The Participant is planned around themes of current and broad interest, and features articles by the Pitzer College faculty, staff, and alumni, with occasional contributions by outside writers.

The magazine also brings to its readers accounts of the faculty's research, writing and other professional activities in their respective fields.

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John R. Rodman's interest in "The Politics of Ecology", also the title of a course which he presently offers, led to the creation of a freshman seminar "The Ecological Imagination" to be offered in the fall for the first time. Professor Rodman's article on "The Liberation of Nature" appears in the spring issue of Inquiry. He is presenting papers at the annual meeting of the Western Political Science Association and the meeting of the American Political Science Association, as well as working on a book, Four Stages of Ecological Consciousness. His article in this issue of the Participant is based on his remarks at the plenary session of a conference on "Oil and Gas from Alaska: Choices for California."

David Cressy, assistant professor of history, was instrumental in arranging the national Conference on British Studies held at The Claremont Colleges last month. A scholar of the Elizabethan and Tudor period, he was invited to participate in a panel discussion on Puritanism at the Pacific American Historical Association meeting at Flagstaff next August. His continuing research in the field of education during Elizabethan England forms the basis for his article in this issue of the Participant.

Clyde H. Eriksen, professor of biology, is directing the development of the Robert J. Bernard Biological Field Station of The Claremont Colleges. His on-going research has dealt with such questions as "Why do certain species live where they do and not in other places?" His interests have taken him into problems of land use and management. As an administrative consultant to the U.S. Forest Service, he is involved in resource research on the two million acre Beaverhead National Forest in Montana. His article which appears in this issue is the result of some work in that area.

Jeanie R. Wakeland is a 1972 graduate of Pitzer, and has a master's degree in journalism from the University of Oregon. After a brief stint as a reporter with the San Gabriel Valley Tribune, she has worked as a freelance writer for magazines such as Los Angeles, San Francisco, Modern Bride, Print Education, Printing Journal and for The New York Times and East/West Network, publishers of inflight magazines. At present, she lives in Marin County with her husband Craig Von Bargen (Harvey Mudd '74) who devises rationing plans for the Marin Municipal Water District.
An Interview with Nora Ephron

When Nora Ephron began writing her column on women for *Esquire* Magazine in 1968, she wasn't sure anyone was listening. But a great many people read, laughed and enjoyed her witty and revealing columns which wrestled with the ups and downs, the truths and fictions of the women's movement. When most of those columns were put into book form, they became a bestseller entitled *Crazy Salad*, now in its seventh printing.

Nora was born in New York City to screenwriters Henry and Phoebe Ephron, whose movies include *Carousel, Desk Set,* and *Captain Newman, M.D.* Moving to Beverly Hills when she was four years old, Nora grew up in California but went to the East for education at Wellsley. Her first job was with *Newsweek,* followed by five years at the *New York Post* as a reporter. She began freelance writing in 1968 and has been published in such magazines as *New York, Ms., New Yorker,* and *Rolling Stone* in addition to her position as senior editor and columnist with *Esquire.* Nora talked with Pitzer alumni and freelance writer Jeanie Wakeland while on the Pitzer campus as keynote speaker at the conference on "Women, Work, and Power" held February 21st.

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The Editor
Jeanie: How did you get started in the male-dominated field of journalism?

Nora: I had two terrific advantages. First of all, my mother worked. If your mother works, you have a tremendous advantage in terms of your own career motivation. I grew up knowing the answer to the question ‘What do you want to be when you grow up?’ was not a mommy. The second advantage was that when I was thirteen years old I knew I wanted to be a journalist. That is a big help when you go look for work when you get out of college and you know pretty much what you want to do.

Jeanie: Were your first jobs typically female jobs?

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The man who hired me asked, ‘Why do you want to work at Newsweek Magazine?’ I think he expected me to say that it was the most meaningful publication in America or some piece of gobbledygook like that. I said I’d like to become a writer. He said we don’t promote women to writing jobs here.

Jeanie: What did you say to that?

Nora: I didn’t say much of anything. I was thinking, I’ll show him. But I don’t know that I would have shown him, by the way. All I knew was I wanted a job in a place that had something to do with journalism, and they offered me a job, so I took it. And I was not wrong in that it’s a lot better to work in the field you want to work in even if it’s not in the job you want than to go to work in an insurance company and think somehow you’re going to break into journalism. You can’t do it. First I was a mailgirl and then a clipper. Then I became a researcher, and that was not a bad job. You were supposed to check what the writer wrote, but if you had some energy you could go and report things, and I did. While I was there, some friends of mine who put out a magazine of political satire also produced parodies of the New York newspapers during the famous 114-day newspaper strike in New York. I wrote a parody of a gossip column. When this little parody came out, the editors of the New York Post wanted to sue, and the publisher, Dorothy Schiff said, ‘Don’t be idiots! If they can parody the Post, they can write for it.’ So I was given a tryout at the Post in 1963. It was a wonderful job. I was Lois Lane and I was covering fires and murders and courtroom scenes. I loved it, and worked there for five years until I began freelancing.

Jeanie: You grew up on the West Coast and yet you went to the East Coast to work. Why?

Nora: It wasn’t that I wanted to work in journalism on the East, I wanted to get out of the West Coast. My family moved here when I was four. Everything went to hell at that moment as far as I was concerned. I went into the earliest awkward age known to man. And I said to myself, ‘I’ve got to get back!’ I knew if I could just go to college somewhere else, I would be fine. Now the other reason was that mother would not let any of us — I have three sisters — go to a college with sororities. So that narrowed down the number of colleges you could go to, really. In California, there were about three schools — Pomona was one of them — but it was much too close.

Jeanie: Were there more opportunities on the East Coast?
Nora: There were and there are. The reason is because there are very few soft industries out here. You don't have any publishing industries out here. If you want to work in journalism in New York, there are dozens of places you can work. But I don't think California is a great place for women. I just hated it. Most of the girls I went to high school with are now women who don't work. Women who don't work in New York are very self-conscious about it. It seems out here you meet lots and lots of women who don't work. It's the woman who works who is always defending herself, and that's what my mother did for years.

Jeanie: You've written a lot about the influence of your parents on you and the feeling that you would work rather than stay at home. Do you think the motivation to write came from them?

Nora: Well, it had something to do with it.

Jeanie: Did they influence the way you write?

Nora: I don't think they influenced that. I think the way they helped all of us is something else. They worked very hard at things like the way we talked at the dinner table. My parents would say, 'What happened today?' The idea was that you would tell what happened — funny. If something disasterous happened, you weren't supposed to sit down at the table and cry. You were supposed to turn it into a story, so that none of us are bad at telling a story. I think the other part they gave us was the ability to see that inside every true tragedy was a funny anecdote if you could just get far enough away from it.

Jeanie: Where did your feminism come from? You've mentioned your childhood and the influence of your mother, but were there specific experiences that fired you up?

Nora: Prior to the women's movement, I think I was always a very instinctive feminist in that I was raised with some fairly standard beliefs if you are going to be a feminist. You have as much right as a man to be anything you want, that life is not about having children. I grew up with a lot of that, and I grew up with an assertive personality. Did I have that click of recognition that

Jane O'Reilly has written about? Not really. There were lots of moments when my head went click and said, 'You can't do that to me, you sexist bastard!' But no, I don't think the sun came up one morning and I said, 'Oh my God, I'm a feminist.'

Jeanie: Why did you start to write a regular column in Esquire on the women's movement?

