

FORENSIC INVESTIGATION: A PANACEA TO EXPEDITIOUS DISPOSAL OF CRIMINAL TRIALS IN NIGERIA*

Abstract

In Nigerian jurisprudence today, there are so many unsolved criminal cases in which the prosecution or the defence has reached to a dead end thereby creating a mindset to the court. Cases are resolved on probable evidence and presumptions of circumstantial evidence before the court. However, there is an efficient procedure to reaching a concrete decision in the evidence before the court. Forensic investigation is a panacea to the expeditious disposal of criminal trials in Nigeria. The essence of this write up is to bring to the limelight the need for constant reliance to forensic reports because the results from this investigation are more certain and concrete evidence in prosecution of cases. Forensic reports are not speculative; rather it researches on the timeline of the events involved in a crime scene. The use of DNA and other genetic factors in forensic investigation is a growing area of research which will become more prevalent in criminal cases as more research is done. The certainty of forensic investigation reports is to the extent that samples collected from crime scene can promptly denote time and likely culprit to the crime. Doctrinal methodology is employed in the analysis of data gathered from primary and secondary legal sources. This article recommends forensic investigation for effective, efficient and expeditious disposal of criminal trials and its application by courts.

Keywords: Forensics, DNA, fingerprinting, Court, Admissibility, Polygraph, Ballistics

1. Introduction

Forensic Science is any kind of science used in the legal justice to support and uphold the law. When a crime has been committed and evidence is collected at the crime scene, scientists analyse it, arrive at scientific results and give expert court testimony about the findings¹. Forensic Science concentrates on facts that prove that something did or did not happen in a criminal or civil case². Considering the relationship between laws and science, there tends to be a great disparity because both works at different degrees. Law concentrates on the interpretation of a given law, judicial precedents, application and enforcement of law in case of any violation. However, science is a system of knowledge that is concerned with physical world and its phenomena³. It entails intellectual and practical activity encompassing the systematic study of structure and behaviour of the physical and natural world through observation and experiment. Currently, the evolution of sophisticated technology and sciences, crime has taken a more complex form which cannot be solved by mere interpretation of the statutes and physical assessment of evidence before the court, thus the legal system embraces the adversary process to achieve 'truth' for the ultimate purpose of training an authoritative, formal just and social acceptance resolution of disputes. Forensic science is increasingly relied upon by gaining convictions and by the judicial system in the adjudication of criminal and civil cases⁴. It is a clear fact that judicial system needs science to resolve a question and administration justice.

In Nigerian jurisprudence, various crimes are committed every day; these crimes are more complex as days go by and most of these crimes go unsolved or the wrong person is convicted due to lack of sufficient evidence to trace the actual suspects. Application of forensic science is still far fetch because the law enforcement agencies are ignorant of the provisions of the enabling statute whereas the court's exhibit lackadaisical attitude to the application of these laws, or scientific evidence by experts.⁵ This study will seek to ascertain the synergy between the statutes, courts and forensic science.

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¹ Jenny Mackay: What is Forensic <https://www.crimesceneinvestigatoredu.org> accessed on 16/06/2018.

² Ibid.

³ Science/Definition, Disciplines, & Facts/Briannica www.britannica.com accessed on 16/06/2018.

⁴ Roberta D. Juhan et al: What is the value of forensic science? An overview of the effectiveness of forensic science in the Australian Criminal Justice System project. Vol. 23, 2011, issue 4 *Australian Journal of Forensic Science*. www.tandfonline.com/d10/ab accessed on 16/06/2020

⁵See also Ikenga K.E. Oraegbunam, 'The Nigerian Police and Problems of Cybercrime Investigation: Need for Adequate Training', *The Nigerian Law Journal*, Vol. 18 No. 1, 2015, pp. 1-28.

2. Statutes and Forensic Science

There have been various promulgations and articles on the application of forensic science evidence in the courts. These promulgations include the United Nations Conventions, Organisation of African Union charter, other international laws and Nigeria statutes. The universal declaration of Human Rights adopted in its resolution 217A (iii)⁶ that 'Everyone has the right to life, liberty and security of persons.' Similarly, the international covenant on civil and political rights adopted by General Assembly in its resolution 2200A (xxi)⁷ also provides on its Article 6 to that 'no one shall be arbitrarily deprived of his life. Furthermore, Article 2(1)⁸ states that: No one shall be deprived of his life intentionally save in the execution of a sentence of a court following his convictions of a crime for which this penalty is provided by law. The United Nations General Assembly⁹ adopted in resolution, that it was necessary to develop international standards designed to ensure that forensic investigations were conducted in all cases of suspicious death including provisions for an adequate autopsy. Thus, section B and C¹⁰ of this model protocol contains guidelines for investigation of all violent, sudden, unexpected or suspicious death including extra-legal and summary executions. According to section B¹¹ it states thus;

As set out in paragraph 9 of the principles the broad purpose of an inquiring is to discover the truth about the events leading to the suspicious death of a victim. To fulfil this purpose, the investigators shall seek;

- a) To identify the victim;
- b) To recover and preserve evidentiary material related to the death to aid in any potential prosecution of those responsible;
- c) To identify possible witness and obtain statement from the concerning the death;
- d) To determine the cause, manner, location and time of death, as well as any pattern or practice that may have brought about the death;
- e) To distinguish between natural death, accidental death, suicide and homicide;
- f) To identify and apprehend the person{s} involved in the death;
- g) To bring the suspect(s) before a competent court established by law.

It pertinent to bear in mind that in collection and analysis of evidence, it is essential to recover and preserve physical evidence and to interview witnesses so that the circumstances surrounding suspicious death can be clarified¹². The United Nations standard procedure for inquiring into the investigation of any suspicious death also requires law enforcement personnel and other non-medical investigations to coordinate their efforts in processing the scene with medical personnel. Persons conducting an investigation should have access to the scene where the body was discovered and to the scene where the death may have occurred¹³. The factors required at this stage are:

- a. The crime scene should be preserved especially area around the body should be closed off.
- b. Photograph of both coloured and white should be taken for comparison analysis.
- c. A record of the body position and condition of the clothing.
- d. For estimation of time of death, these factors are important:
 - i. Temperature of the body (warm, cool, cold)
 - ii. Location and degree of fixation of unity
 - iii. Rigidity of the body
 - iv. Stage of decomposition
- e. Examine of crime scene for blood are taken. Any samples of blood, hair, fiber and threads should be collected and preserved.
- f. If the victim has been sexually assaulted

⁶ Universal Declaration of Human Right 10th December, 1948

⁷ International Covenant in Civil & Political Rights, 16th December, 1966.

