

HONORARY GRADUATE

Zena Athene Stein

Dr Zena Stein, one of the most notable medical graduates of the University of the Witwatersrand, opened her academic career with a brilliant undergraduate performance at the University of Cape Town; not, as those acquainted with her contributions to health might suppose, in medicine, but in the ostensibly remote but not completely unrelated field of history. This is a discipline in which she has apparently never published; but in it she gained two gold medals, in 1939 and 1940, and a Bachelor of Arts degree with distinction in 1941. In 1942 she became Master of Arts (with first class honours) and was awarded the Queen Victoria Scholarship.

She was born in Durban on 7 July 1922, the daughter of the well-known mathematician Professor Philip Stein, and in 1939 gained an entrance scholarship to the University of Cape Town. When she decided to study medicine, it was, however, to the University of the Witwatersrand that she came. She commenced her medical studies in the same year, 1945, as her future husband, Mervyn Susser. Whether it was their common earlier involvement with the humanities which first drew them together is unknown; but it was not long before both became involved with the pioneering ideas on social medicine which Sydney Kark was beginning to implement at Springfield, near Durban. After qualification she, with her husband, spent three years delivering health care to the people served by the Alexandra Health Centre and University Clinic on the outskirts of Johannesburg, a population probably even less privileged than that served by Springfield.

They became part of the great exodus of able and committed medical persons who left South Africa during the mid-1950s in response to the official policy of segregated education then in force, and spent the next ten years in the United Kingdom. It was there that Dr Stein was first able to pursue her growing interest in the epidemiology of mental illness. This interest evolved into her well-known expertise in the nosology of mental retardation, especially in developing countries, and led eventually to her appointment in 1968 as Director of the Department of Epidemiology of Brain Disorders Research and Chief of Psychiatric Research at the New York State Psychiatric Institute, a post which she has held ever since. In 1973 she obtained her concomitant Associate Professorship in Epidemiology at the Columbia University School of Public Health (Epidemiology) in the Gertrude H Sergievsky Center at the same School. Since 1986 she has also been Associate Dean of Research there.

From the beginning of her medical career she gave evidence of an epidemiological approach to the problems she confronted. Her four early papers on the families of dull children convincingly established the significance of several important variables in the study of mental maturation. Her ensuing publications conveyed the new, and often more rational, approach she was developing towards mental retardation and ways of preventing it. Zena Stein has inspired, initiated or supervised much of the scientifically more admissible work on the effects of maternal age and nutritional status, whether of the pregnant mother or the growing child, on fertility and on the mental condition of children and the adults into whom they grow. She has written extensively on the impact on maternity of the changing role of women in the economy and has drawn attention to the impact of occupation and the intake of drugs and environmental toxins on reproduction.

The problem of the epidemiology of mental retardation in less developed countries had appeared to be intractable, until Zena Stein devised her now universally accepted Ten Question door-to-door interview test. The test was validated under field conditions and has been used widely, permitting distinct patterns of retardation to be discerned. Governments and health planners in developing countries are now able to devise strategies for dealing with the problem of mental retardation, to introduce measures to lower its prevalence and to provide facilities for the care and training of the children so identified. Countless thousands of children (and their families) will be in the debt of Dr Stein for her fundamental contributions in this field.

The fruits of her historical training are apparent in her approach to many epidemiological questions, particularly where her investigations have been retrospective, as in her studies of the consequences of the 1944/45 famine in the Netherlands and in her masterly handling of the epidemiology of prenatal development. It has also contributed notably to her analyses of the health situation in Cuba and in countries of south-east Asia, and to her two well-received books, *Famine and Human Development: The Dutch Hunger Winter, 1944/45* (1975) and *Conception to Birth: Epidemiological Perspectives* (1989). Her early interest in Down's syndrome has been expanded into a general consideration of autosomal trisomies and other chromosomal abnormalities and the extent to which they may be subject to environmental factors.

Dr Stein has rendered exceptional services to the country of her birth and to medical science in general. The medical care of the underprivileged in South Africa owes a great deal to her importation to the Alexandra Township and Health Centre of the ideas of Sydney Kark. Together with her husband, Mervyn Susser, Zena Stein has played a leading role in supporting and advising prominent persons in the field of medicine opposed to the policy of apartheid and its effects on the health of the individual and the community. In the field of international scholarship, her rational and pragmatic approach to epidemiology has done much to make that science more practically useful, while retaining and advancing its academic respectability. She has become a world figure. For these reasons, the university at which she qualified in medicine wishes to acknowledge her outstanding contributions. It brings honour to the University in bestowing on her its accolade.