

# The Village Crier

 national accelerator laboratory

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## RESEARCHERS TO STUDY CHANGING SCIENCE STRUCTURES

A group of Northwestern University researchers will include the National Accelerator Laboratory in their three-year study of "Technology and the Institutionalization of Science." At a colloquium at NAL on Thursday, December 21, Professors Michael Radnor and Gerald Zaltman, principal investigators of the project, which will be funded by the National Science Foundation, explained the basic hypotheses of their research to members of NAL's professional staff. Technology, or changes in technology, inherent in the performance of specialized science in today's society will determine the structure of the scientific community in the future, with availability of resources acting as a critical intervening parameter, the men contend.

Their presentation was followed by many searching questions from the audience. "This is basic social science research," Dr. Radnor told the NAL staff. "We hope to contribute to the basic storehouse of knowledge in our field in the same way you are contributing to yours. We will not interview to get material we could just as well get elsewhere, and we hope to come back to you occasionally for some group feedback sessions based on preliminary data. Your reactions and these group meetings will be very valuable to us."

Radnor and Zaltman went on to state that in the field of high energy physics, the classical individual scientist working more or less independently is presently found existing alongside and interacting with scientific activity involving substantial team work and large, well-defined and structured organizations and procedures. The theoretical physicist is the "loner." He requires only a limited number of tools -- a library and a computer, perhaps. His peer associations often cross international boundaries.

In sharp contrast, the experimentalist moves in one of the most expensive basic sciences that society supports today. The high costs and high competition for these experimental facilities has forced a structure of scientific cooperation which is a radical departure from the traditional model of the scientist making his own research decisions.

The study will consider four major areas:

1. A description of the changes taking place in the structure of science institutions, the shift from individual and peer group relationships to institution-centered activity, and the formation of related sub-groups and support groups.
2. The impact of the job requirements in the new institutional settings; the influence which the institutional concept has on persons desiring to enter research activities; competition among the groups and teams



*...Professors M. Radnor (L), and G. Zaltman describe 3-year study to NAL staff members...*

(Continued on Page 2)

RESEARCHERS (continued)

which institutional organizations require, and interaction between theoreticians and experimentalists in the institutional setting.

3. A demonstration of how this emerging science structure influences and shifts the direction of research into areas suited to the structure.
4. Study of cultural and international differences between NAL, CERN, and U.S.S.R. (Serpukhov).

Data will be based on five levels of analysis: (1) The individual scientist; (2) groups of individuals working together on a given project; (3) teams of two or more semi-permanent work groups; (4) the total research laboratory; (5) the social system that emerges from the previous four units.

An important facet of the study is consideration of the relationship of conventional universities and schools (long regarded as centers for research) to institutions such as the National Accelerator Laboratory, and the effect of this relationship on production of new research in institutions such as NAL.

Drs. Radnor and Zaltman, both on the staff of the Graduate School of Management at Northwestern, have been deeply involved in science management research for many years. Radnor serves as a management consultant frequently. Zaltman is director of research for the Northwestern Graduate School of Management.

Associates of the Radnor-Zaltman team plan to begin interviewing in the next months. They intend to talk to NAL staff members as well as to many other people in the U.S. One member of the team, Barbara Peters Koehler, a resident of Berlin, will conduct the research at CERN. Tom Pipal, Richard Butler, John Kernagan, and John Miller, research associates, will conduct interviews with Drs. Radnor and Zaltman.

The Northwestern study is not related to two other sociological-economic studies of NAL which originated at the University of Chicago in the past few years.

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...NAL's buffalo herd, now numbering 26 head, grazes in a 45-acre field adjacent to Road "D" on the NAL site. Visitors are welcome to view the animals from two pull-off spots on Road "D" which curves southwesterly off Batavia Road toward the Central Laboratory area just beyond the intersection of Batavia Road and Eola Road. The herd is a combination of the two original groups brought to NAL -- one from Colorado, the other from Springfield, Ill. Four calves were born into the herd in the summer of 1972. Main building of the Meson Area and the berm of the Neutrino Line can be seen in the background...

### NAL BLOOD PROGRAM NEEDS YOUR HELP

There is a shortage in the blood supply in the Chicago area. Professional donors are no longer used in Illinois and while this means higher quality in Blood Banks, it means that a lot less blood is being "banked." NAL employees are urged to give sober thought to what could happen to their families if suddenly forced to secure many pints of blood for an emergency need.

The American Red Cross Blood Bank will visit the Laboratory on Wednesday and Thursday, January 10 and 11, to accept blood donations from employees and visitors. A total of 91 pints is needed in order for the Laboratory to continue its coverage of free blood for employees and their families for the next year. About 30% of those who volunteer are rejected for one reason or another.

Visitors at NAL may also donate blood; their donation will not be credited to the NAL program but gives protection to their own families.

Call the Medical Office, Ext. 3232 to make your appointment. The Blood Bank staff will set up their equipment in the Village Barn. Employees who have joined the staff since the last Blood Bank visit are urged to become a part of this plan.

