Mats Björkman (1926 - 2001)

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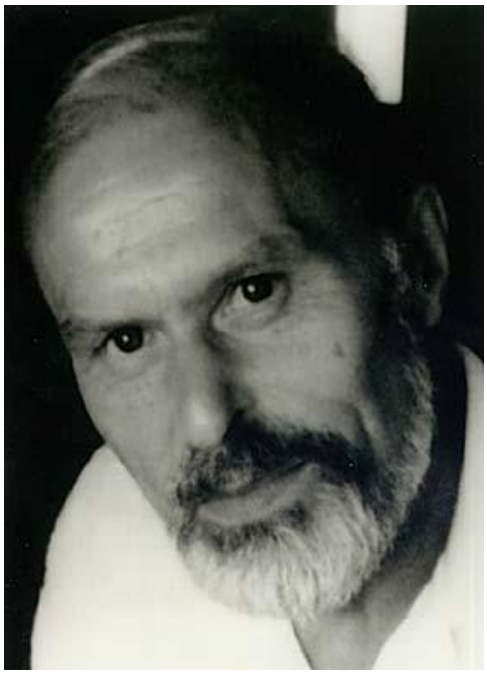

Mats Björkman started his career as a member of the "Stockholm school of psychophysics and scaling" in the early fifties. Under Gösta Ekman's vigorous leadership, this research group had a lasting impact on Swedish psychology in general, and on cognitive psychology in particular. Mats' early research revolved around issues of psychophysics and scaling. He extended the psychophysical methodology to the measurement of learning in his celebrated doctoral dissertation in 1958, in which Thurstone's idea of a discriminal dispersion was applied to new problems. Other issues concerned, for example, the psychophysical relationship between remembered and perceived stimuli and cross-modal matching.

In the years around 1960 Mats authored and co-authored several books that proved to be important in the development of Swedish Psychology. In these years, Psychology was rapidly growing in Sweden. Mats' scholarship, clear-headedness, and taste for simple, yet profound theoretical formulations played an important role in the creation of a scientific psychology. In many respects, these imprints are still characteristic of Swedish psychology.

Mats Björkman's first real contact with Brunswik came in Gunnar Johansson's seminar in Uppsala. In this seminar, the fundamental theoretical problems in perceptual theory were scrutinized in terms of the contrast between Gibson's theory of direct perception and various cue theories of indirect perception, of which Brunswik's theory was one. These seminars are remembered as intellectual feasts by all faculty members and graduate students in Uppsala during the 1960's. The Gibsonians emerged victorious from these seminars in the field of perception proper, while the Brunswikians under Mats' leadership moved on to study cognitive problems, especially problems of judgment and decision making.

Just as important as the Brunswikian legacy in these developments was the influence of Edward Tolman, always one of Mats' favorites. The classic Tolman and Brunswik paper from 1935 was studied in Mats' seminar in Stockholm, and led to an important, but unpublished paper on the structure of the environment as the basis for learning. This was a new approach to learning, which was then mainly seen as response learning in the conditioning paradigm (a form of learning that Mats had described so lucidly in a textbook on learning that it led some, among them the first author, to consider the problems of learning as very much solved). The ideas in Mats' paper provided the point of departure for a vigorous research program where the learning of physical relationships was studied in the laboratory as well as in the field (learning to make judgments in traffic).

The interest in traffic psychology and learning also resulted in Mats being appointed as chairman of a scientific advisory group to the State Commission in charge of the change from left to right hand driving in Sweden, which took place in 1967. The scientific advisory group consisted of experts in the psychology of learning, education and mass media. The group was not content to give general advice. Under Mats' direction, a research program was started to provide a sound basis for the recommendations from the group. In a manner typical of Mats' approach to psychology, it involved both development of theory and empirical research. Specifically, a theory of the transfer effects of a change from left to right hand driving was developed and tested in empirical studies involving both surveys and experimental research, using Sweden's first driving simulator. The advisory group was highly successful, and was very important in establishing traffic psychology as a field of applied research in Sweden.

In 1966, Mats Björkman was appointed Professor of Psychology at Umea University. This was a new department in a new university, providing fresh opportunities for developing Swedish psychology. It was here that the then controversial new cognitive psychology first took root in Sweden. It was also here that Mats started developing his "non-metric" lens model" and the experimental paradigms resulting from that model, with a focus on measuring the concurrent learning of rules and frequencies in probabilistic tasks, much in the tradition of the studies of the concurrent learning of linear and non-linear aspects of metric cue-probability learning tasks by Kenneth R. Hammond and his associates in Colorado. This work brought Hammond to Mats' attention, and it led to a visit from Ken to Stockholm in 1966, and to a lasting

collaboration between the Brunswikian research group in Stockholm/Umea and that in Boulder, Colorado.

The second author met Mats Björkman as an undergraduate student when Mats had settled as a Professor of Psychology at Uppsala University (where the first author had another chair). Mats' interests had now shifted to probability judgment and his role had mainly changed to that of a mentor-our own Nestor from Pylos. Perhaps by no accident, considering his roots in psychophysics and Brunswikian psychology, his interests turned specifically to *calibration* of subjective probabilities. At least on some conceptions, calibration of subjective probabilities can be construed as a "psychophysics of epistemology" and as a matter of relating the organisms' beliefs to true environmental states of affairs.

Listening to Mats' ideas on calibration in the late eighties was a bit like looking into a crystal ball in regard to the research on calibration that was performed in the decade that followed: the emphasis on organism-environment relations (echoing Brunswik), the role of random error in judgment (echoing Thurstone), and the application of item-response theory to calibration data. Moreover, Mats related the classical results on confidence in psychophysical discrimination obtained by Peirce and Jastrow to present-day calibration research, in terms of which the phenomenon would amount to underconfidence in sensory discrimination. In parallel to the research on probability judgment, Mats became increasingly interested in the history of psychology and wrote a couple of reviews of Swedish cognitive psychology.

Mats Björkman retired in 1991. A few years later he left virtually all scientific work and moved to southern Sweden ("Österlen") were he enjoyed a retirement with walks in the country side and the reading of novels. The reasons he gave for his rather abrupt departure from scientific life was indeed characteristic of Mats: "I should stop while I'm still decently clear in the head".

By then, Mats Björkman had already left imprints in Swedish psychology that are pervasive to this day: For example, a down-to-earth scientific attitude with a preference for simple yet profound formulations and a strong position of judgment and decision making in cognitive research, still often with a distinctly Brunswikian flavor. It is hard to overestimate Mats' importance in the development of scientific psychology in Sweden. This importance came not only from his research which was a model of clearly formulated problems and advanced methods, but also from his textbooks on learning, psychophysics and methodology which were studied by generations of undergraduate students in the 60's, and 70's. But perhaps his greatest influence was as a teacher. We would have wished Mats a few more years with contemplation and solemn walks in the beautiful country side of southern Sweden.

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