

University of Florida's

John P. O'Connell

Prepared by Dick Dale, Engineering Publications, with the assistance of U. of Florida ChE Dept.

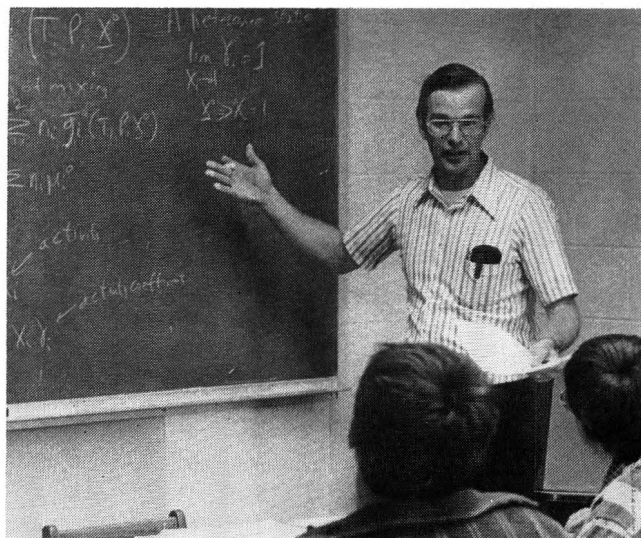
O'CONNELL ENJOYS being a teacher. He has fun at it. He has, admittedly, found his calling. "I became a teacher because of all my great teachers," he explains, "from grammar school through high school and particularly through 10 years in college and university work." (O'Connell's educational background ranges from receiving his B.A. from Pomona College, a small liberal arts college, to his S.B., S.M. from M.I.T. and his Ph.D. from the University of California at Berkeley.) "While I love all the activities of being a professor . . . teaching, research, service, most of my satisfaction comes from teaching in the broad sense. Or, better, helping *learning* in the broad sense."

"I hope to cultivate people. I want to get students to the position where they will be able to handle anything they encounter and take appropriate action, not only in work situations but in all situations."

"I like teaching engineers," he adds, with enthusiasm, "because they are the doers of modern society. Part of the leadership problems we have in all areas are people who are unwilling or unable to *do* things. I want my students to be able to act."

O'Connell says, "While there were many who influenced me, more than any other person W. K. "Doc" Lewis of M.I.T. determined my style of teaching which tries to get students to think for themselves. He recalls that, "Just talking to "Doc" was often an exhausting experience because one

**Teaching a son to play ball
applauding a musical daughter, and
taking the whole family camping are matters
of prime importance . . . to which he
devotes all of his attention and energies
with the same fervor he attacks
teaching, research or academic affairs.**



. . . a love affair with the classroom

had to be constantly alert. But you could learn much because "Doc" was so intuitive about how nature behaves. He always knew the physics of the situation."

As a result of this experience, O'Connell is a man who prowls his classroom hurling questions in response to questions, and to student's answers often gives the frustrating challenge of, "Do you *really* believe that?" But, though the vital young educator admits to a love affair with the classroom, his real love is informal interactions with one student, head to head, or with several in a close contest. Such occasions, be they "bull sessions or counselling sessions, allow me to deal with the students as individuals and give them what I've learned and valued." Unfortunately, this is not 'efficient' in the bugetary sense. Because we are developing people, education is not a matter of production. If we must, a better way to cut costs is to reduce that proportion of students that are not eager to get all they can out of their educational opportunities. We in public institutions

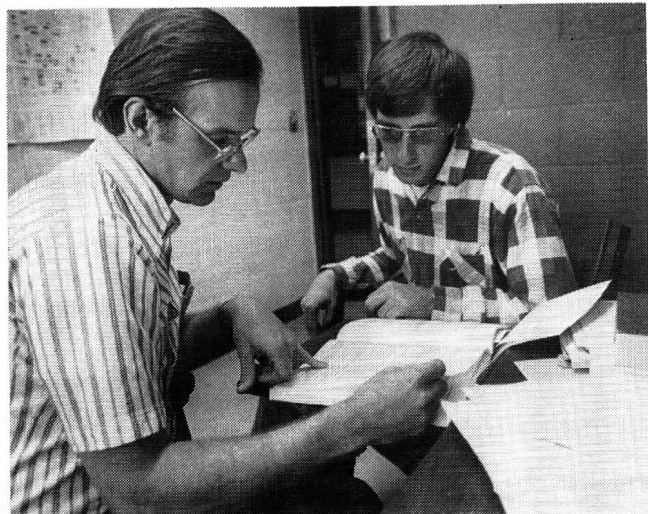
should try to establish an atmosphere of intellectual pursuit and tradition found usually at private schools where students are carefully selected.

REACHING BACK

RECENTLY, THROUGH the latter half of his nine years of teaching, he has noted in his students two trends, one is a move of sorts toward tradition, a return to the ceremonial, a reaching back. And this meets with his approval. "We have such a rich variety of things that we can get into and enjoy. We have the opportunity to go back and rediscover and reappraise so very much."

The second is that even though modern chemical engineering students are more concerned about reaching successful employment and a career than a few years ago, "They are not as selfishly motivated as this usually implies and as students may be in other fields of study," he continues. "They help each other and are more sensitive to each other. This is great, because I feel many of the problems of the world exist because people are insensitive to one another."