Nora: I started writing about women in 1972 and it was an interesting decision for me because I had never been a joiner. I was the kind of journalist who always thought of herself as, you know, temperamentally suited to

You have as much right as a man to be anything you want.
Jeanie: I was very comfortable in it. And suddenly the women's movement came along. I realized that I was going to have to deal with it in a real way; that I couldn't distance myself as I always had and that I couldn't be cynical.

Jeanie: In writing about the feminist movement, did you ever want to 'fudge' the truth to avoid damaging the movement?

Nora: What I usually did was write what I wanted to and then people got angry at me and then I claimed that I was doing tremendous harm to the women's movement. There were a couple of pieces I never did because I knew they would be difficult to do without compromising my standards as a journalist.

Jeanie: For example?

Nora: One was on Bella Abzug. I think she's super fabulous. She's also a real tyrant to her staff. I just didn't want to write it. I mean, I knew the minute I walked in and brought out the notebook, I would go from being another in her army of women worshippers to a very cold journalist. And I didn't want to do it. But the minute I ever did something, I didn't pull my punches.

Jeanie: Do you have ambivalent feelings about writing for a men's magazine like Esquire?

Nora: As men's magazines go, Esquire is not much of a men's magazine. We don't print a lot of the type of stuff like in Playboy or Hustler. I don't think that Esquire is a really disgusting, piggy, awful magazine. I don't. I'm proud of what we print. Secondly, I don't think I could have written those pieces for any other magazine. I think that if I had written those pieces for a women's magazine, I would have pulled my punches constantly. I felt very free to report on the women's movement in Esquire and to write what I believe was really going on. If you're going to write for the Ladies' Home Journal, the Ladies' Home Journal bird comes and sits on your shoulder and says, 'Put in some cutesy words and don't be too intellectual. Just remember that they've never heard of half the people you write about and you have to explain who all of them are.' I would have felt, 'Well, you really don't want to tell them that because there are all those women out there who really need to get the message of the movement, and you don't want to turn them off by giving them some excuse to lose interest in it totally.' If I were writing for Ms., I would have felt I was writing for the converted. If you are writing for the New York Times, the Times bird sits on your shoulder and shouts, 'More boring! Make it more boring!' But I found at Esquire, there wasn't any bird there — just me. It was what I wanted to write. I sat at the typewriter month after month forcing myself to come to some opinion or view on a thing I could have gone through years just being somewhat cynical about. I didn't know if anyone was paying attention, I really didn't. Then I sold it as this book because I don't feel that now, or towards the end of the book because I don't feel that way now.

Jeanie: Last year you married former Washington Post reporter Carl Bernstein. When you agreed to marry him, did you worry that you would become Mrs. Carl Bernstein and lose your identity as Nora Ephron?

Nora: I did not feel that way at all. I wasn't worried that others might perceive me that way. The only doubts I might have had was whether he would see me that way, but of course he didn't and doesn't. What is interesting to me, though, is that everyone asks me about him, but no one ever inquires of him about being married to me.

Jeanie: Do you plan to write a book together?

Nora: We might work together someday, but it would be on nothing serious, just something fun.

Jeanie: You live and work mostly in New York City, and your husband lives and works mostly in Washington, D.C. Is there has been a great deal of disillusionment among a lot of women who thought that all you had to do was leave the man and everything was going to work out.
Women let men answer their questions by staying at home.

scheduling your time together a problem?

Nora: It's not much of a problem. We see each other about five days a week. We use the Eastern Air Lines shuttle a lot. I run the New York apartment and he runs the Washington house. I'm a guest in his house and he's the guest in mine. It's nice to have some nights alone — when I can have a dinner of frozen lima beans and nothing else, when I can watch TV — he hates it — or when I can wash my hair.

Jeanie: You've written and spoken about the need to use the women's movement as a way of making changes rather than letting it explain away the problems of women. How can women, in your opinion, make these changes?

Nora: I don't want to minimize how hard this is because I really don't know how you do this. I think that because so much was rhetorical, there has been a great deal of disillusionment among a lot of women who thought that all you had to do was leave the man and everything was going to work out. One of the dirty little secrets of the women's movement is that some women who were divorced in the early 1970's were not prepared for independence. It's very hard to change, to learn to take risks, and it's hard to gamble. It's very hard to take yourself seriously. But everybody doesn't have to love you. If you're going to take serious positions, you're going to alienate someone. It's hard to put yourself first. But we have to stop letting others answer our questions. Women let men answer their questions by staying at home. I don't mean at all to be talking to you as if I had this under control because, believe me, I backslide constantly. As exciting as it is to be a woman, it's hard. I can only throw out a few questions and fumble for the answers.

Jeanie: Thank you, Nora.

By Jeanie R. Wakeland

Pitzer Courses

English America. An investigation of early American history from a transatlantic rather than a bicentennial perspective. The course will examine the Elizabethan adventurers and promoters, the seventeenth century settlement of Virginia and New England, the evolution of colonial society, and the tensions which developed between the mother country and the New World. D. Cressy.

Study of Woman 26 Women in American Society: An Introduction. An interdisciplinary introduction to the Study of Woman. The course examines women's roles and the social institutions and cultural assumptions which contribute to women's status. Materials from the fields of biology, history, literature, and the social sciences are considered. A. Stromberg.

The Politics of Ecology. (See Environmental Studies 170) A critical examination of the several streams of thought and sentiment that have flowed into the contemporary ecology movement (resource conservation, the humane movement, wilderness and wildlife preservation, etc.), their impact upon public policy, and their contribution to the emergence of a new ecological sensibility. J. Rodman.

Ecology A study of the structure and function of various ecosystems including the interrelationships of plants and animals with their environment and each other, as individuals, populations, and communities. Land and resource use will be considered as it pertains to ecological considerations and environmental problems. Friday labs and some weekend field trips are required. Prerequisites: Introductory Biology, one semester of college chemistry, and permission of instructor. Laboratory, C. Eriksen.
Educational Opportunity in Tudor and Stuart England

A guarded optimism seems to govern most appraisals of Tudor and Stuart education. Some writers have been so impressed by the achievements of the period, especially of the years 1560 to 1640, that they see not only an educational ferment involving an increase in the number of schools but also an expansion of opportunities which brought schooling within reach of the hitherto deprived lower members of society. The expansion of printing as well as the expansion of education leads Altick to suggest, "that in the Tudor and Stuart era the ability to read was more democratically distributed among the English people than it would again be until at least the end of the eighteenth century." Vincent asserts that "the first sixty years of the seventeenth century was a period when the grammar schools of England and Wales flourished, and when education of the sort preparatory to the university was available to all who wished to avail themselves of it." Even more enthusiastic in this vein is Jordan, who claims that by 1660 "a widespread and well-endowed system of education had been created within the reach of any poor and able boy who thirsted for knowledge and who aspired to escape the grip of poverty."

Other writers are more cautious. It is widely agreed that there was a quickening of interest in education and an unprecedented expansion of educational facilities in sixteenth and seventeenth century England. The age of Elizabeth and the early Stuarts in particular, characterized by Stone as one of "educational revolution," saw more newly endowed schools, more freelance teachers, and more students proceeding to higher education than in the centuries before or after. But who took part in this expansion, who benefitted from it, and for whom it was intended are still vexed and open questions. While the scale of the educational revolution is beginning to be known its social dimensions remain unclear.

