EFFICACY OF ACCIDENT INVESTIGATION AS THE LEGAL MACHINERY FOR COMBATING AVIATION ACCIDENTS IN NIGERIA*

Abstract

Aviation accidents constitute one of the threats to aviation safety in Nigeria. Apart from the resultant loss of lives which creates serious vacuums, both in the families of the victims and the aviation industry, and loss of property, aviation accidents have also created fear in the citizenry about the safety and reliability of travelling by air. It is against the backdrop of the foregoing that every endeavour is made to ensure that aviation accidents are combated. Investigation of accidents is the legal machinery used by member states to the Chicago Convention to confront the menace of aviation accidents. Through investigation, the causes of, and contributory factors to an accident are determined in order to put in place the necessary machinery to avoid future accidents. Using doctrinal research method, this article examined the efficacy of accident investigation as the legal machinery for combating aviation accidents in Nigeria. The article found that the utility of accidents investigation to the improvement and enhancement of aviation safety in Nigeria is whittled down by the legal regime regulating it which is skewed in such a way as to provoke needles legal debate, and strenuous route to justice administration. The article recommended the amendment of relevant provisions of Nigerian legal instruments. Specifically, the article recommended inter alia that accident investigation reports should be admissible in Nigerian Courts as it is in other jurisdictions.

Keywords: Aviation, Accidents, Investigation, Law

1. Introduction

Aviation accidents constitute one of the threats to aviation safety in Nigeria. Apart from resultant loss of lives which creates serious vacuums both in the families of the victims, and the aviation industry, and loss of property, aviation accidents have also created fear in the citizenry about the safety and reliability of air travel. From the economic point of view, aviation accidents occasion loss of colossal amount of revenue as a result of the damage to the airplanes, and result to pumping of large amount of money into the industry by the government and other stakeholders like the airlines for cleaning up and payment of compensation. Consequently, every endeavour is made to ensure that aviation accidents are combated. Investigation of accidents is the legal machinery used by member states to the Chicago Convention, 1944 to confront the menace of aviation accidents. It is against the backdrop of the foregoing that this article sets out to determine the efficacy of accidents investigation as a panacea to aviation accidents in Nigeria. In other to do that, the concept of aviation accidents is clarified, followed by the causes of aviation accidents. The legal regime of accident investigation is examined with searchlight on power to conduct investigation, conceptual parameters of investigation, responsibility to conduct investigation, bases for accident investigation, and the legal character of accident investigation reports.

2. The Concept of Aviation Accidents

The word 'accident' appears common, and superficially simplistic to define. However, its conceptual demystification is plagued with intellectual polemics. The definitions of the word range from very narrow ones to too wide definitions. The rich philosophical pedigree and interesting etymological history[1] of the word accident account for the varying meanings which the word conjures in the minds of people. Overall, the word provokes various levels of frustrations in the professional safety community.[2] Etymologically, the word accident appears to come from the Latin verb, *accidere*, meaning, 'to fall down or to fall to'. This suggests an event that takes place without foresight or expectations.[3] From such narrow prism, the court in the case of *Fenton v Thorley*,[4] looks at accident 'in the popular and ordinary sense' as 'an unlooked for mishap or an untoward event which is not expected or designed'. In a similar way, the Osborn's Concise Law Dictionary,[5] defines an accident as 'anything that happens without foresight or expectation, or is an unusual effect or unknown cause.' It is submitted that defining accident as representing an event which happens unexpectedly is too narrow and unrealistic a conceptualization. For all events known or experienced at one point in history or the other are certainly expected to happen. The only issue is that the time, place and precise circumstance cannot be foreseen. Also, there are instances where accidents are results of concealed intentional acts. Black's Law Dictionary[6] defines accident as

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[1]Hermann Loimer and Mag Driur and Michael Guarnieri, 'Accidents and Acts of God: A History of the Terms' [1996] 86 (1), American Journal of Public Health, 101

[2] Ibid

[3] Ibid

[4] (1903) AC 443 at 448

[5] M Wooley (ed), *Osborn's Concise Law Dictionary*, (12th edn, Sweet and Maxwell, 2013), 6

[6] BA Garner, *Black's Law Dictionary* (10th edn, Thomson Renters, 2014), 15

'an unintended and unforeseen injurious occurrence: something that does not occur in the usual course of events or that could not be reasonably anticipated.' By using the phrase 'that could not be reasonably anticipated', this definition is an improvement on the previous definitions as it does not eliminate the expectedness of the event. Yet in strict technical sense, this definition can be faulted on the ground that the definition, like all definitions of the words used in describing human error, 'inhibits examination of the factors contributing to the error and consequent injury.'[7] Thus, the word is merely associated with an event, but not with the damage that results from the event. Also, it cannot be correct to assert that all accidents are 'unintended'. Where safety standards are consciously sidelined and/or flouted, the ensuing accident cannot be said to be unintended.

In the context of aviation law, the definitions examined above are not very helpful. This is because they are grossly inadequate for analytical purposes. The Civil Aviation (Investigation of Air Accidents and Incident) Regulations 2016,[8] provides a very comprehensive definition of air accident. The definition is to the effect that, an air accident is-

> an occurrence associated with the operation of an aircraft which, in the case of a manned aircraft, takes place between the time any person boards the aircraft with the intention of flight until such time as all such persons have disembarked, or in the case of an unmanned aircraft, takes place between the time the aircraft is ready to move with the purpose of flight until such time it comes to rest at the end of the flight and the primary propulsion system is shut down, in which:
>
> (a) a person suffers a fatal or serious injury as a result of:
>
> (i) being in or upon the aircraft;
>
> (ii) direct contact with any part of the aircraft, including parts which have become detached from the aircraft; or
>
> (iii) direct exposure to jet blast, except when the injuries are from natural causes, self-inflicted or inflicted by other persons, or when the injuries are to stowaways hiding outside the areas normally available to the passengers and crew, or
>
> (b) the aircraft sustains damage or structural failure, which:
>
> (i) adversely affects the structural strength, performance or flight characteristics of the aircraft; and
>
> (ii) would normally require major repair or replacement of the affected component, except for engine failure or damage, when the damage is limited to a single engine, (including its cowlings or accessories), propellers, wing tips, antennas, probes, vanes, tires, brakes, wheels, fairings, panels, landing gear, doors, windscreens, the aircraft skin (such as small dents or puncture holes), for minor damages to main rotor blades, tail rotor blades, landing gear and those resulting from hail or bird strike (including holes in the radome); or
>
> (c) the aircraft is missing or is completely inaccessible.[9]

