

The Life of David Clifford: A Drama in Three Acts

By John Williams, Editor of the Alumni Issue

Dr. David Clifford tries his best to sound bland—at least over the phone. Talking to him about his life and work, however, creates its own quiet drama. Though it is one of literature's hoariest clichés, all the world really can be a stage, and conversations with David Clifford reveal a drama beneath the studied calm of this indefatigable administrator, doctor, and humanitarian. Shakespeare's analogy adds that we are all "merely" players, but Clifford's very serious roles in the fight against human suffering have nothing to do with "merely," or to borrow from another Shakespeare work, the protagonist in this drama "knows not 'seems.'" His life—presented here in three acts—is the real thing.

Act I

Boy From the Heartland Makes Good

David Clifford was born in Tecumseh, Michigan, but raised in Georgia and Texas. Because his father, Burr, was a professor of classics, first at Emory and Oxford and then at Southwestern in Texas, the Clifford household revolved around the academic life. Burr also sponsored an Alpha Chi chapter. Young David would watch his father packing for trips to the national convention. He imbibed the lessons on excellence inherent in both the Alpha Chi experience and in the standards of his mother, Doris, who taught school before settling into the role of housewife and mother to three children: David, John, and Jeanne.

David must have been the one influenced most strongly by growing up around a college, for he has remained attached to the campus life he loved as a child. He lived a block from his dad's workplace as a child and with his family attended the plays, sporting events, lecture series, and other events that give college its unique flavor in American life. He experienced the unique combination of sanctuary and excitement, both intellectual and emotional, provided within the confines of hushed auditoriums or raucous gymnasiums. It was not only gatherings of people that drew David to life at college but also the solitary afternoons in libraries, where he spent his share of time from the 4th grade on.

He found another kind of excitement at Southwestern, a Methodist college, in the cool recesses of chapel where he was tutored in the nuances of playing the pipe organ. "In the summer," he recalls, with no summer school at Southwestern, "we faculty kids felt we owned the campus. We flocked to the college swimming pool and to tennis courts. It was wonderful." He fell in love with music in those summers when the campus organist gave him access to all three pipe organs, including the magnificent Skinner organ, considered the finest available at the time.

So in those early years the sensitive, eager child came by his love of music and athletics, but he also found awakened in him a fascination with medicine, especially the intricacies of the human brain. There was no magic moment per se; oh, there was the time he put a Band-aid on someone and felt the satisfaction of easing pain. But more than anything else, it was a growing knowledge of how the body functioned, its paradoxical power and fragility, that led him first to a career in medicine, then to neurology, and finally to neuropharmacology.

Those terms may not be familiar to some of us, but they took on significance for him because of his fascination with the brain. Neurology is simply the study of the nervous system,

which includes the brain and spinal chord. Neuropharmacology is the application of drug or chemical therapy to disorders of the nervous systems. Tongue-twisters to the layman, these words and the discipline they describe represent the human body, which in its complexity was to the young man like the wisdom of his precious library and the beauty of the pipe organ rolled into one. His aspiration was to be a virtuoso in the maintenance of this organism, so fearfully and wonderfully made.

Degree in hand, Clifford took a position at Washington University in St. Louis and applied himself to extensive clinical and laboratory work. Early on he was interested in the treatment of epilepsy, and in the lab studied damage to nerve cells in the brain resulting from epileptic seizures. He discovered that the damage was done by the brain itself. That is, certain neurotransmitters produced, in the grip of a seizure, too much of an otherwise beneficial chemical. The excessive firing of the brain cells, in effect, poisoned those same cells. Clifford's work was to find a drug that could block the excitatory amino acids, and over the years he and his colleagues have been able to use drug therapy to alleviate some of the tissue damage caused by the seizure.