Simon points to the middle classes, established tradesmen, professional men and yeomen farmers, as the major beneficiaries of educational expansion. "While gentlemen were particularly well placed to take advantage of opportunities, townsmen and yeomen in the countryside, indeed all above the swelling ranks of the poor, could profit." Yeomen, of course, were the prospering independent agriculturalists who contemporaries ranked "next unto gentlemen." Education might loosen or lubricate the social order but opportunity patterns were not radically transformed. Indeed, "it was a primary object of Elizabethan politics to restrict men to the callings of their fathers, to consolidate the social order by maintaining due differences between estates; accordingly there were moves to reserve certain forms of education to gentlemen at one end of the scale while at the other the children of the poor were trained to habits of useful work."

Stone would agree that educational changes did not upset the social hierarchy. "The argument about what class was profiting from the growth in higher education is," he writes, "a largely meaningless one. So great was the boom...that all classes above a certain level took their part...Everyone was included except the very poor (who probably embraced the majority of the population)."

Simon and Stone appear to agree that educational opportunity was socially stratified. If Simon stresses the middle class participation while Stone emphasizes the influx of the gentry, they both acknowledge the educational disadvantages of the poor (or the very poor). Nevertheless, the impression persists that access to education was made easier in the Tudor and Stuart period, and that deliberate efforts were made to equalize educational opportunity. Over-optimistic characterizations like those of Vincent and Jordan clearly misread the situation, but even the careful discussions of
The gentry made progress at the expense of their inferiors, the middling classes gained educational advantage at the expense of the poor...

Simon and Stone underrate the constraints on access to schooling. The evidence presented in this paper will point to a somewhat more pessimistic conclusion.

At all levels of education, from the acquisition of basic literacy, through exposure to formal secondary schooling, to attendance at a university,privileged children made progress at the expense of their less privileged contemporaries. Access to education and opportunities within the educational system were severely constrained by social, economic and ideological limitations. Whether we examine the experience of educational institutions or the ideas of educational thinkers we find humanist ideals compromised by the demands of the social order. A pyramid of privilege and opportunity prevailed whereby the gentry made progress at the expense of their inferiors, the middling classes gained educational advantages at the expense of the poor, while any schooling available to "the poor" went to the respectable, employed and even skilled artisans or peasants and not to the indigent, unskilled and barely employed masses of the "very poor." Despite their rhetoric about "favouring the poor", and promoting "aptness" or "capacity" whatever its social origins, contemporary commentators acknowledged these limitations and generally accepted them.

The social order was perennially in danger when educational opportunities were expanded. When the cathedral school at Canterbury was reorganized as a grammar school in 1540, the administrators were divided in their admissions policy. Archbishop Cranmer was a participant in the argument, and his biographer has included a report of the debate. "There were of the commissioners more than one or two who would have none admitted but sons or younger brethren of gentlemen. As for other husbandmen's children, they were more meet, they said, for the plough, and to be artificers than to occupy the place of the learned sort. So that they wished none else to be put to school but only gentlemen's children." Cranmer countered, that, "poor men's children are many times endued with more singular gifts of nature which are also the gifts of God, as with eloquence, memory, apt pronunciation, sobriety and such like, and also commonly more apt to apply their study than is the gentleman's son delicately educated." Ignoring the question of talent and focussing on society's needs the conservatives argued, "that it was meet for the
ploughman's son to go to plough and the artificer's son to apply the trade of his parent's vocation and the gentlemen's children are meet to have the knowledge of government and rule in the commonwealth . . . we have . . . as much need of ploughmen as any other state; and all sorts of men may not go to school." Cranmer could not refute this, but he still insisted that God could bestow his gifts where he chose. The conclusion was a compromise. "If the gentleman's son be apt to learning, let him be admitted; if not apt, let the poor man's child that is apt enter his room." Anyone who proposed opening the schools to mere talent, regardless of social and economic background, faced a host of objections both practical and ideological.

Whatever the theorist might wish, the practical educator was faced with the reality of a strictly hierarchical social structure and a severely unequal distribution of wealth. Money was as important as wit in determining access to school. Without expenditure from either "private purses" or "public provision" there could be no organised education. "It seemeth to me very plain," argues Mulcaster, "that all children be not to be set to school, but only such as for natural wit and sufficient maintenance, either of their natural parents or civil patrons, shall be honestly and well supported in their study." The argument evolves further until financial circumstances actually outweigh mere wit in determining selection. Parents are told, "you would have your child learned but your purse will not stretch, your remedy is patience, devise some other way wherein your ability will serve. You are not able to spare him from your elbow for your need . . . let booking alone . . . You have no school near you and you cannot pay for teaching further off, let your own trade content you, keep your child at home . . . Which way soever need drives you perforce, that way must you trot."

Mulcaster, the educational philosopher was overruled by Mulcaster, the sensible headmaster. No matter what the theory, necessity called the tune. Subsequent writers repeated or elaborated Mulcaster's arguments but hardly improved on them.

One of the celebrated inventions of the Tudor period was the Free Grammar School. Nobody knows exactly how many existed or were founded in the sixteenth and seventeenth centuries, but it is probably true that by the Stuart period most market towns and many large villages possessed a grammar school which may or may not have been endowed, and which may or may not have been labelled "free." The meaning of "free" in this context demands close attention. It does not imply a political or jurisdictional freedom in the sense of exemption from government or ecclesiastical control. Nor, despite some indications to the contrary, does it mean that education in a Free Grammar School cost nothing. What it does mean is that tuition payments, for some pupils, were waived.

"The little learning got at the grammar schools renders them commonly proud, stiff-necked, self-conceited, unapt to be governed, apt to embrace every new doctrine, heresy, schism, sect and faction."

Other payments, apart from tuition, could amount to a hefty sum, placing the grammar school experience beyond the reach of poor families. Many places demanded an admission fee of 12d. or more. Additional sums were required to enter the pupil's name in the register, purchase candles and firing, pay for sweeping the school and ringing the bell, cover the expenses of drinkings and festivities, as well as to buy books, dictionaries and writing accessories. In some schools all or part of these costs were subsidized by the foundation, but in others, the school master was constantly devising ways to augment his salary. Lessons in subjects not included at the foundation, such as arithmetic, calligraphy or foreign languages were charged extra. One enterprising teacher virtually transformed the Free Grammar School of Saffron Walden into a commercial academy, advertising his offerings in the London Gazette of 1674. If we take into consideration the cost of clothes, food and lodging, and the cost of excusing a son from the labor force when he might otherwise be contributing to the household budget, the expenses of secondary education could amount to something prohibitive.

In a Free School the master was
supposed to teach certain children in return for his salary, administered by trustees, and not in return for tuition fees paid by parents. The children to be so favored were usually specified by the founder of the school or the donor of its major endowment. Sometimes, as at St. Alban's school, "poor men's" children were to be received before others. Residents of the town were often eligible for free places, while relatives of the donor might be specified as the beneficiaries of the bequest. The exact conditions, and costs, varied from school to school.

The mixing of pupils with different financial arrangements and from different economic backgrounds created problems. The risk that a schoolmaster might neglect his free scholars in favour of fee-paying outsiders was always present. Some of the more astute educational philanthropists were alert to the danger. Peter Blundell, the wealthy founder of the Free Grammar School at Tiverton in 1599, expressed his "hope and desire and will" that the schoolmasters "hold themselves satisfied and content with that recompense for their travail (salaries of £ 50 and 20 marks) without seeking, or exacting any more either of parent or children, which procureth favour to givers and the contrary to such as do not or cannot give, for my meaning is, it shall be for ever a Free School, and not a school of exaction."

A similar provision was made, but probably not enforced, at Caistor, Lincolnshire, in the 1630s. "The fact that instructions to this effect are frequently found among school ordinances points to the existence of abuses. We can only guess how many wealthy parents purchased a superior education for their sons at the expense of poorer boys in the same school."

