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**THAT MAN MAY NOT ONLY SURVIVE
BUT FLOURISH AND EXCEL:
THE CHALLENGE FOR PSYCHOLOGY**

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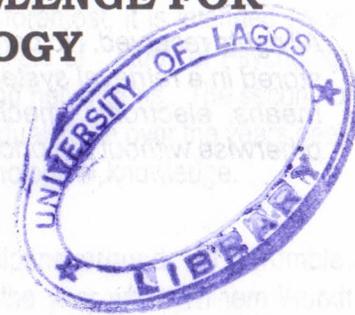
BY

OLATUNDE O. A. MAKANJU



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SURVIVE BUT FLOURISH AND
EXCEL: THE CHALLENGE FOR
PSYCHOLOGY**



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INTRODUCTION

This lecture is going to focus on two important aspects concerning "Psychology" as a discipline. First and foremost, it is intended as an advocacy piece to showcase what the field of study of Psychology can contribute to the Nigerian Nation and her citizens. The second of course is to highlight what I, as an individual, have over the years been able to contribute to the body of psychological knowledge.

Psychology became a separate discipline around 1879 (Kimble, Garnezy, and Zigler, 1980). This was the year when Wilhem Wundt established the first Psychology Laboratory at the Leipzig University, Germany. At the beginning, Psychology concentrated on laboratory experiments and, therefore concerned itself with studying such topics as learning, memory, perception as well as sensory processes (traditional experimental Psychology) and its roots were in philosophy and medicine. However, over the years, it has broadened its horizon to cover virtually all areas of human endeavour, thereby directly or indirectly touching the lives of all of us. We shall deliberate more on this later.

DEFINITION: Perhaps, the most misunderstood or misperceived discipline is Psychology. I have had cause to travel far and wide and, have visited all the continents of the world. In the days when the Nigerian Passport used to have a section for the 'Profession' of the holder, one of the commonplace utterances from immigration officers after reading from my passport that I am a Psychologist was either "so you can read my mind" or "Please tell me more about myself", etc. I used to enjoy the attention and had had to educate many an immigration official all over the world about the correct disposition of Psychology as a field of endeavour.

Psychology has at various times been defined as 'the science of mind', 'the science of mental life', 'the science of behaviour', etc. But Reber and Reber (2001) submitted that, "psychology simply cannot be defined; indeed, it cannot even be easily characterised. Even if one were to frame a definition or characterisation today, tomorrow would render the effort inadequate". The problem is perhaps due to its heritage from medicine, and this includes the orientation and attempt to develop principles about or analyse behaviour couched in the language of biology and physiology. From philosophy came the inheritance of such problems relating to mind, body, will, knowledge, etc. Definitions of Psychology, therefore, usually portray the slant or prejudice of the definer more than the actual nature of the discipline. These difficulties notwithstanding, let us use the Nigerian Psychological Association (N.P.A) (1989) definition of psychology as the scientific study of human and animal behaviour and experience. Psychology is therefore interested in the 'how' and 'why' of behaviour and experience.

Embedded in the NPA's definition of psychology is the concern of psychology with 'overt behaviour', 'covert events', physiological changes', as well as 'experience'. Overt behaviour includes the ones we can 'see' (e.g., talking, writing, sighting, singing, dancing, etc.), which involve action. Covert events and experience cannot be directly observed because they are 'within the organism and, include such things as feelings, moods, attitudes, beliefs, etc. These latter types of behaviour can only be inferred from actions of organisms (or if such individuals voice them out). In short,

"psychology is at one and the same time a biomedical discipline, an arts discipline and a social science discipline. This is in accord with the fact that its subject matter, human behaviour, is a combination and/or fusion of the biological, artistic and the social, organised by a mind or intellect that is peculiar to man" (NPA, 1989).

This is why psychology is related to many other disciplines and professions.

To help psychology in its onerous task, it tackles 'behaviour and experience' in three stages:

- (a) **OBSERVATION/DESCRIPTION/ASSESSMENT:** This involves observing the specific phenomenon to be studied, describing what happens in details and, quantifying or measuring the behaviour. This helps any other individual wanting to examine or find out about the behaviour under study, to be able to identify the specific phenomenon where other similar ones abound and where necessary, quantify it.
- (b) **UNDERSTANDING AND EXPLANATION:** This has been described as the stage of making meaning out of the behaviour and it involves appreciating and explaining factors bringing the behaviour about or influencing events in a systematic manner as well as maintaining it. Of importance here is the fact that factors initiating a behaviour might not be the same as those exacerbating or maintaining it.
- (c) **PREDICTION/MODIFICATION/CONTROL:** Knowledge gained from the earlier two stages are utilised to foretell events or outcomes (based on reliable explanations); put in place intervention strategies; and ultimately be able to maintain factors in order to bring about a desired or expected outcome.

The above-mentioned stages of psychological studies (or, the aims of psychology) are not as simple as mentioned especially the last two.

BASIC AREAS OF PSYCHOLOGY

To understand behaviour better, psychology as a subject has been broken into a number of areas of knowledge, each of which, in most cases, deals with specific aspects of behaviour. Each area is a collation

of information and research findings, which are used to further understand behaviour, extend the frontiers of psychological knowledge in the area in particular and, psychology generally. Knowledge from these areas form the bases or backbone of professional interventions in practical/applied settings. There is nothing sacrosanct about the number of these areas and, may vary from author to author. Some of the more important ones include:

- (i) **Developmental Psychology:** The field dealing with process of change throughout life, from childhood to adulthood.
- (ii) **Physiological Psychology:** This involves the description and explanation of behaviour from the point of view of physiological and neurological processes.
- (iii) **Social Psychology:** The branch of psychology, which concerns interpersonal relationships, group dynamics, social institutions and the society in general. It has been described as the study of individuals as they function in groups.
- (iv) **Differential Psychology:** whose focus is on the differences in behaviour between individuals. Traditionally, this covers differences in intelligence, motivation, personality etc.
- (v) **Experimental Psychology:** which studies behaviour, using experimental procedures by posing questions, testing propositions and offering plausible explanations.
- (vi) **Comparative Psychology:** also known as 'Animal Psychology', it is concerned with the study of the behaviour of various species of animal with a view to drawing comparisons between them. This field seems to have yielded to Ethology, which strives to understand human behaviour through an evolutionary perspective by studying animal behaviour *in situ*.

(vii) **Psychopathology:** whose subject area is the study of abnormal behaviour (or mental disorders), specifically, the causes, influences and management of abnormal behaviour.

(viii) **Psychopharmacology:** the study of the effects of drugs (especially, psychoactive ones) on behaviour.

(ix) **Others:** these include areas which are sometimes called 'General Psychology', covering such areas as Memory Learning, Perception, Sensory Processes, etc. In addition, psychometrics (tests and measurements) as well as statistics, complete the picture.

APPLIED AREAS OF PSYCHOLOGY

These are sub-disciplines within psychology, which strive to identify basic principles within the entire field of psychology, which can be applied (along with theories and discoveries) in a practical sense to fulfilling the 'Prediction/Modification/Control' aims of psychology as mentioned earlier. Since one of the goals of psychology is to understand man, his wishes, desires and needs, and, to utilise this knowledge to promote human welfare in any area of living/working where man might find himself. In my over thirty years of practising / teaching psychology, I have always told my students that psychology is involved and can be applied in any area of human endeavor. To this end, there can be no exhaustive list of applied areas of psychology as more and more are joining the list from time to time. As the frontiers of knowledge expand, or technological advancements bring in new era, so also are we likely to see the birth of new areas of psychology. Today, Japan, USA, etc., are crazy about Traffic Psychology, a new speciality brought about by pressing ambient issues in these cultures.



As briefly mentioned above, there are many areas in which psychology is practised as a profession. I am going to enumerate a few of these areas, highlighting what they can offer as service to mankind, in general, and Nigeria and Nigerians in particular.