### JANUARY MOVIE AT NAL - Fellini's "White Sheik"

Friday, January 12 will mark the opening of the 1973 schedule of the NAL International Film Society. At 8 p.m. in The Village Barn, "The White Sheik" will be shown.

Suitable for family viewing, advance information on the movie states, "Fellini's most humorous film, it contains broad farce, caricature and the fantastic, circus-like atmosphere typical of his world. But the subject also gives Fellini an opportunity to deal with a theme which is central to his more serious works: The danger of living in a world of one's illusions."

Visiting experimenters and visitors accompanying NAL personnel are welcome.

ADMISSION IS \$1.00

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*All photos in this issue are by Tim Fielding, NAL*



*...Associates of Priscilla Duffield gathered recently to honor her as she left her position as secretary extraordinaire in the Director's Office of the Laboratory. Left to Right: S. Burton, R.R. Wilson, E.L. Goldwasser, Duffield, and D.R. Getz enjoy the photo record of the many things that have happened, in which she has had an important role, since coming to NAL in November of 1967.*

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\*\*\*\* JANUARY, 1973 ----- DATES TO REMEMBER \*\*\*\*

Wednesday & Thursday, January 10 & 11

Blood Bank will be at NAL for donations. Call 3232 for appointment.

Thursday, January 11

At 12:00 Noon - Meeting of NAL Radio Club - Village Cafeteria.

Bridge Group Brush-Up Session, 8:15 p.m. - Village Barn.

Friday, January 12

Movie - "The White Sheik" - Village Barn at 8 p.m.

Tuesday, January 23

V O'Clock Break - 5:15 p.m. - Village Barn

Saturday, January 27

Family Skating Party - Phillips Pond - 1 to 4 p.m.

NAL Protons Basketball team plays Thursday nights in the gym of Naperville High School at 7 p.m. Spectators are welcome!

NAL Chess Club social nights on Wednesday, January 3 Thursday, January 11  
Wednesday, January 17 Thursday, January 25 Wednesday, January 31.

BRUSH UP ON YOUR BRIDGE GAME!..At 7:30 p.m., Thursday, January 11, 1973, there will be qualified bridge instructors available in the Lounge of the Village Barn to assist those who feel the need of brushing up on their game. At 8:15 p.m., members (everyone is welcome) of the Duplicate Bridge Club will begin playing. The best way to improve your game is to play a few rounds. Start the New Year with a SLAM! Come - join the club! For further information, call Helen Severance, Ext. 3351.

HAMS MEET JANUARY 11...There will be a meeting of the NAL Radio Club on Thursday, January 11 at 12:00 noon in the Village Cafeteria meeting room. All members and interested persons are welcome. The club operates station WB9IKJ on the NAL site. Dates for regular meetings will be discussed; there will be an election of officers; activities for 1973 will be planned. This is an important meeting!

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CLASSIFIED ADS

FOR SALE - 1969 Mustang/stick, 8 cyl., radial tires, excel. cond; Bolex super 8 movie proj., like new-\$80; Walnut Dining rm. table, seats 8, has ext. \$60; 1 sofa + 2 matching chairs, gd. cond.\$150 for set; other misc. sml. appliances (hair dryer, toaster, movie lamp, vacuum cleaner, TV set). Call Klaus Pretzl, Ext. 3236/3205 or 665-4256.

FOR SALE - 1971 Opel Spt. Cpe. 1900cc, radio, stereo-tape, hd. cooling, ww, new snow/stud tires; 37,000 mi. New car arriving-must sell. Call John Isaac (ANL) 739-7711, Ext. 2025 or 442-8976.

FOR RENT - Clean, lower 1 bdrm. apt., stove/refrig., water furn \$140 mo+ dep., Aurora. Call Cheryl Stadtfeld, Ext. 3349.

FOR SALE - Color TV, Early American cab., 23"-new pic/tube, 1 yr/guarn. Call Don Mendenhall, Ext. 3724 or 896-9308.

FOR SALE - 1971 Porsche-914 mid-eng., fully equip., low-mil. \$3300. Call James Peifer, Ext. 3381 or (815) 729-9072.

FOR SALE - Aquarium set-up, 5 & 20 gal. tanks/fil/gravel/plants, pumps & stand-\$40. Call Thaddeus Ulijasz, Ext. 3776 or 653-3887.

FOR SALE - 6 Siamese kittens, \$15 each. Call Doug Maxwell, Ext. 3701 or 892-8618.

FOR SALE - Movie Camera, 1 yr. old, excel. cond., 3.5 zoom lens, 2 shutter speeds, movie light, super 8, 1/2 price-\$70. Call Dottie Alderton, Ext. 3771 or 231-6119.

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The Village Crier is published by the Public Information Office of the National Accelerator Laboratory. Margaret M.E. Pearson, Editor. Correspondence may be directed to the address below. Telephone number of the Laboratory is 312 840-3000

**National Accelerator Laboratory**  
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**Batavia, Illinois 60510**

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