A dispute at St. Alban's school in 1635 prompted the governors to end this discrimination. "Many parents," they noted, "upon hope to benefit their children more than the general, have secretly exceeded the rates aforesaid, being the ancient rates settled at the foundation of the free school . . . for that cause the said schoolmasters and ushers of the said school have applied themselves in their pains and affections much more to the children of such parents than the general." A similar dispute at Hereford Free School in 1665 led to the regularization rather than the correction of discriminatory payments. "In regard of the smallness of the annual salary and stipends belong to the school . . . the schoolmaster may demand and require what he thinks fit, not exceeding 5s. for entrance and 20s. per annum, to be quarterly paid for the sons of all free citizens of the said city, saving only such as are poor and unable to do so, who are to pay only 5s. for entrance and to left to their own will for the rest . . . As for foreigners, the schoolmaster is left to his own discretion for compounding with them for his salary." And this was at a "free" school in a moderately poor part of the country.

Grammar schools are "too high for the meancer boys, born to the spade and the plough."

The few surviving school admission registers and roll books support the impression that educational opportunity was limited, more limited than most historians have realized and perhaps more limited than some contemporary might have wished. Evidence of this sort is sparse, and much more information is needed. The little that has been gathered may throw some light on the social incidence of formal schooling.

The ruling elite dominated the university as they dominated the grammar schools. Thirty-three percent of the students admitted to the Cambridge colleges in the seventeenth century were sons of the gentry. Since this class comprised no more than 2% of the population their share of education was heavily disproportionate. The gentry valued the university for a variety of reasons. It was a place to make contacts and cement alliances as well as to acquire a veneer of culture and learning which would stand in good stead in county society and in local and central government. A bachelor's degree was not particularly useful to a member of the aristocracy, unless he was a second son and had to shift for himself and make a living in the clergy. Only 30% of the gentlemen's sons entering Caius College stayed to graduate.

Sons of the clergy and other professionals formed the next largest bloc, accounting for 22% of the undergraduate entrants. More than two thirds of these entrants went on to graduate and many of them became clergymen themselves. Their presence as a steady fifth or quarter of the student body was a regular feature at each of the colleges until the final decades of the seventeenth century when their numbers began to rise. Clerical and professional families accounted for nearly 30% of the Cambridge entrants in the 1690s and a still higher proportion in the early eighteenth century. The clergy, professionals, gentry and their families together comprised probably no more than 5% of the English population, yet they filled.
more than 50% of the places at the university.

Sons of tradesmen and merchants provided just 16% of the Cambridge admissions. The exact proportion varied from college to college, but the weighted mean held fairly constant through the period. The representation of this group at Pembroke college varied from 26% of all entrants in the 1650s to 3% in the 1690s, while at Caius the proportions were 13% and 25% respectively in those same decades. As might be expected, most of the students in this category came from prosperous urban and commercial backgrounds, very few being sons of artisans or rural craftsmen. A large proportion were younger sons, suggesting that the university was less well esteemed by the bourgeoisie, a place to obtain career qualifications while the eldest son was groomed for the family business. The seriousness of bourgeois students, or the urgency with which they sought status through qualifications, is attested by the fact that 79% of the entrants from this class at Caius went on to take their degrees.

Admission to a college at university could transform the life of a student with peasant or lower class origins. Sons of the prosperous yeomanry who had been at university might pass themselves as gentlemen, while others could make headway in the church or a career in education on the strength of their degree. Contemporary commentators were convinced that a university degree conferred gentility, while ecclesiastical preferences went increasingly to clergy who were products of Oxford and Cambridge. Despite their handicaps, both social and economic, peasant youngsters who gained admission could most be relied on to complete their courses of studies at Cambridge. Eighty-two percent of the peasant entrants at Caius received their bachelor's degrees, compared to 50% in the university at large. For them, the degree was a meal-ticket, or a path to security, not merely a matter of delight and ornament.

Despite this record of solid performance, the peasantry, who made perhaps 60 or 70% of the English population, comprised only 15% of the Cambridge student population. Most of these were sons of yeomen rather than husbandmen or poorer countrymen. Hardly any could claim to be offspring of the "very poor." This small representation was reduced even further in the late seventeenth century, until in the 1690s only 4% of the entrants to Caius College were from peasant background. Each of the colleges saw a shrinkage of peasant entrants at this time. The university evidence supports the view that the social incidence of education was always limited and was contracting rather than expanding at the end of the Stuart period.

One further body of evidence confirms this pattern of educational discrimination, that is the indirect evidence of literacy. One of the clearest features to emerge from the investigation of literacy in Tudor and Stuart England is its social stratification. The ability or inability to sign one's name, which has become the standard measure of illiteracy, was more closely correlated with social and occupational status than with anything else. Although actual levels varied from decade to decade, the social structure of illiteracy remained quite stable over the entire period. A summary of some findings in East Anglia from 1580 to 1700 will indicate this.

The clergy and professional classes were, of course, fully literate. The gentry and aristocracy too were almost all literate, only 2% being unable to sign their names. These groups, a tiny minority in the population, made the fullest use of educational facilities for their sons. A considerable distance separated the literacy of this ruling elite from that of the rest of the population. Tradesmen and craftsmen had a composite illiteracy of 44%. Yeomen enjoyed a respectable 35% illiteracy, but husbandmen, the poorer and lower esteemed peasantry, were 79% illiterate. Laborers, who formed the back bone of the working population but had virtually no exposure to schooling, had an illiteracy rate of 85%. The only group in the population whose measured illiteracy was worse than the labourers was women, who were not expected to become learned or lettered anyway. Eighty-nine percent of the women in East Anglia could not write their names.

To link these figures to the provision of education is not easily accomplished. The social distribution of illiteracy may reflect educational opportunities, but it might have more to do with the literacy requirements of different trades or occupations. We do not know whether the acquisition of literacy was exclusively the product of formal elementary schooling, or at what stage in a person's life he learned, or failed to learn, to write the letters of his name. The skill of reading was conventionally taught before writing, so the figures quoted above probably underestimated the proportion of the population who could read. Nevertheless, literacy was incomplete without the ability to write, and not just to write one's name. Active literacy, the ability to communicate in writing, was re-
served to a minority of the Tudor and Stuart English.

The most spectacular improvements in literacy occurred in the reign of Elizabeth. By the end of the sixteenth century, however, there seems to have been a shrinkage of educational opportunities. Tradesmen and craftsmen who were of school age in the late-Elizabethan and Jacobean period experienced a setback in their progress towards literacy. The pace of advance among yeomen slowed down, and the cohort of the 1610s was the most illiterate since the 1560s. Husbandmen suffered a reversal which threw their measured illiteracy back to the level of the mid-sixteenth century. Husbandmen never recovered, never again joined in educational progress, and were no more literate at the end of the seventeenth century than they had been at the beginning. We may safely assume that the "very poor", the mass of the population below the husbandmen, were also excluded from literacy. The superior literacy of the gentry and clergy, of course, weathered these doldrums unscathed.

The literacy evidence by itself would not be sufficient to indicate declining educational opportunity at the beginning of the Stuart period. But it was this period which saw some of the grammar schools at variance with their original instruments, and which also saw some disenchantment with the Tudor optimism about education. Early Elizabethan statesmen hoped for stauncher protestants, better humanists and more skillful public servants as a result of investing in education. Late Elizabethan and early Stuart politicians expected only trouble. The Privy Council blamed corruption in religion on "lewd schoolmasters." Francis Bacon found inconvenience and danger in the expansion of schools. "It must needs fall out that many persons will be bred unfit for other vocations and unprofitable for that in which they are brought up, which fills the realm full of indigent, idle and wanton people which are but materia rerum novarum."

