

The Most Influential Scientist in the Development of Medical informatics (10): Marsden S. Blois

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MARSDEN S. BLOIS (1919–1988)

Marsden Scott Blois Jr., was an internationally recognized physician and scientist – professor of Dermatology and professor of Medical information science, visionary in Health Informatics. Scott Blois was Professor and Chairman of the Section on Medical Information Science at the University of California in San Francisco (1-4). Also, he was Professor of Dermatology and founder and Director of the Melanoma Clinic in San Francisco. Scott was born in San Antonio, Texas, January 5, 1919. He lived in various areas of California during his early schooling, including the Central Valley and San Francisco. He enrolled in the United States Naval Academy in 1938 and because of World War II he graduated a year early in 1941 and immediately assigned as a line officer on a destroyer escort in the South Pacific. Scott spent the remaining years of the war conducting classified work for what was to become the Office of Naval Research (ONR) in Washington, D.C. where he continued to carry out research in the Navy as Director of Research at the naval facilities in Corona, California. When he resigned from the Navy he studied physics at Stanford University where he worked under Professor Paul Kirkpatrick on the physical and magnetic properties of deposited metallic thin films. He received his Ph.D. in physics from Stanford in 1952. After receiving his degree in physics, Scott joined with some other physics graduates interested in physical approaches to biology, to help found the Biophysics Laboratory on the Stanford campus as



part of the Hansen Laboratories of Applied Physics. Scott later served as Director of the Biophysics Graduate Program, while developing his research on the electron spin resonance of biopolymers, including melanins. He observed the presence of free radicals trapped in melanin, and was one of the first investigators to suggest that free radicals were an integral part of biological systems. Scott began his medical studies at Stanford Medical School while he was Director of the Biophysics Laboratory, a position he left to begin a dermatology residency at Department of Dermatology at Stanford, chaired by Dr. Eugene Farber, sometimes worked very hardly and more than 10-15 hours daily on his research and as physician with patients. The Melanoma Clinic at UCSF began because of Scott's recognition of the fragmentation of care for melanoma patients. In 1971 dermatologists and family physicians were seeing the initial lesions, and surgeons were rather radically performing "definitive therapy." (4). At that point many patients were left on their own without any coherent or recognizable followup.

Scott Blois organized, Together with physicians at Temple University (Dr. Wallace H. Clark Jr.), New York University (Dr. Alfred Kopf) and Massachusetts General Hospital (Dr. Thomas B. Fitzpatrick), the Melanoma Clinical Cooperative Group. Purpose of this Group was assembling a data base of clinical information. Dr. Wallace Clark called it the “natural history of neoplasia.” (4). It was visionary idea—the early attempts to collect large numbers of attributes about one important “clinical entity”. After a period of several years the Melanoma Cooperative Group was no longer funded, but the institutions continued on their own. At UCSF, because of Dr. Blois' expertise in medical computing as well as his interest in patient care, the Melanoma Data Base grew and the computer science prospered. The Melanoma Clinic, organized and managed by Scott's grew from seeing a handful of patients in the first year to more than 250 per year at the time of his death in 1988. He established a non-profit organization, The Melanoma Foundation, to further the teaching, research and service aspects of patients with melanoma. In honor of these and his many other efforts, the UCSF Melanoma Clinic has been renamed the Marsden Scott Blois Jr. Melanoma Clinic. Despite his considerable clinical responsibilities during the 1970s and early 80s, Scott made fundamental contributions to the evolving field of Medical Informatics during this period. He founded and chaired the Section on Medical Information Science at UCSF, a department among the first of such programs to receive a training grant from the National Library of Medicine. One of Scott's early successes in medical computing was the development and evaluation of the diagnostic prompting program called RECONSIDER (2, 4).

Concerned that then exemplary programs in medical computing contained “knowledge” which was not understandable by physicians, Scott proposed to develop “prompting” programs based on the notion of structured text. Structured text was simply text which was easier to process computationally than narrative text, but which was still easily understood by people. Later, with support from a writing grant from NLM, Scott wrote the landmark volume entitled *Information and Medicine; The Nature of Medical Descriptions*. A sequel to some of the ideas in this book appeared recently. At the time of his death, Scott's Informatics research was supported by both a grant (the “Lexicon Grant”) and a contract

(the “UMLS Project”) from the NLM. Both awards were fitting recognition of work begun more than 15 years before on medical informatics. Scott has received both national and world-wide recognition for the work that has come from his establishment of the Melanoma Clinic and the Medical Information Science program at the University of California. However, it should not be forgotten that he also had a distinguished career at Stanford, and that his early work on the magnetic properties of metallic thin films, i.e. information storage, which resulted in a U.S. patent, and on free radicals in biological systems, was in each case years ahead of the field. Scott's interest in metallic thin films arose from his recognition of their potential for information and data storage, which he viewed to be a major problem during his war years in the Navy. Scott's early interest in information processing and storage was a contributing factor in his selection to head the Medical Information Sciences Section at UCSF.

His continued interest in information processing and tireless efforts for the National Library of Medicine (NLM) led to his election as Chairman of the NLM's Biomedical Library Review Committee a few months before his death. Blois remained devoted to medicine, which he judged to be “the enterprise offering us the greatest opportunity for describing the nature of man in all the interrelated levels of his complexity.” Some of his work includes: „Information and medicine : the nature of medical descriptions“, „Free Radicals in Biological Systems: Symposium by Marsden S. Blois“ and „The integration of hospital information subsystems“ (3). A part of this text was written by his colleague and friend Richard W. Sagebiel in his obituary and published at Wikipedia (4).

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