INTRODUCTION

Airpower took a quantum leap in credibility and perceived importance after the opening days of Operation Desert Storm in 1991. The convergence of high technology with intensive training and determined strategy that was attested by the allied coalition's successful air campaign against Saddam Hussein's Iraq bespoke a breakthrough in the strategic effectiveness of the air weapon after a promising start in World War II and more than three years of misuse in the Rolling Thunder bombing campaign against North Vietnam from 1965 to 1968. Indeed, the speedy attainment of allied air control over Iraq and what that allowed allied air and space assets to accomplish afterwards by enabling the prompt achievement of the coalition's military objectives on the ground marked, in the view of many, the final coming of age of airpower.

There was no denying the effect that initial air operations had in shaping the subsequent cause of the war. The opening coalition attacks against Iraq's command and control facilities and integrated air defences proved uniformly successful, with some 800 combat sorties launched in the darkness of night in radio silence against Iraq's most militarily critical targets and only one coalition aircraft lost - a U.S Navy F/A-18 presumably to a stray infrared missile shot from an Iraqi MIG-25. Over the next three days, the air campaign stuck at the entire spectrum of Iraq's strategic and operational level assets, gaining unchallenged control of the air and the freedom to operate with impunity against Iraq's airfields, fielded ground forces, and other targets of military interests.

In the aftermath of the war, the predominant tendency, not just among airmen, was to credit the coalition airpower with the bulk of responsibility for having produced such a lopsided win. Senator Sam Nunn, initially a doubter about the wisdom of the Bush Administration's going to war for the liberation of Kuwait, hailed the result as attesting to the advent of a "new era of warfare."! Three years later, Elliot Cohen of the Johns Hopkins University's School of Advanced International Studies observed that:

Although ground action necessarily consummated the final victory for coalition forces, airpower had made the final assault as effortless as a wartime operation can be.²

Cohen, who earlier had led the U.S Air Force's Gulf Airpower Survey, went on to note that airpower had all but taken on a mystique in the public mind as result of its success in the Persian Gulf. Since then, a high-stake controversy has emerged in major capitals around the world centering on how best to apportion operational roles and budget shares among the services at a time of uncertain challenges and near unprecedented fiscal constraints. Naturally, given the predominant role played by the allied air campaign in Desert Storm and the far-reaching claims
made on behalf of airpower as a result of its performances, the roles and resources controversy has gravitated towards airpower as the principle lightening rod for debate. At its core, this debate has come to concern the extent to have even Third World countries can now rely on air-delivered precision stand-off attack weapons in lieu of ground forces to achieve battlefield objectives and minimize the incidence of high casualty rate of their armed forces.

However, if the pronouncement that "airpower had won the Gulf War is indeed valid, the premises underlying it, is that airpower suggests a wider evolutionary development, and that it has attained relative dominance vis-a-vis land and naval forces as the "fulcrum" in modern warfare, has the NAF come of age? Bearing in mind the changing security environment in the continent and sub-region and the nature of post-modern warfare.

Against this background, this Chapter seeks to offer a perspective on the nature and meaning of the qualitative improvements that have taken place in airpower since the mid-1980s, with a view towards offering a measured portrait of airpower's newly-acquired strength and continued limitations. The Chapter concentrates on the development and capacity of the NAF in the context of its assets, and its role in new emerging face of warfare in the 21st century.

AIR-POWER: SOME CLARIFICATIONS

Three binding rules need stipulating at the outset to clarify what is meant in this Chapter by airpower. First, airpower does not refer to merely to combat aircraft (the glamorous 'shooters' that performed so unexpectedly well in Desert Storm) or to the combined hardware assets of an air arm, even though these may seem at times to be the predominant images of it held by both laymen and professionals alike. Rather, in its totality, airpower is a complex amalgam of hardware equities and less ~angible but equally important ingredients bearing on its effectiveness, such as employment doctrine, concepts of operations, training, tactics, proficiency, leadership, adaptability and practical experience. These and related "soft" factors vary enormously among air arms around the world operating superficially similar kinds, and often even identical types of equipment. Yet more often than not, they are given little heed in what typically passes for air capability analysis. Only though their combined effects can however, one ultimately determines the extent to which raw hardware will succeed in producing desired combat results.

Second, airpower is functionally inseparable from battlespace information and intelligence. Thanks to the dramatic growth in the lethality and combat effectiveness of airpower since the late 1980s, it has become both correct and fashionable to speak increasingly not of numbers of sorties per target killed, but rather the number of kill per combat sortie. Yet airpower involves more than merely attacking and destroying enemy targets. It also involves knowing what to hit and where to find it. It is now almost a cliche that airpower can kill anything it can see, identify and engage. Airpower and intelligence are thus opposite sides of the same coin. If the latter fails, the former is likely to fail also. For that reason, accurate, timely, and comprehensive information about an enemy and his military assets is not only a crucial enabler for allowing air power to produce pivotal result in joint warfare; it is an indispensable precondition for ensuring such results. This means that tomorrow's air campaign planners will have an ever more powerful need for accurate and reliable real-time intelligence as a precondition for making good on their most far-reaching promises.
Third, airpower, properly understood, knows no colour of uniform. It embraces not only Air Force aircrafts, munitions, sensors and other capabilities, but also naval aviation and the attack helicopters and battlefield missiles of land forces. In this regard, it is worth highlighting that the first allied weapon impact in Operation Desert Storm was not a laser-guided bomb delivered by an F-117 Stealth Fighter, but a Hellfire missile launched against an Iraqi forward air defence warning site by a US Army AH-64 Apache attack helicopter. As was borne out by that example, airpower entails a creative harnessing of all combat and combat support elements, including space and information war adjuncts that exploit the medium of air and space to visit fire and steel on enemy targets. Recognition and acceptance of the fact that air warfare is an activity in which all services have important roles to play is a necessary first step towards a proper understanding and assimilation of airpower's changing role in joint warfare.  