This definition is a tinkered version of the definition of accident contained under Annex 13 to the Chicago Convention.[10] By adopting the definition under Annex 13 to the Chicago Convention, it is submitted that Nigeria has indicated a strong resolve to adopting international best standards into its regulatory framework. Although the definition is lucid and comprehensive enough for analytical purposes, it is too shy of brevity.

As to what constitutes 'fatal injury,' it is defined as 'an injury resulting in death within thirty days of the date of the accident.'[11] 'Serious injury' is defined as follows:

> an injury which is sustained by a person in an accident and which:
>
> (i) requires hospitalization for more than 48 hours, commencing within seven days from the date the injury was received; or

[7] Loimer, *et al*. (n 1), 101

[8] Hereinafter referred to as Accidents and Incidents Regulations, 2016. The Regulations were made pursuant to Section 29(10) of Civil Aviation Act, 2006 which mandates the Minister of Aviation to make regulations providing for the investigation of any accident or incident arising out of or in the course of air navigation and either occurring in or over Nigeria or occurring to Nigerian aircraft elsewhere.

[9] This definition is a radical improvement on the definition under the Civil Aviation (Accidents Investigation) Regulations, 2006 wherein Regulation 2(1)(d) defined accident to "include any fortuitous or unexpected event by which the safety of an aircraft or any person is threatened". That definition was quite unsatisfactory but its practical utility was in the inclusive manner in which it was couched. Thus, by using the word 'include', it meant accident could arise in other instances and with effects not specifically contemplated under the regulations.

[10] Annex 13 to the Convention on International Civil Aviation, 10th edn., 2010 Chapter 1 page 1-1.

[11] Accidents and Incidents Regulations, 2016, Regulation 3, B197

(ii) results in a fracture of any bone (except simple fractures of fingers, toes or nose); or
(iii) involves lacerations which cause severe hemorrhage, nerve, muscle or tendon damage; or
(iv) involves injury to any internal organ; or
(v) involves second or third degree burns, or any burns affecting more than 5 per cent of the body surface; or
(vi) involves verified exposure to infectious substances or harmful radiation; or
(vii) involves the loss of a limb.[12]

As to when an aircraft would be considered missing, the Accidents and Incidents Regulations, 2016 do not provide an answer. It is submitted that the Regulations ought to have made provisions specifying the length of time that will lapse before an aircraft would be considered missing. Annex 13 to the Chicago Convention, however, provides that 'an aircraft is considered to be missing when the official search has been terminated and the wreckage has not been located.'[13] In very simple terms, an aviation accident can be defined as any occurrence related to the operation of an aircraft which destroys an aircraft or causes injury to a person, or which threatens the safety of an aircraft or the safety of any person. Such an occurrence may usually, but not always, be unexpected or unintended.

3. Causes of Aviation Accidents

In order to reduce accidents, it is necessary to try to determine why accidents occur. It must be acknowledged that, an enormous amount of effort goes into investigating major airline accidents, both in Nigeria and elsewhere in the world. The information gained from those investigations has been a critical part of improving aviation safety by reducing the chances that the factor(s) that led to one accident will cause similar accidents in the future.[14] Analyzing the causes of accidents involves difficult choices. Accidents are rarely the result of a single cause. Rather, accidents are usually the culmination of a sequence of events, mistakes, and failures. Often, had any of the individual events in the sequence been different, the accident would not have happened.[15] The difficult task in the circumstances is determining how to assign a single cause for an accident when most of such accidents have several contributing factors. According to Oster, *et al*,[16] there are three main approaches to assigning cause, namely – the cause assigned to the accident is the cause that initiated the sequence of events that culminated in the accident; or to select as the accident's cause the last point at which the event could have been prevented; or to select all factors contributing to the accident as causes. It is not within the scope of this article to delve into analysis tailored along the line of any specific approaches or technical gymnastic. Rather, the intendment is to determine the place of legal regulation within the context of many variables resulting to an accident. Consequently, a generic and broad approach is adopted in classifying the causes of aviation accidents, as examined hereunder.

Human Errors/Failures: The persons who operate and support the aviation system are vital to its safety; the resourcefulness and skills of crew members, air traffic controllers and mechanics help prevent very many accidents and (serious) incidents every day.[17] Conversely, their errors or failures have been the cause of many accidents and incidents. The truth is that no human being can 'perform perfectly at all times'.[18] Human errors or failures in aviation take one of many forms all snowballing to human performance. Annex 6 to the Chicago Convention[19] defines human performance to mean 'human capabilities and limitations, which have an impact on the safety and efficiency of aeronautical operations.' Aviation accidents are generally caused by situations in which a person's capabilities are either inadequate or are overwhelmed in an adverse situation. Human errors are factors in more than two-thirds of commercial aviation accidents. They include lapses in attention, judgment or perception and deficiencies in knowledge of motor skills.[20] Where crew members, maintenance and air traffic officers fail or neglect to perform their duties properly or the pilot disobeys instructions from control tower,