1. INDUSTRIAL/ORGANISATIONAL PSYCHOLOGY

This is the most popular area of specialisation for psychologists in Nigeria, which is a reflection of the type of economy that we have; as many of our students hope to find employment in one industry/organisation or the other. In its broadest sense, it involves behaviour in all ramifications, within organisations – probably why the name 'organisational psychology' is preferred by many, since the addition of 'industrial' could be misleading as, this applied area, in most cases, deals with social structures far removed from actual industries. It encompasses other fields (which are usually regarded as applied areas in their own rights) such as personnel psychology, economic psychology, military psychology etc. The focus here includes personnel selection (matching the individual to the job that best suits him/her and vice-versa), human engineering, human factor, training, remuneration, job satisfaction and morale, fatigue, work environment, etc. Organisational psychology relies on information derived from psychological tests/interviews which are targeted at human interests, personality, aptitudes, abilities, attitudes etc.

To showcase the contribution of this area to organisations, in general, let us consider the following story. In 1961, a newly elected President of the United States of America (USA) – John F. Kennedy set up a high-powered Committee made up of capable hands, highly committed and loyal to their country and leader. Furthermore, the group comprised individuals with special skills in different areas of knowledge and, exceptionally well-qualified. The Committee was to advise the president specifically on USA/USSR/CUBA relations and actions. Continuing

from where Kennedy's predecessor (President Eisenhower) left off, the Committee recommended the continued support to the organisation of Cuban exiles in the USA, some of whom were trained in guerrilla warfare and had already infiltrated their motherland. In short, the USA covertly supported the invasion of Cuba, and surprisingly sent its airplanes on bombing missions to Cuba albeit disguised not to reveal their true identities (a plan that was exposed almost immediately). The plan failed woefully and 'the United States suffered a humiliating defeat in the eye of the world, and the Castro government became even more firmly entrenched and extremely hostile toward the United States. The Soviet Union gained even more influence in Cuba and the Western hemisphere'. (Raven and Rubin, 1983). This became known as the 'Bay of Pigs Fiasco' and nearly led to a nuclear war when the USSR tried to site nuclear missiles in Cuba, etc.

The question is 'how could the U.S. government have goofed to such an extent'? 'How could a select-committee made up of expert brains recommend such a ridiculous scheme', etc.? With the benefit of hindsight, the plan was patently stupid, even to its proponents. The problem was what in psychology is called 'GROUPTHINK' – a decision-making procedure characterised by the tendency for members of a group trying to achieve consensus. The group's desire to reach an agreement therefore takes precedence over trying to obtain accurate knowledge needed to take rational and appropriate decisions. Groupthink has been shown as a significant contributor to disastrous decisions, be it in commerce and industry or politics, etc. Can Nigeria learn anything from this? See Janis (1972).

The challenges to organisational psychology with respect to Nigeria are many. As one can readily see in Nigeria, many a governmental, political, and organisational decisions (group decisions) are usually awfully wrong, and they deviate from reality. It is, therefore, left to Psychologists in this area, to research into such areas as 'Leadership

Styles', 'Decision-Making Processes', 'Effect of Remuneration on Morale and Job Satisfaction/Productivity', etc. Organisational psychology definitely has a lot to offer Nigerian industries and organisations, and help them to function more efficiently by putting in place solutions to the ailments plaguing organisations in Nigeria such as incessant strikes and lock-outs, fraud, stealing and embezzlement, victimisation, low productivity, etc.

2. CLINICAL PSYCHOLOGY

Abnormal behaviour (mental illness, behaviour disorders, etc.) has existed for millennia and because of that, different conceptions of it have also existed at different times. In the olden days, the opinion was that mentally disturbed individuals were possessed of demons or evil spirits. It was, therefore, not surprising that the remedy then was to try and drive out the demons (exorcised) and this can take many shapes. Mentally disturbed individuals were known to have been starved, chained, tortured and flogged in attempt to force the evil spirits out; they could even be immersed in either hot or cold water. The idea was to make the body uncomfortable for the demons residing there. Luckier individuals were subjected to 'prayer' or 'music', etc., in an attempt to persuade the demon to leave. Even at times, an escape route could be made available to the demon – a good example is trephine (cutting of holes in the skull of the mentally troubled individuals).

The demonology approach was replaced during the 19th and 20th centuries (a period of scientific rationalism) by the medical model, which sees mental disturbance as an 'illness' or 'sickness' (caused by diseased parts of the body). In other words, the abnormal behaviour are symptoms of underlying disorders or illness. Other models mainly psychological in origin have also evolved and these include the 'psychodynamic model' the basis of which is Freud's psycho-analysis which sees personality as the arena or home ground for two opposing

combatants. When these opposing forces/energies clash, they produce symptoms, which we tag as mental illness. Other psychological models include 'Behavioural Model' which sees abnormal behaviour in terms of learning processes: the symptoms being acquired through conditioning and by extension, can also be extinguished or modified by reconditioning. The 'Humanistic Model' focuses on the individual and his/her struggles for survival thereby seeing the mentally disturbed as being 'troubled' and not 'sick/ill'. The behavioural disorders are a result of blocking or, making self-actualisation processes difficult. This model sees the individual as being responsible for the choice of behaviour disorder so, therapy is geared towards helping the individual make new decisions that can bring about self-actualisation, etc.

The applied field dealing with research into classification, evaluation, diagnosis, treatment and prevention of abnormal human behaviour (including maladaptive behaviour) is clinical psychology. This speciality relies heavily on theories and findings in the basic areas including psychopathology, social psychology, learning, developmental psychology, etc., in its operations. The range of the clinical psychologists involves a variety of behavioural problems. This area utilises a gamut of techniques in its bid to get afflicted individuals to overcome their problems and be able to function effectively in the society. The clinical psychologist usually works in hospital settings alongside psychiatrists. Suffice to mention it here that the latest revolution in the treatment of mental illness are laws in some Western Countries allowing Clinical Psychologists to own their own practices and perform some of the duties traditionally reserved for psychiatrists (including prescription and administration of drugs).

From the foregoing, it is apparent that clinical psychology has a lot to offer Nigerians. Is it not in this country, where mentally ill individuals roam the streets sometimes constituting themselves into menaces and disturbances? Mental health has virtually been neglected by our

governments and, only once in a while do we hear of a Governor put in place a scheme to take these disturbed individuals off the streets into so-called rehabilitation centres usually devoid of material and human resources to help the unfortunate individuals. Such schemes are, therefore, usually short-lived, with the in-mates sooner or later finding themselves back on the streets. Perhaps more bizarre are the so-called 'native doctors' who recklessly exploit the mentally sick, chaining them together, parading them on the streets to solicit for alms. Another avenue through which this specialty can meaningfully contribute to our society is by putting in place prevention strategies and putting their services at the disposal of the populace through counseling.

3. COUNSELLING PSYCHOLOGY

This is the applied area of psychology, which focuses on interviewing, testing and advising individuals in order to help solve or ameliorate problem and, plan ahead or for the future. Counselling psychology should not be confused with 'Guidance and Counselling,' which traditionally is restricted to educational settings where the practitioners are called 'Counsellors'. Counselling Psychologists, therefore, help individuals to effectively cope better (in their feelings, thinking and handling) with the problems, upheavals associated with such existential areas as, marital and sexual relations, drug abuse, vocational and recreational activities, as well as community work, etc. It must also be said that Counselling Psychology shares a lot in common with Clinical Psychology, perhaps the distinguishing factor is that the former emphasizes well-being and self actualisation, utilising the individual's latent or partially used psychological powers/resources. The latter tries to effect changes in the individual's basic personality structure in order to bring relief to symptoms of sickness and adjustment problems.

In Nigeria of today, many problems abound that should be of interest to Counselling Psychologists. Take, for example, the issue of the so-

called 'Campus Cults' (I am of the opinion that the word 'cult' is a misnomer here: we should be talking of 'Campus Gangsters'). Or, is it the problems of drug abuse, sexual harassment, rape, prostitution, examination malpractices etc that we should concentrate upon? All these problems are canker-worms that have eaten deep into the fabrics of not only our universities and other tertiary institutions, but also nearly all segments of our Nigerian homes, the way in which children are raised by absentee parents, the buying of marks for children to enter schools/colleges/universities; the get-rich-at-all-costs syndrome, sale of votes to the highest bidder, bribery and corruption, etc., one cannot but come to the conclusion that if ever there was a nation here on earth that needs counselling, Nigeria definitely would rank as 'numero uno'. Psychology, if enabled and empowered may be the solution we have been searching for. Counselling psychologists should be available in our schools, government clinics/hospitals and, it is being recommended that both Christian and Moslem clerics should receive training in counselling psychology.