For Clifford, the satisfaction has always been the exchange between the clinic and the laboratory. Working with real people suffering real pain provides the impetus for the meticulous experimentation. In these days of perpetual guerrilla warfare, you might say that he is like a member of a Special Operations unit. He is driven to be out there in the microscopic jungle, or the urban infrastructure, of the nervous system, where so many things can go wrong and so much care must be exerted to isolate the enemy lurking in seemingly innocent places. Seen through a microscope, the terrain appears as red and purple splotches branching out into filaments with frozen dead ends, unmapped anywhere but in the lab or in the mind of men like Clifford. The work is lonely and often frustrating. But every time he talks to a patient, he realizes why he is willing to spend so much time on the fringe. The reason shines in the grateful face, the surrounding family who finally see a smile grace the haggard countenance of their loved one, a haggardness six months or a year in the making. However tentative, the smile is contagious, lighting up all the faces in the room—even the doctor's.

Act II

Enter the Antagonist

“Take a look at this,” a colleague said. “You’ll probably never see it again.” This off-the-cuff statement proved similar to one made by the German aristocrat who urged his friends to observe that fellow Hitler a while before his antics faded away. What Clifford took a look at was the AIDS virus, and suddenly everything else before seemed like training exercises. The Special Ops soldier became a commander of sorts. In fact, he became the man who raised a regiment for a new kind of war. The enormity of the task in those early years of the fight against AIDS galvanized his leadership qualities. It took considerable “political and diplomatic skill” to pull off what David Clifford accomplished by 1993. He led the way in founding and funding the Neurological AIDS Research Consortium (NARC). His fund-raising target: the National Institute of Health (NIH), a hydra-headed conglomerate with tons of money to spend if only the right commander would come along at the right time with the right plan.

With appealing modesty, Clifford credits another kind of soldier in the fight against AIDS with providing the opening he needed. An AIDS-infected activist approached officials at

the Neurological Institute, a branch of NIH, with a funding proposal, but at first they wanted no part of it. After all, it was the Infectious Disease folks who had built all the buildings, spent all the money. AIDS was not a matter for neurology, which ought to be concerned with major brain problems. “Wrong,” said the well-informed activist, who had taken the trouble to avail himself of public access to the Institute’s budget. “You have the money.” Pregnant Pause. “Oh,” said the Director, “then I guess we’ll have to provide it, if someone can come up with a persuasive grant that shows how AIDS research dovetails with neurology.”

Enter General Clifford, representing the AIDS Clinical Trial Network of thirty universities. Understand, if we may finish off the military analogy, that grant-writing at this level is comparable to inventing a war plan. The grant-writing team must know the source of funds as well as General Tommy Franks knew the Middle East, and every possible contingency must be planned for to insure success. That’s why the grant appearing in 1993 was a thousand pages long.

“Funding is political,” admits Clifford. “Factions develop, pet interests determine awards, but early on in the AIDS crisis, the government made lots of money available. Our impassioned activist found the right pressure point. All we had to do was make the case for what our group could do.” So he supervised a team of about thirty people in producing the grant. Most of it was detailed description of clinical projects, the CV’s of hundreds of personnel who would be involved, and proof that the fifteen participating institutions had state-of-the-art medical facilities to handle the research. Clifford had to seal the deal, however, with a thirty-page explanation of how he would manage all the people and technology to produce desired results. In the end, the NIH granted them \$1.5 million and NARC was in business.

“They funded us for only two years in that first grant,” Clifford says. “They didn’t believe I could pull it off.” He did pull it off, though, and the consortium has received two subsequent grants worth millions—each for five years. Apparently the powers that be now believe in what the Clifford-led group can do. As one informed observer puts it, they have “changed the way we treat and manage patients with primary and secondary neurological complications of HIV.”

And the changes go on. On a typical day at the office, Clifford divides his time between conference calls with participants from around the world, to make sure that plans for the latest research proceed, and his own intense preparation, which means developing treatment protocols. In May of 2003, he flew to Florence, Italy, to discuss with colleagues from the world over new trial programs to deal with PML, a complication of AIDS that produces a fatal viral infection in the brain. The trial will feature a genetically engineered interferon that the consortium hopes will inhibit the virus. The trial can begin because Clifford finally completed negotiations with the drug company that owns the interferon. He now hopes that medical staffs in America, France, Spain, the Netherlands, and Italy will join in the trials.

