



President's Column R. E. Budwine

Where Are We Going?

The future of our Laboratory is often discussed. Here I suggest an approach to this issue that I believe is the correct one. To help understand what is proposed, I recall a Distinguished Lecturer talk that was given some months ago.

The talk, entitled, "What Chemists Do," was given by Roald Hoffman, a Nobel laureate. The speaker gave what he described as a 'mini tirade' against reductionism.

Reductionism is the idea that physical phenomena can be explained by 'reducing' them to a few basic underlying concepts that are governed by the physical laws of the universe. In short, reductionism is the scientific way of analyzing our world. Reductionist thinking is the instrument that created most of our technological advances.

Our distinguished lecturer used an absurd example to criticize reductionist thinking. The example was the congressional testimony of Steven Weinberg who purportedly claimed that high energy accelerators could lead to understanding of the most basic laws of the universe, and this would enable us to understand not only the universe but all of life.

I don't know in detail what Steven Weinberg said, but I am quite sure that he did not mean that if we knew the all the fundamental constituents in the universe, and the laws governing them, we could then predict human behavior or individual lives. We have no hope of doing this even for far simpler systems, e.g., our atmosphere. (And it is not just a matter of needing the ultimate computer.)

What he might have meant was that future scientific discoveries and understanding may hold surprises so great that they could make fundamental changes in our views of the universe and ourselves—changes perhaps as great as those separating our philosophies from those of prehistoric peoples.

What has all this to do with the course our laboratory should take? Before answering this question, I will mention another point of view espoused by our distinguished lecturer chemist. As part of his objection to reductionism, he criticized 'vertical thinking' (analysis) as being overly emphasized, and praised 'horizontal thinking' (social relevance). He believed there should be more emphasis on the relevance and connections of scientific developments to the rest of the world.

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Newsletter Without Postage

This is the first SPSE Newsletter to be delivered to you without U.S. Postage being paid. The Public Employment Relations Board and the State Court of Appeals have ordered the Laboratory to deliver employee organization mail and to compensate SPSE for postage costs going back to 1988. We will report more details in our next Newsletter. ♦

Security Questionnaire Fixed

The Office of Personnel Management (OPM) has finally issued a new Standard Form 86 ("Questionnaire for Sensitive Positions"). The new form has changes requested by LLNL employees.

The old form included a liability release that prevented the signer from suing persons who gave information to clearance investigators. In 1989, SPSE sent a petition to Congress, asking for changes in the wording of the release which read: *"I release any individual...from all liability for damages that may result to me on account of compliance...with this authorization. This release is binding, now and in the future, on my heirs, assigns, associates, and personal representative(s) of any nature."*

This broad release was unfair to employees who had to sign it in order to keep their clearances and jobs. They were left with no legal recourse against persons who intentionally gave false damaging information. (It did happen to some LLNL employees.)

The release no longer contains the objectionable language. SPSE took the lead in pointing out this problem to Congress and the OPM. Several hundred employees, including many who were not SPSE members, signed the petition. We believe this strong employee support was instrumental in producing an acceptable release form. ♦

Salary Fiche Error

The microfiche sent to all SPSE members giving FY92 salary data contains some errors. The errors affect 1991 salaries listed for persons who changed from (1) monthly to hourly, or (2) from hourly to monthly pay rates between FY91 and FY92. In particular, this affects the data for retirees who switched to an hourly rate to work as Lab Associates. To obtain the correct 1991 salary for group (1), divide the number shown for 1991 by 1.74. For group (2) multiply the 1991 salary by 1.74. In all cases the FY92 salary is correct as shown. The fiche will not be reissued, but computer disks with the corrected information are available from the SPSE office. ♦

President's Column *(Continued from page 1)*

The activities of our laboratory may be categorized rather naturally into the following: (1) developing and maintaining very high technical competence; (2) representing (or selling) various applications of the technical competence outside the Laboratory; (3) liaising (or 'politicking'?) with the Federal and State governments, and the University. Most people would say that the first category must be an unequivocal *given* for the other two categories to be meaningful.

I believe that, in planning the future course for this laboratory, we should not look to specific topical programs. Rather, we should place maximum emphasis and resources on developing the highest technical competence. We should be the absolute best at reductionism: in theory, in computers and numerical methods, in scientific instrumentation, in all aspects of modern scientific endeavor. If we take this as our basic goal and fundamental mission, then we will be in real demand by society. This does not mean we should reject specific tasks. Rather, it is a matter of emphasis.

We do not seem to be very good at category (2). At present we are running around in an absurd manner trying to find ourselves some new missions: the environment, clean-up, economic competitiveness, education for whomever, etc. All of these are, in my judgment, dead-ends.

It may not be easy for our leaders to accept this emphasis, partly because they don't understand it very well. Perhaps they were never very good at reductionist thinking, and so became managers. I imagine they will argue that the various government officials they have to deal with will not be receptive to supporting the highest possible level of scientific and technological competence, but rather are interested only in specific socially relevant 'missions.' But this only means that the government officials don't understand the real basis of technological progress. It is the essential task of our leadership to develop this view among the people we depend upon for our operation.