Conservative thinkers began to suggest that education bred social disruption and spawned political sedition, and should therefore be very tightly controlled. This meant control of access as much as control of content. The setbacks to literacy may reflect a changing climate of opinion.

The events of the civil war and interregnum further discredited education in some eyes and may have lead to a further restriction on educational expansion after the Restoration. Edward Chamberlayne, in his Angliae Notitia, blamed the "market Latin schools" for fermenting the revolution and subverting decent children. "The little learning got at the grammar schools renders them commonly proud, stiff-necked, self-conceited, unapt to be governed, apt to embrace every new doctrine, heresy, schism, sect and faction." It is not surprising that in this climate many of the grammar schools were becoming yet more socially selective. Traditional grammar schools which maintained the classical, pre-university curriculum were increasingly reserved to the gentle and professional elite. Others broadened their curriculum to appeal to the commercial interests, offering accounting and modern studies and charging what the market would bear. Ordinary pupils, sons of the peasantry and artisans who at least had a toehold in the schools in the earlier period, appear to have been increasingly shut out.

By the beginning of the eighteenth century educational opportunity was, perhaps, more rigidly stratified than it had been since the Reformation. The generous expansion which characterized the early part of the "educational revolution" gave way to retrenchment, a closing of doors (which had never been very wide open), and a hardening of class consciousness and snobbery. The gentry increasingly preferred private academies over ordinary public grammar schools, while the bourgeoisie, who had acquired literacy and some learning to go with it, pulled up the educational ladder behind them. In an argument reminiscent of Cranmer's antagonists' at Canterbury 170 years earlier Kennett claimed that the grammar schools were "too high for the meaner boys, born to the spade and the plough." Despite the rhetoric of some philanthropists and reformers this opinion reflected reality throughout the Tudor and Stuart period. There were some lucky breaks, some extraordinary successes, but in general the chances of escaping drudgery through access to education were always exceedingly slim.

By David Cressy
Introduction

The southern grayling (Thymallus arcticus tricolor) a strikingly beautiful and rare trout, occurred as a glacial relic in two disjunct areas. The Michigan population declined around the turn of the century and is now extinct. Those in Montana have been reduced to such an extent that Kruse (1959) reported the Red Rock Lakes area harbored the only remaining native population. Even here it is in trouble as the lakes are a case study in grayling limitation and probable elimination due to development and land abuse.

In order to understand grayling requirements and, therefore, causes of their decline, most studies have focused on reproduction. It is generally conceded (e.g., Nelson 1954; Vincent 1962) that improper timber, grazing and irrigation management, which allowed muddying and warming of the water, increased flows, silting of spawning beds and habitat dewatering, factors detrimental to various phases of the reproductive process, have commonly led to grayling elimination. Barriers, overfishing, and inability to compete with introduced trout of wider tolerances are also often cited as responsible for the grayling’s decline.

The above is not an exhaustive list of all limiting factors, of course, and recent identification by the author of a grayling popula-
tion in the Pioneer Mountains (Big Hole River drainage) as native and undisturbed made it possible to ask the following questions so far uninvestigated and best answered on unmodified habitat: (a) what is peculiar about lake structure and biology that is required by grayling? (b) What are their physiological abilities and limitations and how behaviorally are such abilities fitted to their habitat?

Research was initiated when the Forest Service began planning and construction to open the Pioneers to logging, for it was recognized that, as before, development and closer access would undoubtedly bring habitat degradation to a unique population worth protecting. The ultimate purpose was to obtain further information pertinent to more effective management with a multiple use perspective of this non-inventoried, non-commodity and rare resource. This article summarizes the work accomplished.

Location and methods

The study population occurs in several upper tributaries of the Big Hole River, West Pioneer Mountains, Beaverhead National Forest, Montana. In the area, Odell, Schwinegar and Lower Bobcat Lakes contain only grayling, their inlet streams provide conditions necessary for successful spawning, and their outlet streams contain only native species. Location is backcountry, and fishing pressure are light. Grazing is minimal, irrigation is non-existent, logging operations have not commenced. The area lies as an island within, and therefore buffered by, a larger parcel of unroaded Forest Service land, a condition in which the area could remain if the agency would make that management decision.

Standard ecological, physiological and observational techniques were used. For example, oxygen was determined from KEMMERER bottle samples using the WINKLER method. Mid-lake and shoal temperatures were measured with electronic and recording thermometers, respectively. Grayling were caught by angling and were then acclimated for 3 days in holding pens constructed in the 12 ± 1°C shoal waters. Low oxygen tolerance was determined by placing an acclimated fish in each of 8 closed one-liter containers. The latter were set in a water bath of given temperature until sufficient oxygen was consumed by the fish to disrupt equilibrium. Oxygen concentrations were then measured. Critical Thermal Maxima (CTM) were obtained by placing fish, at their acclimation temperature in a water bath which was then warmed 1°C each 5 minutes. Temperatures at which equilibrium was disrupted (CTM) were recorded.

Results

ECOLOGICAL ASPECTS OF THE LAKES AND STREAMS

The waters studied share a number of ecological features. For example, inlet and outlet streams are small (1-2 meters wide), serve a restricted watershed and lack large seasonal or daily peaks or flushes but do slowly decrease in volume with season. In fact, flows become small enough that adult grayling can not normally navigate spawning streams if they remain long after mid-July.

Water temperatures are cold during the June spawning season. Snow melt and rainy, cool weather ensure water less than 10°C. With cessation of rains and warming of the weather in July, flows decrease and stream diurnal temperature variation increases considerably. Whereas a mid to late June day would show stream temperatures of about 5-10°C, mid-July to September temperatures range from 10 or 12 to 18 or 20°C over 24 hours.

Stream substrates are mainly pebbles, gravel and sand. They do not support vegetation at spawning time although aquatic plants develop in the outlet streams as the season progresses.

The lakes are 2,500-2,600 meters in elevation and are in sub-alpine cirques. Surrounding terrain is generally covered with lodgepole, white bark and limber pines.
sub-alpine fir and Engelmann spruce. Lake basins show simple form sloping gently to a central plateau that in Odell (Fig. 1) and Schwinegar Lakes is 10-12 meters while Bobcat is only 7 meters deep. Substrates are largely fine, soft and often peaty. Peat originates seasonally from aquatic plants found throughout most of the lake basins. At depths greater than 2 meters aquatic plants are submerged and small but often peaty. Peat originates seasonally from aquatic plants found throughout most of the lake basins. At depths greater than 2 meters aquatic plants are submerged and small but often peaty. Peat originates seasonally from aquatic plants found throughout most of the lake basins.

**HORIZONTAL SEASONAL THERMAL DYNAMICS**

Horizontal, shoal-depth (less than 1 meter) temperatures were intensively studied only at Odell Lake (Fig. 2). Waters warm uniformly until about July 1 when they are approximately 10°C. Coincident with the onset of bright, warm days and rapid development of water lily leaves which retard wind mixing of shoal waters, the broad shoals warm significantly more than the open lake. From mid-July to very early September, shoal temperatures are above 15°. Through most of August they are above 20°, and are usually 3-5°C warmer than open water. Rapidly cooling weather of September reduces water temperature, and because water lily leaves have shriveled from heavy frosts, water mixing is greater and temperature differences between shoal and open water decrease. By mid-September both open and shoal waters are 10-12°C from which temperature they cool equally until turnover.

