

Claude McMillan, Jr. 1923-2008



On May 20th Claude McMillan passed away in Boulder, Colorado, just two days shy of his 85th birthday. He is survived by his wife, Sue, an author; three sons: Chip, a PhD in science education; Clayton, a PhD in neural networks; and Scott, a software designer; and a daughter, Diana, known for her outstanding work in promoting literacy in Boulder, Colorado.

Claude McMillan was my mentor. His influence on me began well before I met him for the first time. While working as a process control engineer with Borg-Warner Chemicals in the winter of 1970, I came across the second edition of *Systems Analysis: a Computer Approach to Decision Models*, co-authored by him with Richard F. Gonzalez while they were colleagues at Michigan State University. The book had a profound impact on the emerging practice of computer-based modeling and analysis of business decision-making processes. On hearing of Claude's passing, Linda Sprague, Thomas J. Petters Distinguished Professor of International Business at Rollins College, told me, "I met Claude through the American Institute for Decision Sciences some time after I had come to know Dick Gonzalez. I was quite in awe of the fact that I had then met both authors of *Systems Analysis: A Computer Approach to Decision Models*. ... I had read the book just after the famous IBM MRP Seminars in 1973/74: it was required reading for PhD MIS students at MIT."

Armed with the book, I developed a computer-based model of Borg-Warner Chemicals' manufacturing plant in West Virginia, and experimented on it numerically, saving the company substantial amount of funds and materials. Inspired by this success, I resolved to pursue my doctoral stud-

ies with Claude. I had barely missed meeting Claude earlier at Michigan State University. By the time I arrived in East Lansing in 1966 as a graduate student, he had already moved to Boulder, Colorado. I traveled to Boulder in May 1972 to persuade him to be my mentor. From then on he remained my advisor, teacher, guide, and a generous friend.

Claude was one of the 16 founding members of the American Institute of Decision Sciences, known today as the Decision Sciences Institute. Al Simone, erstwhile president of Rochester Institute of Technology, and one of the original 16, recalls, "Back in the 1960s and 1970s, we were kindred spirits, attempting to introduce quantitative methods into the business curriculum. Claude was one of the early pioneers in this regard, and his seminal textbook paved the way for the developments which followed, including the establishment of the [American] Institute for Decision Sciences and its journal. His contributions have earned him a place in the history of our discipline."

Roger Collons of Drexel University, another of the original members, adds, "I always thought of Claude as one of the great gentlemen in DSI and in the academic community at large. From time-to-time, he would bring his graduate students to meetings and I thought that was a really neat thing to do." Claude was vice president of the Institute in 1970-1971, which was the Institute's second year of existence. He was a member of the Institute's Council during 1971-1973, and was elected Fellow of the Institute in 1980. He received the Institute's Best Application Paper Award in 1985.

Claude's schooling was in Ada, Oklahoma, where he was born. His childhood friend, retired Superior Court Judge Robert H. Kroninger of California, recalls, "Claude was my closest friend through high school. Of the dozen or so boys that hung around together, he had

A Man for All Seasons

Claude McMillan beyond question deserved the label of "a man for all seasons." In addition to producing highly regarded textbooks and a series of papers on optimization (a few of which I had the privilege of co-authoring), he was a great devotee of the arts, especially literature and play writing. I recall how his imaginative bent carried over to his work in the decision sciences field, as illustrated in a memorable instance by his coining of the term "managerial robot" which he explained as follows:

When a craft employee is replaced on an assembly line by a machine that performs the same function, we refer to the replacing mechanism as an industrial robot. Similarly, it is appropriate to give a special designation to a system which replaces a manager in performing key decision functions—by referring to such a system as a managerial robot—to distinguish it from a system that merely supplements the manager.

In applying this concept, Claude and two of his sons, Scott and Clayton, joined to build a system to replace managers in the decision-making function of employee scheduling, and formed a software company called Heuristec, Inc., that made their innovation available commercially. Their company was subsequently bought out by Tomax, Inc., which continues to provide their employee scheduling software to business and government organizations today.

