

now in American education. That is, the ability of the comprehensive high school to generate on a mass scale, very advanced abstract intellectual abilities.

Now, how do you raise the abilities of kids who are not at this very advanced level? I do not know, and I do not think anybody else knows. I think that there are any number of theoretical problems here that are of grave difficulty principally because we know so little about the human mind. We have no sense of the structure of the mind. We are unable to establish the elemental character. We cannot get down to the bits and pieces of which neurological phenomena are made. We lack models of the mind.

If there were in the science of cognition a significant breakthrough, we might move into some new era. I personally feel very hopeful about that. Of course, I am sorry to say that the promising developments are not coming from educators. I do not know any educators who are really working in this field. I have on my staff a few people who I am trying to train. I perhaps ought to say a word about it, although I am giving you too long an answer.

When Einstein, working from the Michelson-Morley experiment developed the Special Theory, he did not use his own mathematics; he used mathematical models which had been developed in several places independently--Lorenz in Germany and Fitzgerald in England conceived of a series of mathematical equations which would explain the phenomenon that turned up in the inability to detect the ether drift. But these men who made the models did not take them seriously. They said, "These are models, but ha ha, aren't they ridiculous?" Einstein comes along and says, "No, they are not ridiculous. Because these models explain the data, they must be right." In other words, the insight that carried the lesson came to the mind of a person different from the games-player who constructed the answer.

I look for something like that. I can see these way-out types with all their crazy computer circuitry, impedances and other things that I cannot understand; I can imagine one of these fellows happening on a way to hook a thing up that would be a true analog of some piece of mind or some mental process. But I can imagine him not knowing it. There has to be another fellow who understands this fellow and also understands the nature of the problem. I am trying to train some of those. They are going to spend some