[12] Ibid, B198-B199
[13] Annex 13 to the Chicago Convention
[14]Clinton V. Oster (Jr) and John S. Strong and C. Kurt Zorn, 'Analyzing Aviation Safety: Problems, Challenges, Opportunities'[2013] 43 Research in Transportation Economics <www.elsevier.com/locate/retrec> Accessed 29 December 2016, 151
[15] Ibid
[16] Oster Clinton V Oster and John S. Strong and C. Kurt Zorn, *Why Airplanes Crash: Aviation Safety in a Changing World* (Oxford University Press, 1992), 2
[17] Alexander T.Wells, *Commercial Aviation Safety* (3rd edn, McGraw-Hill, 2001), 101
[18]Ibid, 102
[19] Annex 6 – *Operation of Aircraft*, 7th edn, Part 1, 1998, 2
[20] Wells (n 17), 27.

accident may result. Also, pilot's disregard for aeronautic information service and weather reports constitute threat to air safety. A good example here is the 2005 incidents of EAS and Chanchangi Airlines. It is reported that the pilots of those airlines were told not to land due to flood but they ignored the information and landed causing serious incidents.[21] There are also instances where air traffic controllers at times, in error, give the wrong information to pilots. For instance, it is reported that the ADC Flight crash in Abuja on 29th October, 2006 was due to air traffic control issue.[22] Flight controllers have also been linked to hundreds of incidents due to the complexity of the job and occasional long hours. The failure of air traffic controllers to properly monitor the airways causes aviation accidents.[23] Besides, there are pilot errors. They may occur in different forms. It may be that a pilot develops mental breakdown during flight, suffers a heart attack at a critical stage of the flight or the captain suffers a heart attack and the first officer cannot regain control of the aircraft. It may even take the form of the incapacitation of the captain due to depressurized cabin, and lack of oxygen.[24] Some plane accidents are caused when pilots misread equipment, misjudge weather conditions, or fail to recognize mechanical errors until it is too late. It can be gathered from the above that, many accidents occur from less than optimum human performance. According to Shappell and Wiegmann,[25] about 70% of accidents are attributed to human error.

In Nigeria, other human failures that greatly contribute to most aviation accidents in the country include: lack of proper maintenance (failure to keep maintenance logs for the planes, the tendency to manage planes instead of effecting repairs on them as and at when due);[26] poor crew selection, checks and training;[27] corruption which takes the form of taking bribes in order to turn deaf ears to airline operators buying condemned unmaintained aircrafts from foreign lands;[28] and diversion/sharing of money meant to ensure safety by those in whose hands the money is expected to pass;[29] the domineering influence of Nigerian politicians in the aviation industry. Human error was also identified as one of the causes of the accident involving Dana Airlines Nigeria Limited Boeing MD-83 aircraft with registration 5N-RAM which occurred on the 3rd June, 2012. The Report[30] describes the probable causal factors of the accident thus: 'The inappropriate omission of the use of the checklist and the crews' inability to appreciate the sensitivity of the power related problem and their subsequent failure to land at the nearest suitable airfield…lack of situation awareness, inappropriate decision making and poor airmanship.' As far as human errors are concerned, the most relevant aspect to this article is human failure, arising out of violations. The reason is that in most of such violations, it is safety standards that are violated – that is – willful flouting of regulatory prescriptions. In the circumstances, therefore, such accidents could be avoided by strict observance of the legal prescriptions. This is where law has a role to play. Compliance and enforcement of safety regulations would, therefore, impact positively on aviation safety. In this context, strict punitive measures would help reduce violations.

Meteorological Conditions and/or Natural Phenomenon: This includes adverse weather conditions, bird strikes and so on. Meteorological conditions or situations are very closely related to pilot's abilities to cope to

[21] Causes of Airplane Crashes <odinakedotnet.wordpress.com/2012/04/10>Accessed 24th October, 2019

[22] A speech by Capt. Nogie Meggison, Executive Chairman of Airline Operators of Nigeria (AON) as reported by Eze, C. Nigeria: Uncovering Causes of Air Crashes; <allafrica.com/stores/201507101/48.htm> Accessed 12th October, 2019.

[23] Causes of Airplane Crashes (n 21)

[24] An Address by Capt. Nogie Meggison at the Safer Sky Forum in Lagos as reported by Eze (n 22)

[25] SA Shappell, and DA Wiegmann, A Human Error Analysis of General Aviation Controlled Flight into Terrain Accidents Occurring between 1990 – 1998 as cited in Laura V. Dragomir, The Effect of Commercial Aviation Accidents: A Dynamic Approach (Unpublished Master Thesis, 2013), 14

[26] It is reported that the ADC Airlines Boeing 737 had its rear tires burst at the Yola Airport on the 25th February, 2015 but none of the 86 passengers then on board was harmed. Meanwhile, before takeoff, the tires were discovered to be bad. Also, it was neglect of strange loud noises emitted by Sosoliso Airline in an earlier flight that led to the mishap of 10th December, 2005 which resulted to the death of the 108 passengers on board. These events would have been averted by a good maintenance culture. See generally the Insider Weekly of November 7, 2005 as cited in Ehikhamenor Edeaghe and Okoro Esosa and Hestia Idiodii, 'Comparative Analysis of the Bellview and Sosliso Air Crashes in Nigeria: Matters Arising' [2006] 5 (2) The Internet Journal of Rescue and Disaster Medicine. Doi 10.5580/216219, 9

[27] It is reported that most pilots in Nigeria have never taken any kind of serious proficiency check because they obtain their job through military, political and family connections. They are only examined by their peers and expectedly cleared without stress as everyone gets a free pass. See Firth, R. 'Plane Crash and Nigerian Airspace' (2006) <http://www.dawodu.com/firth/htm>Accessed 7th September, 2015, 2

[28] MM Dura, 'Combating Aviation Accidents in Nigeria: A Socio-Legal Approach' [2011] 4 (1), *Nasarawa State University Law Journal*, 9