THE NIGERIAN AIR FORCE (NAF)

The Nigerian Air Force (NAF) as part of the nation's Armed Forces is under the control of the executive arm of government. Thus, like all other arms of the national defence force, it does not have autonomy of action in defining its role in society at large except in cases where such actions or roles are within the guidelines of national policy objectives. In the recent past, national policy and objectives have undergone fundamental changes as a result, the role, tasks, and mission of the NAF is also undergoing substantial and to an extent a painful adaptation.

The principle of self-defence as it is stipulated in the United Nations charter provides the moral justification for maintaining an Air Force as part of national defence. Though the realities of power, politics and national interest have often superseded this moral ideal, it still provides the general constitutional basis for the establishment and deployment of an Air Force. The Air Force as other branches of the Armed Forces within a democracy exists to deter and if deterence fails defend the country against external and physical attack.

The success of airpower during operation Desert Storm was part of the inspiration for this chapter, but a little preamble is necessary. Air power as it was employed in the Gulf, exemplified classic textbook prescription with all the awareness that it implied. The centrepiece of Desert Storm, the air campaign, was clinical and brutally executed; achieving such success that the assertion was subsequently made that "air power" had won the Gulf War.

If the pronouncement that "airpower had won the Gulf War" is indeed valid, the premises underlying it is that air power suggests a wider evolutionary development, and that it has attained relative dominance vis-a-vis land and naval power as the "fulcrum" in modern inventorial warfare. Has the Nigerian Air Force come of age? Bearing in mind the changing nature of warfare, and security.

Thus, this chapter will speculate in the challenges facing the NAF in the light of the recent dramatic changes in the international, regional and national environment within which it exists, it will also try to investigate the application, vulnerabilities and doctrine of the NAF in the context of the security architecture of the early -mid 21st century and the argumentation it may entail.

THE EVOLUTION OF THE NIGERIAN AIR FORCE
The mission of the NAF derives from the National Defence Policy. By the statutory Act of Parliament establishing it in 1964, four goals were specifically highlighted by this Act:

a. To achieve a full complement in the military defence system of the Federal Republic both in the air and on the ground.
b. To ensure fast versatile mobility of the Armed Forces.
c. To provide close air support for the ground forces in all phases of operation and to ensure the territorial integrity of a United Nigeria.
d. To give the country the deserved prestige which is invaluable in international matters.

**ROLES OF THE NIGERIAN AIR FORCE**

The mission of an Air Force further determines its equipment and its roles. The Nigerian Air Force being a defence-oriented force is essentially a Tactical Air Force, and not a strategic one. Although defensive in nature, the edifice stone of NAF operational doctrine is offensive response with emphasis on counter air operations. The NAF is thus organised to carry out the following roles:

a. **Air Defence:** Air Defence is attained by maintaining air superiority over Nigerian air space through interception, point defence, and combat air patrol.
b. **Counter Air Operations:** Counter Air Operation is performed either through preventive or retaliatory attacks against enemy targets and installations.
c. **Interdiction:** Interdiction is carried out against hostile forces and supply activities in the battlefield.
d. **Close Air Support:** This is performed through concentrated air attacks against enemy forces within the Forward End of Battle Area (FEBA) as requested by friendly forces.
e. **Air Transport:** This provides tactical mobility for troops and equipment. It includes air combat support, medical evacuation, search and rescue and movement of VIPs.
f. **Maritime Operations:** Maritime Operation involves aerial patrol of own territorial waters for security and information gathering purposes.
g. **Air Recce:** Air recce involves aerial reconnaissance mission flown for the purpose of gathering air intelligence.

The NAF prior to the civil war was in the process of being established. During the crisis that led to the war, it lost, like the other services, highly trained Igbo officers. After the war, the Air Force remained for a long time underdeveloped in relation to the two other Services. Nevertheless, it acquired some systems to add to its civil war stock. It took delivery of some F-27 medium transport aircraft in 1971; Soviet-built MiG-21 Fighters in 1975, C-130 transport aircraft in 1976, and acquired helicopters, and training aircrafts.

The NAF was restructured into three major commands - The Tactical Air, Training and Logistics. Infrastructural developments further led to an increase in operating stations. In 1975, it was observed that the NAF structures did not reflect the roles it had to play in providing not only air defence and air support duties, but also in achieving air superiority in any conflict in which
Nigeria was involved. The 1975 1980 NAF development plan, therefore, 'restructured the NAF field formations into units of group status that reported directly to HQ, NAF. This structure, however, proved too cumbersome, and led to the creation of the Tactical Air Command and the Training Command in 1978. In 1980, however, the support changed to Logistics Command. Soon after that, strategic planning was made a permanent feature of NAF with the establishment of the Forces Structure and Establishment Committee in 1981.8

In spite of all these restructuring, the Air Force nevertheless, still felt inadequately equipped. A former Chief of Air Staff, Air Vice Marshal Bello lamented in 1982 that 'the Air Force lacks aircraft in the strike or counter-strike role which could provide the necessary defence, and if need be, the offensive force against any potential enemy.9 The importance of air defence strategy and the need to develop Nigeria's air defence network was strongly pushed by the Air Force during this period. The fact that the Army and Navy budgets were always higher irrespective of need, worked against it; and an argument was put forward for this to be changed to reflect the changing face of Nigeria's defence requirements.

