

And this led, of course, to the expeditions to West Africa and Brazil in 1919 when Eddington and other astronomers went out, got the sun blotted out, measured, and found these displacements. This was more than just another useful idea. It was not merely a pragmatic application of something; this was an event that told man the way to look at the world and know what is really there is not to follow commonsense; not to follow the evidence of the senses alone; but to look with instrumentalities that are independent of sense; that are not related to human behavior; that derive directly from the rational tradition.

This particular work was done between 1913 and 1915. The elucidation of it occurred in 1919. Yet, it was in 1918 that American education put itself firmly on the behavioral front. This was what I have called the "20th Century Fallacy." It was a fundamental error for purposes of our own future. I am not saying it was an error at that time; I am saying it is an error now.

You look at the force of the rational tradition and try to explain to yourself why is it that this thing has this power? Partly, of course, it is because people who build bridges, if they follow these lines, build bridges that stand up. This is a good way to organize production and win wars. But there is more to it than this.

On the one hand there is the ability of the rational tradition to cross cultural lines. Let me illustrate. If you use terms like beauty, decency, justice and freedom, you are using words with which we could disagree as to specifics, but I am sure we would all agree that these words mean something in our culture.

You can cross over into the Communist culture and you will find they use the same words. But you will find that although those words have substance there, the substances are not parallel. Consequently, for purposes of cross-cultural communication the use of these value-laden terms, far from introducing a factor of communication, actually introduces what the communicators call "noise." They are a positive source of confusion.

But look what happens when you move into nonverbal systems of communication. The workers on the Aswan Dam are working from engineering drawings made in the Soviet Union. To the extent that they have any words on them, they are Russian words. These people speak no Russian, but they build dams. Or look at