**VERTICAL SEASONAL OXYGEN DYNAMICS**

Being alpine cirque lakes, high oxygen concentrations would be expected. True to this hypothesis oxygen profiles taken through the season, in mid-afternoon, usually demonstrate plentiful oxygen (Fig. 3). However, morning samples in the deeper lakes, and usually in earlier season, demonstrate lower oxygen in bottom waters (as low as 2-4 ppm; Fig. 3). By mid to late afternoon low oxygen is often replenished apparently by photosynthesis of aquatic plants and phytoplankton. No doubt quantities of metabolizing and decaying plankton, numerous aquatic plants and organic sediments combine to lower bottom water oxygen through the night.
THERMAL AND RESPIRATORY PHYSIOLOGY

Grayling adults acclimated to 12° lose orientation at 26.9°C and have a CTM of 27.3°C (Feldmeth & Eriksen sub. for publ.). Interestingly, and contrary to that demonstrated by other trout, 2 month old, 12° acclimated young lose orientation and show a CTM about 2°C higher than adults (28.8 and 29.2°, respectively). These temperatures are not experienced in the lakes but do suggest comparative physiological tolerances or “preferences” for thermal environments afforded. Other work (e.g. Brett 1956) suggests that CTM’s are 6-8° higher than those withstood long term.

Adult grayling, acclimated to high oxygen and 12°C, show comparatively high tolerance to low oxygen for trout species (Feldmeth & Eriksen sub. for publ.). However, they cannot live in its absence as some observations have suggested (Emig 1969). At summer shoal temperatures (20-24°C), oxygen would have to drop to 2.5-2.3 ppm before adults lose orientation. Since that never happens surface waters are not oxygen-limiting to grayling. In bottom water, or during winter (~4°C) oxygen could drop to 1.6 ppm before orientation was disrupted.

Of course acclimation to lower winter temperatures may affect results somewhat, but during summer, fish that range through the levels of a stratified lake for feeding are constantly and rapidly facing varying temperatures and oxygens, and acclimation has less meaning.

BEHAVIORAL OBSERVATIONS

When grayling first enter the spawning streams is not known, but spawning continues until early July at which time adults move back to the lake. Until at least mid-July adults are seen feeding over the entire lake. After late July adults cannot be caught nor are they seen in shoal areas but are conspicuously surface feeding outside the water lily beds. Not until well into September do adults begin to return to the shoals where they may be taken by angling once again.

Eggs hatch by late July well after adults have left the spawning stream. Although some young remain in the stream in September most have moved to the lake where they have been observed near shore among the water lilies, and sedges. Whether young ever venture into open water is not known. By the time adults move back to the shoals in mid-September the young grayling are agile swimmers.

DISCUSSION AND CONCLUSIONS

Given the correlation between lake structure and physico-chemistry, and young and adult grayling behavior and physiology, the following hypothesis is offered. During cold water and higher flow of early spring, adults enter small, stable streams and spawn. By early July stream volumes have decreased and warming temperatures heat the small spawning streams considerably during the day. Because of preference for cool water (low CTM) adults return to the lakes where they range freely. Increasingly warm weather and development of the water lily leaves (that retard wind mixing of warmer shoal water with open lake water) raise shoal temperatures above those preferred by adults and they move entirely to open water by late July. During this time young appear in slowly flowing, comparatively warm spawning streams and because of higher temperature tolerance and probably preference, remain there or in warm shoal waters. When cooling fall weather reduces shoal temperatures to about 15°C (early September) adults return and generations are mixed for the first time.

Grayling thus appear to be adapted both physiologically and behaviorally to habitat structure. Physiological differences are expressed by behavioral responses that separate adults from young during the latter’s first several months of life when they have hatched at an early developmental stage and are particularly poor swimmers. The inference is that grayling, like all trout, are predators. They feed indiscriminately and probably would not distinguish between their own young and other food. Grayling young have not been found in adult stomachs (e.g. Kruse 1959; Vincent 1962) but if differential behavior makes environmental separation effective, one would not expect such an occurrence.
Environmental separation apparently depends upon habitat complexity created particularly by beds of pond lilies. Such vegetation limits water mixing allowing shoals to heat disproportionately, in turn allowing behavioral expression of thermal physiological differences between young and adults. It probably also provides protection for young when both generations use shoal areas in the fall.

The temperature tolerance — temperature preference argument might be extended to theorize that

in streams and rivers, where grayling were once abundant but have now been all but eliminated, grayling have not been competitively successful with introduced species because the latter have CTM’s (and preferences) similar to those of grayling young (FELDMETH in M.S.). Thus young, even though physiologically-behaviorally separated from adults of native trout species (FELDMETH & ERIKSEN sub. for publ.), may actually be brought together behaviorally with introduced species (rainbow, brown and brook trout), which may heavily predate them, because of similar temperature preferences.

Grayling show considerable low oxygen tolerance for trout and studies of their vegetated habitats suggest the ability has survival value. Although grayling are restricted from the bottom water of Grebe Lake in Yellowstone National Park by low oxygen during summer (KRAUSE 1959), restriction has probably not yet occurred either during summer or under ice in late winter in the study lakes. However, their developing enriched state is obvious since less than 2 ppm of oxygen have been measured during a summer morning in bottom water and under ice over shoals, so oxygen restriction, at least from portions of the lakes (approximately 1.6 ppm at those temperatures), is near reality.

These and other study results suggest management necessities for the last native “southern” grayling populations if they are to long survive. (a) Stream and shoal areas particularly must remain unmolested if the physical-biological structure providing for behavioral separation of young and adults is to remain functional. (b) Since the enriched state of grayling lakes is comparatively advanced, further nutrient enrichment that stimulates greater production, more decay and higher oxygen utilization cannot be tolerated. (c) Even moderate pack stock or cattle grazing, logging or mining could destroy the streams for spawning since they are so small. Pollution, siltation or a significant change in water flow, that kills, silts over or dislodges the semi-buoyant eggs or sweeps away the comparatively undeveloped young, would be the major problems. (d) Simplified access, allowing a large influx of people hoping to take this easily caught and rare fish, would create, as elsewhere, some or all of the problems discussed above. Management must limit access, not only to grayling watersheds but also to adjacent terrain.

REFERENCES


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By Clyde H. Eriksen
OF TIME, SPACE,
QUALITY,
OIL, GAS, AND
WHALES

"What, then, in the face of the monumental irrelevance of myself to this conference, and of this conference to me, might be worth saying?"
A 'Humanist' Addresses the 'Real World' 

1. These somewhat controversial remarks were made at the plenary session of a conference on 'Oil and Gas from Alaska: Choices for California', held in Los Angeles on November 20-21, 1976. 

Sponsored by the Center for California Public Affairs under a grant from the California Council for the Humanities in Public Policy and the National Endowment for the Humanities, the conference brought numerous oil and gas company executives, government officials, and environmental lobbyists together with four academic 'humanists'. Since the rapid course of events is apt to make any specific statements about energy policy seem dated as soon as uttered, these remarks may have whatever interest they have as an example of what (if anything) the humanities (or, more broadly, the liberal arts) can contribute to the discussion of public policy issues of considerable economic and technical complexity. 

2. The reader should keep in mind that these remarks were made during the last months of the Ford Administration. As this issue of The Participant goes to press (March, 1977), the Carter Administration's promise to develop a long-run, comprehensive energy policy is still in the process of redemption. While the reorganization of various federal agencies into a new Department of Energy may facilitate the emergence of such a policy, it does not guarantee it. 