⁸ European convention for protection of Human Rights and Fundamental Freedoms.

⁹ United Nation resolution E/CN.4/986/21, 4 December, 1986

¹⁰ Ibid.

¹¹ UN Resolution Opcit

¹² UN Manuel on the Effective Prevention and Investigation of Extra-Legal, Arbitrary & Summary Executions UN. DOC. E/ST/CDSHA/12 (1991)

¹³ Ibid.

- g. A record of tyre marks on the ground or vehicle found in the area.
- h. The pry marks, shoe impressions or any other impressions at the scene which are of evidentiary nature.
- i. Any evidence of weapon, such as guns, projectiles, bullets and cartridge cases should be taken and preserved and, ballistics examination should be conducted with each other.
- j. A record of the identity of all persons at the scene including witnessed those who last saw the deceased alive, when, where and under what circumstances. The complete names, addresses and telephone numbers should be recorded for it is essential that vital profile of suspects and witnesses are recorded.
- k. Any relevant papers, records or documents should be saved for evidentiary use and handwriting analysis.

Given the fact that a forensic examination starts at the crime scene and ends in court,¹⁴ it is important that every step of the forensic process form a synergy and is guarded by enabling statutes. In Nigerian criminal justice system, there are various statutes that guard the application and implementation of forensic evidence. However, these Nigerian statutes did not clearly define the term ‘forensic science’. These statutes include the Evidence Act¹⁵, Cyber Crime Act¹⁶, Economic and Financial Crime Commission (EFCC) Act¹⁷ and Independent Corrupt Practices Commission (ICPC) Act¹⁸ and Coroner Law of States^{19 20}. These statutes merely made references to the few terminologies attributed to or characterised with forensic science discipline. Nevertheless, section 4(i) (d) Cyber Crime Act²¹ in provision for computer related fraud states that the office of the National Security Adviser, shall established and maintain a national computer forensic laboratory and co-ordinate utilisation of the facility by all law enforcement, security and intelligence agencies. Sadly, this provision is not exhaustive.

3. Forensic Science in Courts

Forensic Science can be traced back to the sixth century with legal medicine being practised by the Chinese. However, scientific discoveries dating back to the ancient Greek and Romans have had a tremendous impact on science specifically forensic science. One of the first ever case was in the year two hundred and seventy five B.C, when the king of Syracuse approached Archimedes to undertake some test as was suspected that he was being cheated by a goldsmith who was ordered to make a golden crown for him²². Historically, legal science originated from Chinese when a Chinese used fingerprints to establish the identities of documents and clay sculptures. A more advancement was achieved when the Chinese published the book ‘His Duan yu’ (The washing Away of wrongs) in year twelve forty-eight, which described the differences between cases of strangulations and drowning²³. This was the first ever recorded application of medical knowledge to the solution of a crime. This book also encouraged more research in the field of pathology which led to the first legally ordered autopsy in Bologna in thirteenth century by Dr. Bartolomeo da varignana.

Subsequently, the application in court advanced this positive result in forensic science evidence applied to murder trial, and led to increased research on various forensics in effort to solve crimes. More advancement was made through fingerprint identification which also aid in solving crime. In an attempt to get a more specific body embodiment, DNA analysis was discovered which is used to identify an individual’s unique biological code. This discovery caused a total change and more embrace to application of forensic science evidence in our court. With the application of forensic science evidence,

¹⁴ PMIN viewpoint: Forensic Science and the law

¹⁵ Evidence Act No. 18, 2011

¹⁶ Cybercrime Act 2015

¹⁷ EFCC Act

¹⁸ ICPC Act

¹⁹ Administration of Criminal Justice Law Enugu State 2017

²⁰ Coroner Law of Lagos State 2017

²¹ Ibid

²² Hatice Han E.R; Justice through science: A brief history of Forensic. <https://www.dailysabah.com> accessed 29/06/2020

²³ ibid

courtrooms around the world are now able to help turn suspicious into certainty and assists on freeing the innocent and convicting the guilty while transforming legal system into evidence-based justice system.

Admissibility and Relevancy of Forensic Science in Court

The term ‘admissibility’ is the concept in the law of evidence that determines whether or not evidence can be received by a court²⁴. The quality or the state of being allowed to be entered into evidence in a hearing trial or other proceedings²⁵. The evidence must first be relevant, but even relevant evidence will be tested for its admissibility. Thus, when a suspect has confessed of an alleged offence it’s relevant but if the confession has been obtained other than voluntarily. It will in many jurisdictions be excluded as inadmissible²⁶. Scientific evidence has the capacity to contribute important information to the law enforcement personnel, prosecutors and the courts in cases of sexual violence, murder, computer fraud, armed robbery and so on³⁰. Items collected or information gathered through scientific methods are used in legal proceedings. These evidences are vital in order to arrive at the reasonable consequence in determining large number of issues²⁷. Admissible evidence is key factor to the court in forming an opinion as to the judgment of a case. The evidence which can be brought forward in court of law to support an evidence to be admitted must meet certain standards as well as when it pertains to the case and clear chain of custody can be established with people demonstrating that the evidence is authority and that it has been protected to ensure that the integrity is retained²⁸. Thus section 42²⁹ provides that a statement is admissible where the maker had peculiar means of knowing the matter stated and such statement is against his pecuniary or repertory interest and; He had no interest to misrepresent the matter; the statement of time would expose him to either criminal or civil liability

African Union Protocol to the African Charter on Human and People’s right made a clear provision for the admission of expert and scientific evidence in solving criminal case. Article 26³⁰ provides that,

1. The court shall hear submissions by all parties and if deemed necessary, hold an enquiry. The states concerned shall assist by providing relevant facilities for the efficient handling of the cases,
2. The court may receive written and oral evidence including expert testimony and shall make its decision on the basis of such evidence.