4. HEALTH PSYCHOLOGY

Table I shows the ten leading causes of death in the USA in 1900 and 1993 (rates shown are per 100,000 population). The table shows a definite shift from 'infectious diseases' (individuals getting infected by contact with causative agents – bacteria and viruses) to 'chronic diseases' (illnesses that develop persist or recur over a long period of time and mostly occur as a result of individual's behaviour). Behavioural pathogens (personal habits and life-style behaviour of individuals) are now more in focus than external pathogens (infectious agents, nutritional deficits).



TABLE I: TEN LEADING CAUSES OF DEATH IN THE UNITED STATES 1900 AND 1993 (RATES PER 100,000 POPULATION)

1900			1993		
S/No	CAUSE	RATE	S/NO	CAUSE	RATE
1.	Cardiovascular diseases (heart disease, stroke)	345	1.	Cardiovascular diseases (heart disease, stroke)	366
2.	Influenza and Pneumonia	202	2.	Cancer	206
3.	Tuberculosis	194	3.	Chronic obstructive pulmonary diseases	39
4.	Gastrihs, duodenitis entities and colitis	143	4.	Accidents	34
5.	Accidents	72	5.	Influenza and pneumonia	32
6.	Cancer	64	6.	Diabetes mellitus	21
7.	Dipteral	40	7.	Other infectious and parasitic diseases	18
8.	Typhoid fever	31	8.	Suicide	12
9.	Measles	13	9.	Homicide and legal intervention	9.9
10.	Chronic liver diseases and cirrhoses	*	10.	Chronic liver diseases and cirrhosis	9.6

* data unavailable

TABLE I

Although statistics for Nigeria are not readily available, if they are available, one is most likely to find out that they may not significantly depart from what obtains in the USA. As Knowles (1977) puts it, "over ninety per cent of us are born healthy and suffer premature death and disability only as a result of personal misbehaviour and environmental conditions". The gist here is that health and illness are now more closely linked to behaviour than ever before, and if behaviour is

involved, then one can surely bet that psychology must also carve out a niche for itself there, hence the birth of "Health Psychology.

Matarazzo (1982) defines health Psychology as the

"aggregate of the specific educational, scientific and professional contributions of the discipline of psychology to the promotion and maintenance of health, the prevention and treatment of illness, the identification of etiologic and diagnostic correlates of health, illness and related dysfunction and the analysis and improvement of the health care system and health policy formation."

This definition can be summarised as the use of psychology in health, illness, the health policy formation and health care delivery system.

The psychologist's involvement in health include: (i) a commitment to keeping the populace healthy by promoting attitudes which are consistent with prevention of illness; (ii) provision of techniques that could be utilised to change the individual's behaviour implicated in chronic diseases; (iii) utilise psychological skills to alleviate pain, reduce anxiety, improve compliance with medical advice/regimens, as well as empower individuals plan their families to live/cope better with chronic illness; and (iv) to research into and try to provide answers to many questions dealing with health and illness (for example: what are the physiological bases of emotion and how do these relate to health and illness? Do certain behavioural patterns correlate with illness? etc). From the foregoing, it follows that health psychology has significant economic, political and social significance.

Any fertile mind will readily discern a high relevance of Health Psychology to Nigeria. Nigeria with its myriad of perennial and perpetual health problems that has in very recent times culminated in a drop in the life expectancy of Nigerians from 51 years to 49 years (Federal Office of Statistics, 2001). Nigerians just go on working day-in-day-out without any major form of relaxation. In fact, the relaxation of most

people is binge drinking which is also deleterious to health! With the upsurge in the number of HIV-AIDS cases across Africa along with its debilitating effects on all facets of life, Nigeria needs to revamp its health care delivery system. In recent times, chronic diseases have taken their toll among many Nigerians, cancer of all types, diabetes mellitus, cardiovascular diseases, fibroids, vehicular accidents, typhoid, HIV-AIDS, hepatic and renal failures etc are the most cited causes of disease in Nigeria too and, most of these have been linked to stress, cigarette smoking, alcohol abuse, unwise eating, lack of exercise, lack of safe-sex practices, etc.

Health psychology focuses on topics such as 'health behaviour' which are those activities which individuals who believe they are healthy engaged in to prevent disease or to detect it in an asymptomatic stage; 'health protective behaviour', defined as "any behaviour performed by a person regardless of his or her perceived or actual health status, in order to protect, promote or maintain his or her health, whether or not such behaviour is objectively effective toward that end" (Harris and Guten 1979); 'illness behaviour' is described as those activities targeted at defining the state of health of an individual who feels ill, as well as discover suitable remedy; 'stress' and its effect on health; special issues such as coronary heart diseases, cancer, HIV-AIDS, etc. Health psychology, therefore, should be provided a pride of place in the scheme of things, as far as healthcare delivery in Nigeria is concerned.

In Nigeria, a lot of health and healthcare delivery system problems abound. In the first instance, our medicare facilities are in many cases obsolete and in severe shortage – the citadel of medicare practice of yesteryears, have decayed so much. The harsh economic condition has pushed many of our doctors to seek greener pastures abroad. An unconfirmed account has it that Nigeria has up to 30,000 qualified medical practitioners in the USA alone! Apart from facilities, the people themselves are not motivated enough to use the medicare facilities

available. It is either they cannot afford the high cost or, the facilities are so over-crowded and congested that the people no longer trust them to deliver. Most people are therefore pushed into self-medication, patronising patent medicine stores to obtain over-the-counter prescriptions. Some of these pseudo-pharmacists even prescribe and administer medications including injections! Until very recently, nearly all categories of drugs could be purchased over-the-counter in Nigeria.

In addition, studies have reported an increase in drug abuse, alcohol abuse and smoking in Nigeria. With smoking, Nigeria has suddenly become the Mecca for tobacco and manufacturing of cigarettes. Although Asian and African countries are targets for cigarette manufacturers, to my mind, Nigeria is probably the only country where smoking is still so much in vogue – just take a look into the booming tobacco/cigarette business in Nigeria and compare it to what obtains in other countries. One would readily see why we urgently need a positive shift in our tobacco/cigarette policy in Nigeria. The inclusion of psychologists in committees and boards dealing with healthcare delivery system, coupled with appointment of health psychologists into appropriate positions, will go a long way to solving most, if not all, behavioural problems in health and illness. One would like to see our people empowered more, to be better positioned to tackle our harsh ambient environmental conditions, as well as stop the perception of Nigerians as a race that is driven towards self-destruction.

5. SPORT PSYCHOLOGY

This speciality is otherwise referred to as 'Sport and Exercise Psychology'. It has been defined as the scientific study of the psychological factors associated with participation and performance in sport, exercise, and other types of physical activity. The focus of sport psychology are, therefore, two: (a) to utilise psychological principles

and skills in helping athletes achieve optimal mental health as well as improve performance; and (b) to investigate and understand how participation in sport, exercise and physical activity affects psychological development, health and well-being: Albeit, the world of Sports emphasises the former.

Mental toughness has been identified as one key attribute, which an elite athlete must possess in order to achieve success in athletic competitions: other names for this characteristic is 'hardiness' or 'psychological hardiness'. It was Orlick (1990) who identified two psychological separators between 'elite and world-beaters on one hand and, mediocre athletes on the other. He called the two attributes 'commitment' and 'control'. While "commitment" implies an individual's responsibility to excel and achieve the utmost possible, it motivates an individual to deploy all resources at his disposal into achieving a given or specific goal. So, commitment is another name for diligence, tenacity, conscientiousness, etc., all put together. "Control, on the other hand, involves self-control or 'being in charge', where an individual believes and acts as if he has the power to influence the course of events in life or controls his/her attitudes/reactions to life events..." (Makanju, 1996a). Being in control translates into the ability to cope with all situations, as well as being highly motivated, unruffled, alert, etc. An athlete who has control will, therefore, be able to handle/accept arbiters' decisions even when they are apparently unfair; react positively to team-mates, coaches and spectators.

