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Police Science Technical Abstracts and Notes

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POLICE SCIENCE TECHNICAL ABSTRACTS AND NOTES

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The Interrogation of Suspects—R. Deb, *International Criminal Police Review*, Number 121, 239-48 (October, 1958). A review of basic interrogation procedures. (JDN)

Instrumentation of Law Enforcement—Anon., *Analytical Chemistry*, 31(2): 21A (1959). A general survey of the analytical facilities of the Federal Bureau of Investigation laboratory. (JDN)

Use of the Thermobalance in the Analysis of Soils and Clays—M. Schnitzer, J. R. Wright, and I. Hoffman, *Analytical Chemistry*, 31(3): 440-4 (1959). Weight loss vs. temperature curves are given for soils of various compositions. Sources of error are discussed from the point of view of quantitative determinations. No mention is made of the reproducibility of the method. With 90 mg. samples, variations in composition of five per cent are easily detected. Although not discussed, accurate comparisons seem feasible. (JDN)

Sex Crimes—Dr. Gibbens (WHO), *International Criminal Police Review*, No. 128: 142-5 (1959). Author would limit concern to three groups; (1) use of physical force (rape, indecent assault), (2) use of undue psychological pressure (incest, seduction), and (3) offences against public decency. The following are deemed "important criminological facts"; (1) "at most, 5% of sex crimes are detected", (2) 60-70% never have more than one conviction, (3) sex recidivists are rare (only 3% have 3+ convictions), (4) sex recidivists are also non-sex recidivists, (5) average time between re-

convictions is long (3-5 years), (6) recidivists always repeat same type of crime, (7) minor offences do not graduate to serious sex offences. (JDN)

Two Dangerous Sources of Information—R. Lechat, *International Criminal Police Review*, No. 128: 136-41 (1959). The handling by the police officer of informers and informants is discussed. The author cautions against too great a reliance on informers. The delicate relationship is emphasized; pressure must not be exerted; immunity can't be granted; the officer must remain impersonal; secrecy of source must be kept if informers are so promised; discretion should be used in choosing a meeting place. Some of the suggestions may seem idealized in the light of current practice. (JDN)

Identification of Unknown Synthetic Fibers—S. G. Smith, *American Dyestuff Reporter*, 47(5): 141-2, 145 (1958). By means of refractive index and activity under polarized light microscopy, 16 synthetic fibers can be identified. The fibers are separated into five groups; confirmatory tests are used to identify the individual fibers. Identification of Unknown Synthetic Fibers, Part II—Application of Polarized Light Microscopy, *Ibid*, 48(6): 35-9 (1959). Part II extends the scheme to include Corval, Topel, Dacron Type 64, and Kodel. (JDN)

Determination of Age of Ball Point Pen Writing and Investigation of Line Crossing by Means of Fingerprint Lifting Tape—H. Klauer, *Kriminalistik*, 13(5): 203 (1959). If ball point pen writing is recent, a pencil stroke over it will be lifted by fingerprint tape as an interrupted line. If the writing is over a month old, the pencil line will lift uninterrupted. (JDN)

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Theft Detection—R. Götz, *Kriminalistik*, 13(5): 194 (1959). Suggests silver nitrate and phenolphthalein as a means of detecting thefts. Use 2% KOH to detect the phenolphthalein. Photo effect develops the silver nitrate. Money is coated with cellulose nitrate lacquer, covered lightly with vaseline, and then dusted with the combination powder. (JDN)

Microscopic Investigation of Projectiles—Max Frei, *Kriminalistik*, 11(8): 287-9 (1957). Suggests that bullets should not be handled with bare hands in order that traces of blood, fibers, etc., can be determined without being dislodged or further contaminated. (JDN)

Physical Security through Painted Patterns—J. L. Driskell, *Military Police Journal*, 8(7): 13-15 (March, 1959). Reflecting paint on gate edges, fence tops, ladder rungs, and other strategic areas enable security details to detect the presence of intruders at night, in spite of dark apparel. The reflecting pattern is broken or interrupted by the body of the prowler. Patterns painted on walls at key points make detection easier. (JDN)

Crime Scene Equipment—N. Fahlander, *Nordisk Kriminalteknisk Tidsskrift*, 29(2): 25-38 (1959). Evidence recovery equipment designed by the Swedish State Police is illustrated and described in detail. Compact, fitted cases of standardized size contain a variety of work-tested tools and materials. Examples: a brief case with material for sketching accident and crime scenes; a separate casting kit with plaster and sulphur for footprints, etc. (JB)

