GENERAL SCIENCE

Scientists Like Their Jokes

Not Always Engaged in Dry Research, Scholars, Too, Play Pranks—With a Purpose, Or Just For Fun

By DR. FRANK THONE

SCIENTISTS, like other mortals, like to have their little jokes.

And like other mortals, they are not above making those jokes at the other fellow's expense.

As perpetrators of practical pranks, scientists have a very considerable advantage over the rest of us, for they can make use of their knowledge of the forces and phenomena of the natural world in ways we wot not of. They leave us gasping—and they also leave us guessing.

The very essence of a practical joke is to throw the victim into sudden bewilderment or loss of dignity. You get two laughs out of him; first at his initial discomfiture, then at his wrath when he learns just how he has been tricked.

But the scientist's "goat" may never learn how the trick was played—unless his learned tormentor chooses to tell him. If he does, it is a safe bet that the victim will have at least that particular scientific fact down pat as part of his education. We learn by experience, and the more startling the experience the longer the lesson sticks.

There is the story, for example, of the psychology professor who made his class more careful observers by playing a trick on them. When they came into his room one day they found him mixing an exceedingly disagreeable mess of stuff in a glass beaker. It had an evil greenish-yellowish-brown color, and it smelled as bad as it looked. The professor was stirring it with his forefinger.

"Watch Closely

"Watch closely," he told the class, "and do exactly as I do."

He lifted his hand, flicked his finger into his mouth, licked it thoroughly, brought it out clean.

With a perfectly unmoved face, he passed the beaker round the class. One by one the reluctant students stuck their forefingers into the mess, then into their mouths. The stuff tasted as ill as it looked and smelled. Their wry faces were eloquent of their outraged tongues.

Then the professor held up his forefinger, with the evil goo still on it. "You did not watch closely, as I told you to," he said calmly. "I did stir the stuff with my forefinger, as you saw. But it was my middle finger that I put in my mouth."

But scientists do not usually pull stunts of this kind for the solemn purpose of improving the minds of the young. As a rule they play tricks just as the rest of us do, simply for the fun of it.

A joke which combined the psychologist's trick with an elementary chemical fact was perpetrated years ago by Prof. R. W. Wood of the Johns Hopkins University, and is still a classic tale on the campus in Baltimore. Dr. Wood, then one of the younger faculty set, strolled out of the laboratory one day, after a rain that had left puddles of water on the uneven, worn old stone-slab sidewalk.

As he passed one of the puddles, he spat into it. Instantly a little jet of yellow flame leaped forth on the surface of the water, and danced around for several seconds before it went out. When he returned a quarter of an hour later, a little crowd of mystified students were still arguing about how he did it.

Metallic Sodium

What Dr. Wood had done was very simple. When he spat into the puddle, he also dropped into it a bit of metallic sodium which he had been carrying in his hand in a scrap of paper.

Sodium is one of the oddest of metals. It is as soft as putty, and so light that it floats on water. It has a tremendous affinity for oxygen, so strong that when it touches water it disrupts that marriage of oxygen and hydrogen. The hydrogen, thus roughly divorced, immediately remates with the free oxygen of the air, celebrating the wedding in fire.

Dr. Wood knew that the students would see him do only one thing at a time, so he distracted their attention while he flicked the bit of sodium into the water. And the chemical reactions did the rest.

Dr. Wood once played a joke on the naval censors of one of the Allied powers, but it was a joke with a purpose this time, to convince them that they were not using all the precautions they needed to. They had been showing him their elaborate set-up for the chemical detection of secret writing that might be on the back of seemingly innocent letters or between the lines. Letters passed as innocent they marked with a rubber stamp: "NO SECRET WRITING HERE."

Dr. Wood asked them if they had thought of subjecting the letters to the rays of an ultraviolet lamp. No, they told him, that was unnecessary; the methods they were using would detect all possible kinds of secret writing. He challenged them to leave him alone for five minutes, and he would give them a sheet of paper with a secret message they could not detect, but which he could bring out with ultraviolet rays. They took him up.

As soon as they were out of the room, Dr. Wood scrubbed their rubber stamp clean of all ink. Then he rubbed on it a very thin coating of white vaseline, which like all oils and greases shines like fire under ultraviolet rays. He pressed the stamp on a sheet of blank paper, and called the intelligence officer back in.

Chemicals Showed Nothing

They put the sheet through their relied-on routine, found nothing, accused Dr. Wood of wasting their time in trying to spoof them. He led them into the darkroom where there was an ultraviolet lamp, and turned it on.

Instantly, in great letters of fire, leaped out the mocking legend: "NO SECRET WRITING HERE."

Another one of the same scientist's jokes-with-a-purpose was the invention of a trick handle for bank messengers' satchels. So long as it is held firmly, nothing happens. But if the messenger's grip is loosed, as it would be in case a thief snatched the satchel, the handle would begin to pour forth volumes of chemical smoke. For some reason, however, banks and express companies have not adopted the device. It may be they are afraid of false alarms, in case a messenger should inadvertently relax his hold for a moment.

A different kind of a trick bag, devised purely for joke purposes, is the invention of another prominent physicist. As is well known, a rapidly spinning gyroscope wheel tends to stay in the same position, and strongly resists being turned. It is this property that makes it valuable for such purposes as stabiliz-

ing ships, holding a compass true, and steering airplanes and torpedoes.

The impish physicist has put a gyroscope into a small handbag, together with a motor for running it. When he goes on a journey, he starts the motor as he prepares to leave the train, and asks the porter who takes his grips to follow him closely. Then he proceeds to take a course around as many corners as possible—and at each turn the porter finds that accursed bag trying to pull his arm off. Probably more than one red-cap has become convinced that the thing is full of "ha'nts."

