versity tested instruction in general psychology, general chemistry, and psychology of marriage and found that in ten of eleven tests the television students learned just as much as classroom students.

Television has come along just in time to give educators a flexible tool with which to deal with the flood of youngsters who are swamping the schools. By the time they hit the high schools and universities, techniques will have been developed that will make the medium at least as effective as the classroom in lecture and demonstration work. There can be a teacher shortage, but there is no likelihood of a shortage of TV sets. School buildings are being designed to include television viewing rooms. TV is being used to train teacher personnel. Cincinnati expected to have a television set in every primary school in the city sometime this year. This will mean an audience of 200,-000. In Philadelphia 100,000 students a week have been watching in-school telecasts.

But this is only the beginning. Charles H. Silver, president of the New York City Board of Education, has stated: "I look forward to the day when television will be one of the most powerful and stimulating instruments at the disposal of the classroom teacher. Its power of immediacy, its intimate appeal to children, the effectiveness with which it can pinpoint the smallest detail of whatever it looks at, these are just some of the reasons why we must learn how to fit it into the administration and methodology of our modern schools. Like the other excellent classroom aids which have preceded it, television will assist but never replace the teacher."

A week ago Dr. Alexander J. Stoddard, former superintendent of schools in Philadelphia and Los Angeles, urged that every public school be equipped with closed-circuit TV in order to raise the quality of instruction, overcome the critical shortage of teachers, and provide the necessary funds for substantial increases in teacher's salaries. He estimated 100,-000 teaching positions could be saved and more than \$500,000,000 in salaries.

The safest generalization to be made about educational television stations is that they will follow the pattern of other American educational institutions. There will be good teachers and bad teachers, stuffy stations and stations with crisp programming. Some will be in a never-ending struggle for money and some will grow fat with endowments. But all will provide a life-saving cushion against the onrushing mass of children asking for educations.



Sometimes Good Things Are Free

Coping With the Teaching Aids Supplied by Private Groups is a Major Educational Problem

By THOMAS E. COONEY

A LONG with the problems of bus schedules, hot lunch programs, basketball games, and PTA meetings that keep public school teachers and administrators busy these days, is a headache about which relatively little is spoken outside professional circles. This is the mixed blessing being conferred on the American school system by the education and public relations departments of business and industry, trade organizations, and labor unions in the form of "free and inexpensive" teaching materials.

Just about every day's mail brings to the desk of a school superintendent, a principal, or a classroom teacher some kind of book, pamphlet, or chart designed to show that Western civilization would grind to a halt if it were not for the starry-eyed efforts of the folks who produce plastic covers for push-buttons and the like.

Taking advantage of the fact that modern theories of education are hospitable to "units of work" on subjects which, like transportation and communications, cut across traditional subject matter lines, many of these private organizations now offer such units completely tailored to classroom use. Typical of them are the offerings of the Petroleum Institute of America, one for junior and senior high schools consisting of about fifteen pamphlets and charts, a color film strip entitled "Oil from Earth to You," and a seventy-page teacher's handbook. The various pamphlets are keyed to science ("The Chemistry of Petroleum"), social studies ("Oil and How It Fits Into the American Economy"), and conservation, while the handbook gives the teacher exercises and activities that will utilize the information about petroleum as contributions to all these areas of education. Similarly, the Glass Container Manufacturers Institute provides a short illustrated pamphlet unit on the history of glass and glass containers, also buttressed by suggested questions and activities. Other organizations offer a wide range of supplementary material in the form of films, recordings, film strips, pamphlets, papers, charts, models, conducted field trips, and even live speakers. So numerous have these teaching aids become that a whole secondary field of commercially produced catalogues of them has sprung up. A current catalogue devoted almost two hundred pages to films and film strips that are available either free or at nominal cost.

There is, moreover, a publication called *Educational ABC's*, which is likely to appear periodically on a school principal's doorstep, in several-hundred-copy lots, unsolicited and absolutely free. When he looks inside this little magazine, the principal discovers that it is divided into sections ("A for Automobiles," "B for Banks") devoted to "telling the story" of a phase of the business system.

While the private outfits that spend considerable money and effort to produce and promote these elaborate aids may be motivated by a spirit of public service, it is a safe bet that they are also highly intrigued by the possibilities of addressing a malleable captive audience of over thirty million school children on a subject dear to their hearts.

An example of a year-round program of teaching units is that on fire prevention and safety sent out by the Hartford Fire Insurance Company. Naturally, insurance companies who tell the public how to preserve life and property are motivated less by compassion than by the hope of reducing the number of claims they have to pay. Another approach is that of the National Association of Manufacturers, which has a whole corps of trained lecturers who present a series of talks on "How Our Business System Operates." Organized to fit into various grade levels and adult discussion programs, these talks are built around an ingenious portable, changeable chart called a "flannel board." Onto a background of flannel the speaker can put little adhering flannel shapes to indicate visually the relations among the various parts of the business system. These talks, originated by the DuPont Company, are given free to teacher and administrator groups so that they may learn how to use the kit and handbook that NAM supplies, with complete teaching instructions. Obviously, NAM has a vested interest in circulating its particular conception of the business system.