Ballistic Influences on Gunshot Wounds—E. Lapagasse, *Revue Internationale de Criminologie et de Police Technique*, 13(1): 61-77 (January-March, 1959). A detailed discussion of the effects of internal and external ballistic factors in gunshot injuries. Experiments were conducted using a .22 caliber rifle and .32 and .38 caliber handguns to fire into a block of soft paraffin. All test shots were fired perpendicularly into this block after which radiographs were taken of the projectiles and their paths. It was discovered that all of the bullets had formed a curved "wound canal" the end point of which was displaced 2.5-5.8 cm. in relation to the entrance penetration, generally in the direction of the weapons rifling. The depth of penetration ranged from approximately 15 to 20

cm. In view of these findings, which resulted in a soft block of homogeneous paraffin, the author concludes that a straight line between entrance and exit wounds never represents an extension of the path of the projectile at the moment of impact. (JB)

Intoxication Evidence in Finland—A. Alha, *Nordisk Kriminalteknisk Tidsskrift*, 29(1): 7-11 (1959). In Finland, the symptoms of alcohol intoxication are evaluated by the circumstances of the ingestion, by clinical examination, and by blood-alcohol determination. Expert testimony includes a consideration of the time elapsed since ingestion of alcohol in order to make an allowance for the phase of intoxication at the time of arrest. Finnish courts thus consider influencing factors in addition to a blood-alcohol level. (JB)

Fingerprint Evidence—S. A. Eriksson, *Nordisk Kriminalteknisk Tidsskrift*, 29(4): 85-92 (1959). The police department of Stockholm, Sweden, recorded 1,140 crime scene fingerprint cases for the year 1958. The 260 criminal identifications made in these cases are broken down from a technical and statistical point of view. Some noteworthy figures: all of 21 latent fingerprints on paper were developed with ninhydrin; 28 identifications were made in 43 crimes of violence and arson; criminal identifications resulted in almost half of the 98 safe burglaries where latent fingerprints were recovered. The author attributes the success reflected in the latter figure to diligent efforts of experienced personnel in searching for crime scene prints. (JB)

Determining the Make and Model of Typewriters Based on Elite Type—J. Haas, *Archiv fuer Kriminologie*, 123(3/4): 65-87 (March-April, 1959). An identification scheme based on specimens of 3,000 American and European typewriters equipped with elite type. Key letters have been selected and represented in enlarged line drawings for a breakdown into major groups similar on Ordway Hilton's method. Further subdivision is provided for European machines by the measurement of letter spacing in millimeters. Two tables list machines equipped with the manufacturer's own type and those with "outside" type (JB)

Restoring Obliterated Die Stampings in Plastics—A. Njckenig, *Archiv fuer Kriminologie*, 123(1/2): 14-15 (January-February 1959). Letters

and numerals were die-stamped in samples of three types of plastics: hard rubber, vulcanized fiber, and plexiglass. After completely removing the lettering by filing trichlorethylene was swabbed on the surface, restoring the original stamping to good legibility in from 15 minutes to 3 hours, the time depending on the composition of the material and the depth of the original die-stampings. The plexiglass was heated prior to "etching," and the vulcanized fiber was polished lightly with better photographic contrast. (JB)

Instantaneous Film Processor—Joseph Henry, *American Cinematographer*, 40(7): (July, 1959). A revolutionary new motion picture film processor was recently introduced. The "Instant Film Processor", a development of the J. A. Maurer Company of Long Island, N.Y., processes motion picture film instantaneously and simultaneously with the photography. The shooting-processing process takes about nine seconds from the time the film is exposed on the focal plane of the camera until it winds up, fully processed, on the equipment's take-up spool. An alternative is provided in the final step so that the film can travel directly to the projector instead of a take-up reel, so that twelve seconds after exposure, the photographed image can be viewed on a closed circuit TV screen.

A closed circuit TV system is an essential adjunct to the processor for the use for which it was primarily designed—that of race track patrol photography.

The film comes out of the processor fully processed to a negative, and rolls up on the take-up spool of the unit at the same rate it travels through the camera—either 24 or 32 fps. The film is projected as a negative on the closed circuit TV projector and electronically reversed so that the image becomes a positive picture on the video screen.

Picture quality is said to compare favorably with that of the average newsreel film, and the contrast range is ideal for television.

The Instant Film Processor is portable and is designed to work with most motion picture cameras presently on the market by merely attaching it to the camera. Although available only for 16 mm at the present time, developments are proceeding in order to provide a 16 mm and 35 mm processor in the near future.

The wide range of uses for this new processor will undoubtedly create markets for the equipment

in many fields of motion picture production, from Hollywood sound stages to New York television centers, schools, race tracks, industrial firms, TV newsreel producers, and others now can shoot critical or classified subject material without the need to put the film through commercial film laboratories. (WEK)

Watch Mark File is Useful Aid to the Investigation—Orville R. Magans, *F.B.I. Bulletin* 28(7): (July, 1959). The United Horological Association of America, of Denver, Colorado, several years ago organized a national "watch mark" program. Since that time they have assembled a file of more than 5,000 registered marks which are used to help law enforcement agencies by identifying the owners of watches involved in crimes or found in connection with crimes.

