

PSYCHOLOGY

Two-Way Conditioning

Soft music or lovely paintings while you eat good food makes you enjoy the art, but later the art in turn makes your mouth water.

➤ WHEN YOU sit at a delicious luncheon and listen to music your attitudes will change in two directions—toward the music and toward the food.

This is indicated by new experiments reported by Dr. Gregory Razran of Queens College in the *Journal of Experimental Psychology* (Oct.).

Dr. Razran gained prominence some years ago among his colleagues for what came to be known as Razran's Luncheon Technique. That was when he found scientific confirmation for what business men have concluded on the basis of experience, that the big deal discussed with a prospect over a fragrant, juicy steak was much more likely to go over than if it were proposed in the office.

Now Dr. Razran finds that not only do you tend to develop a liking for the soft music you listen to during a meal, but when you hear the music later it will probably make your mouth water and evoke a food-orientated state of mind. This probably means that when the business man's client comes back and a new business deal is brought up, the client will immediately want to go to lunch.

To make the new discoveries, Dr. Razran modified his luncheon technique somewhat. The 20 college students taking part were invited to, not one, but a series of free lunches where music was played or pictures shown. During these meals, they were not distracted from enjoyment of the food by being required to make any decisions.

On the day following the last luncheon, they were gathered in the laboratory with

another group who had not been at the luncheons, for comparison.

While the music was played or pictures shown, they were then asked to find words to rhyme with a list of given words, to unscramble scrambled words, or to tell what the music or picture made them think of.

The luncheon guests tended to find rhyming words that had to do with foods or eating, they could unscramble a word much faster if it was the name of a food, and the music or picture generally reminded them of something related to eating.

The difference between the responses of the luncheon guests and the other students was significant.

What was "conditioned" or learned from the linking of music or art with eating, Dr. Razran concludes, was not so much a sensation or particular motor reaction as it was a generalized attitude or frame of mind that is regarded as basically unconscious.

Dr. Razran has coined a new term for it, "cognitive conditioning."

Science News Letter, October 9, 1954

TECHNOLOGY

Pill of Strontium 90 Controls Steel Rolling

➤ A PILL-SIZED piece of radioactive element, obtained from the Atomic Energy Commission, is being used as the "brain" in a complicated machine that controls the thickness of cold rolled steel.

A piece of strontium 90 the size of an aspirin tablet, contained in a device known as a radioisotope thickness gauge, is able to detect very slight variations in the thickness of sheet steel and, by means of electrical signals, activate control equipment that instantly adjusts the 2,000,000-pound compressive force of the wringer-like roll-

Questions

BOTANY—What natural hybrid has persisted in being different from either parent? p. 229.

HERPETOLOGY—What creature played a role in the Caribbean like that of the American buffalo on the Great Plains? p. 228.

MEDICINE—How can a balloon be used to aid heat stroke victims? p. 230.

METEOROLOGY—How long will the hurricane season last? p. 229.

ORNITHOLOGY—How many trumpeter swans survive in the United States? p. 234.

PSYCHOLOGY—In what two ways do your eyes perceive depth? p. 228.

PUBLIC HEALTH—Why do health officers expect an influenza epidemic this winter? p. 227.

Photographs: Cover, Fish and Wildlife Service; p. 227, University of Florida; p. 229, Harvard University; p. 231, Firestone; p. 240, Davis and Geck.

ers through which the continuous ribbon of steel passes.


This method of determining steel thickness is being used in one of Republic Steel Corporation's plants by Republic technicians, with the help of consulting physicists.

The strontium 90 does its detective work from within a small lead-armored capsule. This container, mounted below the moving ribbon of steel, beams beta rays from the speck of strontium 90 through the sheet steel. Above the moving steel is an ionization chamber about the size of a tobacco can. This chamber receives beta ray emanations through the steel. These emanations are strong or weak in proportion to the thickness of the metal.

Through elaborate electronic equipment, the beta ray signals control the "squeeze" of adjoining heavy rollers, which correct off-standard variations in thickness to within .0005 of an inch.

Science News Letter, October 9, 1954

No large body of land on earth is separated by more than 290 miles from some other body of land.



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