

Imagine

Imagine if today a President of the United States were to espouse the importance of science to the extent to the extent that John F. Kennedy did in the early 1960s and help our country come together, united in a singular scientific goal? Famously Kennedy in 1961 as President issued this challenge: "I believe that this nation should commit itself to the goal, before this decade is out, of landing a man on the moon and returning him safely to earth", recognizing that science requires long range thinking. He called to mind the French General Lyautey, who once asked his gardener to plant a particular tree. The request was met with reluctance from the gardener who knew the tree would not reach maturity for a hundred years, to which the general replied "in that case there is no time to lose, plant it this afternoon!".

Two years after his bold challenge JFK spoke at the Centennial Convocation of the National Academy of Sciences [NAS] in Washington DC on 22 October 1963. Stressing the importance of pure science Kennedy asserted that the century leading up to 1963 brought about a "wholehearted understanding today of the importance of science." He went on to stress that "progress in technology depends on progress in theory: that the most abstract investigations can lead to the most concrete results, and that the vitality of a scientific community springs from its passion to answer science's most fundamental questions." President Kennedy also appreciated the international nature of science, reveling in the observation that "As science, of necessity, becomes more involved with itself, so also of necessity it becomes more international. I am impressed to know that of the 670 members of this Academy [NAS], 163 were born in other lands". He believed that "the great scientific challenges transcend national frontiers and national prejudices: the language of science has always been universal and perhaps scientists have been the most international of all the professions in their outlook, but the contemporary revolution in transport and communications has dramatically contributed to the internationalization of science, and one of the consequences has been the increase in organized international cooperation." Kennedy recognized that "Science is the most powerful means we have for the unification of knowledge and a main obligation of its future must be to deal with problems that cut across boundaries, whether boundaries between the sciences,

boundaries between nations, or boundaries between man's scientific and humane concern." What a prescient statement for these troubled times inflicted upon all of us across the globe by Covid-19.

Kennedy was not to see the fruits of his challenge to the nation for he was assassinated on Nov. 22, 1963 just a month after he had spoken to the NAS.

Our country was palpably saddened by Kennedy's assassination, but serendipitously a few months after his assassination a new rock band, the Beatles, was introduced to America on the Ed Sullivan Show. Their upbeat music seemed to re-energize the nation and scientists from shore to shore began work, some directly and most less directly, toward the goals enunciated by Kennedy. Many of the laboratories reverberated to the beat of tunes like Penny Lane, All You Got To Do, Dr. Pepper's Lonely Hearts Club Band, and Come Together. Through the inspired efforts of a generation of scientists Kennedy's goal was met, when on July 16, 1969 at 9:32 am America heard the triumphant proclamation "the eagle has landed". The effort to reach the moon eventually resulted in the launch of the International Space Station, arguably the greatest example of international scientific cooperation to date.

JFK can also be credited with seeing the looming threat of climate change upon the global environment even in 1963, for in his address to the NAS he asserted that "The oceans, the atmosphere, outer space belong not to one nation or one ideology but to all of mankind, and as science carries out its tasks in the years ahead, it must enlist all of its own disciplines, all nations prepared for the scientific quest, and all men capable of sympathizing with the scientific impulse." Our country, and our world, desperately needs leadership to inspire the efforts of scientists around the globe to tackle this challenge with the same enthusiasm that was brought to bear on the quest for space.

Our world would certainly be a different place today if Jack Kennedy, or a similarly enthusiastic proponent of science, were the President of the United States. Imagine, united by the world-wide battle against a Corona virus and a global crusade to minimize the impact of rampant climate change, instead of fighting against one another, we could all "Come together....It isn't hard to do."