

William H. Corcoran

1920-1982

WILLIAM H. CORCORAN, the Institute Professor of Chemical Engineering, died on August 21 at the age of 62. A memorial service was held on campus on October 27, at which four of his colleagues reminisced about him. The service was opened by Harry Gray, Beckman Professor of Chemistry and chairman of the division of chemistry and chemical engineering. Gray was followed by John D. Roberts, the Institute Professor of Chemistry, provost, vice president, and dean of the faculty. One of Corcoran's graduate students, Murray Gray, spoke next. The final speaker was John Seinfeld, Nohl Professor and professor of chemical engineering and executive officer for chemical engineering. Michael Kong presented piano music both before and following the service. Excerpts from the tributes appear below.

HARRY GRAY: Bill Corcoran was a great teacher and scholar. He was a grand colleague and friend. And he was a superb human being. When I came to Caltech 17 years ago, I honestly thought that a chemical engineer was a person who slept through PhD exams in chemistry. Bill let me know very quickly and in no uncertain terms that that simply was not so. He felt very deeply that the training of every chemical engineer should include a strong component in pure chemistry. He also felt that chemists would not be hurt if they understood a little chemical engineering. I think it was this deep feeling and his expression of it that helped build our division into the close-knit group it is, a division with real cooperation between chemists and chemical engineers. This is not the pattern in this country, but it is at Caltech, and most of it is due to the devotion, the example, and the dedication of one man, Bill Corcoran.

I remember Bill as a person who wrote

notes to me. Usually he wrote first, and usually I answered. But I have to tell you about one note that I beat Bill to. When I learned that he was to receive the highest honor in chemical engineering education in this country, the Warren K. Lewis Award for 1982, I quickly scribbled off a note to him expressing my delight. Just before he went to Hawaii last August, he wrote a little note to me in answer, as he always did. I could tell from it how much this award meant to him because it recognized his deep interest in education and his commitment to students. I am very pleased and honored to tell you that his award will be presented to Bill's family at the annual meeting of the American Institute of Chemical Engineers.

JOHN ROBERTS: The death of Bill Corcoran in late August deprived all of us of a wonderful friend, distinguished colleague, most loyal alumnus, and a staunch ally in the battle for excellence versus mediocrity.

Bill's career resumé spans six single-spaced pages in elite type, before one even gets to the nine pages detailing the titles and coauthors of 90 professional papers. Clearly, no one can do justice to such a career in a gathering like this one. Indeed, it is better not to even think of being comprehensive. It is better to mark the Corcoran era at Caltech by recalling the main features of the man and his efforts on our behalf.

Many at Caltech do brilliant research and brilliant teaching. These are Caltech's purposes, and Bill served those purposes well. But Bill's career was also featured by extraordinary service to the Institute. There may be others on the faculty who have records that compare with his service on 20-odd committees or boards, but I don't know of them. I think of myself as being a reasonably good Caltech citizen,



and I have served on only four of these.

Two especially memorable jobs Bill did for the Institute, with real devotion and patience, were 19 years of service as chairman of the Sponsored Research Committee and 10 years (concurrently) as vice president for Institute Relations.

One can hardly believe with all of these Caltech responsibilities that Bill could possibly have much time for the outside world, but he served as an officer or committee member for some 50 different outside professional activities, as director of three corporations, on the board of Villa Esperanza in Pasadena, and he gave light years of truly outstanding and dedicated service to the Huntington Institute for Medical Research.

Perhaps, if each of us could bring ourselves to help others in a half, or even a third, as many ways, the world would be a far different place to live in.

MURRAY GRAY: During the 30 years that Dr. Corcoran taught at Caltech, he was research adviser to over 30 PhD students and a large number of MS and undergraduate students. Today I would like to describe what that meant to all of us.

In his contact with us, Dr. Corcoran

placed strong emphasis on several areas of professional and personal development. He encouraged good communication skills in our oral and written work. Biweekly reports and group seminars were opportunities to practice speaking and writing and to get helpful comments.

Dr. Corcoran always encouraged us to maintain a professional attitude toward our work and responsibilities. He strove for fairness in his dealings with us and encouraged ethical conduct.

He encouraged us to think of our research as a part of a larger framework of knowledge, making sure that we were up to date on related topics by sending a stream of material across our desks. His own research interests always had a well-defined social aim.

He worked to develop our self-reliance. Authority was always delegated to the students as much as possible. He treated our inevitable mistakes as part of the learning experience.

His impact on our professional conduct and attitudes was matched by his impact on us as a person. He was always a gentleman without necessarily agreeing with us.

