Forensic Science Timeline and Impact on Trial Essay

Introduction

Edmond Locard was able to demonstrate to law enforcement authorities that the scientific analysis of trace evidence such as dust particles could link suspects to victims and crime scenes. Locard's tireless research and successful analysis, identification, and comparison of dust traces led to the founding of many other forensic science labs throughout Europe and North America. Studies in the field of anthropology led to an understanding of the uniqueness of fingerprints: this science was introduced into forensic science gradually, up to the proposal of a successful classification by Edward Henry, which had already popularized fingerprinting as much as possible (Meilia et al., 2018). Accordingly, it was discovered that the use of medicine in solving crimes can sometimes provide answers to a wide variety of questions, which led to the organization of forensic science in New York and further around the world since 1915.

Discussion

Attention to ballistics was drawn after the case of Sacco and Vanzetti in 1920, which, together with the invention of the comparative microscope, led to the establishment of a bureau in New York in 1923. Court practice also evolved in the field of the polygraph and its application. The rule, according to which the results of the polygraph examination were recognized as probative value, gradually formed (Ubelaker, 2018). The condition was this: both parties – both the prosecution and the defense – do not mind that the results of the polygraph test were given the status of forensic evidence. The EEG method is the best for diagnosing epilepsy and other organic brain lesions, but it can also be used in some cases in the study of deviant behavior (Meilia et al., 2018). Pathological intoxication caused by alcohol consumption is invariably noted on the electroencephalogram, just like some other psychosomatic disorders.

The creation of such a laboratory marked the beginning of the federal experience in organizing similar institutions with more specific specializations: FBI, DEA, and many more. John Glaister introduced hair into the database of potential evidence, giving them a multilateral classification, which gave it the most important applied value for forensic science (Ubelaker, 2018). Deviations in behavior were often caused by external influences of substances on a person, including alcohol and drugs. Research in this area for a long time did not know bright discoveries until Professor Borkenstein invented the breathalyzer.

The rapid development of technology, biology, and medicine has given its natural results in forensic science, which, over time, gradually implemented these developments in solving cases. Voice recording, DNA, toxicology – all these changes required appropriate adaptation of judicial practice, amendments to laws and forensic methods, and horrific crimes served as the motive (Saferstein & Roy, 2020). In addition, after DNA was recognized as strong evidence in court, the

National DNA Index System was developed and opened to the use of forensic scientists, like a single database of fingerprints.

The case of Dr. Shipman is unique in that, for a long time, the criminal could carry out his crimes with impunity. According to various sources, he committed about 250 murders, carefully choosing his victims among lonely older women. Toxicology became an independent part of science only in the 19th century, but progress was made only by the middle of the 20th century. There are likely many serial poisoners whose crimes have remained unsolved in the history of humankind because then there were no tools or methods for analyzing the body of victims. At the same time, if the Shipman case had been limited to only one murder, without raising a retrospective of his potential other crimes, the practice of toxicology might not have considered such a possibility for a long time as a search for patterns in unsolved cases or, at first glance, deaths from illness or old age. Most of the clues are available in 1998 were already foundational advances in this field of forensics, although the analysis of DNA, hair, and other crucial forensic evidence turned out to be powerless specifically here because the traces of the killer were evident and were not considered precisely as traces of a crime. The only additional evidence would be indirect signs of the doctor's crimes in more modern times. First, the availability of drugs and substances used to commit crimes became much more severely limited, and heroin was even recognized as a drug. Finally, the statistics of dying patients a doctor would have attracted the attention of the relevant authorities much earlier than in the corresponding period at the end of the 20th century.

Conclusion

However, suppose the specific evidence trial took place in earlier periods. In that case, likely, Dr. Shipman could not have escaped punishment even without any available technologies and clues. This fact is explained by the number of murders committed, which could be proved by the left wills, the fact of receiving an inheritance, and comparing deaths with medical practice. The only thing that can be argued is that the presence of additional clues significantly speeds up the process of the case, respectively, the later in history these crimes would have happened, the less the trial would have gone.

References

Meilia, P. D. I., Freeman, M. D., & Zeegers, M. P. (2018). A review of the diversity in taxonomy, definitions, scope, and roles in forensic medicine: implications for evidence-based practice. Forensic Science, Medicine and Pathology, 14(4), 460-468.

Saferstein, R., & Roy, T. (2020). Criminalistics: An Introduction to Forensic Science (13th ed.). Pearson Education (US). Web.

Ubelaker, D. H. (2018). A history of forensic anthropology. American Journal of Physical Anthropology, 165(4), 915-923.