In Nigeria, many crimes go unsolved due to inadequate application of the enabling statutes by the prosecutors and poor forensic examination. There is no or a minute possibility that the police carry out necessary forensic investigation expected of them in order to achieve a positive result. The Nigeria police still exhibit lackadaisical attitude in criminal investigation which often impede the administration of criminal justice. However, in our courts the main evidences are usually verbal confessions or circumstantial evidence. This poses a lot of constraints as people could choose to confess wrongly to a crime, they know nothing about for various psychological reason and later retract from the statement. Such contradictions hinder court process and make prosecution process difficult.

Application of forensic science evidence in court is essential because it does not only facilitate a quick dispensation of justice; it leads the evidence to the actual culprit. Sadly, no statutes in Nigeria defined the word forensic science or prescribe the procedure for the application in court. Thus the Evidence Act in Section 55³¹ states who is eligible to tender forensic report in court. Again, the Administration of

²⁴ Farlex: Legal Dictionary. Admissibility www.legal.dictionarythefreedictionary.com accessed on 29/06/2020

²⁵ B.A. Ganner Opcit

²⁶ Ankita Patel et al; ‘Review of the Role of Forensic Evidence in Criminal Justice System’ *SNJM S*(2016) Vol. 3

²⁷ Ibid

²⁸ Ankita Petal et al, op cit

²⁹ Evidence Act 2011

³⁰ Article 26 OAU, Protocol to African Charter on Human Rights and People’s Right on the establishment of an African Court on Human and People’s Rights

³¹ S. 55 Evidence Act 2011

Criminal Justice Act³² re-echoed the above provisions³³ without any progressive input to add to the provisions of the Evidence Act. Section 257³⁴ only reproduced section 55 of the Evidence Act. Presently, Nigeria statutes have no provision on steps and modality for application of forensic evidence in court³⁵ and statement of defendant at preliminary investigation or coroner's inquest³⁶. However, Lagos State³⁷ has coroner's law, but it covers mostly death investigation and no other aspects of forensic science which include, ballistics, polygraphs, etymology, odontology, DNA, fingerprinting, computer forensics and so on. A few attempts has been made to admit forensic evidence in court, but forensic investigation or examination carried out are rarely sufficient to attain the desired result as in the case of *Isiekwe v State*³⁸ where Ibiyeye JCA rightly observed that the absence of the doctor during trial is a prevailing circumstances of no disclosure of whether the deceased whose corpse was examined in Lagos State University Teaching Hospital died there or Asaba General hospital. He stated that the trial court should have *suo motu* summoned the pathologist who prepared exhibits to give evidence on the antecedents of the corpse he examined in accordance with the provision of section 42(1) of the Evidence Act³⁹. Interest of justice demanded that the pathologist should have been summoned to explain the lacuna created by want of evidence on how he came by the corpse of deceased. Consequently, the evidence of PW2 on particularly exhibit 3 in the prevailing circumstance in hearing and its (Exhibits) probable value has been adversely affected.

In Nigeria, the crime rate is on the surge and the government seems helpless because of the sophistication in terms of how such crimes are perpetuated. Experts have linked many cases that dot the Nigeria criminal justice system to the absence of forensic evidence. This forensic gap has rendered justice quite unprotected and ineffective⁴⁰. Crimes go unsolved because of lack of adequate equipment and training⁴¹. Complex crimes remain unsolved by the justice system due to the gap in forensic science⁴². There is no gainsaying the fact that forensic evidence provides a better option compared to the traditional eye witness testimony and confessions which are seldom falsified⁴³. DNA analysis results have proven very effective in crime solving in other various jurisdictions. A more application of DNA examination on cases such as homicide, arson, rape, bomb blast, armed robbery, kidnapping will go a long way to solve the incessant cases of insecurity in our legal system. Forensic science does not only aid in the area of crime solving but also helps in determination of individual profile, consanguinity and paternity in *Anozia v Nnani & Anor*⁴⁴ and *Olayinka v Adeparusi & Anor*⁴⁵. Forensic science examination does more than identifying the source of the sample; it goes further to place a known individual at a crime scene, in a home or place where the suspect claim not to have been present. It comfortably reputes the defence of *alibi*. For instance, in a DNA matching, once two samples are found to have similar profiles, the question arises as to what, if anything the Trier of fact may be told about the significance of the finding. That DNA analysis has the power to help identify the source of an evidence sample⁴⁶.

³² S257 Administration of Criminal Justice Act 2015

³³ Ibid

³⁴ Administration of Criminal Justice Act 2015

³⁵ Section 55 Evidence Act 2011

³⁶ Section 48 Evidence Act 2011

³⁷ Coroner Law Lagos State

³⁸ (1999) 9NWLR (pt 617) 43CA

³⁹ Cap 12 Laws of Federation 1990

⁴⁰ D Ngbowaji: An Evolution of Challenges of Forensic investigation and unsolved murders in Nigeria 2012 African Journal of Criminology and Justice studies

⁴¹ K Keltus Opcit

⁴² O. J. Alisigwe & O. M. Olunafemi: The State of Forensic Science in Crime Investigation and Administration of Justice in Nigeria vol. 10 ass 7 *IJSER* 2019 <https://ijscr.org> accessed on 30/06/2020

⁴³ Ibid

⁴⁴ (CA/OW/29/2013)[2015] NGCA 15

⁴⁵ (2011) LPELR 8691 CA

⁴⁶ The Evaluation of Forensic DNA Evidence: DNA Evidence in the Legal System. <https://www.ncbl.nim.nih.gov> accessed on 01/07/2020

