

in a moment. Let us agree, then, that the fact is that a scientist is no longer content with a bit of floor area and some odds and ends of glassware. If you are going to do sophisticated work in R. & D. your budgets had better be very realistic about the tools you are going to give these gentlemen to work with, remembering again Lord Kelvin who said: "If you can't measure it, it isn't scientific." Now one has to measure things that are in the order of one billion to one. It is desirable to measure the constituents of air pollution in billions of parts. Similarly it has been necessary to measure true alloys or pure metals which have fantastic strength when they meet such terms of purity that could never have been conceived of until modern instrumentation and methods were available.

We have already said that modern scientific work requires men of many disciplines, and we need not elaborate on that, because, with this proliferation of sciences, a pure physicist is not enough. A physicist in what? Optics? Radiation? Cosmic rays? Solid state physics? Et cetera.

As a concomitant of that situation, there is a proliferation of scientific and technical societies. If you were operating in this field, your mail every day would be loaded with enticing, seductive requests to join these marvelous associations and meet with your betters. Of course all of them have annual meetings and semi-annual meetings and local meetings. If you laid these all end to end, you would find, if you joined the ones of your interest, that your wife would have good grounds to sue you for divorce because you would never be home. They are holding meetings all the time. If you look at the titles of their papers you find all of them of interest, and presenting great challenges. Perhaps you would drool at the prospect of so much of this new knowledge which you might wish to get your hands on, but the total supply is so vast, for this is the array that the General presented to you, namely that this is one of the characteristics of modern-day science and technology.

How does one deal with this? How does one select from this enormous body of information organized into professional societies? Back in 1922, when the American Association for the Advancement of Science found that only two scientists from the far west came to the Chicago annual meeting because it took so long to get there on the railroad, they felt the need of some equivalent body on the Pacific Coast. They found that there were 56 separate scientific societies there even in those days. These had to be banded together to make the Western division of the American Association