From the perspective of the Air Force at the time, it required:

\[
\text{At least, three Squadrons of modern fighter-bomber aircraft capable of making about ten short ton of bombs within a radius of about 250 nautical miles. Such an aircraft must be equipped with self navigational system and aerial refuelling system for improved range, and should be capable of night operations with defence suppression capability.}
\]

THE CHANGING SECURITY ENVIRONMENT

The uncertainty of events in the former Soviet-Union, Eastern and Central Europe and the war in the Gulf would appear to dash the hopes that the new world order is in any way a safer place than the previous era. In retrospect, the international bipolar structure may have provided a greater degree of stability than the uncertainty of present and expected future changes in regional and global balances of power. In fact, recent events in the former Soviet Republics and Yugoslavia have given rise to concern about the stability and nature of the "New World Order"y It is of course certain that new international "rules of the game" will certainly emerge, but this will not happen over night nor will acceptance of, or adherence to the new power structures be unanimous.

These events are disheartening as they make it obvious that the world has not yet entered a golden age in which military power and armed conflict are something of the past. In the first world communities recognition is, however, being given to the declining utility of armed conflict in favour of economic instruments of power. In contrast considerable value is still attached to the use of armed forces and coercion in what is generally termed the Third World. Since the majority of the peoples of the globe live in the Third World, this situation is a cause of great concernP

This assessment is illustrated by the fact that most of the wars which have occurred since 1945 took place in the Third World, whilst in this period Europe and North America experienced an unprecedented era of peace. The last three decades have seen the major conventional conflicts in
the Middle East alone, namely the Arab-Israeli conflict, the Iran-Iraq war, and most recently, the unequal test of strength between a First World coalitions of the willing against Iraq.

Even though First World rivalries and competition have played no small part in most of these Third World conflicts, the origin of these wars cannot simply be attributed to external involvement alone. Much of Africa has no political tradition of accountability as a result; leaders are often in business for themselves and a rather small group of supporters. Although governments do change, the processes of election are neither free and fair nor free from fear.

To a degree these developments may support the role of a regional power such as Nigeria. Rather than run the risks inherent in direct involvement in the often-messy conflicts and problems in a region such as West Africa, the developed world may attempt to enhance regional stability through regional arrangements. However, lasting cooperation on such sensitive issues as security in West Africa can only succeed if built upon a shared value system, common interest and cooperation. This, in essence is the implication of President Bush's (Snr) New World Order.

Multinational involves sharing the burden of defence while at the same time promoting common and regionally acceptable political and economic aims. In military strategic terms it implies that mobility be accepted as a strategic principle which guides force structure and doctrine considerations. Consequently, military forces should have the ability to react quickly and appropriately to a crisis, Le implying lighter, multi-role air force capable of executing a variety of tasks,13 which are not limited to those on conventional armed conflict alone. Along with these developments go the obvious requirement for strategic mobility and support, propositioned stocks, and multinational cooperation etc.

**THE REGIONAL CONTEXT**

In broad terms, Jenny Macgregor's description of Africa also holds true for West Africa:

Most African states are suffering from high population growth rates, declining per capital, food production, severe land degradation, declining export revenue, worsening trade balances and enormous debts. 14

From a regional perspective, West Africa remains a cesspool of conflict as was stated by Nowamagbe Omoigui in a lecture delivered to the National War College on the 19th of January 2005:

Sub-Saharan Africa is mired in bitter ethnic feuds and has the world's lowest growth rates in per capital Gross Domestic Product (GDP). Similarly, life expectancy, the rate at which children are immunised against disease and ration-in-take in Africa are the lowest in the world. Consequently, Africa has the highest percentage of people living below the international poverty line. In recent years, its economic performance has been the worst in the world. Africa cannot adequately fled, educate or maintain the health of its rapidly expanding population, many of whom are internally and externally displaced persons. To compound the problem, there are limited opportunities for extra-governmental
acquisition of sustainable wealth. Instead private wealth is accumulated largely as a result of access to state power. This confluence of power, wealth and social mobility within the state structure, set up a rat race of gargantuan proportions for control of government. 15

To a large extent much of rural West Africa has deteriorated to the point where in countries such as Liberia, Sierra Leone and Cote d'Ivoire, Central government have lost control over much of the countryside, either to armed opposition movements or warlords. In a once prosperous country such as Cote d'Ivoire, urban neglect and decay has reduced the modicum of central government control over the rural areas to an alarming degree.

In Nigeria, the expansion of the democratic space has let loose pent-up frustration and agitation contained by years of military rule as the fourth republic got on track. There is nothing new about communal conflicts in Nigeria. The country's diverse ethnic groups have always lived somewhat uneasily together, and there has been terrible outbreaks of violence in the past, although the current tension does not remotely compare, for instance with the situation in 1966, when ethnic pogrom helped spark off the Nigerian civil war. But the recent upsurge in violence coming so early in President Yar’ Adua's tenure has provided a gruelling examination of his government's ability to assert its authority, whilst not being seen to be favouring one group over another. 16

Like a Bulgarian bear at bay, tormented and cut to pieces by a thousand bloodhounds, the Nigerian state has borne the brunt of a dramatic upsurge of ethnic militias, particularly since the restoration of civil governance. The names are often as bloodcurdling as their stated missions. The Egbesu Boys of Africa; Oodua Peoples Congress, Movement for the Actualisation of the Sovereign State of Biafra, the nascent Arewa Peoples Congress and the Niger Delta Volunteer Force which has made resource control its main agenda.