Two other characteristics, which are closely related to commitment and control have been mentioned by Simmonds (1991) and Makanju (1996b); these are 'challenge' and 'confidence', respectively. Challenge is the willingness to accept or tolerate change, or, the acceptance of the fact that changes do occur and, are necessary for growth and development. Confidence is the belief that an individual has in his/her ability to achieve specific goals (that, certain achievements are not

beyond one's capabilities). Confidence and success are reciprocal: the experience of successful outcomes precipitates confidence in one's ability and a confident athlete will be more success-prone than one who lacks confidence. Commitment, control, challenge and confidence have been tagged the "four C's" of mental toughness or psychological hardiness. According to Makanju (1996b), these attributes are those that differentiate "two hypothetical athletes with identical physical capacity and technical preparation, where one becomes an Olympic champion and the other, just a local star or mediocre athlete: the one that becomes a world champion exhibiting significantly more mental or psychological toughness".

While coaches, trainers and other technical staff minister to the needs of an athlete in terms of physical fitness, skills and techniques, the sport psychologist focuses on mental preparation of athletes, all in an effort to achieve optimal performance, sports psychology professionals provide a variety of services depending on their professional training but, these usually include (i) educating athletes/coaches/administrators about the role of psychological factors in sport, exercise and physical activity (e.g., exercise adherence, leadership, team cohesion, communication, programme development and evaluation, etc.); (ii) teaching athletes specific mental, behavioural, psychological and emotional control skills that are a must for success in sports, exercise and physical activity context as well as in the prevention of injury and early recovery if injured (e.g. mental training/rehearsal – attention, thoughts, imagery, relaxation breathing, self-talk, concentration, athlete enhancement, etc.)

Since the late 1970's, sport psychology has warmed itself into reckoning among athletes, coaches, administrators and other concerned individuals: It is no wonder then that a growing number of elite, amateur and professional athletes now work-out with sports psychologist if they can afford it, or, working with team psychologist). Such sport psychology

professionals in ways as already discussed. Since 1985, Nigeria has toyed with the idea of attaching sport psychology professionals to teams but, I dare declare that these efforts are grossly inadequate and usually misdirected or misinformed: this will be tackled later on in the course of this lecture.

Suffice it to mention, however, that if there is any country in the world, which urgently requires the services of sport psychologist, Nigeria will surely be the one. Apart from the ubiquitous problems associated with sports performances all over the world, like losing focus during competition, lacking in confidence during games, choking during important sporting engagements, etc. There are lots of problems associated with Nigerian teams which beg for the attention of sport psychology professionals. For example - conniving, back-biting, rumor-mongering, etc., in our teams; lack of patriotism (just check out the number of our elite athletes dumping Nigeria through changing of nationality or, the rate at which our athletes always fight over money at the expense of success!); introduction of quota-system into team selection; shoddy, late and inadequate preparations for competitions; lack of essential nutritional and welfare support for athletes, etc. One can go on cataloguing the ills that pervade our sports scene and which have rendered us under-achievers in the field of sports, despite our God-given resources (compare our performances in most sports with other African countries like Ethiopia, Mozambique, Kenya, Uganda, Tanzania, etc.). Sport psychology may not be able to solve all the problems associated with our sports developments and performance, but it surely has the capacity to inject new ideas, skills and attitudes that can ultimately guarantee success and world recognition.

6. FORENSIC PSYCHOLOGY

Makanju (1996c) noted that there were many recorded incidences of miscarriage of justice. For example, Ellis, Davies and Shepherd (1977)

documented the case of a man named Adolph Beck, who in 1896 was charged to court and eventually convicted of defrauding some women. Ten different women testified against him and identified him as a fraudster who presented himself to them as an aristocrat, and, under the pretext of requiring their jewelries to buy new ones for them in the correct sizes, made away with their properties. Some of his accusers also identified him as one John Smith who had some twenty years earlier, been convicted of similar offences – despite Adolph Beck's being able to prove that he was then in South America, he was eventually convicted and sentenced to seven years imprisonment with hard labour.

Beck served five years of his sentence before he was paroled. He only spent three years out of jail before he was re-arraigned this time for defrauding five other women. Beck was found guilty of the charges against him and, was awaiting sentencing when mother luck smiled on him. The actual John Smith was apprehended for defrauding many women of their jewelry. The five women who had earlier fingered Beck as the culprit, identified Smith as the one who defrauded them. Eventually the court was able to ascertain that John Smith was actually responsible for the crime for which Beck had earlier been jailed for seven years!

Before you start to think that the above true story could only have happened in the nineteenth century. How about this, that happened roughly thirty years ago in 1973.

"George Ince was charged with a number of offences, including the murder of a woman and the attempted murder of her husband and daughter. The evidence for these allegations was largely based upon the eyewitness testimony of the survivors and others who had seen two men in the vicinity of the house where the crimes took place either before or after the murder. Witnesses selected a photograph of Ince from among several shown to them by police. Following his arrest, Ince was placed in a number of identity parades from which, he was picked out by same, but not all of the witnesses. Happily, Ince

was found not guilty, following alibi evidence presented during the second of his trials. Eventually, the men who actually carried out the crimes were apprehended and convicted. One again eyewitness testimony was found to be seriously inaccurate" (Ellis, et al, 1977 – p. 220).

Psychology has always claimed one principle: That perception is not simply a direct interpretation of sensory events but a process that is mediated by internal psychological factors like expectations, desires and intentions. This might be one of the problems with eyewitness accounts. To illustrate this vividly, let us invoke the 'dilemma of the three basins' (Miller, 1962). We start off with three basins containing water at different temperatures – one cold, one luke-warm (tepid) and, the last one, hot. Put one hand in the basin containing hot water (not hot enough to scold the hand) and the other inside the cold-water basin. The ambient temperatures in the two basins will be registered by the hands, respectively, one feeling hot while the other feels cold. If the hands are left in the two basins over time, the differential temperature being experienced by the two hands will disappear – the hands would have become accustomed to their environment. Now remove the hands from the two basins and dip them simultaneously into the basin containing tepid water. You will experience two different temperatures at once, one hand feeling cold (the one from the hot-water basin) while the other will feel warm (the hand from the cold-water basin): The same environment (or event) has evoked two different perceptual outcomes at the same time. This simple demonstration is a result of sensory adaptation and serves to show that, perception is not just simply a direct interpretation of sensory events. In other words, apparent qualities ascribed to objects/events are not in the objects/events, but in the minds of those who perceive them.

The above experiment is an attestation to the fact that perception is not necessarily objective but subjective. Same event could have as many different interpretations as the number of individuals observing them.

Psychologists have come to accept that phenomena such as 'perceptual expectancy', 'unconscious inference', etc., operate in most cases to make our perception subjective - and, therefore, any account or testimony based on individual perceptions cannot be as veridical as say, a video recording of events since the emotions, wishes, expectations, etc., of the perceiver are most likely to contaminate perception of such. All these and more come to play in the applied area of psychology called forensic psychology.

Forensic Psychology, therefore, is the application of psychological knowledge, principles and methods of investigation to legal issues. It focuses on crime detection, translation of oral and material evidence into substantive facts, the psychology of decision-making – particularly group decision-making as injuries, credibility of witnesses, the role of human memory, the reliability of eyewitness testimonies, etc., The NPA (1989) describes it as

"that branch of forensic science that seeks meaning out of material and oral evidence by relating them to other sources or backgrounds to the crime of interest".

It is, therefore, interested in answering such questions as 'what are the social and dynamic forces in a given crime? What is the personality of the individual(s) involved in a particular crime or, in crimes generally, etc.? Another name for this applied area is 'Legal Psychology', which is preferred by those who see the name forensic psychology as being too tilted towards 'clinical psychology'.