Each new phase of the fight against AIDS begins in a search for money and ends in the attempt to save an individual human life. And that’s what it has always been about for Clifford. A decade later, he recalls with anguish that in the first year of his consortium “everybody died!” Or it seemed that way. He still wants to visit with all the patients taking part in the trials, and now the success rate is much better. One in particular stands out: a 30-year-old AIDS patient whose case was so hopeless that his parents had already sold his possessions—including his clothes. Dr. Clifford said, “Wait! Let’s try one more thing.” Now the patient is working forty hours a week and even performing in musical theater in his spare time. Spare time is what Clifford and his compatriots live to give. The extra year with loved ones, or a decade free of pain and full of hope for someone who was hopeless.

The task in the United States is still daunting for these neurology specialists. After all, 100 percent of all untreated AIDS cases will show nervous system problems. It may not happen until six years into the disease, but it will happen. Further, up to 30 percent of AIDS patients develop cognitive problems. Despite the continuing challenges, NARC has accomplished far more than the NIH apparently thought it could back in 1993 when that first million was granted.

For the leader and chief administrator of NARC, the decade provided quite a second act to a professional life that had begun auspiciously enough at Washington University. But every career ought to have a third act, and Clifford's awaited him on another continent.

Act III Don Quixote, Santa Claus, and Frequent-Flyer Miles

Setting: Addis Ababa, a city of 4 million people in Ethiopia.

Protagonist: a slender, bespectacled doctor from Washington University, who is in town because an Ethiopian student had approached him one day about doing a fellowship. One thing led to another until he found his gaze captured by this huge city.

What Dr. Clifford sees is almost a cliché of the new millennium. He looks out from the window of a Sheraton more well appointed than most in America only to see rows of shacks. He sees a land of the wealthy few and the impoverished many. He sees a nation with a per capita income of \$120 a year. Even worse, he sees a country with almost 4 million people infected with HIV, a figure triple what it is in America. Ethiopia has only three medical schools, each with minimal facilities—only one intermittently working brain scanner—and none able to offer much if any therapy to their AIDS patients.

In other words, what David Clifford, the Don Quixote of neurology, sees is bunch of windmills.

His impossible dream for Ethiopia is a trained medical staff capable of proper diagnosis, enough drugs to treat infections and neurological disorders associated with AIDS, and effective distribution methods to get the medicine to those who need it. The dream can come true, Clifford reasons, if some of the \$15 billion in aid to Africa promised by George Bush in his 2003 State of the Union address can be squeezed from Washington into the thirsty land Clifford has now adopted.

So far the billions of dollars in Bush's proposal have not materialized. First, the war against Iraq and then the rebuilding of Iraq diverted attention and money from the African AIDS project. Admittedly frustrated by how politics can get in the way of such an important human need, Clifford has not spent any time complaining. Whether surveying from his Sheraton window the overwhelming poverty in Addis Ababa or contemplating the immense financial needs of research, the good doctor hears a familiar admonition sounding within: "Do Something."

His latest visit to Ethiopia, in the summer of 2003, answered that call. Traveling with an official from the National Institute of Health, Clifford visited a research lab being used jointly by Ethiopia and the Netherlands. Soon after being put in touch with the right people, he negotiated an agreement for NARC to use the lab, a major step in accomplishing the group's research goals.

Even more exciting to Clifford is NARC's participation in a specific project. His group will be aiding the Dutch in a cohort study, during which the population of an entire village will

be charted for epidemiological factors in the spread of disease, especially AIDS, of course. In December of 2003, Clifford will return to Ethiopia to help administer physical exams to two groups of people—one HIV positive and one free of the virus—hundreds in all. Then, for at least a year, both groups will be monitored to learn more about the way AIDS behaves in the infected population. Further, the study hopes to determine genetic and environmental factors in the spread of HIV as well as the impact of other, local, infectious diseases on AIDS.