He set standards of discipline and will power that few of us could match. He lived every day to the fullest. He carried such a massive work load that we always knew that he was working at least as hard as we were and probably much harder.

Dr. Corcoran always treated us in a fatherly way. He worked in our best interests. He was there when we needed him for help or advice. He strove to pass on the best of what he knew to us. We will do well to remember and build on the ideals that he taught us.

JOHN SEINFELD: To describe the accomplishments and contributions of Bill Corcoran to chemical engineering, engineering education, and to his friends and colleagues would require many, many pages. During his life, Bill attained virtually every honor and recognition available to an engineering educator while, at the same time, truly touching the hearts and minds of all those with whom he came in contact. Perhaps no other individual had more influence on the course of engineering education in the United States over the last 20 years than Bill. Throughout a long and distinguished career at Caltech, and through his continued leadership in the American Society for Engineering Education and the Amer-

ican Institute of Chemical Engineers, Bill Corcoran maintained a vigorous, excellent program of teaching and research. One of his proudest moments was when he received a teaching excellence award from the Associated Students of Caltech.

I should like now to read an excerpt from a letter to Martha Corcoran from one of Bill's former graduate students, Malcolm Morrison (BS '64, PhD '69). It will remind you all of Bill's personality and character in a very special way. Morrison is recalling a softball game between faculty and students at a chemical engineering picnic that took place in the 1960s.

"Bill and I were on opposing teams. I was catcher. I think Bill played first base, but that doesn't matter. We were coming down to the end of a close game, and we were slightly ahead. His competitive nature had been thoroughly aroused, and for several innings he had been playing very aggressively, making plays deliberately and exuberantly, keeping the ball moving around the infield and keeping up the chatter. He was never laid back, but he was particularly hyper now, and he was exhorting the team relentlessly. His team was at bat, and for his "up" he laced a ball to right field which should have been only a strong single. But he turned it into a double with heads-up base running in all the speed a man in his late forties could muster.

So there he was, parked on second, when to my great dismay, the next man up hit a weak single to right field. Bill knew right away, and I knew right away, that he was tearing straight to home, come hell or high water, to get a run that was very important. And I as catcher had a reasonable chance to get him out if the throw was good. I am also quite combative, and by the time he had passed that shortstop I had determined that I was going to plant myself in front of the base and keep him from getting home if I had to break every bone in his — and my — body.

I have always wondered what he thought when he rounded third. He could see me finishing my burrowing in, and boy, was I planted! Dynamite could not have gotten me out. He could see the throw starting to come from the fielder, and it could not have taken long for his experienced eye to tell him that he and the ball would arrive at my location simultaneously. It was a perfect throw — the only kind that could have caught up to him.

So, for 60-odd feet, what did he think of? I know what I was thinking — pure fear. Here was a big guy with a humongous head of steam, coming straight in to cream me, and I had to hold on to the ball during the creaming. But what was he thinking? Was he thinking, as he saw me, that the only thing between him and possibly the game was a little "kid," six inches and 60 pounds smaller than him? A kid who, without that much problem could be totaled out of the base path so that even if he held on to the ball he would be too late with the tag? Was he thinking about the last several innings? Innings in which he had urged aggressiveness on his teammates? Innings in which he had shown them the right kind of go-get-'em, heads-up ball playing that won games? And how, now it had come to this, that winning the game meant putting it to me and counting the broken bones later?

But he could not. When our time came, he broke stride, slowed down, and tried to hook-slide around me. He failed, and when they untangled us, about five feet past the plate, I still held the ball, and he was out. Even trying to miss me, he almost killed me, and to this day I remember that hit. Jesus, the aches I had later!

After he had stood up and asked for, and received, the umpire's decision, he turned and jogged to his team without a word or a trace of facial expression. I am sure it hurt too much to tell me it was a good play, particularly when he had had the power, unused, to have prevented it. But he was too good a man to show disappointment and curse a little, as most everyone else would have done.

I forget who won the game. It was not important. Everything from which something could be learned was past. What Bill had said when he broke stride and tried to slide around me was that Yes, combativeness and controlled aggression is important to success, and that hustling and doing your heads-up best is important in life. But that when it all comes down to hurting someone to get the job done — then it is not worth it, even if your failure may cause a loss of face to those whom you have been guiding by your actions. He had been urging aggressive play, but when one spectacular aggressive play could have turned the game around, he could not do it. There were more important things than the game, and there always are, no matter what the "game" happens to be. And I remember this from that game, and from him." □