Forensic psychology definitely has a role to play in a country where crime detection/investigation is still at the 'primitive' stage. Just look around and you will discover 'tons and tons' of unsolved criminal cases ranging from murder, arson, fraud, to armed robbery, etc. Perhaps the mother of all crimes is the yet unresolved murder of Nigeria's former

Minister of Justice and Attorney-General in December, 2002. It is not only the police that can benefit from Forensic psychology, our entire justice system will become more efficient if they have the benefit of working alongside Forensic Psychologists.

7. MILITARY PSYCHOLOGY

This is the involvement of psychology in the special environment that military life invariably creates. The branch of psychology came into being between the 1st and 2nd World Wars and has become an applied area that is vigorously researched. The focus of psychology in military life includes areas such as personnel selection, stress, human factor engineering, manpower resources, human relations, morale, training, information and propaganda, etc.

The stress put on military personnel and their families by frequent separations as soldiers train and fight in wars is, to say the least enormous, and, usually contribute to abnormal behaviour and aberrant occurrences. For example, the world press recently published accounts of unusual incidences around soldiers involved in the USA's war on terror in Iraq and Afghanistan: Four American soldiers at Fort Bragg killed their wives in June/July 2002. Three of the cases involved special operations soldiers returning from Afghanistan. Two of these soldiers committed suicide before they could face trial while the other two were charged with murder. Yet another case involved a special forces Major, who was killed, with his wife charged with murder. Other stress related incidences during wartime periods involved soldiers committing suicide; of recent, 21 USA troops in Iraq committed suicide while another 300-400 troops were evacuated from Iraq for stress-related problems (*Nigerian Tribune*, February 2003).

These above-mentioned stories point to the fact that soldiers, especially those at war fronts, require a lot of psychological support in order for

them to maintain their sanity and at the same time be effective in their primary assignment! It is not only during war periods that soldiers need psychological assistance – this is needed at all times. In fact, it is better to be psychologically prepared, for such incidences as wars before they happen. Soldiers in the Western World benefit a lot from such application of psychological principles to life in the military and, they still demonstrate aberrational behaviour such as mentioned earlier. What then do we expect from our soldiers who are probably thrown into wars without psychological support? Unfortunately, Nigeria's willingness to contribute soldiers to peace keeping forces all over the world is near legendary. Such soldiers come back home as changed individuals and, their families and the society at large are made to pay the heavy price of being on the receiving end of their maladjusted behaviour and misdemeanors. It is high time that Nigeria increased the involvement of psychology professionals in its operations and, save many of her citizens the agony of inadequate psychological preparation of our soldiers.

8. TRAFFIC PSYCHOLOGY

The Nigerian Punch Newspaper (Monday, April 5, 2004) quoted the Kwara Sector Commander of the Federal Road Safety Corps (FRSC), Mr. Peters Osawe as saying

"Injuries from road accidents account for about 2.2% of global mortality rate and road traffic injuries, which used to be ninth position on the list of causes of death in the world, has now shot up to third position, surpassing HIV/AIDS"

This statement, as contestable as it is, is a pointer to the growing menace of traffic accidents. Traffic psychology grew out of the need to understand such things as causes of accidents, both human and constructional, and how they can be prevented; aberrational behaviour

on the roads – for example 'road-rage', which has led to violent deaths; moderating/modulating factors on the behaviour of operators such as pilots, drivers, ship captains, etc. It is, therefore, the application of psychological knowledge and principles to movement of people through various means of transportation: covered here are road transportation of all types as well as travelling by water and air.

The primary factor is the promotion and provision of easy, comfortable, efficient and in particular safe means of travelling – with emphasis on the behaviour of those operating the various means of transportation as well as those utilising such means. In cities like London, New-York, Tokyo, etc. the problems of transporting millions of commuters everyday, especially during 'rush-hours' are best imagined than encountered. Transportation planners and managers have had to fall back on psychology to help out in their onerous tasks.

In Nigeria, the need for Traffic (Transport) Psychology is probably more expedient especially in the way we use (or is it misuse?) road transportation facilities. It is in this country that thousands die every year in horrendous 'road accidents'. Nigerians drive on roads at reckless/break-neck speeds much less the accompanying disregard to highway codes (as if they never existed in Nigeria). Our behaviour on roads has been described as one portraying that 'lives have replacement'. We drive as if we do not believe that other road users have rights, and if they do, our own wishes are superior to their rights! Considers this small community called Unilag: the way our children/students drive boggles the mind. This has resulted in untimely and unnecessary waste of lives – many very recent cases are still fresh in our minds. In fact, I was just going to gloss over this applied field in this lecture until some of our students (2 boys and 2 girls) decided to try and turn the entrance to my quarters to their graves – thank to providence that did not allow this to happen. The car smashed (obviously at high speed) into the culvert in front of my house,

somersaulted and landed on its roof in the gutters and partly blocked my entrance. The occupants were pulled out of the wreckage and sent to the hospital. All these happened in the early hours of Wednesday, 31st of March, 2004 (just past midnight) while I was busy writing this lecture!

The way Nigerians operate/interact with mechanical means of transportation needs to be studied. We tend to think that accidents cannot happen to us, but to others. We are always willing to take risks – just take a look at death-traps that some call cars/buses that still ply our roads (some as commuter buses!) and you will understand what I am talking about: sometimes I cannot but wonder how people in their senses can be persuaded to board such vehicles. The fact is that Nigerians, do not even need to be cajoled into entering such contraptions, they do it with glee. Nigeria's contribution to the world's history of commuting – the 'Okada' and their operators – are a phenomenon that one can write books about. Or is it our complete negligence of means of transportation that 'mother nature' has endowed us with – I mean travelling over water. Maybe we are innately afraid of water and even so, it makes it more interesting to study. All the aforementioned and many more, make a very urgent case for our transport planners to imbibe transport psychology.

9. ENVIRONMENTAL PSYCHOLOGY

The whole world has over the last two decades been more sensitised to environmental issues. Perhaps the most threatening issue has been the depletion of the ozone layer resulting in what is known as the 'green house effect' and, global warming. Other very serious environmental issues include deforestation; desertification; pollution of the air, oceans, land, etc. All these environmental issues portend grievous harm to the continued existence of man on earth. The industrialised western nations are probably more to blame for the

degradation of our environment and, to be fair to them, they also spearheaded the needed fight against further pollution of our environs, as well as putting in place where possible, intervention programmes to correct some of these anomalies.

The applied area of psychology that deals with environmental issues is as expected, Environmental Psychology. It has been defined as an area of knowledge that draws upon methods, information, theories, etc., from psychology and other disciplines, using them to tackle issues involving the complex and intricate interactions existing between people and their environments. It is as implied from above, an interdisciplinary fields of psychology which also draws knowledge from a variety of other disciplines such as, Architecture, Sociology, Anthropology, Ethology, Political Science, and Ecology, apart from core psychology areas like Attitude change, Motivation, Territorial Behaviour, Personal space, etc. Of interest to the environmental psychologists are sensitive topics relating to issues such as appropriate use of space; rural/urban migration; overcrowding and related concomitants; environmental/human friendly design of houses/cities, etc.

Nigeria as we know it, is a country where some areas are overcrowded leaving a greater percentage of the land unpopulated or, sparsely populated. This urban-drift has created a lot of overcrowding related problems in the cities; perhaps the most urgent is pollution. Our cities and towns are filthy and can best be described as eye-sores (Lagos has been described as one of the dirtiest cities in the world, while Port-Harcourt is said to have metamorphosed from 'Garden City' to 'Garbage City'); many buildings in which we live are not suitable for our tropical climate; sanitation problems even inside our dwellings, abound etc. The rural areas are generally cleaner, but are also not free from the pollutants affecting the urban areas. Out of all these pressing problems, the problem of the misuse and careless disposal of polythene deserve a mention. Since we have discarded the age-long traditional

methods of packaging and switched over to the use of polythene, we also need to update our knowledge about this pretty nigh indestructible material. Presently, there is no specially designed method of disposing off polythene wrappers. Therefore, our drainage system, rivers, streams are mostly clogged with badly disposed off polythene. Our soil has not fared better, for, any attempt at digging our top soil will reveal buried polythene materials! Action is required urgently from concerned authorities to combat the menace of polythene and other pollutions before they wreak untold havoc.

