

PSYCHIATRY

Whines, Grunts Studied

► NOW PSYCHIATRISTS have a way of recording for future study a patient's grunts, bellows, whines, wheezes and even burps.

The sound of a patient's voice often conveys more information to his psychiatrist than does the words he uses. If the patient says "I'm feeling fine, Doctor," but says it in a tearful voice, the psychiatrist will ignore the words and listen to the tone of voice. Dr. Peter F. Ostwald of the University of California School of Medicine in San Francisco describes a method of recording non-verbal noises in the *Archives of General Psychiatry*, 3:117, 1960.

Probably the most accurate and detailed way of recording these human sounds that are not speech is by speech spectrography, but this method is expensive and requires a highly skilled interpreter, Dr. Ostwald points out. He recommends, as a simpler method, one standardized by acoustical engineers for the measurement and analysis of noise.

A microphone is placed in front of the patient's mouth and his sounds are recorded on tape. Then a small segment of the tape is played backwards into a sound analyzer.

The result of the sound analysis is

plotted on graph paper to show the frequency (pitch) of each sound and also the volume. Four different kinds of voices were distinguished by the analysis.

First was a "sharp" voice. This is the kind usually called a nagging, insinuating, querulous tone of voice.

As many people might expect, this kind of voice came mostly from adult women patients. One of the records, however, was made by a 10-year-old boy with a behavior disorder.

A "hollow" voice, the second kind showing up in the records, is often described as a flabby, rattling, quavering voice. Three of these records came from senile men and the fourth came from a young man whose brain was injured in a motorcycle collision.

What Dr. Ostwald calls a "flat" voice is a smudged, lusterless, hesitant way of speaking.

The fourth kind of voice, called the "robust" voice, is the voice known as extrovert, aggressive and confident. The records of robust voice obtained by Dr. Ostwald were obtained from professional men and women, some known for their excellence as teachers or lecturers.

• Science News Letter, 78:100, August 13, 1960

AERONAUTICS

Unmanned Plane Can Spy

► AN UNMANNED PLANE and a matching spy system that permits surveys of enemy territory without the risk of losing a single life will relay photographic radar and infrared data to a field commander day or night, under all weather conditions.

The Army said the drone plane would be especially useful for getting target data for tactical missiles.

It needs no landing field for take-off or landing. It is launched from a flat-bed trailer. After flight it parachutes into a selected open area.

It can be pre-programmed for its flight and mission. Constant radio instructions, which might possibly be jammed, are eliminated.

The drone has a slim body 35 feet long. From half way back on its body, delta wings sweep to the plane's rear.

Details of speed, range and altitude were not available. But the turbojet plane is designed to fly fast and low to avoid enemy fire.

Called the AN/USD-5, the spy system includes two huts in which equipment will acquire and process information the drone will instantly radio back. The entire system can be transported by air. The drone itself can be air-lifted by helicopter.

The drone can be instructed to remain in a target area so that the commander can quickly tell if his missile has hit its target.

The spy system is designed for use at field army level.

The plane can automatically follow the contour of terrain so as to avoid detection by flying low—without bumping into hills. The system is being developed with the Army Signal Corps by Fairchild Engine and Airplane Corp. of Hagerstown, Md., under the direction of the U. S. Army Signal Research and Development Laboratory in Fort Monmouth, N. J.

The Army indicated that development of all sensing equipment for the drone is not complete.

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METALLURGY

Depleted Uranium May Have Additional Use

► DEPLETED URANIUM can be used in the steel industry, in the construction of shielding materials and in various alloys, Vincent Barth and George Rengstorff, metallurgists at the Battelle Memorial Institute, Columbus, Ohio, believe. Stocks of depleted uranium, from which the fissionable isotope U-235 has been extracted, are accumulating at a rate of "tens of millions of pounds a year," they report in the *Battelle Technical Review*, July, 1960.

The metallurgists said that uranium is still too expensive to compete with metals now used in the steel and alloy industries, but that the price might be lowered if increased demand were to lead to better methods of preparation.

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VETERINARY MEDICINE

Regulations Will Prevent Poultry Disease Spread

► PROPOSED FEDERAL REGULATIONS governing interstate movement of breeding poultry, baby chicks and hatching eggs will offer increased protection against pullorum disease and fowl typhoid, the U. S. Department of Agriculture has reported.

The proposal would require that poultry and hatching eggs shipped interstate must originate from flocks not infected with pullorum or fowl typhoid. These are indicated by an official blood test. In addition, certain sanitary requirements would be established for boxes and crates used in interstate transportation of these products.

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