[29] Ibid

[30] Aircraft Accident Report - DANA/2012/06/03/F: Report on the Accident to DANA AIRLINES Nigeria Limited Boeing MD-83 Aircraft with Registration 5N-RAM which occurred at Iju-Ishaga Area of Lagos State, Nigeria on 3rd June, 2012 published by Accident Investigation Bureau of Nigeria, 94

certain weather circumstances. Meteorological conditions can be avoided if the flight crew is capable of avoiding risk situations. Weather conditions can cause aircraft accidents. Research has shown that meteorological conditions can be fatal. According to Knecht and Lenz,[31] the most common variables playing a role in weather related accidents are wind, visibility and turbulence. Although research has shown that modern aircraft can operate in virtually all kinds of weather, unpredicted severe conditions such as wind shear or heavy icing can prove deadly. Poor weather compounded by mechanical difficulties or errors in judgment provides a common scenario for aviation accidents.[32] In Nigeria, the reports of most of the accidents establish adverse weather conditions as contributory factor in such accidents. For instance, the accident to Aero Contractors was caused by 'the crew decision to continue with the training in an adverse weather condition'.[33] The report on the accident to the Chanchangi Airlines also shows that the weather at the time of training was not good.[34] Bird strikes can also cause accidents. When birds fly into engines of the aircraft during takeoff or fly into the cockpit, damaging sensitive equipment, accidents occur. Research disclosed that an aircraft engine that is hit by bird could cost as much as $200,000 to repair while a twin engine aircraft hit by birds could drop from the skies.[35]Here again, it is submitted, putting in place facilities that are in accord with safety International Standards and Recommended Practices may be helpful. Thus, improved regulatory framework and vigilant compliance strategies could play a vital role.

Mechanical Failures: This cause of aviation accidents has to do with the functioning of the aircraft itself. Failure of an aircraft component is a factor in quite a number of accidents. Such aircraft components include engines, structural members, landing gear, control systems and instruments. Mechanical failures can result from improper maintenance, design, flaws or operator error. For instance, investigation reveals that Bellview Airlines Ltd B737 – 200 which had an accident on 22ndOctober 2005 had technical defects. It is said that the airplane should not have been dispatched for either the accident flight or earlier flights.[36] Also, another contributory factor to the accident of Dana Airlines Nigeria Ltd was mechanical failure. [37]

Traffic Environment: The structure of the airways and airports and the level and composition of air traffic heavily influence safety. Difficulties with facilities or traffic routing are usually discovered through incidents before an accident occurs. However, high traffic density puts continuous strains on many aspects of the Air Traffic Control (ATC) system.[38] Thus, for a given air traffic infrastructure increased traffic density most likely correlates with an increased risk to mid-air collisions. Although the number of flight operations can be accurately counted or estimated, collisions occur too infrequently to correlate. Other potential air traffic safety indicators include operational error, operational deviation and pilot deviation.[39]

Terrorist Attacks: These attacks include acts of terrorism, incidences of hijacking, suicide attacks on an aircraft, external weapons attacking the aircraft and explosives on aircraft.[40] Many times in history, hijackers have taken over planes to achieve certain causes and their actions often end in many air passengers losing their lives. A typical example here is the September 11 incident in the USA where airplane hijackers gained control of some planes (four in number) diverted them and crashed into the World Trade Centre buildings and other target areas. Many lives were lost in the incidents.

Other Causes: What is readily in contemplation under this section relates to accidents for which there was not sufficient information to determine the cause or in which the aircraft was not found or recovered so that it was not

[31] WR Knecht and M. Lenz, Causes of General Aviation Weather –Related Non-Fatal Incidents: Analysis Using NASA Aviation Safety Reporting System Data, as cited in Laura V. Dragomir (n 25), 15
[32] Wells (n 17), 28
[33] Report on the Accident to AERO Contractors Nigeria Limited MS 365 N2, Registration 5N-BJF at Bonny Airstrip, Bayelsa State, Nigeria on 24th March, 2008, 37
[34] Report on the Accident to the Chanchangi Airlines Boeing 737-200 Aircraft Registration YU-ANU which occurred at Kaduna Airport on Sunday, 22nd February, 1998 No. 04/35, 8
[35] The Leadership Newspaper of 16th June, 2006, 25
[36] See Report on Accident involving Bellview Airlines Ltd B737-200 Registration 5N-BFN at Lisa Village Ogun State, Nigeria on 22nd October, 2005, 65
[37] Report on the Accident to DANA AIRLINES Nigeria Limited Boeing MD-83 Aircraft, (n 30),94 The Report discloses that: 'Engine Number 1 lost power 17 mins into the flight and thereafter on final approach Engine Number 2 lost power and failed to respond to throttle movement on demand for increased power to sustain the aircraft in its flight configurations.'
[38] Ibid
[39]Ibid, 28
[40]Knecht and Lenz (n 31) 15

possible to conduct even a cursory accident investigation. In the latter case, that is where the aircraft was not found or not recovered, the Malaysia Airlines Flight MH370 presents a good example.[41]

4. Accident Investigation

Investigation of accidents is a formidable legal machinery used by member states to the Chicago Convention to 'fight' the menace of aviation accidents. By it, the causes of, and contributory factors to, an accident are 'accurately and expeditiously' determined through a 'fact-finding proceedings with no formal issues and no adverse parties.'[42]

Power to Conduct Investigation

The power, and of course the obligation, to conduct investigation of accidents is derived from the Chicago Convention. By Article 26 of the Convention, the State in which an accident occurs is obliged to conduct an inquiry into the circumstances of the accidents; which inquiry shall be in accordance with the procedure recommended by the ICAO. From article 26 of the Chicago Convention, it can be inferred that, when an aviation accident occurs the Chicago Convention requires the following to be done:

(a) The state in which the accident occurs is mandated to institute an inquiry into the circumstances of the accident.
(b) The inquiry so instituted shall be in line with the ICAO recommended procedure subject to local legislation of the state.
(c) The state in which the aircraft is registered (state of registry) shall be accorded an observer status during the inquiry.
(d) The state conducting the investigation shall communicate the report and findings of the inquiry to the state of registry.

