FORENSICS: THE MISSING LINK IN NIGERIAN CRIMINAL INVESTIGATION

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ABSTRACT

All over the world, the frequency with which various crimes are being perpetrated seems to be uncontrollable. The difference between an underdeveloped and developed country in the incidence level of crime lies not in the rate at which criminal activities are perpetrated but in the ingenuity, substance and velocity of the responses and investigation systems in existence. It is highly detrimental for any country’s response to be static, as the global scene constantly evolves and so do criminal motivations and machineries. Serial killers, rapists, murderers, drug traffickers even terrorists may never be prosecuted in the absence of adequate technological advancement to strengthen investigative capacity and assist in building reliable evidence. An outcome of technological advancement in criminal investigation is the ever-evolving field of Forensic Criminal Science. A key player in criminal investigation in the United States of America, United Kingdom, Canada and Australia, the application of forensic science to crime often involves the collection, preservation and analysis of scientific evidence which include Ballistics, DNA, Hair, Fiber, Finger prints among others. This paper seeks to examine the emergent significance of forensic evidence in the Nigerian Criminal Investigation system.

1.0 GENERAL INTRODUCTION

The ancient Greeks and Romans were the first to practice forensic science. The system of criminal adjudication in ancient Roman societies consisted of the presentation of cases before a group of persons in
the forum. Both parties were allowed to say their side of the story, after which the outcome of the case was determined based on the best argument. Despite the beliefs of forensics being used in ancient times, the concept of using science to combat crime did not develop until the late Middle Ages, particularly, during the frequency of human poisonings across Europe. This led to the practice where corpses were analyzed to check for toxic substances in the 19th century. At some point, it became necessary to document the identity of offenders in order to identify repeat offenders. The first attempt to document the identities of offenders was called Anthropometry. It consisted of measuring and documenting the body (fingers, ears, head, legs, etc.) of the offender. However, due to similar characteristics and measurement errors, this was found to be unreliable and was replaced by Dactylography; the use of fingerprints for identification due to the uniqueness of fingerprint prints, even in identical twins.

In 1892, Francis Galton propounded upon calculation, that the chances of identical prints were 1 in 64 billion. This method has been extremely successful and is still used today. The next major advancement occurred in 1980 when scientists became able to decode human deoxyribonucleic acid (DNA). DNA is till date, a reliable way to link a suspect with a crime scene and also to identify human remains. The role of science in the criminal justice system increases daily. Evidence can be linked to its source through forensic science. For example, a bullet can be matched to the gun from which it was fired; a piece of tape from the scene to the

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original roll from which it was torn. However, due to the difficulties in confirming identification, bullet matching was not used as evidence in court till 1926.

Computer graphics are also used to create compelling visual evidence to clarify the events of a crime for jurors.

In the United States of America (USA), the birth of Forensic Science can be said to have occurred during the professionalism movement. The movement sought to promote a more analytical means of fighting crime. This movement consisted of pioneers such as Police Chief August Volkmer of Berkeley, California; who is credited with inventing the ‘Crime lab’. Pioneers in this era urged for standardization, adaptation of new technology and specialization of law enforcement agencies. The process did not exist void of frauds and counterfeits who perceived an opportunity to make financial gains through artifice. In the light of these, the courts had challenges in identifying genuine forensic analysis. The Supreme Court of Illinois in the case of People v. Jennings stated that ‘peculiar and specialized experience,’ could be useful, however, that could not be conclusive, as it might be inappropriate to let a person with such experience testify in court, for example, gamblers.

Furthermore, most forensic fields were not invented in forensic labs, rather, they were the work of law enforcement agents just in the course of solving crimes, without the desire to gain an in-depth knowledge or skill. This meant that such analysis were not subjected to reviews and criticisms in scientific journals. There were no thorough experiments and flaw findings in theories.

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3. What is Forensic Science? – Definition, History & Types’
   accessed June 15 2016

4. BBC – iWonder (n 3).

5. ibid


This was generally the situation in the U.S till the 1923 case of *Frye v. United States*⁸. This case was renowned for setting certain standards in relation to expert testimony. The decision stated that for a scientific evidence or testimony to be admissible, it must have gained general acceptance in the particular field in which it belongs. Thus, courts rose from focus on the witness’ qualifications to evaluating the content of the witness testimony. As an ancillary effect, Judges became the gatekeepers of scientific evidence.