Admissibility of Fingerprint Evidence in Court

It is trite law that fingerprints evidence if competent, relevant and material, is admissible in court to prove and ascertain the identity of the accused⁴⁷. Statutorily, section 15(a)⁴⁸(ii) provides that, Where a suspect is arrested, whether with or without a warrant, and taken to a police station or any other agency effecting the arrest, the police officer making the arrest or the officer in charge shall cause to be taken immediately. In the prescribed form, the record of the suspect arrested is taken for the purpose of identification and his full fingerprint impressions. The above provision is important because a complete compilation of the suspects profile eliminates doubt in the identity of suspect and convict hitherto characterised administration of criminal justice system. Apart from the several information relating to the alleged offence, the information of the person arrested or probable suspect will remove doubt in the future identity of the suspect. In United State of America, fingerprints are a standard part of booking record which automatically enters the data base of the nations. This can be tendered in evidence when the need for it comes up. The reliability of fingerprint evidence as a system of identification and the practice of taking and company fingerprints rests on substantial basis, have been so universally admitted⁴⁹ in various jurisdictions such as Canada, United States of America, South Africa and so on. Whereas many courts have taken judicial notice of the fact that there are no identical fingerprints; fingerprints are a means of identifying an individual⁵⁰. It is an established fact that fingerprint evidence unsupported by other evidence inn sufficient alone to identify a defendant⁵¹ thereby admissible in court. In Nigeria jurisprudence, the Administration of Criminal Justice Act⁵² and Prevention of Crimes Act⁵³ recognises the importance of fingerprint analysis of suspects. Section 6(c)⁵⁴ of prevention of crimes Act provides thus that ‘the President may make regulations for all or any of the purpose that the fingerprint of criminals and persons charged with or being suspected of having committed any felony, misdemeanour or other offence may be taken for comparison which may become an exhibit or a criminal case’. Notwithstanding the provisions of Administration of Criminal Justice Act and Prevention of Crimes Act, the process of fingerprint data collection has been overlooked by the police and currently ignored by the Nigeria court. Owing to the fact that fingerprinting will go a long way to ameliorate and deter injustice in our legal system. The law enforcement agency in Nigeria is not only poorly trained but also lacks the technical knowhow to carry out this basic forensic science data collection. Many cases go unsolved in Nigeria due to lack of experts and poor investigation by the police.⁵⁵

Admissibility of Polygraph Test in Court

The truth about lie detector is that we really want them; it would be much easier if when police were faced with two contradictory versions of a single event, there was a machine that could identify which party was telling the truth. This was the motive of modern-day polygraph intends to achieve; the admissibility of the application of polygraph is still controversial all over the world. Both the scientific community and inventors are still worried about calling it a lie detector⁵⁶. Presently, polygraph test is still alien in Nigeria but in June two thousand and eighteen, the Nigeria Police trust fund Bill emanated which seeks an urgency and significance for a new lie detector policy to be introduced into police force to enable police curb corruption in the Nigeria Police Force.⁵⁷

⁴⁷ *Duree v United State* 297 Fed 70 (8th cr. 1924)

⁴⁸ Administration of Criminal Justice Act 2015

⁴⁹ A. A. Moenssen; Admissibility of Fingerprint Evidence and Constitutional Objections to Fingerprinting Raise in Criminal and Civil Cases 40 *chi.kent.Rev.*85 (1963) <https://scholarship.ketlaw.iit.edu> accessed on 01/07/2020

⁵⁰ *Piquet v United States*. 81 F.2d 514(1950)

⁵¹ *People v Daly*, 168 cal. APP 2d 164, 335 P.2d 503 (1959)

⁵² ACJ 2015

⁵³ Prevention of crimes Act Cap p 27 LFN 2004

⁵⁴ Prevention of crimes Act Cap p 27 law of Federation 2004

⁵⁵ *Chiedi v A. G. Fedetion* (2006) B NWLR (pt 997) ph. 308/(2006) LPELR 11806. See also Ikenga K.E. Oraegbunam, ‘The Nigerian Police and Problems of Cybercrime Investigation: Need for Adequate Training’, *The Nigerian Law Journal*, Vol. 18 No. 1, 2015, pp. 1-28.

⁵⁶ Dam James Levin Aeeddy; How Polygraph work and why they aren’t admissible in most courts <https://mentalphoss.com> accessed on 02/07/2020

⁵⁷ Eli Esoimene; using the lie Detector Test to curb corruption in the Nigeria Police Force <https://www.papers.ssm.com> accessed on 02/07/2020.

In Nigeria, polygraph evidence is not recognised by virtue of section 57, 67 of the Evidence Act⁵⁸. There is no law that grants the admissibility of polygraph examination in Nigerian courts⁵⁹. The opinion of expert is circumscribed in section 68 and section 76 which says that if you preview the provision of the Evidence Act, you have to seek other laws validly in force in Nigeria. There is no law that grants the admissibility of polygraph examination in our Nigerian laws, historical evidence and what this document seeks to talk about is expressly excluded by section 67 Evidence Act 2011 has taken all technological advances into consideration, polygraph evidence is a foreign practice and our jurisprudence does not recognise it... it will be a dangerous practice for the courts to openly embrace it⁶⁰. In other jurisdictions such as Canada and United State polygraph evidence is presently inadmissible. One of the major reasons for its exclusion lies on the belief that jurors could accept such evidence without question due to its technical scientific nature⁶¹. The question of such blind acceptance was examined in two experiments in the influence of polygraph evidence on people's judgment of guilt, secondary, is whether a caution on the limitations of the polygraph would be effective in reducing people's weight of such evidence⁶².

In spite of the fact that polygraphs evidence aims expertly at some influence over the judgment guilt, it was not expected to be so great as to result in blind acceptance⁶³. Polygraph evidence tends to limit the scope of evidence ad defence thereby forming a mindset on the court. In the case of *State of New Jersey v A. O.*⁶⁴ where the defendant was accused of child molestation, upon invitation by child Advocacy center for questioning, the defendant denied the allegations and asked the police how he could clear his name. He was told he could take a polygraph test, which he did without being arrested or denied by his attorney. During trial, the prosecution tendered the polygraph test as an evidence of proof of the defendant's guilt, claiming that the polygraph test is Hundred percent (100%) accurate. The trial court counted upon this evidence. Aggrieved by the decision of the trial court he appealed. Upon appeal, the court reversed the conviction on two grounds,

1. First, we hold that the defendant's stipulation as to the admissibility at trial of polygraph results, which he executed without benefit of counsel was constitutionally invalid.
2. Second, include the trial court should have held a Rule 104 hearing pursuant to *State V Guenther*⁶⁵ before precluding defendant from presenting evidence about an incident in which complainant who accused defendant of molesting her and then reacted later accused another man of molesting her and then recanted that accusation.

As much as polygraph test is inadmissible in some jurisdiction, countries such as Kenya by virtue of its section 106 B(2)⁶⁶ of Evidence Act still admits polygraph test in evidence⁶⁷. On many occasion, issues come up in view of the stipulation as to admissibility of polygraph test. The courts usually set guidelines for the admissibility of stipulated polygraph results including;

1. The polygraph test is admissible in the country in question, where it seeks to be admitted.
2. Admission is allowed with stipulation of both parties. That is to say that the prosecution and the defence have agreed to admit that the test results are evidence. There must be a consensus between the parties that the polygraph testing has sufficient probative value to warrant admission.

