

Do you all realize that until the advent of the nuclear sciences and sub-particle physics, there were scientists /he was certainly one of them/ who were competent to understand and to deal with almost every branch of the physical sciences. There could even be a one-man all-around researcher. But such a day is gone. The scientific field has proliferated with its vast, new knowledge, so that there is no such thing as the all-around competent scientist.

Now, if this were true in 1947, recall what the General just told you and imagine what is true today. So, in science and technology the shift has been largely from the mental giant, as a creative discoverer, such as the Galileo's, the Issac Newtons, to groups or teams of scientists complimentary to one another and working together. Therefore such men have been largely superseded. Even in such a theoretical area as to how the cosmos was created, the theory of the steady-state cosmos, was developed by three men, one a mathematician, Bondi, one an astronomer, Hoyle, and one an astrophysicist, Gold. Those three British members of Cambridge University faculties together developed the theory of how the cosmos not alone was not created under the big-bang theory at a point in time but instead the cosmos is continually undergoing creation, and this helps us to understand the red shift of galactic light and the fact that all great galaxies are moving away from us at speeds directly in proportion to their distance from us.

If it takes a team to come out with such an advanced theory, think what an array of specialists it would take to prove the theory, and then think what it takes to make the theory work experimentally. This is, in part, the structure of science and technology today. It is obvious that curricula in colleges have had to undergo vast changes in order to try to deal with such progress. They are somewhat like the Red Queen in "Alice in Wonderland." "She ran as fast as she could so that she would stand still."

Now, another important factor in present-day science and technology is the need for scientific intelligence. In serving with the first Hoover Commission for the Reorganization of the Federal Government as a member of the Eberstadt Committee which dealt with national defense, one of our most critical findings was that America was moving blindly ahead without having access to the vast outpouring of scientific knowledge available from the older countries of Europe, including Russia. So much pressure was