

Softer Physics Teaching

Since 1948 the percentage of high school seniors taking physics has decreased from 29 percent to less than 20 percent. And a new gentle approach to physics education is needed to keep students in the field.

So said Gerald Holton, professor of physics at Harvard University and co-director of Harvard Project Physics, a program to develop a more personal approach to the high school subject. Holton, along with his codirectors, F. James Rutherford and Fletcher G. Watson, gave the first progress report on the two-year-old project at the convention of the American Association for the Advancement of Science in Washington.

Key targets of the new approach to physics teaching are the two million high school seniors (80 percent of the total) who are not interested in pursuing the subject in college.

Essential to the new approach is a minimal use of mathematics, according to the Harvard group. Math is what drives most students away from physics. Instead, Watson proposes quotations from literature, examples from art and the home life of physicists.

It is too early to be sure, but the technique may be working.

The main lesson learned in the past two years of experimental teaching of

the program has been that teachers must be allowed flexibility in deciding how fast to go and what to emphasize.

Early reaction to the project, which has two more years to run, has been favorable. In the 10 schools which have teachers who participated in the program in 1965, enrollment in the project course increased 50 percent in 1966. Fifty-five teachers are now teaching in the program.

POPULATION CONTROL

Urbanites Less Fertile

Women living under the strain of urban life are less fertile than their country cousins. Because the United States is fast becoming a universally urbanized country, it will probably never face the same population crisis India is experiencing, Dr. Ulla H. Olin told the American Association for the Advancement of Science.

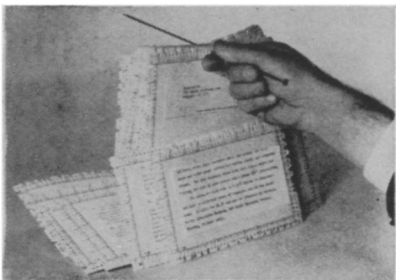
There is a universal difference between the number of children born to city and country dwellers which can be explained by the fact that tension may interfere with fertility, she said.

One participant at the meeting pointed out that women who are extremely concerned and anxious about their ability to conceive often turn out to be infertile—possibly as a result of their anxiety rather than a biological disorder.

In animal studies at the National Institute of Mental Health and elsewhere, psychologists have reported rats living in crowded conditions bear fewer offspring than those living in more open surroundings.

It is quite appropriate to derive principles from animal studies and apply them to humans, Dr. Olin said, because man's "reproductive physiology is the same as other mammals." The only peculiarity lies in man's enlarged central nervous system and ability to create instead of just adapting to an environment, she added.

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