In the states where this test results are deemed inadmissible, even if both parties wish to enter the test result into evidence, it is forbidden except in very rare circumstances⁶⁸. Polygraph test are most efficient

⁵⁸ Evidence Act 2011

⁵⁹ Christian School, supervisor failed polygraph test-expert <https://www.premiumtimesesng.com> accessed on 02/07/2020

⁶⁰ Ibid

⁶¹ Ann Canoukian & Ronald J. Heslegrave; The admissibility of Polygraph evidence in court. <https://link.springer.com> accessed on 02/07/2020.

⁶² Ibid

⁶³ Ibid

⁶⁴ 397 NJ. Super. 8,935 A. 2d 120

⁶⁵ 181 N. J. 129 (2004)

⁶⁶ Cap 80 Laws of Kenya

⁶⁷ *Darn Otieno v Stanbic Bank Kenya Ltd*

⁶⁸ Legal Match; Admissibility of Polygraph test in court <https://www.legalmatch.com> accessed on 02/07/2020

and comfortably applied on employment cases or federal police issues such as search of driver's license or help in identifying untrustworthy, deception or guilt people in an employment.

When we speak of lie detector evidence, it is actually referring to the testimony of an expert witness regarding his conclusions based upon the interpretation of physiological data recorded by a scientific device⁶⁹. For this reason, it should be apparent that the competence of such evidence is very dependent upon the qualifications and experience of the polygraph examiner.⁷⁰ Thus, '... it is common knowledge that the expertise of the operator and interpreter has substantial bearing on the reliability of the polygraph'⁷¹ In a jurisdiction where the rule of admissibility pursuant to stipulation of parties is adopted, polygraph technique would be considered legally acceptable and evidence pertaining thereto would be admissible provided there has shown a sufficient foundation when polygraph test is applied. *Frye v United State*⁷² set a judicial standard for the admission of polygraph test. In *Frye* (Supra) the court held that the scientific accuracy and reliability of the lie detector has not gained general recognition and acceptance among psychologist and psychology to support the admission of evidence is base therein⁷³.

Arguments have arisen on the general acceptance of admissibility of polygraph test evidence in court, McCormick observes that through the standard of 'general scientific acceptance' maybe a proper condition upon a court's taking judicial twice of the accuracy of scientific device or method, the proper test for admissibility in evidence should be whether the device or method acceptable to a substantial body of scientific opinion⁷⁴. It is observed that if the latter standard were applied, the polygraph technique would measure up satisfactorily. For polygraph evidence to be admitted where there has been a stipulation, voluntarily agreed upon, the discretion of the court should be substituted for the rule of exclusion⁷⁵ thus, court should apply discretion on the weight to adduce to the polygraph evidence before it to determine the admissibility of such evidence. Today, polygraph testing has been developed to such a part of reliability that in criminal cases when the state and defendant enter into a stipulation to have the defendant submit to a polygraph test, and result tendered in evidence. Polygraph testing has sufficient probative value to warrant admission where; the stipulation is clear, the stipulation is unequivocal and complete, the stipulation is freely (voluntarily) entered into with the full knowledge of the right to refuse the test, the consequences involved in taking the test In *State v Pared*⁷⁶, Judge Shebell in his dissenting judgment opined that a defendant cannot avoid a polygraph stipulation where defendant understood the stipulation but did not believe it. However, there can be certain waiver to stipulate agreement but this is subject to the enabling law of the State administering justice. Nevertheless, where the stipulated formal requirements were complied with while administering polygraph test on a defendant, the court is expected to consider whether the reliability of the test and qualifications of the operator are sufficient to admit such evidence. It is solely on the courts discretion to do the needful in avoidance of miscarriage of justice.

Admissibility of Forensic Ballistic Evidence in Court

The science of ballistic comes indirectly from the ancient's habit of writing a contract or two pieces of wood and their carving into the sides of the wood marking for the later purpose of identification, just as the metal parts of the weapons barred mark on the softer components of the cartridge case and the brilletts.⁷⁷. The admissibility of forensic ballistic evidence is court to simply a match to the exclusion of all other weapons in the world⁷⁸, the testimony of experts on the distinctive marking of firearm.

⁶⁹ *AKRON LAN REVIEW*; The Admissibility of Polygraph (lie Detector) evidence pursuant to stipulation in Criminal proceedings <https://www.uakron.edu> accessed on 06/07/2020

⁷⁰ *People V 2a 22etta, 27 III.2d 302, 309, 189 NE 2d 260 264 (1963).*

⁷¹ *Ibid*

⁷² 293 F. 1013 (Dc cr 1923)

⁷³ *Ibid* at 1014

⁷⁴ C McCormick 'Evidence' 5174 at 371 (1984) in *AKRON Law Review*. The Admissibility of Polygraph Evidence pursuant to Criminal proceedings <https://www.uakron.edn> accessed on 06/07/2020.

⁷⁵ C McCormick *Opcit*

⁷⁶ 98 N.J. 64 (1984)

⁷⁷ Inbau, Scientific Evidence in Criminal cases, 24 J. Criminal, C & P.S. 825 (1933) in *Williams & Mary Law Review* Vol. 2 1551 1959. <https://www.lg.org> accessed on 07/07/2020

⁷⁸ Jeremy R, Dack; Using Forensic Ballistics in the court room (2014) Law School Student Scholarship <https://scholarship.shu.edn> accessed on 07/07/2020.

Currently forensic ballistics testimony admitted in the court if the court is satisfied with the evidence and the qualifications of the expert⁷⁹. In considering the position of court in the admissibility of forensic ballistics, expert testimony is the key factor that will qualify the evidence of a particular weapon admissible in court. The following are basics types of ballistic knowledge;

1. Internal Ballistics which involves the forces, pressure, and ignition that operate on the bullet while still inside the firearm.
2. External Ballistics: it described the speed of a bullet between the firearm muzzle and its impact at target.
3. Terminal Ballistic: this describes the mechanic of impact on both the projectile and the target.
4. Forensic Ballistics: entails the analysis of bullet and cartridge case evidence and the use of that evidence to link specimens to each other and to particular weapon⁸⁰.

