

# SCIENCE DOES IT

## Machines Are Replacing Black-jack, Water Hose, etc., in Securing Confessions

Under the heading, "Science Gets the Confession," The Forum magazine recently printed an article, written by Henry Morton Robinson, in which he tells of the many scientific means by which officers may obtain confessions from those guilty of crimes, without use of the brutal force methods which have frequently been a disgrace to a civilized nation. We found it very interesting reading:

For six hundred years, western civilization has not appreciably altered the use of torture—the rack, the pincers, and more recently the black-jack and rubber hose—in the important legal process of "snatching the confession" from suspected criminals.

Science, however, has recently developed a number of devices that are causing a quiet revolution in criminological circles, and while they are not yet in general use, they seem clearly destined to supplant the barbarous tortures of the Third Degree.

Perhaps the most dramatic is the Keeler Polygraph, commonly known as the "lie-detector." Fundamentally, the polygraph is exactly like the sphygmomanometer that your physician straps around your arm when your blood pressure is being tested. But instead of the usual dial indicator, the polygraph has an ink-pen attachment which translates changes of blood pressure into a wavy line on an unwinding reel of paper. The suspect sits with the inflated "cuff" of the lie-detector wrapped around his arm; the operator asks him questions in a quiet, unharmed voice—and whenever the prisoner tells a lie, a sudden rise in his blood pressure is revealed by the graph.

The explanation of that is connected with the physiological changes that take place in the human body under stress of emotion. When, for example, we are confronted by danger of any kind, our body instantly organizes itself on a wartime basis; millions of fighting red corpuscles leap from the spleen into the bloodstream, where they are joined by energizing secretions from the adrenal and other glands. Quick power is rushed to nerves and muscles; these sudden reinforcements are manifested in an increased heart-beat and a definite rise in blood pressure. (Have we not all "heard our blood pound" when assailed by some momentary panic?) Now when a person is confronted by danger in the form of a question, the answer to which will connect him with a crime, his reaction is naturally that of fear. His whole system organizes for defense, which in this case is the concealment of his guilty knowledge.

But no matter how sternly or skillfully he represses every outward sign of guilt, he cannot prevent the involuntary mustering of interior forces. Voice and features may dissimulate, but the indicator of the lie-detector reveals that his blood pressure is leaping like a mountain goat at every critical question. The actual confession is secured by asking the suspect to explain, if possible, the weird antics of his blood pressure as revealed by the chart. In 75 per cent of cases the suspect, on viewing the unanswerable evidence he has given against himself, confesses. If he does not confess, the collateral leads supplied by the graph are of service in tracking down valuable objective evidence. The lie-detector infallibly reveals innocence as well as guilt; in 1500 cases, not a single finding has proved erroneous.

Although legal acceptance of "lie-detector" testimony in courts has yet to be won, many banks and private institutions use it in ferreting out embezzlers within their own walls. One Chicago bank had polygraph tests made upon 56 of its employees in an effort to track down the embezzler of \$5000. The guilty man was nailed, and a confession secured. But that wasn't all! Nine other employees confessed to petty larcenies hitherto unknown to the bank officials. As a result, an annual polygraph test is made by the bank on all its employees initial offenders do not lose their jobs, but if the lie-detector puts its finger on a man twice, he is discharged.

In another type of lie-detecting apparatus—the "psycho-galvanometer," successfully demonstrated by Father W. G. Summers of Fordham University—the principle involved is electrical. The suspect holds a small metal slab in his hand, and a tiny current of electricity from a dry battery is passed through his body. He is then asked questions, some innocent enough, others very searching. When he is asked a critical question, a strange thing happens: If he has guilty knowledge of the crime, his sweat glands are stimulated by the marshaling of inner energies to ward off the impending danger of detection. The extra deposit of perspiration on the skin of his hand, slight though it be, reduces his resistance to

the electric current passing through his body. This reduction is immediately registered on the dial. It is impossible to beat this machine, for even though the suspect refuses to answer any question, he cannot control his sweat glands that are shamelessly "squealing" on him.