So have the U. S. Chamber of Commerce, General Electric, Ford, General Motors, Bristol & Myers, and General Mills, all of which provide extensive resources in free teaching aids. Foreign governments, through their embassies and information centers, provide booklets and films that are sometimes mere travelogues and sometimes complete sets of pamphlets, posters, and maps (like one distributed by the government of Portugal) designed to give background informa-

tion for geography, and, of course, to praise a particular political and social system. The Southern New England Telephone Company supplies schools in its area with small telephone hookups for teaching dialing, and a unit called "Telezonia" whose movies, pamphlets, and film strips provide a regular communications unit in grades three and four in many local schools. The Aetna Casualty and Safety Company has lent to driver-education departments in high schools all over the country a unit that consists of fifteen mock-up sets of automobile controls that are operated by pupils in response to driving situations flashed on a movie screen in front of them.

Out of the mixture of motives behind these varied items there comes, therefore, much that is good, much that is tendentious, and some that is downright bad. Aside from the physical problem of where to put the stuff as it pours in, the educator's main task has become to separate the educationally useful from the irrelevant. Because the American system of public education is decentralized, this task devolves upon local superintendents, principals, and to a large extent upon the individual teachers.

Experience with the pressures of private organizations has made most educational administrators quite sanguine about the motives and content of the free materials offered them in this manner. One New England superintendent recalls that a few years back the state manufacturers association sent him some teaching aids with a strongly worded letter advising their adoption. The superintendent thought the material too biased, and so rejected it. He then received a letter asking him to report whether he had used the stuff, and what his opinion of it was. When it became clear to the association that he was not going to use it, the superintendent received yet another letter, pointing out that the association had gone to considerable expense to produce the material and mail it to him, and that he should think twice before depriving his pupils of this fine educational opportunity. The superintendent simply ignored the whole matter, and later discovered that four other superintendents in his state had had exactly the same experience.

Out of such situations, and out of an awareness of the often blatant advertising and propaganda that is contained in the material they receive. educators have evolved certain standards for the adoption of teaching aids. The first principle, as enunciated by the pamphlet "Choosing Free Materials" published by the American Association of School Administrators, is to remember that such materials are best used as supplementary rather than basic teaching devices. Only those aids that contribute effectively to a carefully planned learning situation should be adopted. For this reason, it is wise for every school to have a screening committee made up of teachers as well as administrators, so that uniformity of instruction at various grade levels can be preserved. Granted that a given teaching aid legitimately augments a basic program, the principal objections to it may be that it is mere advertising, or that it presents biased information. The pamphlet mentioned above asserts that advertising is objectionable when it tries "to establish the exclusiveness of a particular product or service." Some schools permit no mention even of the sponsor's name, while others allow him to name his products and identify his company, so long as he does not try to promote them.

Are "Free" Films Good?

ACCORDING to one survey, 86 per cent of the high schools in this country use "free films" in the classroom as direct teaching aids or as general background information. If the report errs, I would imagine it is on the conservative side. Are the kinds of business-sponsored films that are being made worth showing in valuable class time?

There is nothing wrong with business-sponsored films that a little competition couldn't cure. As free films they are shown in many schools (and hospitals, jails, church groups, and clubs) that have little or no budget to buy or rent the 16mm films that are available for a fee. They are gift horses into whose mouths their docile audiences seldom look. If sponsors are willing to believe these audiences, they will be reassured that their films are "good," "wonderful," or "great"—depending upon the personality of the individual who fills in the postal reply card after the showing. If the sponsor made his film for purely selfish reasons (as is generally the case), he will count each "thanks a lot" as a potential sale or a sector of the public ready to respond favorably to all the causes that concern his company. But any sponsor will tell you that this is not the way he does business: words of praise and thanks mean nothing; it is cash sales that count. Rarely does the audience of these films remember a week later what the film was about, much less who made it—even if the manufacturer's name is repeated a dozen times.

Until sponsors understand the necessity of producing films that stand up well alongside the best of those that are commercially produced, until they begin to compete with each other to produce the most useful films (not necessarily the most expensive or the most attractive), until they begin to think of responsible leadership in education, their films are likely to remain suspect.

Some enlightened firms contribute the money for needed educational films, turning over the job of script supervision to a qualified non-commercial organization. Something along these lines has been worked out by the U.S. Bureau of Mines. The Bureau supervises the production of films on mining and metallurgy that are paid for by commercial companies, their only credit being a dignified printed line on the opening titles. From such team work have come many acceptable films about the natural resources of various states, and so interesting a film as "The Petrified River," the story of uranium and its present uses, sponsored by the Union Carbide and Carbon Corporation. The Bureau distributes these films without charge to many educational film libraries.

Another interesting kind of support is that given by the Burroughs Corporation to the Detroit Institute of Arts for the production of special films on its painting collections. "Portrait of Holland" and "The Expressionist Revolt" are two fine results of this sponsorship, and they are good enough to have been accepted for commercial 16mm distribution by Film Images in New York.