The expert testimony is the key role on which the admissibility of forensic ballistic evidence depends upon; thus the expert criminal laboratory technicians examine shell casings and bullet to match identifying marks to a particular weapon under the assumption that guns leave individual identifiable marks and if necessary will testify to in court.⁸¹ It is trite law that when a gun is fired, some of the gun's features are transferred to the shell casings creating patterns of scratch mark as cartridge casing leaves the gun. The gases produced when the primer explodes and gun powder burns cause the casing to expand in all directions; as a result, markings from the breach face of the gun is imprinted to some degree into the casings. In addition, in the process of ignition, the firing pin creates an imprint in the cartridge case. On Semiautomatic firearms a metal spring called the 'extractor' can also leave individualized markings. There are also chamber marks in the fired casings left by the sides of the firing chamber as the casing sides through the gun.⁸² Currently, in many jurisdictions, forensic ballistics evidence is admitted in court through the expert testimony. Forensic ballistic experts at the crime scene collect specimens for evidence, these include shell casings, and bullets collected at crime scene or by test firing guns found at the crime scenes to collect shell casings and bullets to create ballistic images which are uploaded to crime data bases in order to find a match.⁸³ In *Com v Pytou Heary*,⁸⁴ the court observed that the theory underpinning forensic ballistics is that all firearms possess distinctive features that in turn impart distinctive markings or 'tool marks' onto projectiles and cartridge casings when the weapon is fired. Using a microscope, firearm examiners compared tool marks found on spent projectile and cartridge casings to determine whether they were fired from a particular weapon, generally by comparing projectile and cartridge casing found at the scene of the crime or in an autopsy with one test-fired from sized weapon. A forensic ballistic evidence is probable admissible on the condition of examining the underpinnings of the science and questioning the precision of identification from the expert testimony. Once the expert testimony is able to prove the matching of markings to prove the identification of a weapon associated with the suspect, evidence will be allowed in courts.

In Nigeria legal system, the admissibility of forensic ballistic in court was not mentioned or defined in both the Evidence Act⁸⁵ and Firearm Act⁸⁶. However, the evidence Act allows experts in science, art and foreign law to offer their opinion at witnesses in a court proceedings under certain circumstances, in order to assist court determine some issues which are not within the competence of court⁸⁷ Across many jurisdictions, ballistic testimony by forensic expert's witnesses has in the fact been held to be admissible in court.⁸⁸ Ballistic opinions by forensic expert witness are subjective in nature which entails

⁷⁹ Ibid.

⁸⁰ R. A. Rinker, *Understand Firearm Ballistics* (5th Edn) Clarksville, IN Mulber House publishing 2004

⁸¹ J.R. Dack; using forensic Ballistic in the court room (2014) law school student scholarship 637 <https://scholarship.shu.edu> accessed on 07/07/2020

⁸² *United States v Green*, 4051, sup. 2d 104, 110 (D. Mass 2005).

⁸³ J.R. Dack Op cit

⁸⁴ 458 Mass 827, 837-38, 942 N.E. 2d 927, 938

⁸⁵ Evidence Act 2011

⁸⁶ Firearm Act Cap F28 Laws of Federation 2004

⁸⁷ K Adegbite; Law and Forensic: Technique of Evidence Gathering and case presentation in court (Articles/Law-and-forensic-techniques-of-evidence-gathering-and-case-presentation-in-court.html) accessed on 07/07/2020.

⁸⁸ Michael Talve; Forensic Expert witness qualified to testify in criminal case <https://www.expertinstitute.com> accessed on 08/07/2020

assessment of the quality and quantity of resulting tool marks; whereas the decision of what does or does not constitute a match comes down to a subjective determination based on the experts institution and experience.⁸⁹

Admissibility of Forensic Odontology

When crisis or natural disaster occurs, in a nation, for proper identification of the victims there calls the need for a forensic experts and investigation. In crises such as plane crash, petroleum pipeline explosion, genocide, fire outbreak, terrorist attack, vehicle accidents and other natural disaster, the question of proper identification of individual victims or deceased persons arises. Again, a homicide case may occur and by the time the victim is found, the body has decomposed beyond recognition thereby making it impossible to identify the individual, except through forensic examination. A forensic odontologist plans an important role in this identification process. Forensic odontology has been instrumental to the prosecution of many perpetrators of crimes such as genocide or human remains in case of mass death⁹⁰. In Nigeria Legal System, though did not specifically mention a forensic odontology, it however in Evidence Act⁹¹ made provisions for expert evidence in science, art and foreign law to offer their opinion as witness in a court proceeding under certain circumstances, in order to assists courts determine some issue which are not within the competence of courts⁹². Impliedly, an expert testimony to the court subject to the provision of the Act will be admissible in court except where such evidence is contrary to common sense. In *Okoh v The State III*, the court observed that, it may be bound by the evidence of an expert, if the expert witness fails to state the basis of his opinion.

The admissibility of forensic odontology is considered according to distinct cases. During a forensic examination, the specialists focus his investigation on areas such as, assessment of bite mark injuries, evaluation of abusive cases, classification of uncovered human, classification of mass fertilities, age estimation, civil cases involving dental or medical malpractice, identification of a deceased individual. Earlier in the twentieth century forensic dentist confined themselves to identification of victims of natural or human caused disasters. Frequently, these situations provided odontologists with complete dentition of a small, well defined set of individuals, who needed to be distinguished from each other⁹³. The technique used to accomplish that was to compare the victim's dentition against their dental records, which often include full mouth X-ray.⁹⁴ The admissibility of the use of identification of human remains in cases of mass death has been trite unlike bite mark evidence which has been subject of server criticism forensic dentistry played a significant role in the prosecution of many perpetrations of genocide around the world⁹⁵ such as Rwanda and Bosnian genocide, also in identification of corpses at two thousand and four, Tsunami flood disaster.⁹⁶

The controversy on the admissibility of bite mark evidence left in skin because of the differences between identifying victims of mass disasters and identifying the source of a crime scene bite mark scene prohibitively daunting. The argument varies thus, 'in the disaster situation, there is a forte number of candidates to identify and full dentition often is available from the victims as well as from the dental charts in forensic bite mark cases, the number of potential suspect is huge, the bite mark include only a limited portion of the dentition and flesh is a far less clear medium than hARRY the teeth (of the disaster victim) themselves'.⁹⁷ Crime scene bite mark contain only a small fraction of the information needed