I asked Father Summers to try the psycho-galvanometer experimentally on me, and he arranged the following test: I was shown ten playing cards and was asked to make a mental note of one of them, keeping my selection a secret. I chose the deuce of hearts, the cards were shuffled, and then displayed to me one at a time. "Is this your card?" asked Father Summers as each card was turned up. I steadfastly replied "No," keeping my eyes on the galvanometer dial to see what happened. When the deuce of hearts appeared I said "No" as coolly and disinterestedly as possible, but the indicator shot up most alarmingly. After two repetitions of the test, I broke down and "confessed" that I was lying about the deuce of hearts.

"You see," said Father Summers benignly, "if one perspires over a little thing like a playing card, what would happen if an actual crime were being concealed?"

A simple but highly effective method of getting a confession with no instrument but a stop-watch is the "word-association test" devised by Professor H. R. Crosland. With this test Prof. Crosland detected and got confessions in five cases of stealing, one of forgery, and one of cheating in examinations. The procedure consists essentially in getting a suspect's reactions to a list of 100 words, among which are 20 words relating to the crime under investigation. Suppose for example that a wallet containing a hundred-dollar bill has been stolen from a drawer in the office-manager's desk. A list of words is prepared as follows: circus, black, milk, \$100, fire, desk-drawer, diamond, house, wall, roof, etc. The suspects are required to state the first word that comes to mind as the key words are read to them. The normal time reaction is about 2½ seconds; anything longer than that shows that a selection is being made, or that there is an emotional disturbance that prevents a prompt reaction. Also, if a suspect makes strange or far-fetched word associations these too are noted. The individual "scores" are tabulated and compared; innocent parties are soon eliminated, and the culprit is eventually run down. I was present at an experimental demonstration of this method at Columbia University, when Prof. Mortimer Alder (now with the University of Chicago) unerringly selected from a class of 50 students the person who was "guilty" of a prearranged crime. Thus far, the courts are inhospitable to evidence gathered by the word-association test, but this does not bother the criminologist who knows that 30 years must elapse before his scientific methods displace the roundsman's heavy boot.

The psychology of color is used in the "mirror - confession - chamber," quite the antithesis of the medieval torture cell. The walls of this confessional are mirrors; the suspect sits in the center, and is questioned through an aperture in one of the walls. As the examination proceeds, the lights inside the chamber are gradually changed to a greenish tinge; the prisoner, unaware of the altered illumination, sees only the characteristic hue of guilt upon his face. Glance where he will, the mirrors throw back his ghastly reflection; he thinks his complexion has betrayed him already so he breaks down and tells all.

Two devices as yet not fully developed as crime detectors are the pneumograph and the oscillograph. The pneumograph has been successfully used in conjunction with the Keeler polygraph; it measures the respiratory rate of the suspect as he responds to questions, thus corroborating the blood-pressure graph. The oscillograph is a camera device that actually takes pictures of your sweat-gland reactions, as recorded by the psycho-galvanometer. It affords the operator a chance to study at leisure the subject's "sweating-peaks," and is also serviceable in demonstrating the findings to a jury.

Thus far we have considered scientific methods of exposing what might be termed a consciousness of guilt, but criminologists are quick to admit that such methods do not always extract actual confessions from tough-fibered prisoners. Science reserves for this close-mouthed type the final solvent of scopolamin. Known as the truth serum, this very peculiar drug gets the whole story and gets it without pain. While leaving intact the patient's memory, hearing, and power of speech, it was the strange power of blocking off that area of the brain normally used in the fabrication of self-protective stories.

An illuminating experiment with scopolamin, made by the eminent criminologist, Col. Calvin H. Goddard, shows the uncanny power of this drug to uncover the truth. Goddard asked one of his associates to write down the truthful answers to 20 simple questions: "Do you play bridge?" "Where do you live?" etc. The sub-

ject of the experiment was then given a hypodermic injection of scopolamin, and then was asked to answer the same questions—with this added proviso, that he was to lie as furiously as he could! To 19 of the 20 questions he gave identical answers, proving that although he was wholly rational, he was unable to invent a falsehood. But it was the 20th question that revealed scopolamin's strange power to get at the truth. The question was: "Have you ever been arrested for a motor vehicle violation?" While fully conscious, the assistant had written "No" as his answer. Under the influence of the truth serum he replied, "Yes, while at prep school in Virginia." After waking up he was questioned about this contradiction. He admitted that he had forgotten all about the motor vehicle violation until the truth serum reminded him of it! Thus among its other properties, scopolamin has the power of salvaging facts and memories long submerged in the unconscious.