CHARACTERISTICS OF THE PREVIOUS THREAT ENVIRONMENT (TYPICALLY PRE-NINETIES, AND ESPECIALLY PRE-EIGHTIES):

- Mode of conflict were primarily interstate in nature and one against another;
- Conflict manifestation and the underlying strategic philosophy on conflict were predominantly conventional;
- Order of battle (ORBATs) of opponents were mainly static in nature, this become less the norm as we moved into the modern era, but even recent conflicts still made use of trenches and fixed positions from which to wage war (e.g the Gulf War and the Angolan War);
- Force design patterns of war-fighting parties assumed linear proportions, with equipment procurement and ORBATs developing in line with perceived changes in threat variables, of which opponent capabilities were the most important;
- Reasonably fixed and clear cut rules of engagement (ROE) existed; Opposing doctrines and tactics were well-known to the various parties in a conflict; and
- Strategic early warnings of an impending attacks was generally possible, due to the time it took to move large bodies of men and equipment into position for attack.
CHARACTERISTICS OF THE EMERGING THREAT:

- Conflict are assuming an increasingly intra-state nature, although spilt over potentials remains high in most cases;
- Conflicts are becoming increasingly non-conventional in nature, as they are fought more often in developing countries with limited conventional forces, however, it needs to be stated that the danger of nuclear, biological and chemical (NBC) proliferation is real;
- GRBATs are becoming dynamic and random and hence difficult to predict, mainly due to the fact that forces are no longer organised along predominantly conventional lines;
- Non-linear force structure increment are becoming increasingly apparent this is mainly the result of the greater availability of ultra-sophisticated weaponry on the world's arms market, such as missiles systems, chemical weapons, computerised planning systems and systems which embrace the greater use of micro-technology;
- Doctrines are becoming increasingly vague and fused, being tailor-made to suit specific operational requirements;
- Strategic early warning is becoming increasingly difficult to obtain, mainly among less technologically developed opponents, due to the unconventional nature of systems and doctrines involved in combat, and due to the unique and non-traditional triggers which often initiate conflict.
- More pressures are being exerted on defence forces to be involved in peace support operations.

The above may be summarised by stating that traditional doctrine and force structures has remain the same as most modern defence forces have been directed towards the use of over-whelming force to achieve victory. As should be already apparent from the above, and as will be argued further in this chapter, this is hardly a formula for coping with the wide range of new threats, which are presently emerging.

This seriously hampers the development of air forces; force design and force structures in most countries. How does one plan for such a volatile environment? How does one go about acquiring equipments for threat, which are vague and unmanifested? How does one achieve the optimal balance in one's force design between catering for expected minor contingencies, but simultaneously remaining, prepared for major conflicts, however rare these may be? And what about the trade-offs for peace support operation? Does one prepare for visible threats, or to counter potential capabilities? Intent can change more rapidly than military capability, so the clever solution would seem to be to design one's air force according to perceived opponent's capabilities, and not according to threats. There is obviously a careful balance in approach required, driven mainly be considerations of cost and effectiveness.

The changes in the security environment can only have an impact on the nature of future conflicts, and on the resulting nature of forces, which will take part in such conflicts. The question is, though, what a nation will require from its air force in the evolving security environment. Viewpoints differ, especially in an era of greater openness, which surrounds defence debates in most countries. In most cases, there would seen to be some agreement that the following should be the major drivers which need to underpin the formulation of defence forces' vision and mission:
To protect the nation's interest in whatever form these may be threatened;
To provide adequate protection against any threat, of a military nature;
To participate in peace support operations;
To enhance the country's international image and influence;
To support domestic goal and interest;
To allow for strategic and operational ethics in the pursuit of national goals and interests.

I. THE AFRICAN SECURITY LANDSCAPE

In the post-colonial, post-Cold War Era Africa has been characterised by the absence of any external military threat, relatively rare instance of inter-state armed conflict, severe socio-economic need, continued vulnerability to political instability, intrastate conflict, non-state or sub-state military and para-military threats and the threat of deprivation resulting from environmental conditions.

Lodge categorised African armed conflict on the basis of the causes or instigators of conflict, as follows:

- Ethnic competition for control of the state.
- Regional or secessionist rebellions.
- Continuation of liberation conflicts.
- Fundamentalist religious opposition to the secular authority.
- Warfare arising from state degeneration or state collapse.
- Border disputes.
- Protracted conflict within politicised militaries.19

While some of these causative factors have declined, others appear to be gaining in intensity. The underlying causes of conflict are nevertheless very difficult to eradicate and it is highly likely that for the foreseeable future conflict in Africa will remain predominantly intra-state. This will be accompanied by para-military and nonmilitary threats of criminal or natural origin, which will exacerbate the overall threat to human security on the continent.

II. ASYMMETRY IN THREATS TO AFRICAN SECURITY

Asymmetry is not unique to either Africa or to 21st century conflict. It is a timeless feature of war/conflict but has been given prominence by the nature of security threats in the contemporary world, also in Africa.

Asymmetry has been variously defined or described as "unanticipated or nontraditional approaches to circumvent or undermine an adversary's strengths while exploiting his vulnerabilities through unexpected technologies or innovative means" and "unconventional warfare that seeks to drive the military dimension into the civil dimension to offset Western superiority in high technology". Metz and Johnson describe the concept comprehensively:

"..." asymmetry is acting, organising, and thinking differently than
opponents in order to maximise one's own advantages, exploit an opponent's weakness, attain the initiative, or gain greater freedom of action. It can be political-strategic, military-strategic, operational, or a combination of these. It can entail different methods, technologies, values, organisations, time perspectives, or some combination of these. It can be short-term or long-term. It can be deliberate or by default. It can be discrete or pursued in conjunction with symmetric approaches. It can have both psychological and physical dimensions". 20

Like terrain and weather it is one of the factors to be taken into account in planning and executing military operations. It does not, however, define the role and functions of the military.

III. CONDITIONS PROMOTING ASYMMETRY IN AFRICAN CONFLICT

IV.

V. A number of factors inherent in the security situation in Africa pre-dispose conflict toward asymmetric manifestations. Colonial legacies, ethnic divisions, poor governance and weak state institutions spur challenges to state authority by rebels/warlords/separatists i.e., by non or sub-state entities vying for power and control over resources and territory or fighting for some level of political power and autonomy. There is also the possibility that the War on Terror could increase polarisation and conflict, and precipitate an upsurge in extremism, in areas where there are already significant religious tensions and/or a history of religious conflict.

VI.