Upon Claude's retirement from university life he pursued his passion for playwriting in earnest, producing a series of plays that received a warm reception not only in Colorado where he made his home, but also in productions off Broadway. His friends would often refer to him as a "gentleman's

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the most inquisitive mind. He took a class in shorthand. At parties he would shake salt out on a table and practice writing shorthand in the salt with his finger. He took Latin while others took Spanish. He, along with some others, wanted to make a telescope and ground a lens. He was very inquisitive." Claude earned his BS in electrical engineering and EE degrees at the University of Colorado at Boulder, graduating in 1948 and 1949, respectively. He married Shirley Sue Jackson in 1949. During 1951-53, he served the United States Air Force as a dashing first lieutenant, flying B-17s, *The Flying Fortress*. This experience laid the groundwork for his doctoral research. To earn his PhD at the Ohio State University, Claude investigated management use of financial standards in the air force, and received the degree in 1955. For the next decade he was on the faculty of Michigan State University. There he teamed up with Richard F. Gonzalez to explore the use of emerging computer technology in decision analysis. He also spent four years, from 1956 to 1960, in Sao Paulo, Brazil, as a member of a joint project between USAID, Getulio Vargas Foundation, and Michigan State University, to establish the first college of business in South America.

Claude's move to the University of Colorado in 1965 put that institution on the decision sciences map. He persuaded Fred Glover to join him at the University of Colorado, as well. Claude was an outstanding teacher-scholar, fiercely loyal to his colleagues and students. He retired from the University of Colorado in 1988 as professor emeritus of management science and information systems. Along the way he published numerous papers and authored six outstanding books, including *Mathematical Programming*, and also *Discrete Optimization* with Donald R. Plane.

In 1988, I persuaded Claude to join my department at The Citadel, where I chaired the business administration program. Claude joked about 'reporting' to his student. I told him that this was a measure of his success as a teacher! After two years in my department as

the W. Frank Hipp Professor of Business Administration, Claude retired from the academe to start an entirely new career in the theater. He wrote 14 plays and became a highly acclaimed playwright. He created plots that were rooted in the philosophies of decision sciences, knowledge management, and artificial intelligence. His plays were staged at a number of locales around the country, including Denver, Los Angeles, and off-Broadway in New York. Most notable of his plays are *An Office for a Friend* and *The Deist*. According to Luke McKissack of First Stage, Los Angeles, Claude's plays demonstrated the brilliant, analytic mind of a philosopher.

Claude enjoyed the challenge of difficult philosophical dilemmas and thorny practical problems. He would frame questions for his students, family members, friends, and even chance acquaintances, to have them ponder and deliberate the issues. He had a way of igniting in others a sense of curiosity and a desire for learning. In our conversations, his questions were always short and concise. I would struggle with them and give him long, wordy answers. Once Claude challenged me to ponder on what causes a dilemma. He posited that an adequate moral theory should render all dilemmas moot. I said that according to some Eastern philosophies a person has many concurrent and potentially conflicting obligations arising from the person's place in the overall scheme of things. Not all of these can be met at the same time, and therefore a person is constantly in a state of dilemma, independent of moral considerations. Claude flashed his characteristic, charming smile with a slow nod that was a mark of his encouragement. I was happy to have my teacher's approval.

Claude was also a practical decision scientist who believed that action was an essential element of the decision-making process. He was not interested in trivial issues. In *Variations*, a play he authored, to which he also gave an alternative title of *The Artificial Intelligencia*, an artificial intelligence system salesman asserts, "Judging is not enough. You

gentleman" in recognition of his gentle manner and the considerate attention he always gave to the concerns of others. I personally owed him far more for his kindness than I was ever able to repay, and beyond a doubt many others have found themselves similarly in his debt. Claude was a shining light in the decision sciences community—his presence illuminated numerous minds and warmed numerous hearts. He leaves a vacancy that is impossible to fill.

Fred Glover, Distinguished Professor Emeritus, University of Colorado at Boulder

A Valued Friend

Claude was an opportunist in the very best sense of the word. His interests were many. He saw opportunities in his experiences and acted to exploit them. Claude and I were part of an MSU-USAID project charged with helping our Brazilian counterparts to develop the first collegiate school of business in South America. Claude first went to Sao Paulo in 1956. In 1958 I joined the group. Claude was our chief of party from 1958 through 1960. He expressed a keen interest in the experiences of expatriate managers from various countries working in Brazil. In fact we ourselves were expatriates. On returning to the U.S., Claude

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cannot be - - - just a judge. The world's problems demand attention. Superficial thinking really shouldn't be tolerated. As thinking human beings our place in the scheme of things is to perturb sloppy thinking, to reexamine antiquated ideas. And to direct those faculties we were endowed with—faculties for influencing events—toward their most productive employment."