On the 11th April, 1951, the ICAO pursuant to Article 37 of the Chicago Convention,[43] adopted Annex 13[44] dealing with and entitled 'Aircraft Accident and Incident Investigation.' Consequently, at the international scene, accident investigation is regulated by both Article 26 of the Chicago Convention and Annex 13. Annex 13 was adopted in order to put in place a uniform process and mechanism of incident/accident investigation in all member states to the Chicago Convention. On the domestic front, Nigeria in recognition of the importance of accident investigation in civil aviation, and as a member state to the Chicago Convention, has the Accidents and Incidents Investigation Regulations, 2016. Basically, therefore, accident investigation in Nigeria is regulated by Article 26 of the Chicago Convention, Annex 13 and the Accidents and Incidents Investigation Regulation 2016. Annex 13 requires that investigation of accident shall be 'consistent with the provisions of the Annex',[45] and all activities following accidents and incidents wherever they occurred shall be in accordance with the specifications. This requirement appears to be at war with Article 26 of the Chicago Convention which provides that inquiry be conducted in accordance with the ICAO recommended procedure subject to national law. The conflict here is whether investigation be carried out in accordance with the ICAO recommended procedure subject to national laws as required by the Chicago Convention, or in accordance with Annex 13. Sensitive of the apparent conflict, Annex 13 in its foreword appears to provide a guide to resolving the conflict in the following words:

> Article 37 of the Convention is the controlling Article in the development of an Aircraft Accident Inquiry Annex, but nothing in the Annex must contravene the express terms of Article 26, or any other Article of the Convention, nor should it contain any provision which would do violence to the spirit and intent of the Convention.

Accordingly, it appears that Annex 13 is meant to deal with matters upon which Article 26 is silent, and accidents of a kind which do not fall within the provisions of Article 26. Thus, the procedure under Annex 13 is not

[41] Malaysia Airlines Flight MH370 was en route to Beijing from Kuala Lumpur carrying 239 people on board. On the 8th March, 2014, Malaysia Airlines lost contact with the flight. Since then, one search upon the other has been conducted, and still in progress with no success being achieved as to the whereabouts of the plane. See Amanda Devlin and Aletha Adu, 'Plane Mystery: What happened to Flight MH 370, what is the latest news on the Malaysia Airlines plane and is the search ongoing?' <www.thesun.co.uk/news/2100795/flight-mh370-n> accessed 10th April, 2019

[42] Cynthia C. Lebow and Others, *Safety in the Skies: Personnel and Parties in NTSB Aviation Accident Investigations.*<http://www.westlaw.com> Accessed 20th November, 2016, 13.

[43] Article 37 of the Chicago Convention provides *inter alia* that the ICAO shall adopt and amend from time to time, as may be necessary, International Standards and Recommended Practices and Procedures dealing with different aspects of aviation including aircraft in distress and investigation of accidents, and such other matters concerned with the safety, regularity and efficiency of the air navigation as may from time to time appear appropriate.

[44] Annex 13 to the Convention on International Civil Aviation - Aircraft Accident and Incident Investigation, 9th edn 2001 (hereinafter referred to as Annex 13)

[45] Paragraph 5.4 of Annex 13; Paragraph 2.1

applicable when an accident to an aircraft not involving death or serious injury 'indicates serious technical defect in the aircraft or air navigation facilities.' In such a case, until the ICAO recommends a procedure, the inquiry shall be conducted in accordance with the national procedure of the state concerned, subject to the obligations deriving from the provisions of Article 26.

Conceptual Parameters of Investigation

Having considered the issue of power to investigate, the next issue of great importance to be considered is the conceptual parameters of the word 'investigation'. What does it mean? Annex 13 defines investigation as 'a process conducted for the purpose of accident prevention, which includes gathering and analysis of information, the drawing of conclusions, including the determination of causes and when appropriate the making of safety recommendations.'[46] This definition is adopted in Nigeria with very slight modification under the Accidents and Incidents Regulations, 2016. Regulation 3 of the Accidents and Incidents Regulations, 2016 introduces the phrase 'and/or contributory factors' after the word 'causes' in its definition of investigation. By that Regulation, investigation is 'a process conducted for the purpose of accident prevention which includes the gathering and analysis of information, the drawing of conclusions, including the determination of causes and/or contributory factors and, when appropriate, the making of safety recommendations.' The word 'causes' is defined to mean 'actions, omissions, events, conditions or a combination thereof, which led to the accident or incident.[47] And that 'the identification of causes does not imply the assignment of fault or the determination of administrative, civil or criminal liability.'[48] The phraseology 'contributory factors' is defined as–

> Actions, omissions, events, conditions, or a combination thereof, which if eliminated, avoided or absent, would have reduced the probability of the accident or incident occurring, or mitigated the severity of the consequences of the accident or incident. The identification of the contributory factors does not imply the assignment of fault or the determination of administrative, civil or criminal liability.[49]

From these definitions, the scope and target of accident investigation include: accident prevention; drawing appropriate conclusions from the information gathered and analysed; the conclusions drawn may include the determination of causes of the accident, and where necessary, safety recommendations may be made which when implemented will help in averting future accidents; the identification of causes and contributory factors does not suggest assignment of blame or liability. It, therefore, means the findings of an investigation are meant to influence policy and regulatory direction of aviation safety. Accordingly, investigation may be defined as a thorough inquiry undertaken at the heels of an accident in a bid to determining the remote and immediate causes of the accident for proper policy and regulatory direction in order to avoid future occurrences.