VII. Terrain in many conflict areas in Africa provide safe havens for belligerents and funding from illicit minerals gives access to lethal weaponry and enables protracted low-intensity conflict. In addition, large numbers of the population may be displaced by conflict and natural phenomena and may be in need of humanitarian aid to survive, often in large informal settlements and refugee camps. This provides a haven and source of recruitment - sometimes forced - for rebels.

VIII. MANIFESTATION OF ASYMMETRY

In these conditions asymmetry may manifests in many forms including:

- Political/military aim. Governments will usually seek to maintain control over and the unity of states within colonial borders. Rebels and/or warlords may seek the autonomy of a part of a country or its resources.
- Method. State militaries may be conventionally organised, trained and equipped. Rebel forces may be highly irregular, using guerrilla doctrine and tactics, with no clear lines of battle, often intermingling with the local civilian population.
- Technology and Support. State militaries will usually be quantitatively and qualitatively more technologically advanced than rebel forces and conflict may involve disparate
forces with distinct technological inequalities. Formal militaries may be highly dependent on external support and logistics, while rebels (and some defence forces) have the ability to live off the land for long periods.

- **Will.** This involves perceptions of survival or vital interests and will differ significantly between truly democratic governments, power elites monopolising power for personal benefit, rebels motivated by egalitarian ideals, minorities (especially ruling minorities) who feel threatened by majorities and political and/or religious extremists. It also involves the willingness to accept causalities and to die for a cause.

- **Normative standards.** Parties to a conflict may vary from forces adhering to strict standards of respect for human rights to those who hold scant regard for the rights and/or lives of others. This has resulted in the appalling brutality, even genocide that has characterised conflict in parts of Africa and in a willingness to engage in terrorism that may result in large scale and indiscriminate loss of life.

- **Patience.** In contrast with the Western (especially US) preference for the quick resolution of conflict, African conflict is usually protracted, sometimes lasting decades without reaching a conclusive resolution.

Such asymmetries must be factored into the planning of military capabilities and execution of operations, but should also be taken into account in the broad context of conflict management and resolution.

**IX. NIGERIA’S SECURITY POLICY**

One of the central principles of Nigeria's emerging national security policy is that the best way of ensuring one's security is to promote safe environment in region, on continent and globally. The principles of defence is contained in Nigeria’s 1999 Constitution and it is reiterated in our posture which states that:

- National security shall be sought primarily through efforts to meet the political, economic, social and cultural rights and needs of the Nigerian people, and through efforts to promote and maintain regional security.

- Nigeria shall pursue peaceful relations with other states. It will seek a high level of political, economic and military cooperation with Southern African states in particular.

Nigeria is, therefore, intensively involved in conflict management and resolution in Africa in collaboration with other African partners, primarily through ECOWAS and the AU. The Nigerian military is intensively involved in several peace missions, including Liberia, Sierra Leone, DRC. ... point and it is expected to remain at least at that level.

**X. NIGERIA’S DEFENCE STRATEGY**

The Defence Policy sets out the principal strategies to be employed in exercising the right and responsibility to ensure the protection of the state and its people against external military threats. These strategies are:

- Political, economic and military cooperation with other states.
• The prevention, management and resolution of conflict through non-violent means.
• The deployment of Defence Force as measure of last resort.

These strategies clearly go beyond the defence of the country and its people against an enemy at the gates and can equally be extended to the West African Sub-region. As Nigeria's commitment to creating a safe environment and the extension of general security by peaceful means.

This intent is reflected in the three military strategic objectives set by the Military Strategy, encapsulating the role and functions of Armed Forces as contained in the Constitution. These are:

• (Self) Defence against aggression.
• Promotion of security (Regional, Continental and Global).
• Supporting the people of Nigeria (in practice, primarily through support to other government departments).

In terms of international law and the UN Charter Nigeria has an inherent right to self-defence against aggression and the self-defence function is undeniably and irrevocably a key component of the Armed Forces mandate. However, the demands of evolving global and continental security landscape and our national security policy have resulted in increased emphasis on promotion of security and the ubiquitous needs of support to the people.

Budgetary constraints and the continued needs of defence transformation have created a certain tension between the requirements to maintain basic (but currently declining) self-defence capabilities while simultaneously satisfying the requirements of the so-called "secondary" functions. In addition, certain emerging security threats lie in a gray area between the military, the police and other departments. The responsibility for the management of such threats is in some cases unclear. There is thus an urgent need to address the balance between the diverse needs and to assign resources accordingly.

ASYMMETRIC CHALLENGES TO AIR POWER

As discussed earlier most of the threats currently dominating the security agenda are by definition asymmetric. This poses particular challenges to air power - challenges that will have to be overcome if air power is to fulfill its potential in countering such threats. Some of the more obvious issues are:

• Careful attention will have to be given to the aim of every operation - to the socio-political end-state that is to be achieved - and to how military means can best be used to achieve or promote that effect, linking the tactical, operational and strategic levels, so that actions at the tactical level do not undermine the strategic aim.
• They require coherence of planning and action can only be achieve if the conflict/threat dynamics are thoroughly understood at every level. The complexity of the situation thus requires the fusion of multi-sensor information into a comprehensive intelligence picture.
• Adjustments may have to be made to force designs/structures and capabilities to
accommodate "secondary tasks".

