The outpouring by the entire nation on hearing the news that Dr. A.P.J. Abdul Kalam is no more has been absolutely overwhelming. Indeed it has been unprecedented. I myself was so overwhelmed that when I was interviewed by a television channel minutes after the news broke out I got choked as I started responding. My views about him have appeared in the media in a variety of forms, including in a two part series published by the news paper DNA. I am happy to share them with the readers of Science Reporter.

Dr. Kalam is being referred to as the Missile Man. I will leave aside the ‘missile’ part of it and write about the ‘man’ part of it, the ‘human’ part of it, especially as I saw him from my personal lens.

My first interaction with Dr. Kalam was when I was a member of the Scientific Advisory Committee to the Prime Minister Shri Rajiv Gandhi. This was in 1987-88. I was given the responsibility of putting together a draft of a perspective plan on the future of Indian Science & Technology. I needed to cover different dimensions of Indian science & technology, including those pertaining to Defence Research and Development. I was trying to get hold of Dr. Kalam, who was then the scientific advisor to our Defence Minister, but I was unable to do so. Finally, we accidentally met at the airport and managed to sit together in the plane.

I still remember his profusely apologizing for being inaccessible, explaining to me at great length as to how busy he was with his several projects. He asked me what I was looking for. I explained. He set aside whatever work he was doing. He pulled out a piece of paper and wrote his thoughts on the subject with his own hand. This very first meeting touched me, because I saw a man who was simple, very humane and yet professional at the same time. I was to realize his other qualities as I met him on several occasions later.

I saw evidence of his extraordinary humility and willingness to learn from others in another instance. I remember the year was 1992. I was then the Director of the CSIR-National Chemical Laboratory (NCL), Pune. I got a phone call from Dr. Kalam. He was then heading the Defence Research and Development Organization with a chain of more than 50 laboratories. Dr. Kalam told me that they were going to have a DRDO Director’s conference in Pune and he wanted me to deliver the inaugural address. I happily accepted the invitation and asked Dr. Kalam as to what I should speak on.

India had just been liberalized in 1991, opening up its doors for trade with and investment from the rest of the world. Dr. Kalam suggested that I should speak on ‘fighting it into the market place in the post liberalized era’. He wanted me to talk about what Indian Science & Technology could do in this fight. I remember addressing the gathering, which was chaired by Dr. Kalam. While beginning the lecture, I addressed Dr. Kalam as ‘Mr. Technology of India’. I went on to dwell on the theme of India’s big challenge in the coming years as we opened up.

My penchant for patents was well known then. In 1989 itself, I had launched this ‘movement on patent literacy’ and put NCL on the path of becoming strong in patents, even licensing our patents to the advanced world. I referred to this issue of ‘patent literacy’ and said as to how this illiteracy had to be removed in order for India to face the stiff global competition.

After the lecture, there was a lunch. Dr. Kalam came to me and said, “Mashelkar, you have addressed me as ‘Mr. Technology of India’. You also talked about patent literacy movement. But can I tell you that your ‘Mr. Technology of India’ is also ‘Mr. Patent Illiterate’ of India!” I asked him why he said that. He replied that he had little knowledge of patents, why they were important and what could his organization DRDO do. I explained. He immediately called someone and issued instructions to set up...
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patent cells in each of the fifty plus DRDO laboratories. Today, DRDO has become not only aware of the patents but is also strong in patents. This simple instance shows on the one hand the humility of the great man, where he was prepared to admit what he did not know, and at the same time his acting so fast and decisively. Both these qualities are so crucial for leaders.

Today when I look at CSIR, we find that there is a major transformation in the CSIR chain of laboratories. All this transformation by CSIR was initially triggered due to a major initiative I took on the suggestion of Dr. Kalam. In fact, I vividly recollect the day was 1st of July 1995. This was the day when I took over as the Director General, CSIR. We had a party in the evening to say farewell to Dr. S.K. Joshi, who had done such a wonderful job in steering CSIR in some really difficult times.

Dr. Kalam was also present in the party. He congratulated me and asked me, “Mashelkar, what is your vision for CSIR?” He went into deep details and told me how crucial it was for me as a new leader to formally launch a bold and clear vision statement, so that the entire CSIR family clearly understood what was in my mind. I remember finally making a presentation to the Advisory Board of CSIR, of which Dr. Kalam was also a member. I remember his many valuable contributions. This vision statement ‘CSIR 2001: Vision & Strategy’ became a major galvanising force and transformed CSIR. The organizational transformation progressed to such a level that in a book World Class in India written on the subject of managing the radical change, CSIR was the only institution to find a place along with the top organizations such as Reliance, WIPRO, Infosys, etc. who have managed the radical change best in the post-liberalized era in India. Professor Jayant Narlikar’s book Scientific Edge also lists the CSIR transformation among the ten best achievements of Indian science and technology in the twentieth century. In some way, we at CSIR should be grateful to Dr. Kalam for providing that initial trigger!
I found Dr. Kalam to be an extremely warm-hearted and simple individual. I have personally experienced his warmth and affection. A very simple instance illustrates this. I remember Dr. Kalam phoning me one day at 11.00 A.M. in the morning when I was in my office. He said that he had fixed up a meeting of the Knowledge Task Force set up by the Prime Minister. He and I were then working together on the steering committee set up by the Chairman, Mr. K.C. Pant, the then vice-chairman of the Planning Commission.