Environmental psychology has a lot to offer planners and managers of our physical environment. Most of the problems mentioned above are directly related to our attitudes toward living. Environmental psychology can help out in changing our attitudes to the environment for the better. It can also help in researching into behavioural aspects of use of space; urban planning including housing, road construction, sanitation, etc. One would not be surprised if in Nigeria at present, psychologists are not involved in ministries and parastatals in charge of environmental issues. The beginning of wisdom here, will be the involvement of environmental psychologists as is done in those foreign cultures that we admire and strive to emulate. Perhaps the core issue for environmental psychology is how to achieve a consensus among a majority of people about effective use of resources while minimising discomfort, and at the same time be concerned about future generation use of the same resources (the conquest of the 'ld' in the service of the 'Superego').

10. ANIMAL PSYCHOLOGY

Though this really is not an applied area of psychology as mentioned earlier, it nonetheless deserves a special mention because of its contributions to the understanding of human behaviour. Psychologists usually turn to animals, to perform experiments that would be unethical

to perform directly on human beings. Animals also, tend to be more genetically similar to members of their species than do human beings. This, therefore, makes the results of experiments carried out on them to be more admissible than those with humans, which might just be indicative of individual differences. Also, if one really wants to understand any behavioural phenomenon, it is more logical to start off with simple aspects as might be seen with animals before proceeding to complex ones. For all these reasons mentioned above and more, psychologists use animals in their pursuit of understanding behaviour and, many human problems have been solved from the results of such animal experiments.

Two examples here will suffice. Navigational problems encountered by blind human beings have been made simpler through the study of echolocation in bats. Although bats are nocturnal animals, it was thought that their eyes are really not used for their movements in the dark. So, to find out how bats fly about in the dark without flying into objects, the eyes of bats were taped to prevent them from functioning, bats were able to fly about unhindered. Next, the mouths of bats were strapped shut to prevent any emission of sound: bats were unable to fly about without bumping into objects both big and small. If the mouth is involved maybe the ears are also contributors; the ears of bats were therefore plugged to prevent hearing: once again the flight of bats were disrupted, as they were unable to avoid flying into objects. Bingo! the conclusion therefore, was that the mouth and ears of bats are used as navigational aids in their nocturnal flights. This principle of echolocation is now used in many human devices including walking aids for blind people.

A more hilarious example actually involved an American President – Calvin Coolidge. Mr. President and his wife were being shown around an experimental farm in the USA and somehow, the President went in one direction and the First Lady in another. When she came to the chicken yard, she observed that a rooster was very active at mating,

actually mating with many partners. The First Lady's interest was aroused and she inquired how often such mating occurs. The reply was that with the particular rooster, such mating occurs dozens of times each day. Mrs. Coolidge then asked if the President had reached the chicken yard yet. When the answer was in the negative, she instructed that Mr. President when he comes by, must be told about the rooster's agility. When Mr. President eventually came to the chicken yard and was told about the sexual prowess of the rooster, he asked 'with the same hen every time'? He got the reply 'oh no, Mr. President, a different hen every time'. President Coolidge then said "Tell that to Mrs. Coolidge". That was how the 'Coolidge effect' came into Psychology: that male animals who have just mated and whose sexual urges have simmered down, will copulate again if a new, receptive sexual partner is made available - a phenomenon which is not restricted to sexual behaviour alone.

We human beings have a lot to learn from animals. Many of these wonderful creatures have enviable qualities and characteristics, which when fully understood can solve some of our perennial problems. Man has gained a lot from birds in the design of aeroplanes; from aquatic animals especially the Mammals in the construction of submarines; from social animals in terms of communal living and division of labour; from animal territorial and reproductive behaviour in terms of population and density control etc. Many theories, principles and methods in most applied areas of psychology have been derived from animal studies.

CONCLUSION I

One can go on enumerating applied areas of psychology and the benefits derivable from them. Areas such as Community Psychology, Ecological psychology, Political Psychology, Consumer Psychology, Educational Psychology, Ergonomics, etc apparently from their names

will positively contribute to our lives in no small way. The USA has realised the import of psychology in the lives of its citizenry for a long period of time and, this can be seen in the number of compulsory psychology courses University students are made to offer as well as the rank psychology holds among professions. Psychology is one of the best-paid and patronised (by both the public and private sectors) professions in the USA. The influence of the American Psychological Association (APA) in education, health, military, sports, etc., and even in the polity and policy formulation, is gargantuan. In fact no individual can hope to become the president of the USA if the APA has genuine negative things to say about such a candidate. Presidential candidates are therefore always willing to voluntarily give the APA opportunity to interview them on a number of important national as well as personality issues.

Also, in the USA (as well as in most Western societies), psychology as a discipline is accorded the privileges of a full-fledged and respected profession, with a central body empowered by law to regulate the practice of the profession and register individuals who are qualified to be called psychologists. This allows a body recognised by law to monitor how and who practices psychology. Such a body is urgently needed in Nigeria in order to minimise quacks and unqualified individuals who parade themselves as professionals. Furthermore, if a charter is given to psychology as a profession, the proliferation of bodies, competing for attention and patronage, will be a thing of the past. This will then leave the cost clear for one umbrella body to work towards popularising and bringing in patronage to the profession as well as ensuring the planting of necessary and required applied branches of psychology in our country.

The establishment of a regulatory body for psychology will also help boost enrolment figures of intending university students applying for psychology. Up till now, only very few students apply to read

psychology. Many who are presently reading psychology, only opted to read what is available rather than miss out on admission, when their first choice (and even sometime, the second choice) is unavailable. There is plenty of opportunities in psychology and today we can boast of many of our former students occupying enviable positions in many fields of endeavours – we are not only Lecturers and Professors, but also Ambassadors (in fact the immediate past Permanent Secretary of the Foreign Affairs Ministry, was one of the pioneer graduates of the Unilag Department of Psychology), we have had 'Generals' and other officers in the armed forces, customs, immigration services, police, prison-officers, etc., much less of 'Directors/Managers' in the ministries, parastatals, financial institutions; consultants, industrialist, etc., are also not left out. My advice to intending university students and their parents is to give psychology a chance. It is a noble profession and, those who study psychology stand a better chance of gainful employment than those who study some other courses, for which prospective students usually queue every admission year.

MY MODEST CONTRIBUTION TO PSYCHOLOGICAL KNOWLEDGE

IN THE BEGINNING

I never set out to read psychology in the university. I came into the University of Lagos to read for a degree in the Faculty of Science, having studied and passed my GCE 'A' level/Higher School Certificate Examinations, in Biology, Chemistry and Geography. In those days, psychology was a unit in the Faculty of Science and, was a general/subsidiary course for science students. One thing led to the other and many students in the Faculty of Science (especially, those studying Chemistry) decided to change to psychology, especially when psychology was being removed from the Science to the Social Sciences Faculty. The rest is history.