- Adjustments to doctrine may be required to accommodate the requirements of emerging threats.
- Airmen and support personnel will have to be trained to cope with the demands of deployment in various roles. The deployment/training cycle will have to be adapted accordingly, cycling between:
  - PSO training
  - Away deployment on PSO's (Promote Security)
  - Conventional training
  - Home deployment ("Support the People")

- Deployment to remote areas means accommodating the high cost of strategic lift within limited budgets and ensuring the integrity of long and vulnerable support/supply lines.
- Lack of effective air traffic control makes it almost impossible to secure the air space. The detection, identification, tracking and interception of illegal flights imply extensive and expensive air defence systems, again within limited budgets.
- The detection and identification of hostile forces on ground may be problematic due to terrain, vegetation and intermingling with the local population and legitimate traffic.
- The scarcity of high-value targets makes the economics of using expensive, advanced aircraft and weapons questionable. Less advanced but affordable platforms may be preferable.
- Action against air and ground targets will inevitably be limited under restrictive ROE. Planners and aircrew will have to operate within those parameters.
- Terrain, vegetation and concentrations of population may favour asymmetric action by hostile forces.
- Bases and infrastructure may be vulnerable to various forms of asymmetric attack, discussed below.
- The ubiquitous MANPADS make aircraft self-protection essential. Support during remote deployments may be hampered by the bureaucracy of procurement processes and dependence on external contractors. Flexible, rapid response systems will have to be devised.
- Compatibility between multi-national forces will be crucial.

**VULNERABILITY OF AIRPOWER TO ASYMMETRY**

The use of air power against hostile forces of the kind implied by the emerging threats to security is in itself a manifestation of technological asymmetry. Opposing forces will inevitably employ asymmetric tactics in an attempt to overcome the technological advantage bestowed by air power, or at least to limit its effect.

Tactics that could be used include the following:

Against Aircraft:

- Shoulder launched missiles against aircraft in the landing pattern and in contact areas.
• Mortar/rocket attacks on aircraft flight line, especially at night.
• Infiltration of the local support contingent to sabotage aircraft, aviation fuel, oxygen etc.

Against personnel:
• Infiltration of locally recruited staff to poison water and food of aircrew and support personnel.
• The use of suicide bombers against air and ground crew, living quarters, command centres or other infrastructure.

Against Infrastructure/Support:
• Denial of runways with cheap obstructions.
• Jamming of air traffic control or operational radio frequencies.
• Sabotage of approach and navigation aids.
• Landmines on routes to and from airfields.
• Attacks on overland supply routes, especially aviation fuel deliveries.

The changing nature of the security environment and the threats it entails, characterised by asymmetry and various associated challenges and vulnerabilities, must inevitably impact on the way air power is conceptualised and applied.

If past and present air power thinking has largely been a product of a fascination with technology, then the new security environment is precipitating a revision of thinking that is long overdue. Conflict and war are firstly about the human psyche. More than 2000 years ago the military philosopher Sun Tzu pointed out the central importance of moral influence and the harmony between people and rulers, and of humanity and justice in formulating victorious policies and making their governments invincible. Mao Zedong reflected this when he said, "[w]eapons are an important factor in war, but not the decisive one, it is man and not materials that counts". It is the mind that wields the sword, not the other way around.

Western military thinking has for centuries been pre-occupied with technology. There is, however, an awakening to the critical importance of the human factor, as evidenced by a recent article in the Air Force Times: "If you don't understand the cultures you are involved in; who makes decisions in these societies; how their infrastructure is designed; the uniqueness in their values and in their taboos-you aren't going to be successful."

This realisation has found expression in the concept of Effects Based Operations, which is currently enjoying considerable prominence in Western defence thinking. EBO are defined by the US Joint Forces Command as "[o]perations that are planned, executed, assessed, and adapted based on a holistic understanding of the operational environment in order to influence or change a system behaviour or capabilities using the integrated application of selected instruments of power to achieve directed policy aims." The desired effects often lie in the cognitive and socio-political domains and unless military force is used in ways that effect changes at that level, it may exacerbate the complex security issues of the 21" Century.
This must inevitably influence our view of air power. Some of the changes or required changes in air power thinking are listed in Table 1.

### TABLE 1: AIR POWER: TRADITIONAL AND CHANGING VIEWS

<table>
<thead>
<tr>
<th>Traditional View of Air Power</th>
<th>Air Power in the Changing Environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Force-on-force combat operations</td>
<td>Avoidance/absence of force-on-force combat</td>
</tr>
<tr>
<td>Clearly defined adversary</td>
<td>Adversaries evasive, difficult to identify</td>
</tr>
<tr>
<td>Aim: Destruction/defeat of enemy forces classical OODA cycle</td>
<td>Aim: Socio-political effect-importance of UNDERSTANDING before Deciding, Acting</td>
</tr>
<tr>
<td>Air superiority role primary</td>
<td>Air superiority uncontested or irrelevant</td>
</tr>
<tr>
<td>Air power in autonomous or semi-autonomous role</td>
<td>Air power adjunct/support to ground forces or operations</td>
</tr>
<tr>
<td>Technology driven</td>
<td>Technology supported</td>
</tr>
<tr>
<td>Intelligence: ORBATS and technology</td>
<td>Intelligence: Politics and culture</td>
</tr>
<tr>
<td>Clinical, staff-off</td>
<td>Up close and personal</td>
</tr>
<tr>
<td>Predominantly a military matter</td>
<td>Close involvement with local population, civilian agencies, NGO's etc</td>
</tr>
<tr>
<td>Flexibility/versatility of Air Power</td>
<td>Mental/psychological flexibility of airmen</td>
</tr>
<tr>
<td>Training as AIRMEN</td>
<td>Training as Airmen AND soldier-peacekeepers</td>
</tr>
</tbody>
</table>

**REQUIRED CORE COMPETENCES OF THE NIGERIAN AIR FORCE (NAF)**

From the evolving security environment, it is fairly obvious that Nigeria is unlikely to face a direct threat from a modern, high-tech advisory in the next twenty years. One could not however rule out the possibility of facing a regional opponent that has a defence agreement with an extra-African actor. So the threat Nigeria may likely face is a combination of sophisticated and less mature allies and terrorists. Nigeria must therefore reorganise its air force to enhance its core competencies.