1.1 STATEMENT OF THE PROBLEM

Evidence is the heartbeat of the law. The Evidence Act of 2011 is the law governing evidence throughout Nigeria. Criminal investigation in Nigeria majorly revolves around the use of witnesses; which may give false testimonies, expert witnesses, confessions which are usually forced, sometimes torture and even blackmail of suspects. If the courts were to apply strict usage of the substantive and procedural rules of *Section 29* of the Evidence Act, a whooping amount of confessions would be inadmissible by the courts for lack of due process and presence of coercion. Unsolved crime cases form pile upon piles. More often than not, innocent individuals are prosecuted just to turn over the pages of investigation. Crime scenes are rarely marked out and scrutinized. Autopsy is only usually carried out on a victim whose family is influential enough to afford it, even with that, it ends with a mere determination of the cause of death. Forensic techniques such as DNA typing, osteology, neuropathology, ballistics, criminal profiling, and crime scene photography amongst others are rarely used to unravel the incidents. Criminal trials last for a long unpredictable period of time due to the lack of evidence. There is an evident lacuna in the legislations; the Penal Code,

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⁸ [1923] 54 App.D.C. 46, 47, 293 F. 1013, 1014
Evidence Act and Criminal Code have no provisions relating to forensic-based investigations.

Furthermore, the application of forensic science in Nigeria has been plagued by lack of funding and political will; there is only one forensic laboratory in Nigeria at the moment. Thus counsel, even when willing to tender forensic evidence; have limited or no access to specialized personnel. A legal commentator, Andrew I. Chukwuemerie, has expressed reservations that: “Statutory law in Nigeria has hardly kept pace with social realities…”

Plane crashes, petroleum pipeline disasters, financial crimes, murder, drug trafficking and so many other crimes constantly occur in Nigeria on many occasions and many of them would remain unresolved if the government remains lackadaisical towards encouraging and developing forensics in its criminal investigation.

1.2 CLARIFICATION OF CONCEPTS

The Key concept in this paper is Forensic Evidence.

Forensic evidence encompasses any science which can be used as evidence in a court of law. It includes scientific analysis and comparison that are used in the investigation of crime. The term ‘forensic’ is derived from the Latin adjective ‘forensis’ which means “of or before the forum”.

Forensic Evidence may be used to –

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1. Prove elements of a crime
2. Verify or discredit victim or suspect statements
3. Identify decedents or suspects
4. Establish a connection to a crime or crime scene

Therefore, Forensic evidence involves both evidence used by during the criminal investigation and those presented before the courts. Forensic scientists can also testify as expert witnesses for the benefit of either the prosecution or the defense. There are different aspects of Forensic evidence, they include Ballistics, Anthropometry, Fingerprints, DNA, Maturation, and Ear print analysis, Chemistry, Entomology, Geology, Geomorphology, Geophysics, Odontology, Optometry, Pathology, and Toxicology amongst others. It is therefore clear that Forensic evidence cuts across various science disciplines. This is because forensic evidence may be gotten from basically any object or atom of existence, thus, making it a viable tool in solving crimes. For the purpose of this research, certain aspects of Forensic evidence would be defined in order to better understand how they work. Terms are defined here strictly in relation to the subject matter of Forensic evidence, therefore, they may possess different meanings in other fields.

i. **DNA** – Scientifically called Deoxyribonucleic Acid, this is the material on which genetic information in living things are stored. It is a scientifically prove fact that no two human beings can have the same DNA, thus, evidence is gotten to link a suspect to a crime or crime scene by comparism of DNA profiles. A DNA database is often needed for this purpose.

ii. **Fingerprints** – Scientifically called Forensic dactyloscopy, fingerprints have been proven to be unique to a person. Thus, evidence may be gotten from surfaces, objects or the weapon used in the crime.

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13 *Ibid*
commission of a crime. Generally, fingerprints are one of the most common ways of ensuring authenticity in a database.

iii. **Ear print analysis** – This is a similar tool to fingerprinting. An ear print is a two-dimensional reproduction of the parts of the outer ear that have touched a specific surface.

iv. **Geomorphology** – This involves the study of the ground surface of a suspected crime scene in the quest to discover location(s) of buried objects.

v. **Entomology** – Insects in, on and around human remains also assist in determining and proving time and location of death. It may also be helpful in determining movement of the body after death.

vi. **Geology** – Forensic geology involves trace evidence which may be in form of soils, minerals and petroleum.

vii. **Toxicology** – This evidence is gotten as a result of the effect of certain drugs and poisons on or in the human body. This is mainly used in autopsy, where suspected cause of death is poisoning.

viii. **Bloodstain pattern analysis** – Blood spatter patterns found at crime scenes are also used in reconstructing or deriving evidence on the events of the crime.

ix. **Optometry** – This involves the study of glasses and other eyewear found at crime scenes for investigations.

x. **Odontology** – The uniqueness of dentition is also used as evidence in crime investigation. It may be used to identify a victim’s body or the bite mark of an accused on the other hand.

xi. **Podiatry** – Forensic podiatry involves the study of the footprints or footwear found at a crime scene to establish an identity.