This brings us to category (3). Our leaders seem to be poor at this activity. But this is the one that matters most, not only for the future of the Laboratory but for our nation. What is required are leaders who are acknowledged, nationally and internationally, to have high competence in science and technology, and to have unquestionable integrity. Only with this type of leadership can the policy makers of our nation be convinced of the importance of developing the type of laboratory proposed here.

Do we have the necessary leadership? Can such a laboratory concept be accepted in Washington? Will our leadership even accept the idea and try? Do they understand what is proposed? You can help. ♦

Editorial: Ranking Gone Awry

Scientist's Suit Charges Discrimination

The Aug. 14 *Valley Times* reported that Dr. Ching Wang, an "L" Division physicist, filed a suit charging LLNL with discrimination and violation of civil rights. The suit claims that Wang's rank and relative salary declined due to discrimination. Further, the suit alleges that his supervisors harassed him after he complained to the State Department of Fair Employment. It also claims they made remarks to the effect that Dr. Wang should return to Taiwan.

Dr. Wang will have an opportunity to prove, in court, that he suffered damages due to discrimination based on his race or national origin. Whether or not he succeeds, the record does show that his rank and salary declined despite what appears to be a career of distinguished scientific achievement. The record we have seen impugns either LLNL's ranking system, or the integrity of those who administer it, or both.

Here I do not defend Wang's discrimination claim or champion his scientific achievements. I believe that, independent of the validity of his claims, or of any assessment of his work, there is something amiss at LLNL and that it needs fixing. Here is the record:

National Recognition

In 1987, Dr. Wang sought to improve time and spatial resolution in measurements of electromagnetic radiation. He conceived and developed a "Radiation to Coherent Light Converter" (RCLC). This innovative device combines a radiation detector and a laser diode on a single micro-chip. He developed the device for the nuclear test program but it also has applications in physics, chemistry, and biology. His research won accolades for him and for LLNL.

The RCLC received a prestigious R&D 100 award for 1988. Director Nuckolls traveled to Chicago where he accepted the award on behalf of LLNL. He wrote Dr. Wang a letter of commendation. The research was lauded in the Lab's *Newsline* and press releases. It was publicized by "L" division management as an example of work they promoted.

University President David Gardner selected Wang's research for mention in his annual report to the Regents. It was given an entire quarter page. The report cited the value of the development to both physics and biomedical research.

The Department of Energy also picked up on Wang's accomplishments. His work was featured in a DOE publication as an example of DOE research with important technology transfers to industry.

Other Research Recognized

In the mid-1980's, Dr. Wang initiated work on neutron penumbral imaging. The Neutron Penumbral Aperture Microscope also won a 1988 R&D 100

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award. The project leader formally acknowledged Wang's seminal contributions in a letter commending project participants.

Publication Record

At the time of these awards, Wang's record included more than 50 publications in a period of five years. Many were in prestigious refereed journals. He led his division in publications, and he has a number of patents to his credit. By usual standards, this is an impressive record.

The Rub

Despite these accolades, Wang's division leader ranked him eighth from the bottom in a division of fifty. His salary was slightly above the 20th percentile level for PhD scientists with his work experience. His salary declined markedly each year, relative to salaries paid other LLNL scientists. He protested, to no avail. SPSE filed an administrative review on his behalf. This appeal asked that his rank be changed. The review went all the way to the Director. No adjustment was made.

During the next several years, Wang's raises were only 1 to 2%. His salary dropped below the 20th percentile. It was during this time that (allegedly) discriminatory remarks and retaliation occurred.

Wang patiently tried to use the system. He filed several administrative reviews. The results were disappointing. He won a decision directing that an appraisal be rewritten to remove unjust derogatory remarks. However, this did not change his rank and his division did even not carry out these directions.

More National Recognition

In 1991, Dr. Wang received another R&D 100 award. This was for the development of a Semi-Insulator Radiation Detector (SID). Wang received a commendation from Energy Secretary Watkins. Again Lab management took credit for the accomplishment. A color photo of Wang's award appeared as the cover of the Sept-Oct 1991 issue of LLNL's publication: *Energy & Technology Review*.

This SID work was identified as being among the Laboratory's most significant achievements in 1991-92, and a summary of the work will be part of the Director's "State of the Lab" report to be published in November. Concurrent with this work, Wang's rank dropped to last in his division.

I said above, something is amiss. Wang's division leader, his associate director, the Lab's director, the president of UC and the DOE have all exploited Wang's achievements to their own gain. If Wang's work is important and valuable to the Lab, he should be compensated accordingly. If his work is not important, if the accolades are all ballyhoo, then these administrators are callous and hypocritical in their use of Wang's work to promote themselves. ♦

Lab Cited for Contempt

Jeanne Kramer, an electronics tech, is suing LLNL for alleged sex discrimination. The Alameda County Superior Court ordered the Lab to turn over copies of some 60,000 pages of performance appraisals (sans names) to Kramer's attorney, Daniel Bacon.