The procedure for the investigating officer or the head of the law enforcement agency is to record in his letter as accurately as possible the mark he finds in the watch case. If there is more than one mark, he records each mark. He further identifies the watch, if he can, by brand name, caliber, jewelers metals, and ornamentation, and he indicates whether it is a man's or a woman's watch. All available descriptive data can then be sent to the United Horological Association of America Watch Mark Identification Bureau, 1901 East Colfax Avenue, Denver 6, Colorado. (WEK)

The Need for Accurate Findings and Effective Testimony as a Basis for Progressive Appellate Decisions—Ordway Hilton, *Journal of Forensic Sciences*, 4(3): July, 1959). The forensic scientist has two goals: first, the development and improvement of examination techniques in order that he may reach the correct conclusion in all problems, and second, the complete acceptance of this evidence by both trial and appellate courts.

The author summarizes his brief article as follows:

1. There is a correlation between good presentation and good decisions.
2. Judges are influenced by their earlier legal experience in deciding questions involving expert testimony.
3. Constantly good expert work—examination and presentation—assures continuously progressive decisions.

4. Poor expert work in time will bring about reactionary decisions. (WEK)

Application of Blood Grouping Tests in Cases of Disputed Maternity—Alexander S. Wiener, *Journal of Forensic Sciences*, 4(3): (July, 1959). Two kidnapping cases are described in which blood grouping tests proved that the kidnappers' claims of maternity were false. In one case, the kidnapper belonged to type Rh₂Rh₂ and the baby to type Rh₁Rh₁, while in the second, the kidnapper belonged to group AB and the baby to group O. In the second case, the five blood specimens from the kidnapper and her husband, the two parents, and the baby had first been tested by a blood bank technician under the direction of a pathologist who classified 3 of the 5 specimens incorrectly. Among these errors, the kidnapper who belonged to subgroup A₂B was incorrectly grouped as B, causing the pathologist to miss the exclusion of maternity.

A table has been prepared listing the chances of solving medicolegal problems of identification and disputed parentage by tests for A-B-O, M-N, and Rh-Hr.

As the author points out, blood tests are useful in a wide variety of medicolegal problems. In such cases, the tests have value only as negative evidence, i.e., to prove that a certain blood stain does not contain the blood of a given individual, or to prove that a certain individual is not the parent of a given child, etc. The reason why blood tests cannot be used as positive proof of identity or parentage is that the number of known groups

is limited, so that the possibility of coincidence is always present.

The field of immunohematology has become exceedingly complex, so that there are physicians who devote their full time to work in this specialty. Only such individuals are qualified to carry out blood tests in medicolegal problems of disputed parentage. (WEK)

Immunological Test for Semen on Female Genitalia as Evidence of Intercourse—Alfred J. Weil, Leo Wilson, and Alexander E. Finkler, *Journal of Forensic Sciences*, 4(3): (July, 1959). A sensitive method for the detection of semen from the female genitalia after intercourse has been described. It is based on the high organ and species specificity of the antigens contained in semen. Its use in forensic medicine is suggested. (WEK)

New Products

Traffic Template—An improved version of the traffic template has been announced by the Traffic Institute of Northwestern University, 1804 Hinman Avenue, Evanston, Illinois. This aids in drawing scale diagrams of street situations to scales of 1:120 or 1:240. Inches and metric scales are provided. Speed and stopping distance problems as well as measurement of grades and super-elevations can be worked out with this traffic aid. An illustrated manual is included with the price of the template. (JDN)

FOREIGN LANGUAGE PERIODICALS AND ARTICLES OF INTEREST IN THE FIELD OF POLICE SCIENCE*

Compiled by

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INTERNATIONAL CRIMINAL POLICE REVIEW. Paris. Vol. 13, nos. 120-123, August/Sep. 1958-Dec. 1958. (English edition)

E. Benhamou, *A form of activity connected with counterfeiting* (no. 120, p. 201-208).—G. Galy, *Forms of recidivism* (p. 194-200).—R. L. Jackson,

* All periodicals listed are available in the Elbert H. Gary Library, Northwestern University School of Law, 357 East Chicago Ave., Chicago.

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The Potters Bar golf course murder (p. 209-124).—*Important decisions taken regarding illicit drug traffic: India, 1956* (p. 215-218).—R. Thiele, *The hit and run motorist and his conscience* (no. 121, p. 226-28).—J. David, *An international case of proxenetism: The Messina case* (p. 229-31).—C. Bedel, *Protection of patients against fatal prescriptions* (p. 232-38).—R. Deb, *The interrogation of suspects* (p. 239-48).—L. Aube, *International tricksters* (no. 122, p. 258-75).—Roland Berger.