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14 *Ibid*
It should be noted that the application of these methods of Forensic investigation differ from case to case, crime scene to crime scene. In other words, it depends on the nature of evidence present at the crime scene and type of crime being investigated. The presence of, or access to skilled personnel relating to the particular field cannot be overemphasized, as evidence is usually delicate and not to be tampered with. This is why most crime scenes are carefully marked out and restricted when a crime occurs.

2.0 FORENSIC EVIDENCE: INTRODUCTION

Forensic evidence may be applied in both civil and criminal proceedings. It is usually obtained from the scene of the event and subsequently analyzed by forensic scientists in forensic laboratories. The essence and use of Forensic Evidence are constantly made popular and highlighted in various Television shows such as ‘Law & Order’, ‘CSI’, ‘Hawaii Five-0’, ‘Bones’ etc. Today, many believe that Sir Arthur Conan Doyle had a considerable influence on popularizing scientific crime detection methods through his fictional character Sherlock Holmes. All these have led to individuals being sensitized and informed on the different processes involved in Forensic Investigation. However, this may also be viewed to have a negative effect as criminals also get to know what gives them away and therefore spurs them to improve their methodologies. Therefore, sustained progress in the research underlining Forensic science is critical for advancing public safety and the administration of Justice.

Forensic Evidence in virtually all Jurisdictions of the world, if carefully and cautiously generated, is the best Evidence. This is because it is

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more often than not obtained from the scene of the occurrence and needs no further social inquiry other than scientific analysis. This therefore means that it is less susceptible to tampering. Sometimes, most Forensic Evidence generating processes require the existence of databases of persons in the country or society. This is mainly dominant in fingerprint analysis. Thus, when a database of fingerprints of persons in the society exists; the fingerprint(s) found at the scene of the crime is carefully lifted and taken to the lab. When entered into the computer, a possible match is identified and the suspect is picked up for questioning. 17

Though Forensic Evidence is of scientific nature, it is not open to all science-inclined personnel. This is due to its delicate and exclusive nature. Thus, Crime scene investigators and forensic lab technicians use specialized skills and tools to collect, analyze, and present evidence in order to solve a crime or successfully convict the offender. Forensic Evidence may not only be generated in relation to fresh cases but from cold unsolved cases. It is essential in not only identifying suspects but also in identifying victims and proving the elements of a crime. Interestingly, Forensic science has evolved to also locate or recreate a crime scene, chemicals like *Luminol* and *Hemident* can be used to identify blood in a crime scene, even if it has been cleaned, information from several drops of blood can also be used to determine where the victim or suspect was standing when the blood hit the floor, therefore making it possible to derive Forensic Evidence. 18 Successful prosecution of criminal cases requires a thorough and professional police investigation, frequently incorporating the skills of forensic science experts.

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17 'What is Forensic Science? – Definition, History & Types’
accessed June 15 2016

18 *ibid*
Forensic laboratories are crucial to the analysis of Forensic Evidence. It was in the United States that the most ambitious commitment to Forensic science was undertaken. In 1932, the Federal Bureau of Investigation organized a national laboratory that aimed to offer forensic services to all law enforcement agencies in the country. The FBI laboratory is now the largest Forensic laboratory in the world; performing over one million examinations yearly. The size and diversity of crime laboratories make it impossible to select any one model that can best describe a typical crime laboratory. However, the support provided by crime laboratories can be categorized into five basic services – the physical science unit which identifies and compares physical evidence; the biology unit which applies the knowledge of biological sciences in order to investigate blood samples, body fluids, hair and fiber samples; the firearms unit which investigate discharged bullets, cartridge cases, shotgun shells, and ammunition; the document unit which provide the skills needed for handwriting analysis and other questioned-document issues and finally the photographic unit which applies specialized photographic techniques for recording and examining physical evidence.

