

I first met Laci Tisza in 1941. I was a very new and very young instructor at MIT. Laci had also just joined the staff. A refugee, he was already a distinguished physicist, known particularly for his important contributions to the understanding of superfluidity and liquid helium. We quickly became friends and indeed at the suggestion of my wife and myself he secured an apartment near us on Ware Street in Cambridge.

At that time, Laci was most concerned with what today would be called condensed matter physics, while I was then, as now, involved in nuclear physics. But like most physicists of those days, we were both interested in all of physics, an attitude encouraged by the fact that we soon became responsible for much of the advanced teaching. In any event, Laci and I had many opportunities to discuss various issues in physics at all levels. Of course, I was the chief beneficiary. For example, I learned from Laci of the importance of group theory, as might be expected since he was one of the pioneers in applying the theory to quantum mechanics. It was also from Laci that I learned about the curious history of the Stokes-Navier equation, in which he found that generations of textbook writers had passed off as proved by Stokes an assumption that Stokes had made only for simplicity. I learned from Laci that the usual discussions of uncertainty in quantum mechanics were directed toward inappropriate issues. To get sensible answers one has to ask good questions. Laci pointed out to me how very much more stable quantum mechanical systems are than classical ones. The charges on electrons are all identical, not approximately identical, and so on. Thermodynamics was another area in which I was woefully ignorant and into which I received much insight from Laci.

We did some research together. I recall his notion that nuclei are superfluids and that the elementary excitations are vortices. This was well before the Bohr-Mottelson theory, which recognized the role of deformation, whose importance, and for that matter whose existence, we had not realized. We did publish one short note together on the pair

production of a heavy electron (to show that it did not exist!) reported by a cosmic-ray group.

Since those early days during and following World War II, our research paths have diverged and the opportunities for collaboration have essentially disappeared, but we have kept in touch. I am particularly impressed by one aspect of his more recent work. Each of his papers involves the formulation and resolution of conceptual problems of broad significance. For these a contemplative, thoughtful approach is necessary, as opposed to frenetic activity and the hurried rush to publish. I have always admired not only the quality of his physics but, at a more personal level, Laci's ability to concentrate on the "big questions," in spite of the many rewards to be gained by consideration of more immediate and urgent problems of the physics "in fashion." Most of these papers deal with thermodynamical issues, phase transitions, critical points, fluctuations, and the thermodynamics of equilibrium as well as irreversible thermodynamics. More recently he has become concerned with the foundations of electrodynamics. It is no surprise that a contemplative physicist, to coin a new term, like Laci would also be interested in structural and philosophical issues. These are areas that are largely neglected by the research physicist. Laci's contributions, based on his own thoughtful participation in research, have been of inestimable value.

This volume is a fitting tribute to an outstanding career and a remarkable person. I am deeply grateful for the opportunity to join with the contributors by expressing my high regard and affection for Laci Tisza, friend, colleague, and teacher for the last four decades.