

The Pace of Prosthetics Development Relative to General Technical Progress: Faster than a Sabre Jet^a

MAX CLELAND

When I was first exposed to the types of prosthetic appliances available to me as an amputee, we Vietnam veterans had a saying we thought to be a pretty original indictment of the system: "They can put a man on the moon, but they can't make a simple prosthesis to make my disability easier to live with".

That seemed to say it all. Development of the astonishing array of devices involved in projecting men outside "our world" and accurately retrieving them was a truly mind-boggling achievement. To us, it was incredible that this level of technical progress could be recorded by the same society that was offering us things like the wooden "stubbies" we learned to walk on after losing our own limbs in combat, accidents, or disease.

That was 12 years ago. I have since discovered that we young veterans hadn't been as original as we'd thought, in attacking the system. I learned that an earlier generation of disabled persons — from the post-World-War II and Korean War eras — had a saying too: "They can make a Sabre Jet, but they can't make a simple prosthesis. . . ." Eventually, too, I learned that the distinguished surgeons and engineers recruited late in World War II by the National Research Council as its Committee on Prosthetic Devices expected to finish their task of improving prostheses within a year. They soon learned that the task of replacing major parts or functions of the human body allows early partial solutions by seemingly crude — yet really ingenious — devices but requires persistent, patient effort for further gains.

So our frustration with the pace of prosthetic development relative to general, technical progress was not unique. The fact is, mainstream inventors and medical investigators have not been all that interested in prosthetics research. Unfortunately, the perception of this area of endeavor still isn't one of excitement and promise of recognition. And it's certainly not an area people are rushing into for profit.

In this rather specialized, less-than-fully-competitive environment, the VA's mandated interest in rehabilitation takes on added significance. This Bulletin of Prosthetics Research is, in fact, a microcosm of VA's pervasive influence. In other fields, scientific and technical articles such as those printed herein would appear in professional journals. But currently there is no single representative professional society in this field — the VA has filled that role. The Bulletin's selections cut across a variety of disciplines — as do the VA's resources and influence. And the Bulletin is a manifestation that prosthetics research progress, while perhaps less glamorous than a moon shot or even than a Sabre Jet, has been substantial.

The research developments chronicled on these pages are indeed no less remarkable, no less significant to the advance of health care, than those found in any medical journal in the world. Some

^a An editorial contributed to the Bulletin of Prosthetics Research by Max Cleland, Administrator of Veterans Affairs

fundamental changes within recent years lead me to believe that significant progress will continue to be recorded in VA's prosthetics research programs:

— Establishment of affiliations between VA and schools of engineering, formalizing relations often begun years ago through research contracts.

— Creation of Rehabilitative Engineering Research and Development Centers in Hines, IL, and Palo Alto, CA, and the enhancement of the VA's New York Prosthetics Center into a Rehabilitation Engineering Center; and,

— The intensified support of the highest levels in the agency. As Administrator, I have made this commitment known both within the VA and to other individuals and institutions affected by our prosthetics research program. The VA's new Chief Medical Director has added his own full commitment, stating that rehabilitation is the number one priority of the Department of Medicine and Surgery. A tangible sign of this support is the funding accorded to the program in a period of austere federal budgets. This year, we'll spend \$8 million for rehabilitative engineering research, more than twice the amount spent in this area in 1975. And next year — fiscal 1981 — we have asked Congress to fund this program at a record of \$9 million.

I believe this kind of initiative will bring VA prosthetics research closer to the kind of program I dreamed about when I was a young veteran in need of prosthetic services. Perhaps these lines from an unknown author — which I've often taken solace in during my own rehabilitation and adjustment to disability — will explain my optimism:

I have dreamed many dreams that have never
come true

I've watched them vanish at dawn
But I've realized enough of my dreams, thank God,
To make me want to dream on.

I have prayed many prayers when no answer came
Though I waited patiently and long
But answers have come to enough of my prayers
To make me keep praying on.

I've drained the cup of disappointment and pain
And gone many days without song
But I've sipped enough nectar from the roses of life
To make me want to live on.

Max Cleland is the youngest man to head the Veterans Administration since its inception in 1930. He is also the first Vietnam veteran to serve in that capacity. Mr. Cleland, who lost both legs and his right forearm in the war, was sworn in at the White House by President Carter on March 2, 1977.

Max Cleland was elected to the Georgia State Senate in 1970. In 1974, after serving two terms in the State Senate, he became the youngest candidate ever to run for lieutenant governor in Georgia. He finished third in a field of 10 candidates in the Democratic primary. He was a staff member of the United States Senate's Committee on Veterans Affairs when the President nominated him for his present job.

Born in Atlanta on August 24, 1942, Max Cleland grew up in Lithonia, Georgia, where in 1960 he received The Atlanta Journal trophy as the "Outstanding Senior" in his graduating class. He was graduated in 1964 from Stetson University in Deland, Florida, and then won an assistantship for graduate study in American history at Emory University in Atlanta where he was awarded a Master of Arts degree. At Stetson, he was one of four students selected in the fall of 1963 to spend a semester at American University in Washington, D.C., to study government in action. In the summer of 1965, he was chosen to work on Capitol Hill as a Congressional intern in the U.S. House of Representatives. In the fall of that year he entered active duty with the Army as a communications officer in the Army Signal Corps. He qualified in 1966 as a paratrooper and became aide-de-camp to the commanding general of the Army Signal Center and School in Fort Monmouth, New Jersey.

Max Cleland volunteered for duty in Vietnam in 1967. He served 11 months and attained the rank of captain before he was wounded. He won the Silver and Bronze Stars for his service with the First Air Cavalry Division in Vietnam. His injuries were the result of a grenade explosion just east of Khe Sahn in April 1968. He was a patient in military and VA hospitals for 18 months before returning to his home in Lithonia, Georgia.