Forensic scientists may provide expert testimony in court by evaluating evidence based on specialized training and experience. Forensic scientists also engage in training law enforcement personnel in proper recognition, collection and preservation of physical evidence. 19

2.1 IMPORTANCE OF FORENSIC EVIDENCE

Criminals are guaranteed to run freely in a world without a competent criminal justice system. In the absence of evidence, criminals would not be convicted of their crimes, ranging from common theft to a homicidal

rampage, drug trafficking, murder, corruption among others. Forensic science can be used to determine many things in virtually all types of crimes when it is collected properly without any contamination. The importance of Forensic Evidence would be considered in four different facets; Murder, Illegal Drugs, Missing persons and Elections.

1. MURDER – Cases of murder; both cold and new are analyzed and solved better with the use of scientific evidence. Law enforcement officials can gain valuable information from evidence that would have been degraded and unusable due to weathering or time. DNA, Fingerprints on the murder weapon, Ballistics in relation to the gun the murder bullet was shot from help identify and convict criminals who have eluded authorities for years and to exonerate prisoners who were wrongly convicted before today’s more sophisticated methods became available. Forensic Evidence has also been highly indispensable in apprehending serial killers due to their constant pattern. A quintessential example of this occurred in 2009, when the Milwaukee police tested evidence in a reopened murder case dating back to 1986 and eventually linked nine murder cases to the suspect: Walter Ellis in what were known as the North Side Strangler cases. Faced with new evidence, Ellis pleaded “no contest” to charges that he strangled seven women and was sentenced to seven life terms with no chance of parole in 2011.

2. ILLEGAL DRUGS – Identifying substances that may be illegal drugs is probably one of the most difficult challenges in the Criminal investigation system, especially with the widespread production of

ever-evolving psychoactive substances such as ‘bath salts’ and synthetic cannabinoids, which mimic the effects of other drugs and are created to avoid being classified as illegal. Forensic evidence of urine samples, oral fluid samples and blood analysis aids identification of the presence of such drugs in the body of the suspect. 21

3. MISSING PERSONS – Air crash victims, natural disasters, explosions, train derailments, genocides, terrorist attacks, all have one thing in common; unidentified bodies. These on the flip side are recorded as missing persons till they are identified. In the absence of proper Forensic investigation and identification of bodies, mass burials would be the order of the day. Forensic pathologist(s), odontologist(s) and finger print expert(s) are very crucial in forensic identification. The process of identification consists of four phases: Recovery of bodies, collection of ante mortem data, examination of bodies and collection of post mortem data and comparison of ante- and post mortem data for reconciliation and identification. Countries should be well-prepared to carry out proper investigation of mass disaster and avoid the unwholesome tradition of mass burial of disaster victims. 22

4. ELECTIONS – In the 2015 Nigerian General Elections, credibility could be said to have been ensured through the use of the National Voters database. This enabled the total number of registered voters, accredited voters, total votes cast, invalid votes to valid votes to all be accounted for. It was the backbone of the election. Finger prints of the

21 Ibid
voters also constituted the database. Thus, Forensic techniques such as DNA and Fingerprints are of utmost importance in ensuring the credibility of elections.

3.0 EMERGENT SIGNIFICANCE OF FORENSIC EVIDENCE IN NIGERIA

Nigeria is ranked the 6th highest crime rate country and presently one of the most terrorized countries in the world. Nigeria is constantly plagued with all forms of crimes and attacks: terrorist attacks, murder, fraud, mass disasters among others. There is an influx of criminal cases daily and the criminal investigation system is docile in combating these crimes.

Undoubtedly, these form a major reason for the socio-economic backwardness of the country as crimes are known to be a main cause of societal stagnancy. More so, crimes are perpetrated at all levels of the society; even and especially the government. The court is the last hope of the common man, yet the difficulty in procuring evidence, the standards which must be attained and the rate at which evidence may be tampered with at ease and existence of false witnesses undermine the competence of the justice system. This are existing alongside wrongful prosecutions by the courts in the absence of real and duly authenticated evidence.

This paper would view the emergent significance of Forensic and Electronic evidence in Nigeria, under four contexts; Mass disasters, Murder and Cybercrimes.