PERCEPTUAL DEVELOPMENT

My B.Sc Honours thesis was supervised by Prof. A. C. Mundy-Castle and it was in the area of perceptual skills/developmental psychology. I wrote on 'Spatial Conservation: An Investigation on co-ordination of perspectives as determined by socio-economic levels of some Nigerian school children'. Little did I realise that my choice of topic will later in life decide where I would work. Hudson (1960) was the first to experimentally bring to the notice of psychologists, the idea that difficulties in the interpretation of pictorial material existed in Africa (informal reports of such difficulties had been mentioned by travellers - Kidd, 1904; Fraser, 1932). Hudson made use of the 'Hunting Scene Test' as shown in Figure 1, which consisted of six outline drawings, each picture similarly structured to contain a man

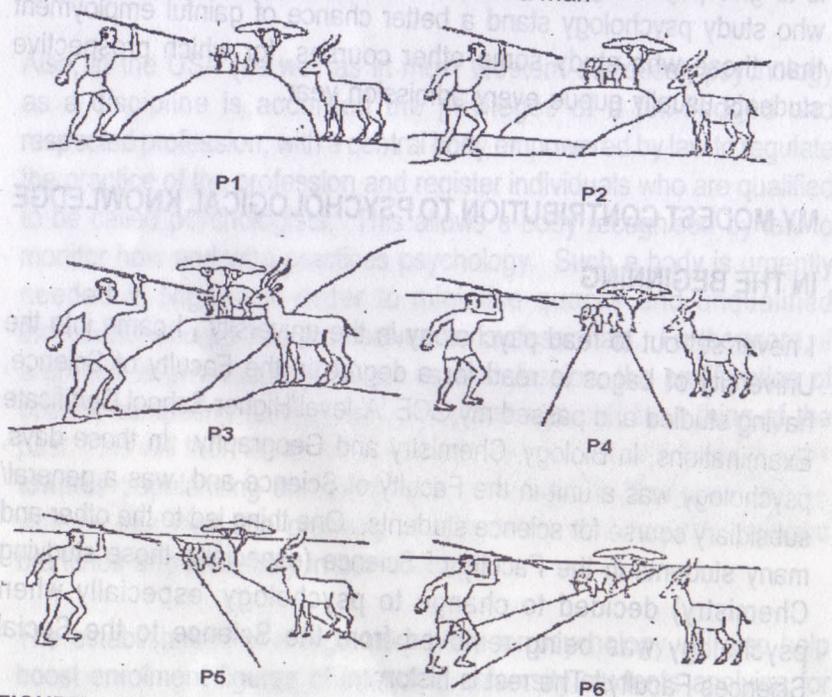


FIGURE 1: HUDSON'S 'HUNTING SCENE' DRAWING 1 - 6

trying to throw a spear (assegai), at an elephant, an antelope, a tree and, either a hill(s) or a road. Hudson showed that African subjects find it difficult to interpret certain modes of the depicted scenes. The responses of subjects to a series of cross checking questions using the 'hunting scene' pictures were taken to be indicative of two-dimensional or three-dimensional mode of pictorial perception. Other researches in Hudson's wake made use of his hunting-scene drawings and, have all been upheld with only slight variations to Hudson's original findings (Mundy-Castle and Nelson, 1962; Hudson, 1962; Mundy-Castle, 1966; Dawson, 1967; Deregowski 1968, etc.). In fact, the viewing of pictures brings about a sort of dual awareness; the pictures simultaneously appear to be three-dimensional and two-dimensional (the paper on which they are made is flat, containing no depth, yet one is expected to perceive the third dimension out of such pictures).

Meanwhile, teachers of Chemistry of the University of Lagos discovered that most of their students including the very brilliant ones, could not handle the perception of the third dimension in very complex drawings of chemical bonds and, this had led to a lot of failures in organic chemistry. In trying to find solutions to this problem, the Unilag Department of Psychology was contacted to take part in some tailor-made research projects at the University of East Anglia, Norwich - England. The department of Psychology nominated me based on my B.Sc. Honours thesis research and, invited me to take up a Graduate Assistanship position in the department, with the added incentive of studying for higher degrees. Unfortunately, the University of East Anglia where I was supposed to be based did not offer a degree in Psychology so, I had to settle for the University of Aberdeen, Scotland where one of the consultants to the East Anglia projects and a world-renowned psychologist Prof J. B. Deregowski was based. I was later to write my 'magisterial thesis' at the University of Aberdeen on "Comparative study of Comprehension of Pictures in Two Nigerian Schools". Interestingly enough, my 'Ph.D. thesis' was on "The effect of training on pictorial depth perception among Nigeria Primary School Children".

In the course of my research into the perception of pictures, I criticised certain aspects of Hudson's test, especially, the content of the pictures in terms of familiarity as well as the introduction of 'action' into the picture (a man trying to throw an assegai). Taking these into account, a new test was designed (Street scene picture were used to test Nigerian School Children (Makanju 1976, 1984); see figure 2.

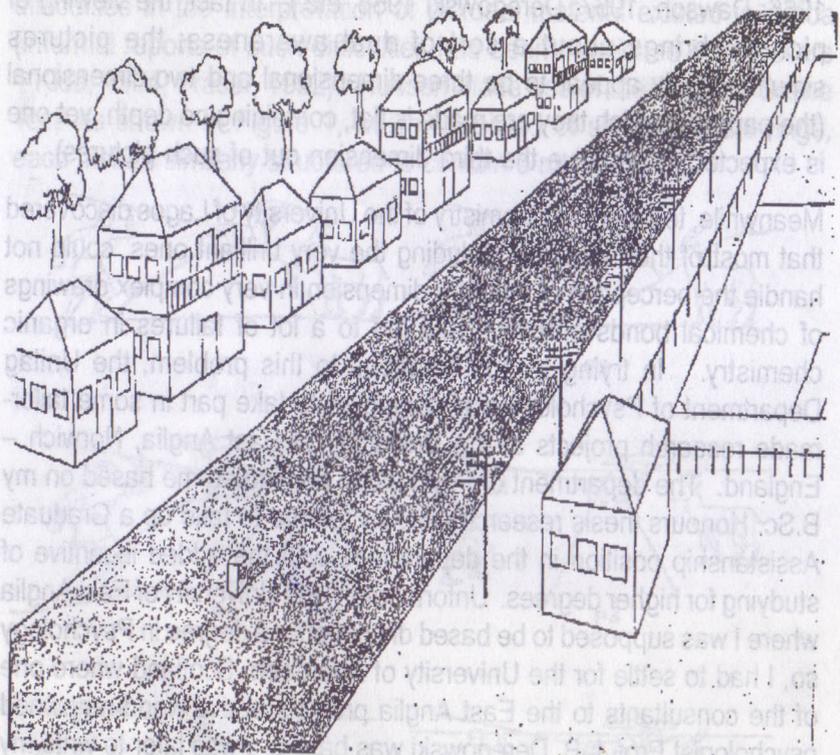


FIGURE 2: MAKANJU'S STREET SCENE DRAWING

In this 'street scene' picture, five bungalows and three one-storey houses were drawn in a row with some trees behind the houses, a straight road, some electric poles, a 20 litre kerosene tin lying in the middle of the road, etc. Pictorial cues such as overlap, relative size, perspective and, texture were employed in creating the picture. Subjects were required to identify the objects depicted in the street scene picture. The subjects were then invited to say how many 'kerosene tins' ('boxes', 'cubes', etc., depending on what they called the object lying in the middle of the road) they thought could go into a particular house pointed out to them and if the house could be filled completely with the objects. The subjects responded in a random order to the eight houses in a single row. After an interval, the subjects were shown the pictures (control pictures), which were actually separate drawings of the eight houses mentioned above. In each of the eight pictures, the house were drawn completely (that is, obscured or overlapped parts in the street-scene were shown), with the drawing of a 20 litre kerosene tin standing by them. (See Figure 3). The kerosene tin and all the houses were exactly of the same size and orientation as their counterparts in the street-scene drawing. The responses of subjects to both the street-scene and control pictures were used to calculate their scores.