⁸⁹ Michael Talve Op cit

⁹⁰ Jean Marrie Morgan, Proving Genocide: Forensic Anthropologist Role in Developing Evidence to convict those Responsible for Genocide. <https://digirole.lib.fsu.edu> accessed on 13/07/2020

⁹¹ Evidence Act Op cit

⁹² S. 68 Evidence Act 2011

⁹³ C Michael Barers, Identification from Bite marks in modern scientific evidence: The law of Science of expert testimony (Falgman eta led, 2010)

⁹⁴ Ibid

⁹⁵ Jean Mane Morgan Op cit

⁹⁶ Kehinde Adegbite; Law, Evidence gathering and forensic Odontology in Nigeria <https://www.academic.edu/10042313> accessed on 13/06/2020

⁹⁷ C Michael Barers, Op cit

from a complete dentition of disaster victims, and the limited of dental information that is available is neither clear nor dependably accurate.⁹⁸

Currently, Nigeria has little or no prosecuted case base on forensic dentistry; it is regrettable that Nigeria has not developed its evidence gathering capacity to the point of recognising the importance of forensic dentistry in unavailing complete crisis and crime⁹⁹. Though is a general acceptance of victim's identification through forensic dentistry in other jurisdiction such as Canada, United State of America, India and so on. Thus, the admissibility of bite mark opinion is still commonly accepted. In *People v Mark*¹⁰⁰ which involved a murder victim with an elliptical laceration on her neck. The laceration was judged to be a human bite; impressions were made of the wound and compared to a cast of the defendant's teeth. At trial, the expert testimony opined that the observable portion of the unknown teeth that made the wound were indistinguishably similar to the comparable teeth of the defendant. The court ruled in fair of the prosecution because the expert witnesses characterised the bite impressions as the clearest that had ever seen, either personally or in the literature, therein making it an exception to the rule among forensic dentistry that crime scene bite mark could not be trusted to yield accurate source of identification. The defence challenged the admissibility of the expert testimony in people's (Supra) on two major grounds;

1. That it was novel and not generally accepted in the field of Odontology and therefore inadmissible under California's Kelly-Frye test
2. That it violated the doctrine of another California case *People v Collings*¹⁰¹ which held that Identification conclusions based on joint probability estimates are inadmissible when the individual probabilities of the underlying attributes are unknown (and therefore are being supplied by speculation); when the attributes are known to be independent of each other (and therefore the 'product rule' typically used to combine individual probabilities to reach a joint probability conclusion is inapplicable and produces inaccurate and exaggerated conclusions); and that when the conclusion is interpreted misleading to suggest a time (or zero) probability that someone other than the defendant could have been the perpetrator.¹⁰²

The bite mark expert evidence was admitted at trial. Again, the court through that Kelly-Frye principle was inapplicable in the instant case on the grounds that such test applied only to evidence that was indecipherable without an expert's interpretation whereas, the instant case involved latest scientific models. What had been an exception to the general rule magically because the rule, not only for courts but for forensic dentists as well. But ironically, rather than forensic dentists convincing courts that their field could accurately identify the sources of bite marks, the court convinced forensic dentist that they could do what until then they doubted they could do.¹⁰³ The court based this on its earlier recognition of the identification of accident victims from their dental records. The testimony of expert witness testified and cited odontological literature indicating an absence of any consensus among forensic dentist so to whether perpetrators could be identified from bites marks left on the victim. Notwithstanding the controversy on the prosecution and defence expert testimony, the court held that the general acceptance standard had been met. It rightly held that questions about the scientific soundness of the prosecution's expert testimony are not to its admissibility and thus were questions for the jury, not for the court. It trite law that forensic dentistry be it victims identification or bite marks evidence testimony is admissible in court. Sadly, natural and human caused disaster cases remain unresolved due to the lackadaisical attitude of the government to develop forensic science.¹⁰⁴

⁹⁸ Ibid

⁹⁹ Kehinde Adegbite; Law and Forensic; Technique of Evidence Gathering and Case Presentation in Court articles/Law and Forensic-Techniques-of-Evidence-gathering –and-case-presentation-in-court. Html accessed on 13/06/2020

¹⁰⁰ 54 Cal. APP 3d 100, 126 Cal. Rptr. 350, 77 A.L.R. 3d 1108 (2d Dist 1975)

¹⁰¹ Cal. 2d 319, 66 Cal RPTR. 438 p. 2d 33, 36, A.L.R. 3d 1176 (1968)

¹⁰² Williams C Thompson and E.L. Schumann, Interpretation of Statistical Evidence in Criminal Trials. The prosecutor's Fallacy and the Defense Attorney's Fallacy, II L & AUM, Bettav 167 (1987) in Forensic Bite mark identification: weak foundations, exaggerated claims. J Law Biosci vol. 3(3) Dec. 2016 <https://www.ncbi.nlm.nih.gov/pmc/articles> accessed on 13/06/2020

¹⁰³ Michael J Sacks etal, Forensic bite mark identification: weak foundations, exaggerated claims. JLaw Biosci 3(3) December, 2016. <https://www.ncbi.nlm.nih.gov> accessed on 13/07/2020.

¹⁰⁴ Kehinde Adegbite Opcit

Limitations of Forensic Science Evidence in Court

Over the years, several arguments have been raised by the defence on application of forensic science evidence in court. Courts in some cases largely legal challenges based on arguments that identification evidence provided by these forensic science disciplines is unreliable.¹⁰⁵ In so holding, these courts affirms precedent that it is adversarial systems function to weed out frailties in forensic science evidence and find that criticism of the facts sui generis qualities.¹⁰⁶ Forensic laboratories are negatively affected or influenced various limitations, in personnel, technology, amount and timing of testing, and the ability to preserve, store and track evidence.¹⁰⁷ Forensic investigations are constantly faced with huge work loads of determining the data collected for investigation and scientific conclusions and reports about the crime are drastically reduced and there are risks that the evidence would not be admitted in court. It is for this reason that statutorily experts or investigators with specialised skills in a particular field of forensic can only qualify to investigation and also give expert testimony in court. The argument in the application of forensic in court emerged as years on and more research are conducted on the impact, progress and challenges that remain for evaluating and interpreting forensic evidence. Some court decisions and convictions upon forensic science evidence led to miscarriage of justice. A NAS Senior adviser on forensic science policy for the innocence project, which works to exonerate those who are, convicted unjustly, report that, there was a worrying lack of science underpinning many types of forensic science evidence, thus limiting the inference and conclusions that could be made.¹⁰⁸ On many occasions, forensic evidence such as bite-marks, firearms and tool mark identifications is introduced in criminal proceedings without any meaningful scientific validation, determination of error rates, reliabilities testing to explain the limits of the discipline.¹⁰⁹