Bacon brought in a crew with a copy machine and set up in Bldg. 5627 ("The Courtroom") to process the documents. They found that certain documents previously inspected by Bacon were missing. Then they discovered that the Lab had installed several paralegals in an adjacent room to screen the boxes of evidence and remove selected documents before they were copied.

On July 17, the court cited the Laboratory and the Lab's attorneys for contempt. Superior court Judge James Lambden imposed a wrist slapping sanction of \$750 to be paid, by the Lab, to Kramer and her attorney. He also ordered the Lab to produce all the documents by July 31.

As we go to press, we have learned that another contempt citation may be sought. It is alleged that the Lab turned over the required documents in disarray so that it was impossible to separate the various appraisals. And further, it is alleged that when this was called to their attention, LLNL responded that the court had not directed that there be any particular order to the documents produced. ♦



Layoffs in AVLIS

J. Creighton

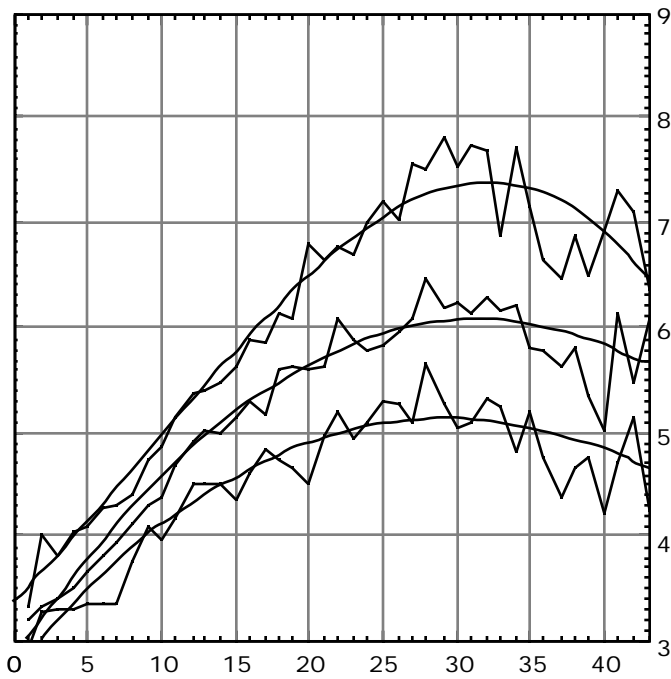
The Atomic Vapor Laser Isotope Separation (AVLIS) project recently announced the layoff of about 170 contract employees. In addition, AVLIS returned a number of matrixed LLNL career employees to their 'home' organizations. An article in LLNL's *Newsline* did not give the number of contract employees retained, nor the number of LLNL employees released.

We have obtained rough estimates of the number of people involved. The isotope separation project retained about as many contract employees as it terminated, and released about as many LLNL career employees as contract employees.

So far, the released career employees are still employed by the Lab, but relocation stresses both the employees and their home organizations. We have learned that some career computer scientists were let go while contract computer scientists were retained.

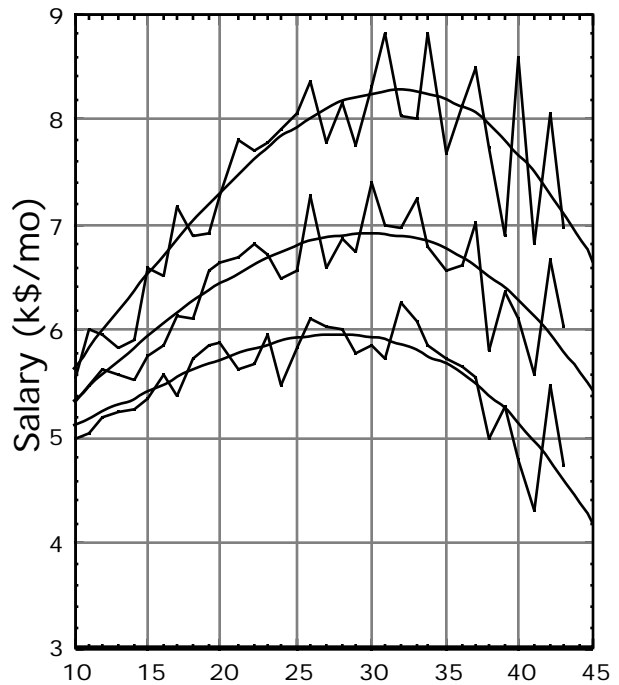
This casts some doubt on management's claim that contract employees are used as a buffer to protect career employees from budget variations. It remains to be seen how well the home organizations assimilate the large number of returned employees. ♦

BS-MS FY92



Years since BS

PhD FY92



Years Since BS

The curves above show salary distributions for LLNL's 200 series job-class scientists and engineers as a function of years since bachelor's degree. The data is for fiscal year 1992 (FY92); it was taken from the April 1992 payroll. The 20th, 50th, and 80th percentiles are plotted. The smooth curves are fits of 3d degree polynomials to the noisy raw data (jagged lines). ♦

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