

**János Kornai**

**On the death of Kenneth J. Arrow. A personal leave-taking**

My first feeling on hearing news of the death of Kenneth J. Arrow was the pain of personal loss. What he meant to his profession is explained in the obituary by Imre Csekő that follows. Here I recall my first impressions of him and our meetings over subsequent decades, which have left within me a picture of Arrow as a friend, Arrow as a man.

I first met Arrow almost half a century ago, in 1968, when he invited me personally to spend an academic term at his institute, associated with Stanford University. This was prompted by a study that appeared in *Econometrica* in 1965: “Two-Level Planning”, written with Tamás Lipták. The subject intrigued him (as did so many subjects): the idealized form taken by planning practice in communist countries – presented in the definitively simplified formal language of mathematical modelling. In addition, he sought the acquaintance of researchers behind the Iron Curtain, and to help in influencing that part of the world with the ideas guiding the economists’ profession in the West. His boundless curiosity and desire to help colleagues working under difficulties were two virtues manifest in the mere invitation. Arrow knew hardly anything of either of us, but invited us both. Tamás had been released recently from a prison sentence received after the defeated 1956 Revolution on the grounds of belonging to a body opposed to the Soviet occupation and Kádár dictatorship. As a further penalty he was banned from travelling abroad. So I had to go by myself.

On arrival I sought the Chairman of the Department of Economics, who willingly took me to a desk, where I remained alone in a large room. I admit I was rather alarmed and confused, not having found exactly what was the connection between the Institute and Arrow. I spent a quiet day or two behind my allotted desk before Ken arrived with a friendly smile and took me across campus to a distant building – his own institute – and offered me another desk. Let that be mine instead, he suggested reassuringly. There I shared the room with two young economists: Masa Aoki from Japan and David Levhari from Israel. Both had known Ken a long while; soon the three sharers were cordial friends. Arrow did not play a director’s part. Everyone did what they wished to do. He did not assign or recommend a topic, or expect subordinates to guess what would please him. He did not send application forms: he invited people without asking what they wished to do.

I had no idea whether the subject I was fully involved with in 1968 would satisfy him or not. Two-Level Planning fitted perfectly into the conceptual apparatus of the neoclassical school, and thanks to Tamás Lipták, it put to elegant use the main mathematical line of methods of the day, even in its outward forms. But where was I now in relation to the “two-level” concept published in 1995? I had brought in my suitcase a largely complete English translation of my *Anti-Equilibrium*. I had been working for several years on this new book, which struck a polite, respectful, objective note, while subjecting the modern general equilibrium theory to strong, decided criticism. It strove to shake the foundations of that grandiose theory, whose main architect was the kind, friendly person who had invited me there. How would he react to the criticism? I myself did not wish to raise the matter, perhaps lacked the courage to do so. My experience in Hungary had shown me how many highly respected oligarchs of the socialist scientific world could brook no criticism and might even take revenge for it. It was an economist of Hungarian origin, Tamás Vietorisz, then living in New York, who drew Arrow’s attention to the manuscript in my drawer. He immediately asked to read it and appeared a couple of weeks later to say he had read it and suggest we have a talk about it.

There was only a six-year difference in our ages, but I was quite aware of the difference in our degrees of preparedness. He had behind him his brilliant work *Social Choice and Individual Value*, based on the PhD thesis he had defended in 1951, and of course the latest version of the

mathematical means of expressing the general equilibrium theorem. Despite my forty years, I felt regular examination nerves. These Arrow dispelled right away, saying that their theory (like all theories) was much in need of criticism.

There was no hint in his words or even his expression of irritation at the criticism or wish to instruct me on the equilibrium theory. On the contrary, he urged me to publish it. I had summed up at the beginning the main objections to the theory. He found nothing wrong with them. He went on to give constructive advice on presenting the further ideas in the book. Towards the end of the talk, he made a smiling remark that I still hear in my head: *Anti-Equilibrium* “will make a fine obelisk on the burial mound of the general equilibrium theorem.” Since then I have met legions of economists in the West and the East, but Arrow towers over the best for his generosity, open-mindedness, and encouragement of criticism of his own work, and for what makes him an especially attractive exemplar: his self-irony.

It would wholly misconstrue Arrow’s intention to read into the general equilibrium theory any defence of unrestricted operation of the market mechanism. He if anybody was quite clear that the market was far from guaranteeing a system of allocation favourable to all. He expressed his reservations publicly not in political statements, but in high-powered scientific studies in his own field: health-care financing, higher-education functions, and insurance. Each was a milestone in scientific examination of down-to-earth, practically relevant issues. They remain an example to me of how to question sharply and clearly false and commonplace beliefs, in words free of impetuous beliefs and preconceptions.