Generally, science and law approach the world in different ways. Science progresses while law build slowly on precedents. Science assumes that human kind is determined by some combination of nature and nurture, while law assumes that humankind can transcend these influences and exercise free will. Science is cooperative endeavor, while most legal institutions operate on an adversary model.¹¹⁰ Most argument on application of forensic evidence in court is on the promise that the products of the scientific methods are widely understood to be provisional; hypotheses are routinely revised or abandoned and replaced by new dominant theories.¹¹¹ Conversely just as science is skeptical about charge. This is because law is based on precedents. Thus science may have progressed beyond the idea that forensic science can engage in individualisation with certainly, law decisions are predicated on judicial process and precedents.¹¹² Recently, from further research, the accuracy of forensic evidence is called into question as unjustified factors such as contamination of the crime scene and skills of an investigation can lead to such uncertainty in result. By the general principle of science, forensic science is not a science *stricto sensu*; rather it involves whatever techniques that produced physical evidence for use in law. The hardship in application of forensic evidence in court is predicted in avoidance of miscarriage of justice. There are cases where accused are exonerated of crimes on the constant misuse of forensic. The court often accept scientific findings that later turnout to be incorrect.¹¹³ It was observed there was too much reliance on and deference to the interpretation and opinion of the expert by courts. On many occasions, the courts and the defence lawyers are not well informed or equipped to challenge forensic

¹⁰⁵ Sarah Lucy Corper; Forensic Science identification Evidence: Forensic Between law and Science. Journal of Physiology, Science & Law Vol. 16, April 2016 p1-35 1 p51-org accessed on 03/08/2020.

¹⁰⁶ Ibid

¹⁰⁷ Edward Inwinkelvied, UC Davis; Forensic Examining the Evidence: Limitations weighing the Evidence. <https://www.forensicbasic.org> accessed on 03/08/2020.

¹⁰⁸ Brian Tarran; Royal Statiscal Society: The limits of forensic Evidence <https://www.rss.onlinelibrary.wiley.com> accessed on 03/08/2020.

¹⁰⁹ Ibid

¹¹⁰ David L. Faigman, Legal Alchery: The use and misuse of Science in the Law 56 (1999) in S. L. Corper. See also J. U. Okoye & Ikenga K. E. Oraegbunam, 'Psycholegal Research and Criminal Behaviour', *African Journal of Criminal Law and Jurisprudence* 4(2019), 159-170.

¹¹¹ Deborah M. Hussey, Speaking to law, 25 *geo intl Envntl .L. Rev* 289, 295-96 (2013).

¹¹² Sarah Lucy Corper Op cit

¹¹³ The Globe and Mail; 14 cases tainted by Charles Smiths, evidence. www.theglobeandmail.com/new/national accessed on 03/08/2020

evidence effectively. It is pertinent to note that the progress and success of any criminal investigation lies on the ability of the investigation to identify evidence define him; evidence not identified and collected will never analysed.

There are several occasions in a criminal trial whereby the major challenges is that lawyers and judges do not have sufficient expertise on these very scientific and technical evidence for it to properly cross examine the witness or counter the evidence before the court. It is paramount that the judgment, knowledge and understanding of forensic technicalities are of essence to the court. Therefore, total relevance of forensic science in our criminal justice system can lead to a miscarriage of justice. Care and precaution should be taken on the relevance of forensic testimonies in court. To admit forensic evidence in court, it suggests that the context of evidence is weighed. Wrongful convictions are more likely to occur when only a few pieces of evidence are available, and their strength is over estimated or unchallenged.¹¹⁴ There are certain factors which the court should put in consideration before admitting evidence. These include;

1. When there is little evidence (of any kind), any piece of scientific testimony carries much more weight than its scientific strength may warrant.
2. When there is an abundance of evidence, any single piece of evidence may be given less weight that it deserves.
3. The admissibility, strength and validity of scientific evidence should always be considered in the context of a broader case.¹¹⁵

Another fundamental limitation to the application of forensic science evidence in Nigerian criminal justice system is the ability to determine the age of evidence. The question the investigators usually explore any investigation include ‘who left the evidence and when?’ If questions can be explored in the cause of investigation, then a greater success will be achieved in solving a particular crime thereby helping the court in reaching a valid

4. Conclusion

Legal representation, cross-examination and investigation, are the key components to achieving a reliable justice in any criminal justice system. Most of the researches examining the application of forensic science investigation in a case and the processing outcomes have been discouraging. These concentrate more on the scientific application or investigation of case only without a comprehensive study on the admissibility of this evidence in court, and the criteria for its application in the judicial system. Indeed, the admissibility of forensic science and expert evidence has procedures to follow before evidence can be admitted. However, we can anticipate the court decisions which touch on these issues. It is observed that forensic science evidence helps to expose the truth of past events which cannot be accounted for. Going by the complex nature of crime presently, conventional legal practices are bound to lead to miscarriage of justice. Legal practitioners and judges are not meeting their obligations and appropriately assess incriminating expert opinions evidence individually or as part of the overall case. Today, forensic science analysis can use ballistics, odontology and DNA in solving complex cases. With the forensic anthropology, the dead victims could have been identified but Nigeria Criminal Justice System has steps to climb before it can attain the required technology for carrying out such scientific analysis. Having examined the extent of forensic science investigation under the Nigeria criminal justice system, it is observed that the application of forensic science evidence in Nigerian courts are faced with challenges ranging from the stage of investigation such as arrest, to laboratory analysis, adjudication and sentencing. Studies from the research conducted thus discover that there are different conclusions for different verdict stages with scene indication of inconsequential role played by admissibility of forensic science evidence in court. Forensic science is a panacea to quick dispensation of criminal matters in court.

¹¹⁴ Edward Imwinkelried, op cit

¹¹⁵ Ibid