

MARYLAND ROOM

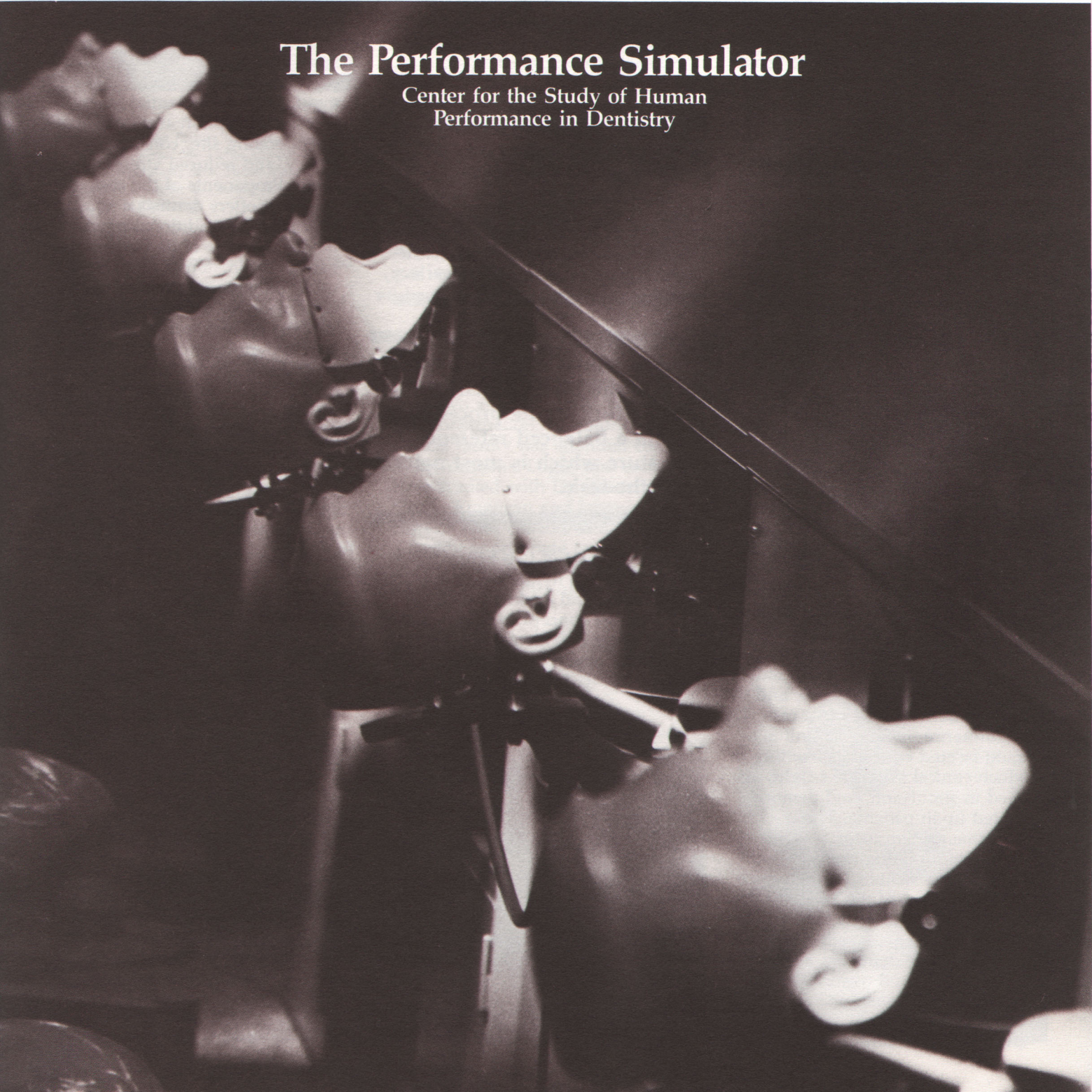
# BCDS FORUM

Fall 1983

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## The Performance Simulator

Center for the Study of Human  
Performance in Dentistry



# OPEN FORUM

## First Again

by Michael M. Belenky,  
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With the September 21st dedication of the Center for the Study of Human Performance in Dentistry, the Baltimore College of Dental Surgery added yet another "first" to its proud heritage of leadership in dental education. The facility is the first of its kind in North America.

The Center is a unique educational, research, and treatment complex for the study of advanced concepts of dental care delivery, with primary focus on the principles of human performance. It was developed through the collaborative efforts of the Dental School and the Center for Human Performance in Dentistry in the United States; and the Human Performance Institute, Group System Development, and the J. Morita Corporation in Japan.

