

# Perspective



## A New Look at Our Human Resources

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ONE OF ROBERT LOUIS STEVENSON'S most famous couplets is:

The world is so full of a number of things,  
I'm sure we should all be as happy as Kings.

Chemists have always been prominent among those who have marveled at the "things" to be found in nature and have sought to understand and explain and to reduplicate and improve upon them. Marvelous success has crowned the chemists' quests and, as a result, we are unfolding a "chemical age."

There is one resource, however, which to a surprising degree, we have left undeveloped and unattended. Like Al Hafed in Russell Conwell's famous "Acres of Diamonds," we have looked to distant fields and have neglected what is closer to us than our own back yards. We have not buckled down to the problem of understanding ourselves, our wives, and our children. We may give lip service to the statement "our children are our greatest resource," but we remain surprisingly unacquainted with this resource.

At the centennial of the American Association for the Advancement of Science in Washington in 1948, I predicted that the most significant development in the next century would be in the realm of human science. I am now more sure than ever that this prediction will come true, because the signs are clearer now than they were then.

Of course, I do not take the ridiculous position that science in general, or chemical science in particular, has wholly neglected man and his offspring. In a sense this is very far from true. On the other hand, I do say that we have not given the subject the attention that its importance demands and as a result we have in a real sense "missed the boat."

How in the field of chemistry do we make progress in some area that has already been "covered" but in an inadequate way? Do we try to recapture and pursue diligently the thoughts of earlier generations? Emphatically, No! We try to avoid the same old ruts and

to develop fresh approaches and new lines of thinking. The same is true in human science.

I doubt that Socrates, who said "know thyself," would endorse the theme song of the present age which is reflected in the writings of Alexander Pope ("Essay on Man"), Alexis Carrel ("Man the Unknown"), and Stuart Chase ("The Proper Study of Mankind"). The theme song is, "Understand Man and You Have the Answer."

The inductive method in science involves making observations *first*, and following these observations with generalizations. Somehow in human science we have prematurely arrived at generalizations which we tenaciously hold to, regardless of observations to the contrary. If we were to forget about these generalizations and make a fresh start with observations and measurements, it would not take us long to find out that understanding "man" is quite a different thing from understanding *men* and that understanding "the child" is far removed from understanding *children*.

As I tried to bring out in my book "Free and Unequal," human *differences* are the basis for our love of liberty. Understanding these *differences* will contribute enormously to the solution of many human problems, medical and otherwise, and recognition of these differences will promote mental health and happiness, will enhance immeasurably human efficiency and the value of "our greatest resource"—our children. Understanding these differences will not engender ill feeling; it will promote good will. We do not need to be afraid of the truth. It will help to set us free.

Chemistry will play an important role in this new development in human science because the internal chemistries of people differ markedly, and these incontrovertible differences are going to be the key to the solution of many medical problems. These findings will start a fire which I am sure will spread and, as a result, there will develop an extremely productive era of human understanding. Only then can we begin to have an adequate knowledge as to the tremendous potentialities which reside in our human resources.