I have learned a lot in the course of these two days about the economic and technical problems of bringing oil and natural gas from the north slope of Alaska to the lower 48 states. I have also learned what kind of lunch people on expense accounts get for $9.50. This has confirmed my long-standing suspicion that dollars are not always a reliable measure of well-being. 

My chosen field is political philosophy. This means that I am predisposed to think of issues as being at bottom political rather than economic or technical, as involving 'value choices' (to use the current jargon) that are more than 'trade offs'. It also means that I try to step back and look at choices from as large and long-run a perspective as I can, making explicit what I take to be their tacit presuppositions. 

The explicit focus of this conference is on alternative ways of bringing oil and gas from Alaska. In the case of oil, the main question seems to be whether it shall be brought in at Long Beach or at some other place such as Point Conception. The issue is posed in terms of the impact on an already badly polluted area versus the impact on a relatively 'undeveloped' area. In the case of natural gas, the main question seems to be whether the gas should be liquified and shipped to Long Beach by tanker, or whether it should be transported by an overland pipeline, and, if the latter, which pipeline route would be the least expensive, the most reliable, and the least environmentally disruptive. 

If the conference discussions sometimes seemed a bit unreal to me, it is perhaps because all the alternatives being considered have more in common than they have in difference. They deal with the How of things, not with the Whether or the Why. For example, I have not yet heard raised the question of Need in a critical sense distinguishable from Desire or Demand. The planners of the conference hope we can get a grip on the overall pattern of choices confronting us, lest momentous policies emerge piece-meal and unintended. This is a worthy ambition. But the basic policy decision — that the northern slope of Alaska shall be developed in such a way as to send its fossil fuels to the lower 48 states — has already been made by Congress. Perhaps a 'humanist' is a person invited to discuss matters after the basic decision has been made. 

What, then, in the face of the monumental irrelevance of myself to this conference, and of this conference to me, might be worth saying? Let me try to put the issues in broader perspective and draw out some practical implications by looking at the issues through three basic categories — Time, Space, and Quality. 

Time. The various schemes for bringing oil and gas from Alaska are all means of temporizing at something approximating our accustomed level of energy consumption while the longer run sorts itself out. The longest time perspective I have heard mentioned at this conference is twenty years. None of these schemes makes any sense outside the con-
text of a long-term energy policy that aims either at making the transition to a more energy-conserving lifestyle and/or at developing radically different energy sources that are at once more abundant, less polluting than fossil fuels, and safer than nuclear energy. But such a long-run energy policy does not now exist, and its non-existence renders all these schemes irrational.2 If an energy crunch is going to come, we might as well face it now as twenty years from now. Moreover, we should probably be keeping Alaskan oil and gas 'in the bank' for a national security emergency instead of wasting it to try to keep up present levels of consumption.

Given the absence of any meaningful long-run energy policy, what is the appropriate position to take towards the short-run alternatives before us? I suggest that the most reasonable position may be to oppose each and every one of them until an intelligent long-run energy policy is forthcoming. Congress may have decided that we shall use Alaskan oil and gas, but the implementation of any specific plan for this requires countless approvals at local, state, and federal levels. The genius of the American political system is that the policy-making process is unending and has many points of access, so that decisions taken in haste are not necessarily final. Even Congress has been known to change its mind on a project that was technologically possible and into which substantial money had already been sunk. (I have in mind the decision to discontinue support for the development of the SST.) Opposition to the various specific schemes for getting fossil fuels from Alaska can amount to opposition to the basic decision to use Alaskan gas and oil at all — unless and until a long-run energy policy is formulated. Admittedly, the American political system makes obstruction easier than long-term planning, but 'creative obstruction' may be one necessary strategy if a long-term energy policy is to be produced.

Within the potential context of an overall policy aiming at reduced energy consumption and/or at the development of radically different energy sources, we should view the proposals before us for what they are — stop-gap modes of temporizing from which no salvation is to be expected. Hence, we should do well to choose the specific ways of getting oil and gas from Alaska that are the most modest, not requiring new technological breakthroughs, not making unrealistic demands upon human fallibility, and not apt in moments of failure to do great environmental damage. For example, why take chances on our ability to develop tankers and liquification plants larger and safer than any now existing when we can utilize conventional pipeline technology?

Space. 'Project Independence', the Ford Administration's slogan that has substituted for an energy policy, envisioned national energy independence of foreign sources within a decade. However understandable that vision may have been as a reaction to the Arab oil boycott of 1973, it is important to recognize its essentially reactionary and ultimately meaningless nature. It is ridiculous for the government of a nation-state that consumes approximately one-third of the world's natural resources to talk suddenly of self-sufficiency. Energy cannot simply be abstracted from the complex of resource and pollution issues that cut across national boundaries and require of us, not self-sufficiency, but increased efforts to negotiate regional and international agreements. The oil tanker that ran aground entering the Los Angeles harbor yesterday while this conference was in session was registered in Liberia and under charter to the Union Oil Company. The control of multinational corporations requires inter-governmental cooperation, and the United States is not without influence in Liberia. I cite this simply as an example. I could also mention the alleged advantage claimed by El Paso Natural Gas Co. for its plan to ship liquified natural gas by ocean from Alaska to Long Beach so as to avoid any regulation by the Canadian federal or provincial governments. In my view this alleged advantage is a defect, for it allows us to postpone facing the need to come to terms with other nation-states in the international order. The spatial point can also be put in terms of time: do not choose the short-term advantage at the cost of the long run; do not choose a plan that is momentarily attractive in such a way as to opt out of the long-run task that faces us.

Quality. All the discussions I have listened to so far have, in effect, been cast in terms of quantity. Corporation executives and regulatory agency officials alike have talked of 'trade offs', sometimes referring to a relatively homogeneous factor such as different sources of nitrogen oxide emissions, sometimes referring to the balancing of such varied factors as the price of gas to the consumer, transmission safety, employment levels, and environmental impact, as if these quite varied considerations were reducible to some common currency and susceptible to cost/benefit analysis. We seem to face a diffi-
difficulty here: either we leave out certain factors altogether, or else we include them as if they were commensurate even though we know that they are not.

I suggest an alternative view: incommensurate values exist, and they ought to be taken into account. Consider the extreme possibility that there are some things that simply ought not to be done, things that we have no right to do. Consider the possibility that certain actions may have an irreversibly injurious impact on groups that are in no position to consent or protest. For example, if the oxidant level in the Southern California Air Basin is already so high that it is causing chromosome damage to future generations of human beings, have we any right to opt for importing Alaskan oil through Long Beach if there is any chance that this decision will either worsen air quality or make the reduction of air pollution to a 'safe' level more difficult? Certainly there should be a heavy burden of proof on the Sohio Company to show that this will not occur; and any regulatory agency that uncritically accepts corporate assurances without allowing for a margin of human error and human greed is, in effect, party to a criminal conspiracy against the public.

In addition to the issue of the effects of our actions upon future generations of humans, there is also the issue of the impact of our actions upon other species of beings. By what right do we aggrandize our economic and technological systems beyond what is necessary and, in the process, impoverish ecosystem diversity and even exterminate whole species? Of two gas pipeline proposals, one crosses the Arctic Wildlife Refuge and the other does not. Other things being equal, we should prefer the one that does not. Of course, closer investigation may discover an endangered species lying in the path of either pipeline — just as the Corps of Engineers recently discovered the furbish lousewort in the path of a proposed dam project in Maine. In which case, the pipeline route should be redesigned — regardless of the dollar cost. The extermination of a species, like chromosome damage to future generations of humans, may not be something that can be assigned an economic cost and 'traded off' against the price of gas for present-day human consumers; and it is not necessary to treat it that way in order to consider it. It may be that there is an ultimate difference in quality that makes some actions prohibitive.