In an effort to guide the overall reorganisation of the air force, capabilities and support structures should be reviewed and upgraded. The NAF should have a new vision to provide a conceptual template of how its constitutional role could be effectively performed, coupled with the leverage of technological opportunities to achieve new levels of effectiveness. Information superiority is the enabler of the Revolution in Military Affairs (RMA), and aliens four new operational
concepts needed to significantly enhance joint operations; dominant manoeuvre, precious engagement, full dimensional protection and focused logistics.  

Characteristics of the information superiority, the operational concepts and resulting strategy follow:

**INFORMATION SUPERIORITY**

To respond rapidly to any conflict, dominate any situation, and optimise day-to-day operation, accurate, timely and secure information must be available to the NAP. The NAF should have information superiority. The ability to collect, process and disseminate an uninterrupted flow of information while exploiting or denying an adversary's ability to do the same.

**DOMINANT MANOEUVRE**

Dominant manoeuvre is the "multi-dimensional application of information, engagement and mobility capabilities to position and employ widely dispersed airpower to accomplish assigned operational tasks." By moving faster and more numbly than an adversary, dominant manoeuvre will allow a reorganised NAF to control the breath, depth and height of the battle space, and forces an adversary to react from a disadvantaged position or quit.

**PRECIOUS ENGAGEMENT**

Precious engagement is a "system of systems and would enable the NAF to locate the objective or target, provide responsive command and control, generate desired effect, assess the level of success and retain the flexibility to re-engage with precision when required. Requiring intelligence on enemy forces and expert judgement to match force to the desired effect, the characteristics of precision engagement are precise stand-off capabilities, more capable attack platform and weapons that will inflict minimal collateral damage.

**FULL-DIMENSIONAL PROTECTION**

From the evolving security environment, it is fairly obvious that Nigeria is unlikely to face a direct threat from a modern, high-tech military opponent in the next twenty years. One could not however rule out the possibility of facing a regional opponent that has a defence agreement with an extra-African actor. So, the threat Nigeria may likely to face a combination of sophisticated and less mature allies and terrorists. Nigeria must therefore develop its air force with certain characteristics.

**CHARACTERISTICS REQUIRED FOR THE NAF OF THE 21ST CENTURY**

The main characteristics that the NAF must acquire, and to which special attention is to be devoted are as follows:

- **Quality of Human Resources:** This is the most important characteristic that any air force must possess. Special attention needs to be paid to training of personnel, to ensure that qualities of leadership, decision-making skills, motivation and dedication to work and engrained into the system. Professionalising the NAF will allow increasingly
complex resources to be managed with maximum effectiveness.

- **Availability:** This consists of ensuring that the NAF are ready to call-up as a prior prerequisite for generating deterrence, coping with a crisis or responding to an aggression. Expertise of personnel and equipment holding will be determinant factors in this connection.

- **Flexibility:** The NAF must be flexible in terms of procedure and organisation of forces. This is a key factor in responding appropriately to the changing circumstances that characterise today's broad spectrum of conflicts.

- **Strategic Mobility:** This is the ability of the NAF to have means of moving necessary combat and support capabilities to the areas of operations.

- **War Fighting Capability or Combat Power:** This is based on effective manoeuvre and fire support capabilities.

- **Survivability:** This is the ability of the NAF units to protect themselves so as to operate in the characteristics environments of modern-day conflicts, where speed of operations, precision and firepower, the need to remain for long periods of time and, on occasions, in environments with a nuclear biological or chemical risk, are key factors.

- **Sustained Action Capability:** This enables NAF to engage effectively in operations for as long as necessary by subsequently relieving the units deployed and providing suitable logistic support.

- **Mobilisation Capability:** The Nigerian Air force must be capable of mobilising its personnel and material resources in order to maintain and, if necessary, restore units' combat power in the shortest possible time.

These characteristics of the NAF are enhanced by the following factors which boost their effectiveness:

- **Joint or Combined Operation:** This will enable efforts of NAF, from when the operations are first addressed, with specific or differentiated characteristics to be combined in a single battle environment. The mode of modern war-fighting is joint operation. No single service fights alone; therefore, enhanced understanding amongst the three services would improve operational efficiency and levels of success.

- **Interoperability:** This is essential in order for the NAF ground, naval and air forces to engage in action with other service and international allies forces. Establishing common standard equipment, doctrine and procedure facilitates easier implementation of operations and logistic support.

- **Advanced Technology:** This is a determining factor as it provides one of the most important advantages today in any situation. Adopting such technology is of particular importance, both as a characteristic of the NAF and for the necessary interoperability with other Allies.

In order to reorganise the NAP, there is the need for intensifying training in the NAF to enable it to easily adopt to joint operation standards, upgrading of equipment, increase in funding levels and enhancement of manpower holdings.

**INTENSIFICATION OF TRAINING**
The integration of men and equipment is achieved through training. In the NAF as in the other services, training remains the cornerstone of building a strong and viable air force. This dictum that a weapon is only as good as the man behind it makes this assertion very relevant. Training gives the personnel the required skills and knowledge in modern aeronautic and technology to successfully execute assigned tasks efficiently. It also enables formation and unit to achieve professional and administrative effectiveness in any operations. Sullivan asserts that the overall objective of training is to achieve tactical superiority over the adversary through adequate knowledge of weapons, effective coordination of their use and the ability to appreciate terrain.\(^{25}\)

The NAF needs to realise that jointness is the way forward in the post-modern warfare. The fact is that existing joint doctrine and strategy are landpower-centric (grand forces in supported role) and means are not adequately available to assess a crisis and make recommendations for the air force only or anything else only. The basis for change lies in having less concern over which branch is decisive and more concern that the right tools are employed to be decisive. Senator Joseph Liberman of the United States Senate Armed Services Committee noted that:

> the eye-popping advances in technology we are engineering today are paving a path not just to a revolution in military affairs, but to a complete paradigm shift in warfare.\(^{26}\)

He went on to add that "successfully transforming our military requires that we move to the next level of jointness." By now, virtually every expert believes that future operations will be increasingly inter-agency and combined, and that while competition among the services can assist in determining how best to exploit new capabilities or solve emerging challenges, there should be a much greater emphasis on collaboration.

