

Robert M. Gottsdanker, Psychology: Santa Barbara

1917-1992

Professor Emeritus

Robert Gottsdanker was born and raised in Los Angeles. Early on he showed an interest in science. He did his undergraduate studies at the University of California, Berkeley, where he was elected to *Phi Beta Kappa* and received his B.A. in 1938. He was invited to stay on for graduate study and earned his Ph.D. three years later. After serving on the faculties of George Washington University, New York University, and Tufts College, he came to UCSB in 1949.

Bob Gottsdanker was considered the father of the UCSB Psychology Department. He was not the first faculty member, but he was one of the earliest ones and he was chair of the department in the critical years of 1954 to 1961 when Santa Barbara College became a general campus of the University of California. It was in these years that the campus took on the mission of research in addition to its mission of education and began to grow very rapidly in students, faculty members, programs, and buildings.

His colleagues at that time credit Bob with leading the department to emphasize experimental research into the basic psychological phenomena of perceiving, learning, and motor performance. Biopsychology, social psychology, and personality were also part of the plan. Experimental research in these fields along with cognitive psychology remains the focus of the department today.

During Gottsdanker's tenure as chair, there were two very important developments. One was the creation of a plan for a graduate program and the shepherding of this plan through the long and demanding approval process. The other was seeking the approval for a psychology building and creating a plan for it. One of the big issues was whether psychology was to be allocated space according to social science guidelines or laboratory science guidelines. Gottsdanker and his colleagues argued successfully that

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psychology is a laboratory science, a result that was very important for the future of the department.

In Bob's early career, his primary research interest was the perception of motion. His work was done before the days of computer-controlled video displays. He constructed his motion stimuli by drawing each frame and photographing it, much as cartoon animation was done. One of the questions that he addressed was: do we have mechanisms for directly sensing acceleration or is acceleration inferred from a sensed change in velocity? By measuring thresholds for

discriminating motions of different accelerations and different velocities, he concluded that it is velocity that we sense directly, and acceleration is inferred from it.

Donders had proposed that response latency or reaction time (RT) could be used to measure the duration of mental events. This idea initiated a 120-year controversy. In mid-career Bob began an examination of it. He did many experiments in which subjects performed relatively simple tasks as fast as they could, and he measured their reaction time. The rationale is this: measure RT to push a button when a light flashes; then measure RT to push one of two buttons when one of two lights flashes. The difference is the time it takes to discriminate which light flashed and select the correct response. In 1986 Gottsdanker and Shragg showed that Donders' idea is sound at least in some cases. It takes about 80 msec to discriminate the lights and select the response.

Another of Bob's interests was attention in the sense of a readiness to see something and to respond to it quickly. He called this "preparation" and he measured it using RT tasks. What controls preparation? He showed that it is the subject's expectation that something is about to happen. How long does it take to get prepared? He found that it takes about 300 msec. Once prepared, how long do we stay prepared? Gottsdanker showed that we stay prepared for at least 400 msec and up to several seconds, if necessary, but being prepared is aversive, so we avoid it whenever we get a chance.

Gottsdanker learned early that good science is hard work. He liked hard work and he did it vigorously right up to the day he died. He valued clear thinking and sound experiments. He scorned sloppy scientific work. He did not jump around looking for something faddish to work on. He selected a problem and then worked on it doggedly until he solved it. Among his important works is a book on methodology entitled *Experimenting in Psychology*. Bob was a dedicated teacher and an inspiring mentor to many graduate students who went on to productive careers in psychology. He was greatly respected by scientists who knew his work.

Bob Gottsdanker was a tall man and he stood very straight. His bearing was a physical expression of his approach to life. He was straightforward both in speech and manner. He was not one to dominate the discussion, but

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on matters that were important to him he made his views and values known quietly and clearly. He was sensitive to the fact that others sometimes had different views and values. He was a person of great integrity both as a scientist and in the conduct of his life. He was always loyal to the department and willing to shoulder more than his share of the work.

Bob had a wonderful sense of humor that often took the form of poking fun at himself. He loved music, travel, and poker. Although he was not highly demonstrative, he cared very much about others. He was especially devoted to his wife, Josephine, and his children, Anne and Gerald. He cared also about the least well-off members of the human family and supported programs serving them.

Bob and Jo were great at making new faculty members feel at home here. They included young faculty members in wonderful dinner parties and gave them a chance to meet their many fascinating friends, who included not only academics in other fields but also people in the arts and public service.

It is fitting that Robert Gottsdanker will be remembered in the naming of the seminar room in the psychology building and in the Gottsdanker Memorial Lecture Series.

John W. Cotton John M. Foley Jack W. Loomis