Conclusion. Historically speaking, a 'humanist' may be a transitional person who comes between the Age of Religion and the Age of Ecology, a person who has lost the perception of man as part of a great Creation and has not yet attained the perception of man as part of a vast and complex biosphere composed of many species. A humanist in this sense finds in species-egoism the boundary of his capacity for altruism. Most of us find it hard enough to be humanists, to think in terms of the good for humanity and human posterity instead of the good for Californians, Americans, or our own generation of humans. If we do obscurely feel a concern for the welfare of fellow members of the biotic community, we are apt nowadays to rationalize that concern in terms of the utility of biological diversity for human survival. Yet there are signs of the emergence of a less homocentric, more ecological sensibility. Yesterday at this conference some people complained that the State of California (meaning especially the California Air Resources Board) was not conspicuous by its presence. From this morning's newspaper we learn that Governor Brown spent part of yesterday at a celebration honoring whales. This would, I think, have been unimaginable in previous Administrations. Perhaps it provides a symbolic commentary: while we debate the costs and benefits of this or that technique of getting oil and gas from the north slope of Alaska, the Governor attends a celebration honoring whales (including, of course, the official state totem, the California gray whale). Ultimately the Governor and his staff can play a crucial role in making decisions of the sort we discuss at this conference. I hope that when the time comes for them to make those decisions they will not forget the day they celebrated the existence of whales.

By John R. Rodman
... Lucian Marquis, professor of political studies, was guest speaker last month at St. Johns College in Santa Fe, New Mexico. Taking part in the college's Friday Night Lecture Series, he spoke on "An Intellectual in Politics: Antonio Gramsci."

... David Mike Hamilton, class of '73 is Assistant Curator of Library Manuscripts at the Huntington Library in San Marino. He is completing work on a book length manuscript, Jack London's Library, for publication this summer.

... Robert S. Albert, professor of psychology, spoke on "Special Family Positions and the Attainment of Eminence: A study of Birth Order, Early Family Experiences, and Cognitive Development," at a meeting of the Society for Research in Child Development. The meeting was held in New Orleans last month.

Professor Albert's talk on "Why Freud? An Intellectual and Cultural Study" has been recorded on four cassettes by Behavioral Sciences Tape Library, Sigma Information, Inc.

... "Density, Design, and Personal Control" is the title of an article by Dru Sherrod, visiting professor of psychology. The piece will appear in Manscape: The Human Environment, to be published later this year by Wadsworth Publishing. Other articles by Professor Sherrod will appear this year in Journal of Experimental Social Psychology and Journal of Applied Social Psychology.

... Jack Anderson, Pulitzer Prize-winning columnist, will speak at the Pitzer College National Issues Forum Monday, May 2 at the Los Angeles Bonaventure Hotel. The event is the fourth in the National Issues Forum series and will begin with a no-host social hour at 7:00 p.m., with dinner and Mr. Anderson's address in the California Ballroom.

The National Issues Forum was initiated in 1974 as a way of presenting timely national issues to the business and community leaders of Los Angeles. The Forum has had three speakers since its inception: Harry Reasoner, Walter Heller, and Roderick Hills.

... The speaker for Pitzer's thirteenth Commencement will be the Honorable Thomas Bradley, Mayor of Los Angeles. The event will be held Sunday, June 5 at 4 p.m.

... Jose Cuellar, instructor of anthropology, presented a paper on "Paradigms in Ethnic Studies: Notes on the Chicano Experience" at the Ethnic Studies Symposium: The Political Economy of Institutional Change, held at the University of California, Irvine. His paper on "Growing Old: The Urban Chicano Experience" was presented at the Multi-Ethnic and Cross Cultural Issues Symposium at the Annual Meeting of the Western Gerontological Society in Denver last month.

... Peter Nardi, assistant professor of sociology, will present a paper on "Moral Socialization" at the annual American Sociological Association meetings next August in Chicago.

... Robert H. Atwell, president of Pitzer College, is among seventeen prominent educators who have been appointed to the American Council on Education's Commission on Collegiate Athletics for the study of sports programs at American colleges and universities. The initial funding for the project is provided by the Ford Foundation.

... "The Hero Pattern and the Life of Jesus" was the topic of the Pitzer College spring convocation March 15. The speaker was Alan Dundes, professor of anthropology and folklore at the University of California, Berkeley. Dundes was one of the first to associate folklore with the social sciences and linguistics.
Albert Wachtel, associate professor of English, will be a panel participant and speaker at the Sixth International James Joyce Symposium to be held in Dublin and London next June.

David Furman, assistant professor of art, was invited to serve as sole Juror for the 1977 Ceramic Conjunction, the major national competitive exhibition of ceramics this year. The show was held at the Long Beach Museum of Art. He has just completed his third one-man exhibition at the David Stuart Galleries in Los Angeles and a showing of his ceramics at the Laguna Beach Museum of Art. His work for the latter gallery is entitled "Illusionistic Realism Defined in Contemporary Ceramic Sculpture."

He was also guest lecturer at the Portland Art Museum and the University of Washington, Seattle.

Rudi Volti, assistant professor of sociology, has authored an article for *Administration and Society*, entitled, "Organization and Expertise in China."

Volti is a member of the coordinating committee of the Southern California China Colloquium whose membership is comprised of persons from colleges and universities in Southern California who specialize in China.

The Lassen Foundation and the A.S.H. Corporation have awarded to Ann Stromberg assistant professor of Sociology, grants totalling $1,000 to build a library at the Claremont Colleges on Health Behavior and Self-Care. The project will be conducted through her class, Sociology 134 Research Seminar in Health Behavior.

Robert Buroker, assistant professor of history, is preparing an article on "An Historical Perspective on Social Welfare Policy" for *History and Social Policy*. The book will be edited by David Rothman of Columbia University and Stanton Wheeler of Yale Law School and will be published by Russell Sage next fall. Professor Buroker's book on *The Pittsburgh Survey: Social Service and Social Science in the Progressive Era* will be published late this year by the University of Chicago Press.

Buroker has been appointed historian consultant to the welfare reform task force of the U.S. Health, Education, and Welfare Department.

Sheryl Miller, associate professor of anthropology, is organizing, chairing, and presenting a paper at the bi-annual meeting of the Society for Africanist Archaeologists in America to be held in April in New Orleans. Her paper will concern research with archaeological finds from Malawi which she has been studying since 1967. Professor Miller is the only woman to be appointed an officer of the organization.

Anthropologist and Leakey Foundation Lecturer, F. Clark Howell, visited the campus in conjunction with the Pitzer College Anthropology Colloquium series. He spoke on "Diversity, Variation, Sexual Dimorphism, and Behavior Among Early Hominids."

Dr. Howell is considered one of the country’s leading palaeontologists, having done research on the Neanderthalers of Europe and Asia.

Ronald K. S. Macaulay, professor of linguistics, has been appointed Associate Editor of *Language*, the journal of the Linguistic Society of America. His article on "Variation and Consistency in Glaswegian English" will appear in a volume entitled, *Sociolinguistic Patterns in British English* to be published later this year.

Paul Shepard, Avery professor of natural philosophy and human ecology, has been awarded a fellowship by the Rockefeller Foundation for 1978. He will devote time to writing a book on the cultural background to environmental studies. His book, *Thinking Animals* will be published by Viking Press later this year. Michigan State University has invited Professor Shepard as guest lecturer in its Perspectives on the Land series this month. His topic will be "The Sense of Place."