In Memoriam: Herbert E. Scarf

Herbert Scarf, a towering figure in mathematical economics as the subject presents itself during the last half of the 20th century, passed away on November 15, 2015 in Sag Harbor, NY. In this inadequate statement in memoriam, I mourn his passing.

Scarf's sterling contributions to mathematical economics – he saw his fields as mathematics and economics – are well-recognized, and now constitute the very vernacular of the subject. His name has become an adjective appended to Ss-inventory policy, to algorithm, to lemma, to counter-example, and also, in conjunction with Debreu, to theorem. His 1962 paper on the "analysis of markets with a large number of participants" predates the papers of Debreu-Scarf and Aumann, and the full impact of his work to non-convex and discrete structures in economic theory, as they manifest themselves in indivisible commodities and in increasing-returns-to-scale technologies, has perhaps yet to be fully delineated and understood by the economics profession.

However, in this brief statement, the author should like to draw attention to his influence as a teacher and a role-model of what it means to be a scholar. I was privileged to take his famous course in *Mathematical Economics (Econ 107),* in the Fall of 1970. Scarf began each lecture for this course punctiliously two minutes after the hour and ended it five minutes before, a delivery executed in his enviable handwriting. These were lectures graced always with a smile and enlivened with exemplary humor, dazzling performances week after week. The fact that a proof seemed so natural and so inevitable, effortless and easy, when he presented it, but was a jumble of ideas difficult to recollect and reconstruct after, was the staple of graduate-student conversation semester after semester I was there.

His influence on how "one carried oneself" was pervasive: not only his lectures, but his presence in seminars, as an oral examiner, as a member of a dissertation committee, actually in any conversation, left its indelible mark. His constant emphasis on the pursuit of perfection – but also when to "stop fussing and leave well enough alone", sentiments that undoubtedly also stemmed from Tjalling Koopmans – was at the forefront in the minds of all who were privileged to work with him. I still recall his polite remark – he was nothing if not supremely elegant and scrupulously tactful – "I am sure that the parts I have not read are very interesting."

I miss and mourn him.

M. Ali Khan

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http : *//www.nytimes.com/*2015/11/23/*business/herbert−scarf−an−economists−mathematician − dies − at − 85.html*