Laboratory experiments such as this sometimes cause sneers to over-spread the handsome features of policemen. To wipe off that sneer, a Progressive District Attorney, James C. Davis of Birmingham, Ala., had used the truth serum in actual practice with splendid results. In a single year there were 25 axe murders in his city; Davis rounded up a gang of 12 suspects, administered the truth serum to all of them, and got the whole complicated story in two or three days. He was not allowed to use these confessions in court, but by digging up corroborating evidence on leads furnished by the truth serum, he obtained convictions.

If scopolamin proved so effective in this instance, why isn't it more widely used to coax confessions from recalcitrant suspects? Why, specifically, wasn't it used on Richard Hauptmann in the Lindbergh case? The answer seems to be that our courts are sincerely, though I believe erroneously, committed to a policy of extreme caution in all matters of judicial proof. Judges say that human life and constitutional rights must not be jeopardized by testimony obtained by blood-pressure device, or while the prisoner is under the influence of a drug. Even though the blood-pressure device in question has never trapped an innocent man nor permitted a guilty one to escape, even though scopolamin has proved that it can temporarily paralyze the whole apparatus of falsification, the courts lag far behind the best scientific thought of the day in conceding the value of these methods of obtaining confessions. There are whispers that the law is jealous of its prerogatives and hostile to the scientific invader. But the scientists' invasion will continue, perfecting their instruments and technique until the last judicial periwig capitulates and the groan of the manhandled suspect is heard no more in the land.

## Notes of Interest From the Coquille Public Schools

### Lincoln School Notes

The Junior High School has adopted a new program which is proving very satisfactory. Previous to this time, five major classes were taught in the morning, and in the afternoon one major class, electives, and the activity period. This required very hard work in the morning with a "let down" after lunch. Under the new arrangement they will have two classes with a break for the activity period, two more classes with a break for the lunch hour, and three classes in the afternoon. This allows rest periods which prevent the complete "let down" experienced before.

Under the new arrangement the girls have a twenty-minute physical education period twice a week under the direction of Miss Barry, and the boys twice a week under the direction of Mr. Wilson.

The basketball season began with a game with Powers just before the Christmas holidays. This game the boys lost. However, the team is improving rapidly. The second game was played at Bunker Hill on January 11. This game the boys won, with the score 19-16. The line-up was as follows:

|          |   |             |
|----------|---|-------------|
| Coquille |   | Bunker Hill |
| Fuhrman  | F | Carlson     |
| Cadman   | F | Lillie      |
| Krantz   | C | Browning    |
| Goodman  | G | Jennings    |
| Arrell   | G | Bones       |
| Staeger  | S | Davidson    |
| Sinclair | S |             |

Rolph Fuhrman is the captain of the Junior High team and was also the high point man for the game. He made 13 of the 19 points.

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## County Superintendent Writes on County Unit Law

### Pleasant Hill

The Pleasant Hill school has been recently painted inside with a cream paint. The money for this was obtained from a social held recently at Gravel Ford.

### Valley View

The school house in District No. 69 has now become a landmark for tourists as it is labeled with a very neat sign, "Valley View."

### Districts Transporting to Larger Schools

Nine rural school districts in Coos are now sending all their pupils to larger schools, thus providing tuition and transportation for same. In addition to this, the school at Delmar transports the seventh and eighth grades to Marshfield. Those schooling their children in places other than their own buildings are: Laurel Lake, Two Mile, and Bear Creek are sending children to Bandon; Riverside to Fairview; Shiloh to Pleasant Hill; Pleasant Point and Locust Grove to Myrtle Point; Leneve to Riverport; Willanah to Cooson; and Beach View to North Bend. Because of there being no pupils in Eden Valley, that district is not operating a school this year.

In cases where districts have only a small population, it has been found that transporting to larger centers is cheaper, and the pupils receive a broader education than when attending schools in the small districts.

### Pertaining to School Laws

#### The County School Law

The former County Unit law as amended by the 1933 legislature is known as the "County School Law." Many objectionable features were eliminated through this amendment. These will be discussed in a later issue.

Just what is the "County School Law?" It is a law under which a county may consolidate her districts for purposes of school administration and taxation. In any county voting to operate under this law, the territory, except that in first class districts and union high school districts which include first class districts, would fall into the county district.