How does O'Connell come across? Well, Professor Robert Bennett, an associate and an admirer comments, "The impression we get from John's students is that he is extremely interested in their welfare, growth, learning and understanding. He will spend hours with a student trying to



His real love is informal interactions with one student . . .

help him understand some point. He will use every possible method to keep his students alert, make them think for themselves, including sarcasm, kidding and prodding them to take logical subsequent steps until they answer their own question.

O'Connell recalls, "More than any other person 'Doc' Lewis influenced my style of teaching . . . adopting the Socratic method to make students think. Just sitting talking to 'Doc' was an exhausting experience."

They see him as having unbounded physical, emotional and mental energy that sometimes leaves his listener gasping for his breath."

John M. Prausnitz writes from Berkeley about O'Connell's influence there: "As elsewhere, new graduate students at Berkeley are assigned a desk and chair soon after arrival. All too often these desks and chairs are worn, routine pieces of furniture devoid of any charm or personality.

"Soon after John's arrival at Berkeley he too was given a hum-drum old chair and desk. Not very pleased, John scouted around the various storerooms of the College of Chemistry and somewhere he found an antique, upholstered swivel chair—not luxurious—but much more comfortable than the assigned one and definitely interesting, colorful and unique. John O'Connell claims an aged janitor told him he had cleaned that chair for over 40 years and that it originally belonged to the late Professor Latimer, discoverer of the hydrogen bomb when he was dean of the college.

"The chair is now the prize possession in the molecular-thermodynamics research laboratory. By tradition it is used by the senior graduate student, sometimes with a little ceremony. Although it lacks an endowment, the O'Connell Chair is high in prestige."

IN A PICKLE

ONE CLASS OF JUNIORS at Stanford was so enthusiastic, but overwhelmed by the learning experience with O'Connell's thermodynamics course that they established the first annual Chemical Engineering "Pickle Award" in honor of "what they were in all term long." The award was a large Kosher Dill Pickle. Returning to give a Seminar at Stanford one year later, he also received the second Pickle award since no suitable successor could be found among the Stanford faculty. John says "That class was one of my great teaching experiences because I had the time to devote to the students and they not only had great ability, they all really wanted to learn. Apparently I was one of the few teachers they had that they felt really cared."

O'Connell's more recent academic activities include belonging to such professional societies as ASEE-CED, AIChE, the American Chemical Society, the American Association of University Professors, the American Association for Advancement of Science. People who have shared committee service with O'Connell note that he has sensitivity, understanding, wide knowledge of the university, good rapport with campus people and is willing to take suggestions. They also say that as a committee member he is a "mover" and a "shaker". For example, he was the principal developer of the University of Florida Teaching Evaluation system which allows individual colleges to choose their own instrument. "While any system can be abused, I think the value of the information which should help improve teaching and of forcing many students to think about the quality of their education outweighs possible 'popularization' of courses and manipulation for wrong ends."

He is also a Danforth Associate, a program for selected faculty established by the Danforth Foundation to "promote the personal dimension of education".

O'Connell's professional fields of interest include applied statistical mechanics and molecular studies, solution thermodynamics (including electrolytes), transport properties of gases, adsorption and surface diffusion, materials and computer calculations. In addition to the usual graduate research direction, he has had a number of undergraduates work directly with him in these areas.

In his private life he concentrates his interest on his family. Their favorite activity "Which happens too infrequently", is travel and camping in their pick-up camper. He particularly enjoys watching the growth of his two sons and one daughter with their diverse talents and personalities. While John devotes the same energy and enthusiasm to their development, he does find limits to their patience with his teaching style. He also "too infrequently" enjoys the products of his wife's culinary expertise, renowned not only among faculty and students in Gainesville, but also among professional visitors fortunate enough to have a dinner or party given in their honor at the O'Connell home.

If all the foregoing paints an unusual picture of John P. O'Connell, it must certainly be founded in fact. In his own words O'Connell says:

"Any one who professes to be a thermodynamicist has got to be a peculiar person!" □

Emphasis on Quality

Sir.

Our ad on page 252 of CHEMICAL ENGINEERING EDUCATION, Volume IX, No. 4, Fall 1975, contains a more-or-less egregious error: the substitution of the word "equality" for the word "quality".

We recognize the importance of CHEMICAL ENGINEERING EDUCATION and appreciate the amount of work that goes into preparing such a publications. Thank you for your efforts.

Noel de Nevers
University of Utah

Editor's Note: *CEE* regrets this typographical error. The corrected ad appears below.

Fall Issue Feedback

Sir:

In the Fall 1975 issue of your Journal, an article by Donaghey discusses "Critical Path Planning of Graduate Research." This paper is somewhat misleading, because it indicates that the process is performed just once per project.

The sequence that Donaghey describes in his Table II does not stop with Tasks 8 and 9, because the Task 8

CONSIDER UTAH

This is a small ad for people who recognize that bigger isn't necessarily better. The University of Utah has a small chemical engineering department (8 faculty) where the emphasis is not on size but on quality. If you are interested in a small, high-quality chemical engineering department having a variety of important research activities and located in one of the world's most pleasant cities in a unique geographical setting,

write for more information to:

Professor Noel deNevers
Director of Graduate Studies
Department of Chemical Engineering
University of Utah
Salt Lake City, Utah 84112