

## OBITUARY

We announce with sadness the recent death of a long-standing member of the Psychometric Society:

### Warren S. Torgerson.

Our condolences are extended to his family, friends and colleagues.

Biographical information about Warren S. Torgerson:

Warren S. Torgerson died Monday, February 1, 1999, in Baltimore, MD, as the result of a fall in his home. He had been in poor physical condition for the past few years, since an operation for stomach cancer and subsequent cancer therapy.

"Torg", as he was known, enlisted in the U.S. Navy in World War II, and earned his bachelor's degree in meteorology from the California Institute of Technology in 1947. He then served as a meteorological officer in San Francisco and the Pacific Islands. After military service, he studied psychology for one year at the University of Wisconsin before moving to the Princeton University. He was awarded a psychometric fellowship from the Educational Testing Service (ETS) to study psychometrics at the Princeton psychology department, where he worked with Harold Gulliksen and Ledyard Tucker. He received his Ph.D. in 1951. In his dissertation, Torg developed the method of multidimensional scaling.

In 1952 he was recalled to active service in the Navy, and spent three years at the Naval Personnel Research Field Activity, in San Diego, where he headed the statistical analysis division.

After his tour of duty, he returned to Princeton to work with Harold Gulliksen at ETS, as an SSRC Research Associate. The outcome was his famous treatise, *Theory and methods of psychological scaling*. He then joined the faculty of the Sloan School of Management at MIT. In 1957 he moved to the MIT Lincoln Laboratory, working on human factors problems. In 1964 he was appointed Professor of Psychology, and chair of the Department of Psychology at Johns Hopkins University. He stepped down as chair in 1969, but continued to teach quantitative psychology and the history of psychology until his retirement from active teaching in 1998, when he was named Professor Emeritus. He continued active work on multidimensional models of scaling, and on the measurement of pain perception.

In his Ph.D. dissertation, Torg developed the method of metric multidimensional scaling (MDS). This opened up a large field of endeavor in psychological measurement. He continued active work on multidimensional models of scaling throughout his life. He developed an early computer program for metric and nonmetric MDS, but he was never quite satisfied with it. As he mentioned in his review of scaling for *Psychometrika's* 50th anniversary issue (1986), he felt that the monotone transformation of dissimilarities to distances should be constrained to smooth functions. Such constraints can be imposed (Shepard, 1974), but in fact are seldom used.

At the Sloan School at MIT, Torg collaborated with Ronald Melzack on the measurement of pain, through the scaling of pain descriptors (Melzack & Torgerson, 1971). Torg remained interested in this problem throughout his life, most recently in consultation with the pain clinic at the Johns Hopkins Hospital. This work led him to develop a model that combined quantitative and qualitative dimensions. The model allowed for distinct qualities of pain, with each kind of pain varying in intensity (Torgerson, 1986). The measurement of pain is theoretically interesting, since it is one of the most private sensations. It is also of practical value in doctor-patient communication relevant to medical diagnosis.

Throughout his professional life, Torg also worked on a variety of applied problems. Early in his career, he used MDS to survey the landscape of silverware patterns to find a niche in the marketplace for a new pattern. This earned him a complete set of silverware from a delighted manufacturer.

Torg also worked on a variety of human factors problems. He and Douwe Yntema designed a method whereby human operators could communicate strategic plans and values to the computer,

so that computers could then make split-second tactical decisions. He studied human reactions to noise, in the days when the roar of jet planes became a serious nuisance. Recently he was involved in the evaluation of night-vision goggles for the military.

In all of these basic and applied ventures, Torg brought to bear his vast store of knowledge, his keen insight, and his technical skill. His students loved him for his patience and wisdom, and for his intolerance of sloppy thought. He was suspicious of overly technical discussions, which he thought often served as camouflage for the real target.

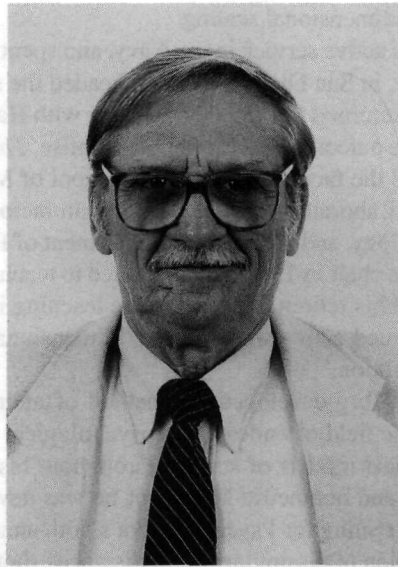
Warren S. Torgerson served as president of the Psychometric Society in 1964–65. He was a member of several other professional societies, including the prestigious Society of Experimental Psychologists.

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#### References

- Melzack, R., & Torgerson, Warren S. (1971). On the language of pain. *Anaesthesiology*, 34, 50–59.
- Shepard, R.N. (1974). Representation of structure in similarity data: Problems and prospects. *Psychometrika*, 39, 373–421.
- Torgerson, Warren S. (1986) Scaling and Psychometrika: Spatial and alternative representations of similarity data. *Psychometrika*, 51, 57–63.



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1924–1999