Responsibility to Conduct Investigation

By Article 26 of the Chicago Convention, it is the responsibility of 'the state in which an accident or incident occurs' to undertake the accident and incident investigation.[50] However, the state of registry, state of the operator, the state of design and the state of manufacture and where appropriate the state having suffered fatalities or serious injuries to its citizens may be obliged after being notified of the accident or incident to appoint accredited representatives to participate in the investigation, as well as provide the state of occurrence with any relevant information available to them regarding the aircraft and flight crew involved in the accident or serious incident.[51] Where, however, the state of occurrence is not aware of an accident or serious incident, the state of registry or state of operator shall notify the state of occurrence, state of design or state of manufacture.[52] If the place where an accident or incident occurs cannot definitely be established as being in the territory of any state, the state of registry shall institute and conduct any necessary investigation of the accident or serious incident. However, it may delegate the whole or any part of the investigation to another state by mutual agreement or consent.[53] In Nigeria, it is deducible from the Accidents and Incidents Investigation Regulations, 2016 that, upon the occurrence of an accident, two options are available to the Minister of Aviation. The first is the conduct of investigation by the Accident Investigation Bureau (AIB), which is established under Section 29(1) of the CAA 2006 as a body corporate. The second option is the conduct of Public Inquiry under Regulation 32 of the Accidents and Incidents Investigation Regulations, 2016. Where the second option is undertaken, ongoing investigations under the first

[46] Para. 1, Annex 13, 10
[47] Accidents and Incidents Regulations, 2016, Regulation 3, B196
[48] Ibid.
[49] Ibid, B196-B197
[50] See also Annex 13 to the Chicago Convention, para. 5.1
[51] See Ibid, para. 4.6
[52] See Ibid, para. 4.1
[53] See Ibid, para. 5.3

option has to be discontinued. Whichever option adopted in the investigation of accidents, the NCAA is statutorily required to participate in aircraft accident investigation and to keep records of accidents, incidents and promote accident prevention programmes.[54] In practice, the NCAA investigates incidents, while the responsibility of investigating serious incidents and accidents reside with the AIB. In the discharge of its mandate, the AIB shall have full 'independence and unrestricted authority' over its conduct in accordance with the provisions of the Annex 13 to the Chicago Convention.[55] Annex 13 requires the investigating authority (like the AIB) to coordinate with the judicial authorities for the investigation to be successful.[56]

Bases for Accident Investigation

The philosophical foundation of all aviation accidents is prevention of future accidents. This fact is emphasized by all the legal instruments dealing with accident investigation. Annex 13 provides that the sole objective of accident or incident investigation is the prevention of accidents and incidents; it is not the apportionment of blame, or liability.[57] This position is adopted in Nigeria without any reservation and is incorporated in the Civil Aviation Policy 2013[58]; the CAA 2006[59], and the Accidents and Incidents Investigation Regulations 2016[60].

It is, therefore, clear that the intention of the law is that the apportionment of blame or liability is not within the scope of accident investigation. This is the position, both under international legal instruments and domestic laws of many countries. In the UK, the position is not only adopted as it is but also requires further that this sole objective shall be stated in the Report of an investigation.[61] In Australia, the position of law in this regard is couched as follows:

> The following are not the objects of this Act –
>
> (a) apportioning blame for transport accidents or incidents;
> (b) providing the means to determine the liability of any person in respect of a transport accident or incident;
> (c) assisting in court proceedings between parties (except as expressly provided by this Act)
> (d) allowing any adverse inference to be drawn from the fact that a person is subject to an investigation under this Act.[62]

Justifying this standpoint, Dempsey[63] asserts that the goal of independent accident investigation is the 'enhancement of safety, and not the apportionment of blame.' This separation of investigation purpose from judicial or administrative proceedings is widely accepted as a tool to avoid creating a high degree of circumspection in the reporting process and in the activities of the investigating inspectors, knowing that their actions and declarations could lead to 'intensive cross examination in court.'[64] It is feared that if blame or liability apportionment is projected as the purpose of accident investigation, in the long run, there will be decrease in the level of aviation safety. It is argued that there is no way an effective investigation will be conducted without apportionment of blame in that in the course of investigation some of the persons directly involved will be interrogated thereby ultimately resulting to apportioning blame.[65] A community reading of provisions of Annex 13 and Accidents and Incidents Investigation Regulations, 2016 regarding the definition of 'investigation' appears to agree with Dura's submission. This is because of the use of the phrase 'the drawing of conclusions including

[54] Section 31(j) of the Civil Aviation Act, 2006.
[55] Regulation 7(2) of the Accidents and Incidents Regulations, 2016; See also para. 5.4 of Annex 13.
[56] Annex 13, para. 5.10
[57] Ibid
[58] Paragraph 5.2.1 of the Civil Aviation Policy, 2013 states that the aim of accident investigation is to determine the cause of an accident so as to prevent future occurrence.
[59] Section 29(12) of the Civil Aviation Act, 2006 is to the effect that 'the sole objective of the investigation of an accident or serious incident under this Act shall be the prevention of accidents and incidents and it shall not be the purpose of such an investigation to apportion blame or liability.'
[60] Regulation 7 (1) of the Accidents and Incidents Investigation Regulations, 2016, provides that the sole objective of the investigation of an accident or incident under these regulations shall be the prevention of accidents and incidents. It shall not be the purpose of such an investigation to apportion blame or liability.
[61] Civil Aviation (Investigation of Air Accidents and Incidents) Regulations in UK Statutory Instrument No. 2798, 1996, Regulations 4 and 11(3)
[62] Australia Transport Safety Investigation Act, 2003, section 7.3
[63]Paul Stephen Dempsey, 'Independence of Aviation Safety Investigation Authorities: Keeping the Foxes from the Hen House' [2010] 75 (2) Journal of Air Law and Commerce, 233
[64] Belsham, G. and Others "Aviation Safety in Balance?" INCE & Co. International Law Firm Journal, 5
[65] Dura (n 28), 99

the determination of causes…'[66] in both Annex 13 and Accidents and Incidents Investigation Regulations, 2016 regarding their respective definitions of investigation. By the use of 'including' it means conclusions to be drawn from information gathered and analysed in the process of investigation are not limited to determination of causes. Consequently, whether the words 'blame' or 'liability' are used or not, the conclusions drawn, and safety recommendations made may point accusing fingers to a particular direction or person. For instance, where an investigation discloses pilot error or poor maintenance or even adverse weather conditions as causes or contributory factors, one does not need more than that to know where the bulk lies. Thus, where any person is found to have been negligent in the performance of his functions and thereby contributed to the accident, it is difficult to arrive at conclusion without blame. The Investigation Report will then be incomplete if it does not highlight the fact of negligence or other contributory factors.

