

New Democracy of the Favored Many

Public Health

An Article by the Secretary of the Interior

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Chairman, White House Conference on Child Health and Protection

THE problems of child health and protection which the year 1930 and this May-Day—National Child Health Day bring before us demand a real understanding of the forces of science at work in our democracy.

Democracy has not essentially changed men. It has not made them greater or more noble. Men of today are not stronger than Sampson nor are our modern athletes swifter runners than those of the Marathon. Christ developed in an atmosphere that would be abhorrent to today's sanitary civilization. Yet he offered a way of living, a philosophy, a moral code that has not been exceeded in this age or in any other. Human beings are inherently today what they were four thousand years ago.

Under democracy, however, greater masses of men are being made strong, greater masses of youth are trained in athletic programs to be swift runners, greater masses of children and youth are being educated—even highly educated and expertly trained. Instead of the favored few, democracy has developed the favored many.

Thus, side by side with the mass attitude and mass action that belong to democracy, science has developed the favored many. In public health, in mental and social health, in welfare, in education and in invention, science has been directed to the benefit of human beings.

Between the principles of science and the principles of democracy, however, there is a sharp distinction. The laws of democracy are made by majority rule, by the vote tossed in

the ballot-box by the individual citizen who may be a man of great mind greatly trained, or a man who is hardly more than literate. The laws of science are not established by mass vote. They have nothing to do with the will of the people. Science has only one rule—the truth of the universal laws controlling the universe.

The problem of harmonizing science and democracy is one of the great questions facing scientists, educators, and leaders. The perfect answer to the question will be given when democracy takes the experts in with it, to blaze the trails and to direct the development of every national activity which affects the health, happiness, and success of all the people.

The democracy of the United States is beginning to do this today. An important example is the White House Conference on Child Health and Protection where more than five hundred experts are studying everything that science teaches today about the health and well-being of children. When their study is complete, our democracy will learn from it what each community and each state can do to ensure that the purpose of democracy may be fulfilled in the life of each child—that is, the opportunity for health of body and mind, for happiness and for success.

The experts of the White House Conference cannot, of course, change the scientific truths that make one way of treating children right and another wrong. Such laws always act the same way and produce the same results. Electricity, for instance, does not change its rules with the changes in political administration. Nor can the experts who control electricity change their methods in handling electricity because of a change in political administration. Yet electricity, steam and similar forces are being put to use to build up the civilization of the United States.

And now through science, through the leadership of experts, men are learning more about themselves. Even within fifteen years, great advances have been made in public and personal health. One by one, through the skill and patience of expertly trained men, certain diseases have been driven out of the nation.

The simplest person today knows something, more than his parents at

any rate, about nutrition. The humblest mother understands more than ever before about the care of her babies. And so it follows that just as fast as mothers and fathers everywhere learn to understand and use these discoveries of science, democracy and science will be harmonized in the United States. And mothers and fathers will learn just as fast as the educators lead them.

But even while the nation is adopting the truths of science and is applying them to improve life for us and for our children, it is likewise building a structure that may become a trap for human beings. The structure is built of steel, concrete, pavement, wires, artificial ventilation, and artificial lighting that turns night to day—a whole series of new things in the environment of human beings.

Because of these things, men are in danger of becoming mere menagerie animals, captured and caged by themselves. Here they will breed and bear the young—the children of 1950 and 2000.

Trees are being driven out of the environment of men and women and children—the flowers, the birds, the grass, the open spaces, all that makes life and happiness for human beings.

No matter how much the nation may know about public health, or about welfare, no matter how much mothers may know about nutrition and the care of their babies, trouble will seize the generation that has been captured and caged and reduced to the status of menagerie animals. The problem of environment, therefore, is a bitter and difficult problem confronting the parents of today's children.

There is a further problem which both science and democracy increase. Personality is the greatest possession the child has, but under the domination of mass thinking and mass action and of science, it is difficult to preserve personality. It is becoming more and more difficult in the United States for it to find expression, except in the old ways of sculpture, painting, poetry, or music.

In favoring the many, the schools of America today are under the necessity of trying to preserve the personality, the spark of individuality, in the children who come to them.

One of the most interesting experiments in (Turn to page 286)

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Electrons Behave Like Waves

General Science

Physicist Describes Their Reflection By Crystal

ONE of the outstanding puzzles of modern physics—how electrons, once thought of as material particles, can behave sometimes like waves, while “waves” of light sometimes behave like particles—was discussed at the meeting of the American Philosophical Society by Dr. C. J. Davisson, of the Bell Telephone Laboratories. One result has been that the physicist no longer tries to imagine a model of every physical phenomenon.

Describing his own experiment, Dr. Davisson told how a stream of electrons aimed at the face of a crystal had behaved much as light does on striking a mirror. Most of them were shot back at the same angle to the surface layer of atoms as they had approached.

“There is a strong and well defined beam of regularly reflected electrons,” he stated. “This is a phenomenon which is not predicted and cannot be

explained if we insist on assuming that electrons are solely corpuscles much smaller than the individual atoms, for to such corpuscles the surface of the crystal must appear not as a smooth plane, but as a rough and broken field.

“Picture the crystal built up of atoms, each of them enormous in size compared to an electron and each of them comprising a nucleus surrounded by a larger number of electrons rotating in closed orbits. Imagine now an electron plunging into the galaxy of planetary systems. It is obviously a comet. The simplest event which may ensue will be a comet-wise deflection of the electron in the field of some atom into which it happens to strike, and then a speeding away of the electron from the crystals without loss of energy. The direction taken by the departing electron would be determined by a number of circumstances, one of which

would be the distance of the line of approach of the incident electron to the nucleus of the atom responsible for its deflection.”

“If we regard the beam of incident electrons as a beam of waves instead of as a stream of particles,” he continued, “then each wave-front of the beam comes in contact with all the atoms of the surface, and the regular reflection is explained, as in the case of X-rays, as the result of constructive interference among the coherent secondary wave trains scattered by and proceeding from the regularly arranged atoms of the crystal.”

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Favored Many—Cont'd

the American school system has been the determination to keep religion out and to get character in. The substitutes for religion, some think, have not been satisfactory. Because many of the great moral leaders are associated with religion, much of their influence and power have been denied our boys and girls in school. The schools need substitutes for the great moral leaders of the past and the question many ask is whether they are finding them.

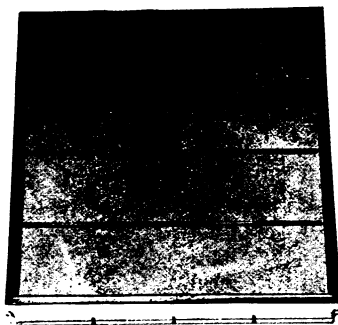
If there is question as to national wisdom in side-stepping the influence of religion, there is no question as to the importance of cutting superstition out of the child's environment.

The future of education in our great democracy gives us anxiety. It must be different. Under it, boys and girls will be educated less in specific subjects so that a boy with a gift for science but no mind or interest for language will be acceptable in any university. Education will be directed not to subjects but to boys and girls. Its purpose will be to adapt each one to the environment science has created and to the society of democratic America. At the same time, it will preserve personality and health.

When the findings of the White House Conference are all in, the nation will know better how to protect its children, how to harmonize science and democracy in their lives. Any agency like May Day—National Child Health Day speeds the good work along!

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