Mass disasters are common in Nigeria; plane crashes, oil explosions, violent riots, fire outbreaks, suicide bombings. However, there is a lack of a

functional disaster victim identification system. Cases over the years include the gasoline explosion in Jesse in October 1998, where 500 died and about 100 were wounded; the EAS Airline crash in Kano in May 2002 which recorded 148 deaths; about half of the deceased being those on the ground on the day of incident; the Belleview flight 210 which crashed at Lisa village in October 2005; killing 117 people on board and the Sosoliso Airline crash in Port Harcourt in December 2005, killing about 108 students. Other cases include the pipeline explosion at Ilado village in May 2006, following pipeline vandalisation that left over 200 people dead; the ADC Airline, flight 53, Boeing 737 which crashed in October 2006 after takeoff in Abuja where 96 people died including many medical doctors as well as the then Sultan of Sokoto and only 9 survivors; the pipeline explosion in Abule Egba in December 2006, following vandalism leaving over 100 of charred bodies, most of which were buried at the scene; and the DANA Airline crash of June 2012 where all on board died and rescue mission recovered 152 bodies; there were several bags of body parts and bone fragments. Most recently are the terrorist activities in the Northern part of the country where scores of people are killed almost daily.

A huge percentage of trials in Nigeria yearly are murder related. More often than not conviction or acquittal by the courts take years. It is agreeable to say that murder cases are the most delicate and a high duty of care should be exhibited by the courts. However, the delay in judgment by the courts is not necessarily an effect of the exercise of a duty of care, most times, it is due to the lack of evidence good enough to convict or acquit a suspect. The traditional methods of proof; confessions, eyewitness accounts, expert witnesses have become unpredictable and sometimes, unreliable. The

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truth is that this lacuna is not unidentified by the police force and criminal justice personnel. As far back as September 29 2008, at a workshop organized by the State Ministry of Justice and Office of the Chief Medical Examiner, these have been recognized and suggested by former Lagos State Solicitor General, Mr. Fola Authur-Worrey and former Commissioner of Police, of the Force Headquarters, Abuja, Mr. Yomi Onashile, who attributed the failure of the Nigerian police in solving high profile murder cases to their reliance on confessional statements and eye witness accounts in place of hard evidence that could be obtained through modern scientific methods. They posited that the Nigerian Justice administration suffers an institutional neglect and that the state of the country’s facilities makes a mockery of justice; many crimes are committed in the dark, in secret, out of sight, thus, it is impossible to obtain evidence from eye witnesses. The lawyer, like the former commissioner of police said there is only one barely functioning forensic laboratory in the whole country at Oshodi, Lagos, and the lab suffers serious government neglect, resulting in a severe shortage of relevant chemicals and reagents and poorly motivated staff. Items such as knives, clubs and other weapons suspected to have been used to perpetrate homicide are often kept for months thereby holding up the investigation and trial process. Fingerprinting, described as the most reliable means of identifying an individual, he narrated, no longer features in crime investigation in Nigeria.  

4.0 CONCLUSION AND RECOMMENDATIONS

In view of the current understanding of global best practices concerning medico-legal investigation of death resulting from mass disasters,  

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it would appear that Nigeria lags behind. The country also lacks proper and well-equipped forensic science laboratories to investigate mass disasters and the routine forensic cases closely related to them; there is also a dearth of the relevant personnel of all categories.  

It has become pertinent that law enforcement agents; lawyers and the judiciary rely on more authentic and concrete methods of proofs in order to solve criminal cases. These methods have to be reliable, objective and not susceptible to easy manipulation. This necessity is provided by science because by nature, scientific evidence is more or less exact, far more reliable and does not turn hostile under threats. Science is based on clues and materials which are often dependable.

The fundamental deciding factor of the success of Forensics in countries such as the UK and US is the government’s will to making committed funding for research. This is highly indispensable. Once the government’s will is apparent, the private sector would key in.

For Nigeria to develop a research system that is result-oriented, developmental based and establish efficient laboratory systems that can thrive, we will require more than sheer intellectual talk or expert opinion. An all-inclusive approach by relevant stakeholders, including the government, academia and industry; and commitment to create policies that will prioritize solution-based and developmental research which will chart a new course for economic, social and national security is essential. Organizations like SON, NAFDAC, NDLEA, NAPRI and NISLT should be developed to research-based, result-oriented and industry-inclined centers.

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27 Ibid at 3

Universities and polytechnics require such funding too. Forensic science cannot thrive in an environment that is scientifically-research redundant. It is the principles of scientific investigation that forensic science is based on. Thus, legal counsels should be educated on how to present such evidence, as more laws are enacted to govern Forensics.