The Center has three distinct but integrated elements: the *Performance Simulation Unit*, the *Clinical Research Unit*, and the *Optimum Management Unit*. Collectively they form a controlled state-of-the-art environment for undergraduate and postgraduate education, clinical research, and the optimal delivery of patient care. The Performance Simulation Unit is a multi-faceted educational setting in which clinical skills are taught, applied in simulation, and demonstrated upon patients. The Performance Simulator, a highly sophisticated training modality with ten operator stations, is the principal component of the Unit. It realistically simulates a patient head, correctly presents the dynamic armamentaria of dentistry, and establishes the desired postural and positional relationships between operator and patient. The application and practice of clinical skills in this

simulated setting dramatically enhance preparation for patient care. The Clinical Research Unit is a controlled environment for research. It comprises a reception area, a quick-check and x-ray area, five operatories, and a small laboratory. The Optimum Management Unit is a dental practice setting with a reception area, quick-check and x-ray area, five operatories, a panoramic x-ray area, a laboratory, an instrument preparation and storage area, and a staff lounge. It is designed for

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a complement of two general dentists, a dental hygienist, two dental assistants, and a receptionist.

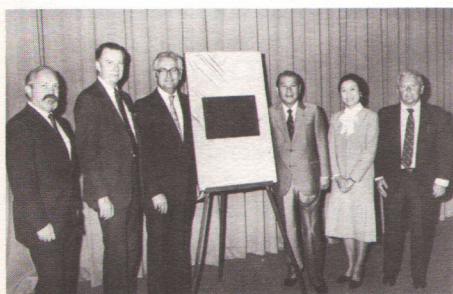
The first concept to be studied by the Center is *Performance Logic*, a scientific paradigm developed by Dr. Daryl R. Beach at the Human

Performance Institute in Atami, Japan. Performance Logic is based upon the human inclination to perform finite procedures from a balanced reference posture which is most natural for the task. A "balanced" clinician can establish the correct postural and positional relationships with respect to both the patient and the practice environment, with the potential for increased perception and control of the operating site, consistent accuracy, and reduced stress and fatigue. Proponents of the concept believe it offers dentists a superior alternative to traditional practice modes, because of its basis in the natural inclination of man, the logical development of a practice environment for the balanced operator, and the precise specification of intraoral performance. With its sophisticated new complex, the Dental School is able to introduce, operate, and evaluate this and other concepts of care delivery, in order to determine their merit and potential for education and practice.

For the proper assessment of Performance Logic, the Center is equipped with dental units, area cabinetry, and materials which allow practice of the concept with minimal compromise of its principles. For the same reason, the overall design and decor of the Center reflect a reference "model" at the Human Performance Institute. The prepon-

*Optimum Management Unit*





*Dedication of the Center: (l. to r.) Dr. George M. Gillespie, Pan American Health Organization, WHO; Dr. T. Albert Farmer, Chancellor, UMAB; Dean Errol L. Reese; Mr. Fukuo Morita, President, J. Morita Corporation; Mrs. Fukuo Morita; and Dr. Hector P. DiNardo '53, Center for Human Performance in Dentistry.*

derance of equipment was provided by the J. Morita Corporation in a research grant to the Dental School.

In the 1983-84 academic year the Center will be the site of several activities related to the study of Performance Logic. In the Performance Simulation Unit, a study group of ten first-year students will acquire their preclinical skills at the Performance Simulator, in an evaluation of the potential of the concept for dental education. In the Clinical Research Unit, several faculty members will conduct clinical research of new techniques and materials. The Optimum Management Unit will operate as a full-service intramural practice for faculty, in order to measure the concept's application to general and specialty practice. Collectively and throughout the year, all three units of the Center will be used in support of intramural education for Dental School faculty and students, as well as for a monthly continuing education course in Performance Logic for dental practitioners and their assistants.

The potential and promise of Performance Logic have stimulated considerable international interest. The Faculty of Dentistry at the University of British Columbia now employ a 40-station Performance Simulator for preclinical instruction of first- and second-year students. The World Health Organization sees Performance Simulation Training as

a potential model for universal application to the training of dental personnel, particularly in those countries without established dental care systems. The Dental School is to be designated a WHO Collaborating Center for the Review and Evaluation of Performance Simulation Training Systems for Oral Health Care.

**. . . a controlled state-of-the-art environment for undergraduate and postgraduate education, clinical research, and the optimal delivery of patient care.**

The Dental School's initiative in this oft-neglected area of human performance is the product of more than two years of study, planning, and construction. A majority of the clinical faculty has attended courses in Performance Logic, and some have studied with Dr. Beach in Japan. American and Japanese architects have collaborated to achieve a facility appropriate to any culture or environment. Innumerable others have joined in this unique project to

meld the best of the Occident and the Orient and deliver a universal product whose ultimate beneficiary is the dental patient.

The Center for the Study of Human Performance in Dentistry reflects the Dental School's standing commitment to professional excellence through innovative research and evaluation. The new complex does not exist to promote any one concept, product, or facility design. Its mission is to investigate new and promising alternatives in professional education and practice. The Center may not determine the patterns of dental practice in the 21st Century, but it will always search for a better way.

Dr. Belenky, an assistant professor in the Department of Oral Health Care Delivery, is director of the new Center for the Study of Human Performance in Dentistry. He is a graduate of the University of Michigan Dental School and received the M.P.H. degree from The Johns Hopkins University. Before joining the BCDS faculty Dr. Belenky was a consultant in dental care systems management to the chief surgeon of the Army's Seventh Medical Command, during a military career that included service in both the medical and dental units.



*Performance Simulation setting*



*Clinical setting*