Of what is the County Board composed? Five members, one person from each zone, is chosen in very much the same way as the non-high school board members are now chosen. The county is divided into zones by the district boundary board. The board members represent the people as a whole, the zones being used for election purposes only. This board has several important duties, among

which are the preparation of a school budget, the appointment of a superintendent for the county school district, and all necessary assistants. It also selects teachers for the several schools.

The school board of each former district acts as a committee for the sub-district. This committee, among other things, cares for school property; reports to the superintendent as to the needs of the districts, and also has power to reject teachers assigned by the county board. However, this subject must be unanimous on the part of the board, and must be delivered to the school clerk thirty days prior to the opening of school.

State Superintendent C. A. Howard has published a pamphlet on this law and same can be obtained by request at the office of the county superintendent.

### Ladies Hold All-Day Session

The women of the Church of Christ met at the church on Wednesday for an all day session. A pot luck luncheon was served at noon, honoring Mrs. Bean and her division as winners in last year's contest. After lunch part of the ladies tied a comfort for Mrs. Maury, while the dishes were being washed by others. At two p. m. a very interesting program was given, including a playlet, telling of our pioneer missionaries. Myrtle Benham was leader. There were 24 present.

### St. James Church

(Episcopal)  
Church school every Sunday at 10 a. m. C. Oaska, superintendent.

### First Church of Christ, Scientist

Coquille, Oregon  
Sunday School at 9:30 a. m.  
Sunday Service at 11 a. m.  
Subject for next Sunday, "Life."  
Wednesday evening meeting at 8 o'clock.

Free public Reading Room open in Church Building every Tuesday and Friday afternoons except holidays from two to five o'clock.

The public is cordially invited to attend our services and to visit the Reading Room.

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## Church of Christ

Earl F. Downing, minister  
Bible school 9:45 a. m.; Ralph Harry, superintendent.  
Morning service, 10:45 a. m. Sermon topic, "The Undone Weightier Matters."  
Christian Endeavor, 6:30 p. m. Evening service, 7:30 p. m.; sermon topic, "Millions Now Living Are Already Dead."  
Midweek service, Wed., 7:30 p. m.

## The Holy Name Catholic Church

Sunday, Jan. 20, Mass at 8 a. m. Hereafter all late Masses will be at 10 a. m.

Father M. G. Hart, Bandon.

## Coquille Assembly of God

Hazel MacLeod, pastor  
Friday, 7:30 p. m. Bible study on the Book of Hebrews.  
Saturday, 2:30 p. m. Children's Church. All children welcome.  
Sunday, 9:45 a. m. Sunday School. 11:00 a. m. Morning worship. 1:30 p. m. All afternoon prayed service.  
6:45 p. m. Young people's prayer meeting.

7:30 p. m. "A Skeleton in the Closet," sermon by Hazel MacLeod. Beautiful baptismal service preceding message.  
Tuesday, 7:30 p. m. Prayer meeting.

## Seventh Day Adventist Church

Second and Collier Streets  
Sabbath School (Saturday) 9:45 a. m.  
Preaching service 11:00 a. m.

## Methodist Episcopal Church

Evening preaching 7:30 p. m.  
Prayer meeting Wednesday 7:30 p. m.  
Preaching at Bandon 11 a. m.  
Scriptural, spiritual preaching. Everyone welcome.

G. A. Gray, Pastor.  
107 E. 2nd St., Coquille, Ore.

## Church of God

Sunday School at 10 o'clock with classes for everyone.  
Morning service at 11 a. m.  
Evening preaching 7:30 p. m.  
Young People's meeting Sunday evening at 6:30 o'clock.  
Prayer meeting 7:30 o'clock Thursday evening.  
The public is cordially invited to all these services.  
Edward E. Watkins, Pastor.

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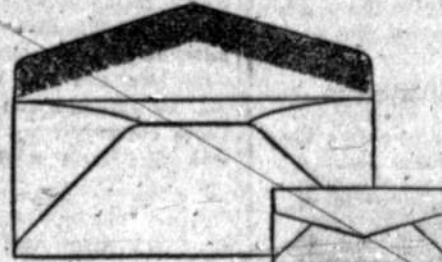
The Silver Fibre Clasp envelope is one of the Mail-Well specialties. Made of a distinctive, high-quality, tough silver-grey stock it presents a rich appearance.

It prints well and lends itself to either hand or type writer addressing.

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**Coquille Valley Sentinel**