Claude will be sorely missed by many. He will never be forgotten. He will remain my teacher. ■

Krishna S. Dhir, Berry College

proposed that we write about these expatriate managers; their professional and personal lives living abroad. The manuscript was our first collaboration.

Shortly after, Claude and I were awarded Ford Foundation fellowships to Carnegie Mellon and The University of Chicago. There we learned about computer simulation and related topics. It was Claude's initiative that led to our second collaboration. Even though there were few courses in the B-school curriculum for our text Claude believed that our materials were timely. We worked through two subsequent editions and a third book.

When I remember Claude, the words that come to mind are collegial, patient, decent, friend, honorable, generous, professional, family man.

*Richard F. Gonzalez, Professor Emeritus,
Michigan State University*

A Generous Colleague

Claude had a profound impact upon my career. Two incidents come to mind that illustrate his enthusiasm and generosity. The first is my initial meeting with Claude in 1967, when I was interviewing for a faculty position at the University of Colorado. His first words to me were, "Don, there is no better way to earn a living than to be on the faculty at the University of Colorado." His enthusiasm was obviously genuine; that enthusiasm permeated every aspect of Claude's career. He pursued each of his diverse interests with passion and creativity.

Generosity came easy to Claude, because he practiced it so often. Shortly after I became Claude's colleague at Colorado, he enquired of my interest in collaborating on a book that eventually was titled *Discrete Optimization*. I agreed, even though

I knew very little about the subject. I was confident Claude would generously guide my learning, which he did. As publication neared, Claude informed me that I would be listed as first author; his generosity was overwhelming to me, a young untenured faculty member. But let me set the record straight: Claude was undoubtedly the senior author of *Discrete Optimization*! ■

*Donald R. Plane, Professor Emeritus,
Crummer Graduate School of Business,
Rollins College*

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also personal lives of everyone from little kids to their parents and families.

The thinking of the two external sources is consistent with those of the two authors being compared in this paper.

More on marketing—both, the "appeal" aspect and audience aspect of the field are presented below. Having given Friedman some grief and applause for the marketing aspect of his title, let's do the same for Ghemawat's presumed marketing approach as well. The statement made on the HBS site quoted earlier, "With apologies to Thomas Friedman, managers who believe the hype of a flat world do so at their own risk" is a provocative marketing pitch (again, I'm not knocking such a marketing pitch—that's my field, having spent many years in the corporate and academic world of marketing, I wouldn't bite the hand that has fed me); but, that's how I see it. Ghemawat's book is an excellent book but, in the absence of such a marketing approach, the target audience might have been a limited one—perhaps limited to a handful of corporate executives in each company and academic colleagues in the field of global strategy. It's possible that some clever marketing person determined that the book could have some wider and broader cachet or bestseller

value to a larger audience by deliberately drawing a distinction between his book and that of Friedman, which was already a bestseller at that time. I am not, for a moment, suggesting that this is actually what happened; merely that it is possible. And, this is the reason for my concentrating on the 2005 version of Friedman's work, because it clearly pre-dates Ghemawat's 2007 book.

These two books are entirely different ones. Friedman's bestseller, while a serious piece of work from a journalistic perspective, is not the business and academic text that Ghemawat's book is.

My interpretation of Friedman's work (whether Friedman would agree with this interpretation or not, I cannot say!)—and indeed, such has been the basis of my many speeches on the topic—is an exhortation to us, particularly in America—including the corporate sector, the education and higher education sector, and perhaps most significantly, parents and families—to get serious about a world that is becoming increasingly flat. I see Friedman's book as a good wake-up call to all Americans and other westerners (even if they simply stay at home). I see Ghemawat's book as an excellent strategic guide book for corporations

which are considering expanding to other countries.

Two excellent books, but very different ones. Largely different audiences, in spite of the creative marketing approaches.

To summarize:

Is the world flat?
No.

Is it flattening?
Yes.

Do differences matter?
Yes.

Do both authors know that?
Yes.

Should we read both books?
Yes.

Should we compare them?
*Only for the sheer academic enjoyment
of it!*

Endnote

1. The Organization for Economic Cooperation and Development (OECD) is an international organization of ~30 countries which state that they accept principles of representative democracy and a free-market economy. ■