Krieger Publishing) the second edition of his first book "Textbook of Medical Parasitology."

LESLIE H. NICOLL, instructor, School of Nursing, had several of her recipes featured in an article, "Nutritious Meals Can Be Easy and Quick," in the Portland Press Herald.

WILLIAM A. PHILLIPS, assistant professor of economics, recently spoke on "The Role of Profits in the American Enterprise System" at the Eighth Annual Hugh O'Brian Maine Leadership Seminar at Bowdoin College.

ALFRED L. PADULA, associate professor of history, had an essay "Pan Am in the Caribbean: The Rise and