I said that I would be unable to join him because I had to leave by the 4.00 P.M. flight to Pune. I explained to him that only that morning I had received a call from Pune saying that my wife was suddenly taken very unwell. I desperately needed to be in Pune. I had dropped all my programmes and was flying back with the first available flight. I was so tense that I could not control myself and broke down on phone. Dr. Kalam consoled me. We ended the conversation. After 15 minutes, which, incidentally is the time it takes to come from Vigyan Bhavan to Anusandhan Bhavan, I was surprised to see that Dr. Kalam was there in my office, leaving a meeting that he was to chair! He spent an hour with me saying that we will get the best advice and help for her ailment from all possible sources from India and he will personally help. Not only that, he called me the following day to inquire about how she was and continued to do so. He came out as an extremely concerned and warm-hearted individual.

Dr. Kalam really caught the imagination of the children and the young, like few have done in India. This became evident when he came to Pune during the Indian Science Congress 2000 in January in Pune. I was then the President of the Science Congress. It was my dream to get the ‘Trimurty’ representing the leadership of space, defence and atomic energy together. That meant getting Dr. Kasturirangan, Dr. R. Chidambaram, Dr. Anil Kakodkar, Dr. Kasturirangan and myself on a single dais. There were around 2000 people in the audience. While the presentations were going on, Dr. Kalam walked in. Everyone forgot that we all were on the dais and rushed to Dr. Kalam! He was again surrounded by hundreds of young people. Dr. Murli Manohar Joshi told me to go down and rescue him. The only way out was to get him up on the dais so that we could continue. And indeed it was only then that we could resume the proceedings! I have never seen such an appeal of a scientist amongst the young, or indeed for that matter, amongst the society ever before.

Dr. Kalam was convinced that children were our future and we had to ignite their minds. When he was Principal Scientific Advisor to the Prime Minister,
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I remember I had gone for a meeting with him. He was the chairman of the Committee to select the vice chancellor of Goa University and I was a member. After the meeting the conversation as usual drifted to talking about the future of India and how it will be built by our children. I still remember his telling me that in future he wanted to dedicate himself to the cause of igniting the minds of young children. He said that he would interact with at least 1,00,000 children in one year. He asked me, “Mashelkar, why don’t you join me in this grand adventure. We two can go and inspire the children from a common platform.” I remembered have to agreed to this enthusiastically but, of course, could not really join him.

Soon afterwards, Dr. Kalam became the President of India. I went to meet and congratulate him. The first thing he did was to remind me of this conversation. He asked me as to how many children I had addressed. He said that he had already addressed 50,000 children. I remembered to have agreed to this enthusiastically but, of course, could not really join him.

To me, in Dr. Kalam, we had a President, who was the right man, in the right place, at the right time. Indian youth were desperately looking for a role model. What better role model could they have had than someone who was the son of a boatman and went on to occupy the position of the President of India? What better role model could they have had than this simple and humane individual, who was a staunch nationalist, and who was a great dreamer and visionary at the same time? What better role model could they have had than an individual who strongly emphasised that ‘strength respects strength’ and wanted to see a Developed India in our life time.

I would like to end by repeating what Dr. Kalam said in this address to the nation on 25th July, when he was sworn in as President of India. He said:

“When I travel across our nation, when I hear the sound of waves of the three seas around the shores of my country, when I experience the breeze of wind from the mighty Himalayas, when I see the biodiversity of North-East and our islands and when I feel the warmth from the western desert, I hear the voice of the youth: ‘When can I sing the song of India?’ If youth have to sing the song of India, India should become a developed country which is free from poverty, illiteracy and unemployment and is buoyant with economic prosperity, national security and internal harmony.”

And then he went on to sing that song:

As a young citizen of India, armed with technology, knowledge and love for my nation, I realize, small aim is a crime.

I will work and sweat for a great vision, the vision of transforming India into a developed nation, powered by economic strength with value system.

I am one of the citizens of billion; only the vision will ignite the billion souls.

It has entered into me; the ignited soul compared to any resource is the most powerful resource on the earth, above the earth under the earth.

I will keep the lamp of knowledge burning to achieve the vision – Developed India.

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The only fitting tribute we can pay to Dr. Kalam is not only fulfilling his dream of Technology Vision 2020, but also setting up a game changing ‘Vision 2050’ in the true spirit of Dr Kalam, which always was to think and act with the belief that impossible can be made possible.

This will only happen if each Indian in the true Kalam spirit said: “Yes, I can. Yes, India can. Yes, India will.” We owe it to Dr. Kalam.