

## PSYCHOLOGY

# Compressed Speech Helps

Compressing speech into fractions of its normal time commands more attention than normal talking rates and may prove a valuable aid to educators—By Patricia McBroom

► THE POSSIBILITY of compressing speech into half or a third its normal time has claimed the attention of education, communications, the armed forces and the Poverty Corps.

Why compress speech? One good reason is that some degree of compression seems to command more attention than normal talking rates, said Dr. David B. Orr, at the American Institutes for Research (AIR) in Silver Spring, Md.

Dr. Orr, who has directed experiments in the educational value of compressed speech during the past two years, explained that normal speech allows the fast-working mind to wander.

If the listener is motivated, he will "marshall his attention and efforts" to catch compressed material coming over rapidly, said the psychologist.

Time-compressed speech has some significant applications to education, thinks Dr. Orr. It not only aids the blind, but it can be used to help poorly educated people to learn to read. Dr. Orr said that studies have shown significant reading improvement when printed words were simultaneously accompanied by speech.

It may even be possible for illiterate people to get an entire education without

reading a word, except it probably would not be acceptable.

Psychologists at AIR, headed by Dr. Herbert L. Friedman, found that their subjects could comprehend 500 words per minute (50% compression) with no practice but faster speech required training.

However, the Department of Defense has reportedly developed a compressing machine that will throw out words at 500 words per minute, completely intelligible to persons without practice.

This discrepancy may be due to compressing machines themselves, said Dr. H. Leslie Cramer, Harvard University, Cambridge, Mass. Dr. Cramer, who has been experimenting with speech compression at the Harvard School of Education, said tapes are not just speeded up, giving a Donald Duck effect. They are cut periodically and indiscriminately by machine, which then discards thousands of small sound sections. Unfortunately the machine may toss out important consonants at high compressions.

The Defense Department machine, however, picks up all the discards, compresses them and feeds them back into one ear, while the first compression is running in the other ear.

Unusually good results have also been

obtained by Dr. Cramer in delayed speech experiments.

He found compressed speech to be consistently more intelligible if there were the slightest delay in one ear.

Dr. Cramer is now interested in a new computer, the ambilog, which can be programmed to cut tapes with some discrimination. Vowels can be sliced way down, but the consonants are more crucial, he noted.

So far, psychologists do not know what speed is optimal. Dr. Orr believes that the best rate for any individual would correspond with his highest comfortable reading rate.

An average high school student reads about 225 words per minute; an entering Harvard freshman, 400. Talking speeds range from 125 to 200 words per minute.

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FDA

TEA TASTER

## PSYCHOLOGY

# Confirm Smoking Theory

► A PSYCHOLOGICAL THEORY that has wide application in human behavior is confirmed by smokers who continue to smoke in spite of possible health hazards.

This is the conclusion of Dr. Harold H. Kassartian, assistant professor of business administration, and Joel B. Cohen, doctoral candidate in marketing, of the University of California at Los Angeles.

The results of a smokers' survey support the Festinger "dissonance" theory that individuals are able to think their way out of the inconsistencies in their lives.

According to the theory, many decisions are followed by dissonance, as the individual worries that he may have taken the wrong step. This dissonance can be reduced in a number of ways, several of which were evidenced among the smokers interviewed.

1. The importance of the issue may be denied. Thirty-five percent of smokers interviewed said the facts are not clear, that there are many hazards in life, and that many smokers live a long time.

2. The individual may claim inability to change a decision. Thirty-one percent of smokers replied either that they could not stop smoking or that they like to smoke and would not stop.

3. The alternatives may be seen as less

desirable. Thirteen percent of smokers suggested that smoking is better than being a nervous wreck or taking pills or becoming an excessive drinker.

4. The individual may seek social support for his behavior. Twenty-five percent of smokers replied that smokers are normal and in the majority.

Advertising, the investigators suggest, has been used not only to sell a product, but to reduce dissonance among those who have already bought it.

"The consumer will often control his own exposure to information and advertising to support what he wants to believe," they assert. "Undoubtedly, the primary audience for advertising is comprised of the advertiser's present customers."

The UCLA investigators predict that the dissonance theory may provide the businessman and researchers with a broader frame of reference for understanding human behavior.

The report was published in the fall issue of the California Management Review, a quarterly publication of the Graduate Schools of Business Administration of the University of California, Berkeley and Los Angeles.

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## PUBLIC HEALTH

## Professional Tasters Check Imported Products

► THE U.S. FOOD and Drug Administration tea tasters taste tea from more than 30 countries and check the product for quality standards, adulteration or labeling violations.

Many imported products deteriorate in direct proportion to the effect of natural disasters and political upsets in foreign countries, the FDA says. Figs and dates, for example, from several Mediterranean countries became contaminated with insects and other impurities after political upheavals during the last 10 years caused the replacement of trained technicians with inexperienced native labor.

Examinations by Customs appraisers or a full-fledged FDA examination takes place at wharves and laboratories. Such examinations are concentrated on products that are contaminated by filth, pesticides or radioactivity, as well as those that might be spoiled or decomposed. Random spot checks are made on many importations because of the expense of inspection of every import.

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