In the circumstance, it appears needless to go into arguments for or against the sagacity of the requirement that the sole objective of investigation shall not be the apportionment of blame. The futility of such argument is further obvious for two reasons. One, in strict legal sense, determination of liability or blame is the sole responsibility of judicial proceedings. Therefore, in practice, even where a person is indicted by an investigative body or a panel of inquiry, such indictment usually forms the basis of prosecution in a court of law, and/or at worse the basis for administrative disciplinary action. In the end, whether an investigation apportions blame or not would boil down to the same thing. Two, nothing in the relevant legal instruments prohibits an administrative or juridical investigation. This is because Annex 13 recommends that 'any judicial or administrative proceedings to apportion blame or liability should be separate from any investigation conducted under the provisions of this Annex.'[67]

In other jurisdictions, two types of investigation are recognized, namely, technical investigation and juridical investigation. According to Mateou and Mateou,[68] the main purpose of technical investigation is to prevent future occurrences of accidents. It is not meant to find who is responsible. Neither is it to find some pieces of evidence that will be used in court. It is not punitive in nature.[69] On the other hand, juridical investigation is conducted to determine who or those responsible for the accident, and to determine the amount of compensation. It is punitive in nature and focuses on the facts and pieces of evidence collected during investigation.[70] In most common law countries, like the United States of America (USA), the United Kingdom (UK) and Australia, priority is given to the technical investigation.[71] In such countries, it is only when there is criminal assumption like terrorism that juridical investigation is conducted. In Nigeria, priority appears to be absolutely on technical investigation. In civil law countries operating under the Napoleonic Code, countries such as France, Italy and Netherlands give priority to judicial authorities to conduct juridical investigation.[72] In practice, juridical investigation is merely sequel investigation to technical investigation. It is not, therefore, independent investigation but relies on the result of technical investigation.[73]In the USA, the investigation of aircraft accident is conducted by NTSB but if there is any strong indication of criminality, the appropriate law enforcement agency will be conducting an investigation parallel with NTSB.[74] Meanwhile, in the civil law countries, the role of juridical investigation is more prominent than technical investigation.[75] In Indonesia, juridical investigation is conducted after technical investigation if there is any criminal indication in the accident. The implication is that Indonesia neither gives priority to one investigation over the other nor conducts parallel investigation.[76]In Nigeria, once criminality is noticed, in practice, the AIB will simply refer the criminal aspect to the relevant authority for prosecution. Such authority may either be the Attorney-General of the Federation or the Police.[77] It appears from the experiences of other countries highlighted above that juridical investigation is utilized only when there is criminal indication in an accident. It is submitted, however, that the distinction between technical and juridical investigation, as it is at present, does not answer to the question of admissibility of Accident Reports, especially in civil proceedings.

[66] Annex 13, paragraph 1, 10; Accidents and Incidents Investigation Regulations, 2016, Regulation 3.
[67] Annex 13, paragraph 5.4.1, 20; See also Regulation 32(3) of the Accidents and Incidents Investigation Regulations, 2016.
[68] Michaelides Mateou and Andreas Mateou, *Flying in the Face of Criminalization: The Safety Implications of Prosecuting Aviation Professionals for Accidents* (Ashgate, 2010), 2
[69] See also para. 3.1 of Annex 13
[70] Mateou and Mateou (n 68)
[71] Atip Latipulhayat, 'The Function and Purpose of Aircraft Accident Investigation According to the International Air Law' [2015] 27(2) *MIMBAR HUKUM*, 321<DOI:https://doi.org/20.22146/jmh.15890> Accessed 5th September, 2016.
[72] Mateou and Mateou (n 68) 2
[73] Ibid, 102
[74] Ibid, 104-105
[75] Lindsay Fenwick and Michael Huhn, 'Criminal Liability and Aircraft Accident Investigation'(2003), *Airline Pilot*, 17
[76] Latipulhayat (n 71) 323
[77] Callistus E. Uwakwe, *Introduction to Civil Aviation Law in Nigeria* (Aviation Publishing and Consultancy Co. Ltd, 2006), 203

Legal Character of Accident Investigation Report

What appears to be disturbing about aviation investigation is the legal character of the Final Report. The Accident Report appears to be the key to identifying the causes of accidents or incidents and to increase the level of safety. It is a document which details all factors that led to the occurrence of the accident. Annex 13 to the Chicago Convention requires that civil aviation investigation authorities should draw up an Investigation Report at the conclusion of investigation. According to the Accidents and Incidents Investigation Regulations, 2016 'on completion of an investigation into an accident or incident, the investigator in charge shall and with a minimum of delay prepare a report of the investigation in a form appropriate to the type and seriousness of the accident or incident.' Under Annex 13 of the Chicago Convention, the Final Accident Report shall present the following: factual information, analysis of the situation, conclusion and safety recommendations. In order to conduct an investigation effectively and issue a report in accordance with its mandate under the law,[78] the AIB is required to, under the hand of its head (the Commissioner of Accident Investigation) to appoint persons as Inspectors of Accidents, one of whom shall be appointed as Investigator-in-Charge (IIC).[79] The IIC or inspector has been given enormous powers to conduct investigation in the 'most efficient and effective manner within the shortest time.'[80] He has the power to summon and examine witnesses (including to obtain documentary evidence); to take written statements from witnesses; to have access to aircraft involved in the accident and the power to require that the aircraft be preserved pending examination, and power to enter and inspect any place or building that appears to him to be requisite for the investigation purposes.[81] It appears that where a claim for damages arises from an accident or incident, the Report of any investigation to that effect will not be admissible in evidence. Section 29(14) of the CAA 2006 expressly provides that investigation reports are not admissible in evidence as to form the basis of liability in any criminal or civil proceedings. It is submitted that this section cannot be justified in a democratic society like Nigeria. It is unconstitutional as it glaringly conflicts with the philosophical postulates of fair hearing[82].