In the months I was at Stanford, Institute members would often have lunch together at some nearby restaurant. We gladly patronized an unassuming delicatessen that sold food, and also had a few lunch tables in the corner of the store. Often Arrow would join us. Many subjects were touched on, with Ken joining in, not as a dominant contributor but as an equal. He was earnestly interested in what the others had to say. I was not too familiar at the time with the inner workings of the American economics profession, but it emerged from the discussions that most of the company, including Arrow, spoke with some sarcasm of Milton Friedman and his Chicago school. Politicking continued.

Arrow clearly identified with the Democratic Party on the American political scene. But he did not use television statements to signify this. His commitment emerged in scientific work from which emanated liberal values. Think of his master work on the impossibility of having an ideal democratic system. In this study he does not get involved in the domestic political struggles of the moment, but there can be sensed a criticism of such ideas, for promising a regime that would express the will of the whole community, prompted in doing so by naivety, ignorance or populist falsity. All would ostensibly do well by it, and without using dictatorial methods, with due respect to democracy. Arrow used inexorable logic to prove that the two basic principles of democracy and the adjustment to the individual preferences of every citizen contradict each other. He provided a profound strong argument against populism.

Let us move on to 1972, when I was invited by Arrow to deliver a lecture at Harvard University. There the great news broke that Arrow in conjunction with John Hicks had won the Nobel prize. That evening he invited his friends to supper, to share his delight. My wife Zsuzsa Dániel, also a research economist, sat between Arrow and Robert Solow, hardly daring to say a word. Someone asked how news of the prize had reached him. Ken, with one of his far from rare smiles, gladly gave the details of the telephone conversation, with due modesty and no measure of falsity in it.

The year 1984 was a decisive one in my career, as I was offered a tenured university professorship by several universities, including Stanford and Harvard. It was a joyful choice, but also a dilemma to choose between such splendid institutions. Finally my wife and I agreed I should accept the invitation from Harvard. When we next visited Stanford, to visit my son and grandchild there, Arrow invited us to a talk over lunch. I knew he had strongly pressed for the invitation to me. Would he not reproach me for accepting the other offer? My anxieties were over within minutes of meeting Arrow again. There was no question of reproach. He was sincerely interested, as a scientist should be, why I had preferred Harvard over Stanford. He had faced the same dilemma: a few years ago he had left his beloved Stanford in beautiful California and moved to Harvard, but a couple of years later he had returned. He probed our motives and accepted our replies with full human understanding.

We met often in the early post-system change years. We both had joined the advisory board of the European Bank of Reconstruction and Development (EBRD), a new financial body for supporting the post-socialist countries. The period saw a succession of excellent American economists visiting the capitals of the post-socialist region and giving their advice enthusiastically. The advice was sometimes good, sometimes erroneous, sometimes remarked, and sometimes ignored. Arrow, who in academic standing far outstripped the others, spoke rarely. In a sober assessment of himself, he said that theoretical knowledge and strict logic would not suffice. Good advice also depended on a thorough inside knowledge of the history of each country and its current position. If I happened to glance at him at the board meetings, I could see him watching, taking notes, and learning with full intensity.

Only a few years have passed since I last met Ken, this time in Budapest, when he received the Von Neumann Prize, the high honour awarded by the Rajk College, a distinguished institute for advanced study of students of economics. His tireless mind was as fresh as ever; his thoughts moved faster than his tongue, and he still spoke so fast it was hard to follow.

At the time I still had not felt personally what it meant to be ninety. He asked to be shown around the city. Attila Chikán, the founder of Rajk College, a highly respected Hungarian economist took us by car to Elizabeth Bridge for a boat trip. Ken was unperturbed by the potholed street along which we walked from the car to the boat. He became a thorough tourist for an hour or two and enjoyed the fine sight of Budapest in the sun. That evening my wife and I sat down to supper with him and talked of his wife Zelma, our families, and our friends in common.

That was the last time we met. After that we kept up only in writing. He heard I had written a study on Piketty's well-known book on capitalism and inequality. Arrow, always on the side of the oppressed and those low down in the economy, asked for a copy, but I did not receive a response. I could not imagine why not, as it was quite unusual from Arrow, a scholar who always answered letters conscientiously even when overworked.

Those who knew Ken personally learnt with shock that this warm-hearted man was gone from us. What luckily remains for posterity is the life's work of Kenneth J. Arrow, one of the greatest geniuses of economics.

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