**EQUIPMENT**

Currently in terms of number and types, the NAF inventories are not enough for air dominance even in the sub-region. In most cases, their operational status is zero. The only antidote is immediate refurbishing and major modification. The Mig-21 aircraft are for fighter/interceptor and reconnaissance roles. Similarly, the Alpha jets have been tested for close air support and interdiction, the MB-335 may also perform the same role. The SuperPuma can be re-noted for close support/tactical operation. On the other hand, the F-27 and Do-128-6 and for patrol. The available F-27 troopship can be re-modified for airborne early warning. Finally, the P-12 and the P-35 short and medium range surveillance radar can be re-modified to three-dimensional long-range role. Last but not the least are equipment and communication standardisation and the command and control, since the NAF must operate with the other services.

**STRATEGIES FOR REVITALISATION THE MIG-21**

The aircraft has not flown for many years because of lack of spare parts. The condition has so deteriorated that before it can be made air worthy, an extensive refurbishing must be carried out and the aeronautics re-modified to meet the modern standard in communications and navigational systems. The re-modification either be done locally by a friendly African country like Egypt or India. These nations use the same aircraft type and have acquired the technology.
This option would be cheaper than employing the manufacturers in Russia or buying new aircrafts. In addition, the pilots and technicians can be retrained and adapted for operational as it obtains in Egypt and India.

**ALPHA-JET**

In the case of Alpha-Jet, pilots and technicians could manage the aircraft. Although, the aircraft were acquired purely for weapons training until the ECOMOG operation started. The Cameroon have an improved combat version (Impala) acquired from South Africa though France. It is advocated that a few of the aircraft be traded in, to acquire the Lancier Version for day and night attacks, anti-shipping, strinke, maritime air defence and anti-helicopter micro capabilities. Added capabilities include forward-looking infra-red (FUR) system, variety of weapon capability, all weather missiles, laser guided bombs and missiles and passive and active electronic counter-measures. Air Commodore Okoiye, however, maintained that the AlphaJet re-roled missions far beyond its capabilities. The same mistakes should not be repeated with the NAF.

The superpuma helicopters should be refurbished and modified locally or an outright trade-in to acquire a few more modern close support helicopters from the manufacturers in Germany or an outright purchase of attack helicopters from Russia.

The following radars are in the inventory of the NAF and are located at various stations in the country:

(a) P-12 short range
(b) P-35 medium range
(c) PRV-II Height Finder

Unfortunately, all the equipment are unserviceable due to spares. The Russian manufacturers have stopped production of the series. However, when they were operational, the P-12 and P-35 were instrumented to 360 KM and 370 KM range respectively. A low level, they both have 90 KM effective range. In addition, the P-35 has IFF that is only marked to Russian type of transponder.

Furthermore, when co-located with PRV-II, it is capable of three-dimensional reception. It can also be used for electronic warfare (EW) jamming, but will have to be manually operated in that mode. The P-35 can transmit video pictures to command post within 30 KM.

**INCREASED FINDING LEVEL FOR THE NAF**

Achieving better funding of the NAF is one of the means to reorganise it since the NAF could be part of a peacekeeping. The end of the Cold War has provided opportunity to expand the utility of air force in multinational peacekeeping. In order to succeed at the type of intrusive activities proposed by Boutros-Ghali’s Agenda for Peace, Air Forces are now an integral part of peacekeeping. The preparation and deployment of the NAF for international military engagements require a lot of fund. The NAF on the whole is ill-funded, yet expected to playa crucial role in the changing security environment. This should be reversed.
IMPROVING MANPOWER HOLDINGS

The manpower requirement of the NAF should be increased and training enhanced. With the concept of jointness and the engagement of the NAF in national defence, sub-regional activities and internal security duties, the current level will overstretch the present manpower holding. There would be the need for the Federal Government to increase Ministry of Defence allocation for the NAF to redress these shortcomings. The redressing of these issue would place a reorganised NAF to effectively and efficiently perform is responding constitutional roles.

Finally, the strategic imperative for the airman has always been present. It has, however, been masked by a land power-centric approach to war, the overwhelming firepower approach of previous conventional wars that has prevailed through the various forms of warfare, due to in some cases, the inattention of the airman. Desert storm changed the airman's outlook and supplied confidence in his abilities and capabilities. The stage is set for a newbreed of airmen for the NAF, to change the land-centric conception of war and attain their rightful place.

CONCLUSIONS

Changes in the security landscape over the last decade or two have given increasing prominence to intra and sub-state threats and conflict and to non-military threats to security, at the expense of traditional views of conventional inter-state warfare. In addition, there is an increasing awareness that the resolution of complex security issues requires a thorough understanding of the dynamics of conflict and the achievement of socio-political change. This has led to a re-evaluation of the role, functions and utility of military power.

While air power theory was in the past dominated by a technological perspective, the challenges of the emerging security environment, with all its potential for asymmetry, require a change in the way we view air power. It is no longer not primarily about air superiority and the destruction of enemy forces, but about the subtleties of creating security, of influencing the way people perceive the world and think and act. And it requires a new kind of airman-soldier-not just a techno-warrior, but a soldier who understands that his role is ultimately to help create security.

Air power truly is versatile and multi-faceted instrument and it can find many applications in defence against aggression, promoting security and supporting the people. However, if we are to use it to full effect in the complex security environment of the 21st Century, we must learn to use it with sill and innovation, looking beyond its technology to the way that technology can best be applied to alleviate or address the causes of conflict and insecurity. This means accommodating both the technological and the human dimensions in air power theory and doctrine.
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