There is another way of looking at the provision of section 29(14) of the CAA 2006. Confronted with Title 49 USC section 1441(e) which is in substance similarly worded with section 29(14), the USA courts had cause to hold that the provisions only render the formal reports as inadmissible, and does not require exclusion of testimony of investigators and others having firsthand factual knowledge concerning an accident. Thus, the US courts reached a consensus that section 1441(e) only excludes that part of the report which expresses the agency view as to probable cause. The factual positions are admissible.[83]Similarly, in *Bolick v. Sunbird Airlines, Inc.*[84] the North Carolina Court of Appeals held that, the factual portions of an aircraft accident report were admissible, for example, in an action seeking to recover for injuries suffered in the aircraft crash. The position taken by the US courts should provide regulatory direction for Nigeria. The provision of section 29(14) of the CAA 2006 appears to be justified on the ground that if information gathered in the accident investigation process is not protected by the civil aviation investigation authorities, there may be fear on the side of aviation personnel involved that in providing information related to the causes of the accident, they would be prosecuted and held accountable for the accident and damages resulted. Fear of criminal proceedings may lead to less contribution by aviation professionals in the course of safety investigation and the increase of judicial proceedings would lead to less reporting. So, section 29(14) of the CAA 2006 is meant to encourage reporting and safety improvement.

In 2014, the English Court of Appeal in the context of a legal regime similar to section 29(14) of the CAA 2006, established in the *Rogers v. Hoyle case*[85]that accident reports are admissible as such as evidence in civil proceedings. The facts of this landmark case were that Mr. Rogers was a passenger in a vintage Tiger Moth bi-plane piloted by the defendant, Mr. Hoyle. The plane crashed into the ground. Mr. Rogers was killed and Mr. Hoyle was seriously injured but survived. The Accident Investigation report published in June 2012, noted that 'a loop manoeuvre was carried out at too low height for the pilot to be able to recover from the subsequent spin.'[86] The report further stated that the pilot did not have sufficient knowledge or training on the Tiger Moth's correct spin recovery technique and it was very much probable that he would not have been able to recover from an

[78] Accidents and Incidents Investigation Regulations, 2016, Regulation 6(2),
[79] Ibid, Regulation 14(1)
[80] Ibid, Regulation 16(1)
[81] Ibid, Regulations 16(1) & (2)
[82] Constitutional of the Federal Republic of Nigeria 1999 (as amended), section 36(1)
[83] See *Travelers Insurance Company v. Riggs*, 671 F. 2d 810, 816 (1982); *American Airlines v. United States*, 418 F. 2d 180, 196 (1969) as cited in LE Gesell, *Aviation and the Law* (3rd edn, Coast Aire Publications, 1998), 680
[84] 386 SE 2d 76 (1989), as cited in Gesell, Ibid.
[85] Case No. B3/2013/1817
[86] UK Air Accident Investigation Branch (AAIB) Report of June, 2012

unintentional spin, taking into consideration the height available. The dependents of Mr. Rogers brought a claim against Mr. Hoyle seeking to submit the Accident Report as evidence. The defendant responded, requesting an order for the parts of the claim relying on the report to be struck out and a declaration that the report was inadmissible in the proceedings. The court of first instance accepted the report as evidence. The decision was contested by the defendant. In its decision delivered on the 13th March, 2014 the English Court of Appeal confirmed the decision of the court of first instance that the Accident Report is admissible as evidence, both as to the facts it contains and as expert opinion evidence. Further, the court rejected the defendant's submissions that the Report was unsuitable as evidential material. Features of the Report, including the unattributed nature of the findings, and the lack of any verbatim reporting of witness evidence, went in the opinion of the court, to the weight to be given to the evidence in the report rather than its character. It was also stated that the Report contained statements or reported statements of fact, and it was, in the view of the court, *prima facie* admissible. Concerning the considerations to be taken by the court when exercising its discretion to admit/exclude the report from evidence, the court rejected the concerns raised by the defendant that admission of the report into evidence would have an adverse impact on future accident investigations. Noting the overriding objective of the court 'of dealing with cases justly and at proportionate cost,' the 'particular potential value' of the report tended in the court's view, to favour its inclusion in evidence. The court noted the challenge faced by many litigants to advance claims without access to the relevant information submitted to the investigators, and/or in financing independent evidence. The court also rejected the notion that the admissibility of accident reports was so likely to prejudice the interests which the investigation authority serves that its reports should generally be excluded from evidence, nothing *inter alia* that, the reports are, on any view, available to litigants and can be used as the foundation for a claim or defence, and this has not had any apparent adverse effect on the authority's work.

The above case clearly shows that the time for change in the approach the courts have, and a somewhat new type of balance between the administration of justice and aviation safety now beckons. The decision has shown a different perspective in relation to accident investigation reports used in civil proceedings and has changed the view that accident reports are not to be used in order to apportion blame or liability. The decision emphasizes that the report constitutes a relevant evidence of potential value and not taking into consideration the report as evidence, would be contrary to the role of the court to analyse the case justly and proportionately. It is submitted that though the case of *Rogers v. Hoyle*,[87] is merely of persuasive effect; it has the potentials of influencing judicial reasoning in Nigeria.

5. Conclusion

This article has examined accident investigation as the legal machinery for combating aviation accident in Nigeria. The article has established that the utility of accidents investigation to the improvement and enhancement of aviation safety in Nigeria cannot be denied. What is disturbing is the legal regime regulating it which is skewed in such a way as to provoke needless legal debate, and strenuous route to justice administration. Consequential amendments are recommended to make the legal regime more in tandem with 21st century realities.

[87] supra