Play That Paid

Sometimes a thing that starts more or less as a joke turns into a real scientific discovery. Several years ago, a young chemist named Dr. A. L. Fox, working in one of the du Pont laboratories at Wilmington, Delaware, was investigating the properties of a complex chemical known as p-phenyl-thio-carbamide.

Two of his co-workers accused him of "poisoning the air with that stuff," making it taste bitter. Dr. Fox was incredulous. He put some of "that stuff" on his tongue. He could taste nothing. His two protesting companions also tried it. To them, it was more bitter than quinine. They wouldn't believe he could not taste it.

Really, it was a most remarkable thing, for until then all things that had a taste at all tasted alike to everybody. Dr. Fox had stumbled upon the strange phenomenon of "taste-blindness."

For some time, however, he did not regard it as anything more than a curiosity, and a chance to have a little fun with his friends. If he could get two persons to try the stuff, and one of them turned out to be a non-taster, a lively argument was likely to ensue. He tried it on two Chinese waiters in his favorite chow-mein establishment. One could taste it, the other could not. The resulting flow of Celestial language was something awesome to hear.

Then a science-writing newspaperman got wind of the thing. He broadcast it through the press; other scientists became interested. Physiologists, psychologists, geneticists worked at different angles of the phenomenon, and a tidy bit of research was carried on. The joke had become a serious matter.

Scientific jokes may become serious matters in quite another sense, if attempted by persons who have only that little learning that is proverbially a dangerous thing. That is why student jokes are so much more likely to end in disaster than are the more carefully controlled jokes of their professors.

There is, for example, the tragic tale of the erratic but otherwise harmless anti-evolutionist antiquarian, who was steered by a group of mischievous students to a place where they had planted some fake fossils baked out of clay. On finding some of these inscribed with the Hebrew name of God, the poor old professor was tremendously excited, and published his discovery broadcast. It ruined his career and shadowed the last years of his life when the hoax was uncovered. The students were sorry, but could not undo the harm they had done.

Sometimes, however, a professor quite deliberately "sticks out his neck." A few years ago, newspapers published the old, hardy-perennial yarn about wheat from an Egyptian tomb being planted by a professor in a Pacific Coast university, and bearing a crop of good grain. Such wheat is frequently found in Egyptian tombs—but always where it has been put by some wily guide with an eye to bigger and better baksheesh. The luckless professor in the present case was not in the science department; if he had asked a botanical colleague about his wheat, he could have escaped being played for a sucker.

One of the most deliberately planned of professorial jokes was perpetrated years ago, in Yellowstone National Park, by a scientist who had better remain nameless, lest even now he incur the wrath of the National Park Service.

This professor, then arranging his honeymoon trip, packed in his grip a pint jar of fluorescein, a powerful, intensely blue dye. Standing alone with his bride on the brink of Morning-Glory Pool, a remarkably blue hot spring that opens out into a deep, funnel-shaped basin some thirty or forty feet deep, he waited until he heard a tourist party approaching.

Then he fished the jar out of his pocket, and heaved it into the pool. It sank from sight into the depths just as the tourists came up. The dye, quickly dissolved in the hot water, came welling up from the spot where the jar had disappeared.

"This, ladies and gentlemen," the tourists' guide was saying, is Morning-Glory Pool, famed for its deep, intense blue . . ."

"Oh, look!!!" gasped a lady tourist, as the pool turned bluer than a tub of washday bluing.

The guide forgot the rest of his speech.

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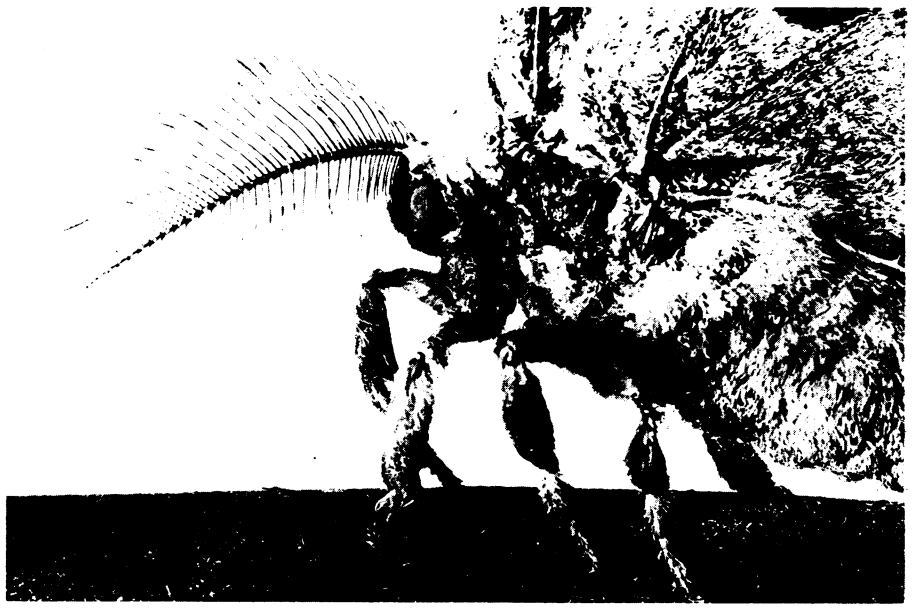

MOTH'S MESSAGE-DETECTORS

In the earliest days of wireless telegraphy, long before radio became a popular means of entertainment and information, the wires strung aloft to catch the fleeting waves out of the ether and lead them down to the receiving instruments were named antennae. Aptly named, too, for the "feelers" of insects do much besides just feel. Moths, probably, do not use them for that purpose at all, but as a means for detecting odors so subtle that they are almost the chemical analogues of the far-travelled Herzian waves of the radio. This photograph is by Cornelia Clarke.

Air conditioning is proving popular in Argentina.