Despite the need for so much money in AIDS research, the preparatory physical exam itself, or at least Clifford's part in it, is almost starkly simple. In December, armed with a doctor's hammer and tuning fork, he will encounter the villagers, tap their bodies at key points to determine their neurological reflexes, and send them on their way. Oh, he may carry a device for measuring the conduction in nerves, but he is not sure yet. From that relatively primitive beginning, researchers hope to discover the "magic bullet," the hidden key to treating the worst epidemic since the Middle Ages. If this story really were a play, or a film, we could juxtapose the budget wrangling going on in legislative halls to the image of a lone doctor, tapping Ethiopians on the knee under the shade of a thatched roof. Meanwhile, according to figures reported by Joseph Dolman of *Newsday*, 8,000 people in Africa die every day from AIDS.

For Clifford and his colleagues, of course, the scene is all too real, and they do not see themselves as contemporary versions of Albert Schweitzer, paternalistic white men ministering to the savages. The effort is world wide and the colleagues are white and black and various shades in between. Sharing Clifford's passion to do something, they gather at conferences like Clifford's own Conference on Polyoma Viruses and Related Disorders, first held in 1999 and now featuring participants from most countries in Western Europe, from Japan and China, as well as from Africa. They read dry academic papers—in English—and enjoy the small perks of their profession in the setting of a comfortable hotel. They always return to the human face of their work, though, and for Clifford, this fellowship in expertise and compassion is the most rewarding thing about his work.

Take, for example, Enawgaw Mehari, an Ethiopian physician now married and living in America. According to his friend David Clifford, Enawagawa is "sincere, caring, generous, and resilient." In addition to his work as doctor, he has established a non-profit organization called People to People. He simply delights in helping others. Every year, as part of his orphan support program, he holds a Christmas party for these children.

What else are friends for, but to inspire us to a greater measure of the qualities we already value? So Dr. Clifford toils on surrounded by men and women like Mehari, personifying the slogan "doctors without borders," which so aptly describes the network of professionals who give globalization a good name.

But for Clifford, parties with children must be limited so that he can play the role of Santa Claus in a business suit, poring over grant proposals or taking meetings with governmental sugar daddies who dare him to make sense of the arcane complications of prying their money from its hiding places. While the Bush plan lies dormant, there is always the United Nations global fund, but that means going to the Center for Disease Control, through which the fund flows, and making sure that USAID does not get all the appropriations, or that cooperating countries can be placated enough to allow timely disbursement of monies.

If the real Santa Claus were faced with this almost endless bureaucracy before he could put toys in the hands of children, he might be tempted to ship the North Pole factory to another country where foreign elves work cheap, downsize, and put the sleigh in storage. And that's with only one trip a year. Several times annually, Clifford shuttles from one site to another, keeping

alive contacts with this or that official, who, when the money does come, will remember the plan for using it.

Dr. David is a man with a plan: to stop the suffering, the dying. It goes far beyond the latest phase—the one-year cohort study in Ethiopia. Asked about the long-range goals of NARC, he muses that effective therapy and treatment of AIDS is at least two, maybe three decades away. He himself could be dead before any of it happens. “True,” he says, “but who can expect to live long enough to accomplish the big goals?”

In the meantime, he will try to do something. On this very day, for instance, he will conduct a few spinal taps, see some patients, do some reading for grant proposals, and contact the National Institute for Health. All these matters relate more or less to Clifford’s undiminished fascination with preserving the complex, delicate mechanism called the human body.

And, instead of eating lunch, he will stroll over for a meeting of the Washington University Women’s Music Appreciation Society, where he will conduct a lesson in the intricacies of the pipe organ.