FIGURE 3: CONTROL DRAWINGS FOR THE STREET SCENE DRAWING

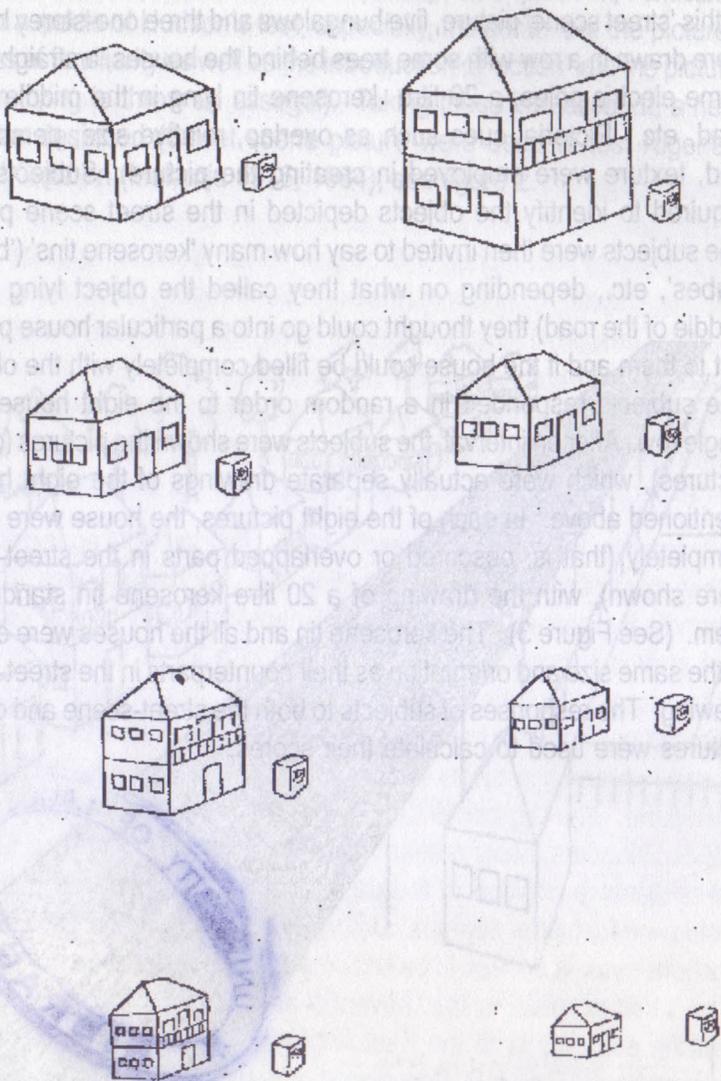


FIGURE 3: CONTROL DRAWINGS FOR THE STREET SCENE DRAWING

Makanju (1979, 1981) studied a phenomenon known as 'implicit shape constancy', which was defined by Makanju (1979) as a pictorial constancy judgment where the elements affecting such a judgment are

in the form of pictorial cues. A good example is given by Gregory (1966), where a man carrying a basketful of bottles is looking down at a broken bottle, which is most likely to have fallen from his basket. An irregularly-drawn shape surrounding the broken bottle is seen as puddle left by the fluid-contents of the broken bottle. An identical shape as the puddle is also depicted in another drawing; in this case, the shape is meaningless since it has no context and one cannot say how it lies in space (that is, is it upright or flat?). The true shape of a depicted figure is thus implied by its pictorial surroundings. Implicit shape effects were discovered to be more observable among children from higher socio-economic groups and it was thought that this was probably due to the existence of a link between implicit shape constancy and perception of pictorial depth.

Makanju (1991) directly attempted training of disadvantaged children on the perception of depicted depth, based on the accepted fact that pictorial cues to depth are learned indicators and that pictorial depth perception should, therefore, be trainable. In this study, utilising findings from Makanju (1976, 1979, 1981, 1984) in designing training materials based on some identified contributory factors to three-dimensional perception of depicted scenes, it was demonstrated that children could be taught how to interpret depth in pictures. After all, pictorial depth cues such as, overlap, perspective, texture, shadow, size, figural elevation, and foreshortening were largely worked out by artists of the Italian Renaissance in the 15th century A.D., notably Leonardo da Vinci and Della Francesca. Prior to the renaissance, realistic 'photographic' portrayal of depth in pictures was not achieved anywhere (Edgerton, 1980).

A number of human endeavours require the perception of depth in pictures beyond what one will need to perceive and understand in most common-place pictorial displays. In the field of technology and related professions, the ability to perceive depth in two-dimensional

displays is of great importance (e.g., in Chemistry, Physics, Pharmaceutical Chemistry, Architecture, Geography, Geology, Surveying and all branches of Engineering, etc.). Even other related professions like aircraft piloting, ship navigating, soldiering, etc., are not left out of the reliance on appropriate and correct interpretation of multi-dimensional relations in pictures and drawings. To prepare our children for the future, some of the findings mentioned above and many more developmental and cognitive factors have been utilised in the production of a textbook in six volumes involving perceptual-cognitive functioning by Olunloyo, Oguntuashe and Makanju (2000). The teachers of children, who for no fault of theirs may be pictorially unsophisticated, are also not left out, Olunloyo, Makanju and Oguntuashe (2002), have also produced a teachers' guide to the six volumes.

SPORTS AND SPORT PSYCHOLOGY

I am a sportsman. I participated in sports especially Track and Field Athletics up to the International level. My specialties were the 100 metres and Long Jump, while Triple Jump, 110 metres Hurdles, 200 metres and High Jump were my subsidiary events. Athletics apart, I had at one time or the other dabbled into football and Tennis. The only game I play now is Squash Rackets. At the end of my brief athletic career, I found myself in sports administration. I consider myself quite experienced in the administration of sports, having served at the University, State, National and, International levels in various capacities. I have also served in many associations including, the Nigeria Table Tennis Association, Nigeria Volleyball, Athletics Federation of Nigeria, Nigeria Football Association, Nigeria University Games Association, etc. Sports has provided opportunities for me to travel to the extent that I have visited all the continents of the world.

As a Psychologist, it is therefore natural for me to want to introduce my profession into my passion – sports. Two men introduced me to sports

psychology, the Late Ayikwe, Bulley (a Ghanaian and one time Ag. Head of Unilag's Department of Psychology) and, Isaac Akioye (one time National Director-General of Sports). Some individuals have claimed that they introduced sports psychology into the Nigerian sports scene. This is my opportunity and one that I have waited long enough for, to counter such claims with facts. It was during the 1977/78 session that through my two mentors – Bulley and Akioye – that the University of Lagos authority was persuaded to sponsor me to the 3rd All-Africa Games and Commonwealth Games held in Algiers – Algeria, and, Edmonton – Canada respectively in the summer of 1978. The idea, was for me to gather information and data on the area of sport psychology under the supervision of Mr. Akioye. I was only able to accomplish half of my goal as the Nigerian contingent was barred from proceeding to Canada from Algeria after had Nigeria decided to boycott the Commonwealth Games in protest against apartheid rule in South-Africa and the then Southern Rhodesia (Now Zimbabwe). The exit of Akioye from the National Sports Commission in 1980 put paid to our plans.

On my own part, I continued in Sports Psychology and I was the unofficial psychologists to elite Nigerian athletes, especially in the National Football Team between 1976 and 1983. At the 1982 annual conference of the then Nigerian Psychological Society (now Nigerian Psychological Association), I made a case for Sport Psychology in Nigeria – see Makanju (1982). I sponsored myself to the Olympic Games of 1984 in Los Angeles, a game which chose as one of its highlights, the showcasing of Sport Psychology. I was fortunate to meet the then Executive Secretary of the defunct National Sports Commission – Col. Mahmudu Mahraja (retired) – who was then a Captain. He was surprised at the fact that a Nigerian could come all the way solely for Sports Psychology sake. I was able to fill-in the blanks for him in terms of what he had been hearing about Sports Psychology in Los Angeles. Getting back to Nigeria, the Executive Secretary convinced his Board to formally introduce Sports Psychology into

National Associations. The NSC board sent one of its senior officials – Mr. E. A. Oniyide to me, to suggest names of Psychologists who were subsequently appointed into fifteen of the National Sports Associations. This was the birth of the first Sports Psychology body in Nigeria – Psychologists in National Sports Associations (PINSA) - a body, which should be credited with its pioneering role in Nigerian Sport Psychology. Makanju (1992) deals with problems, issues and solutions in Nigerian Sport Psychology. However, I will like to emphasise here that many of the *dramatis personae* mentioned here, are still alive, to deny or confirm my account of events.

Back to my involvement with the national teams as a psychologist, I have been involved with the following football teams between 1985 and 1990:

- Under 17 (Golden Eaglets) of the 1st FIFA tournament,; China 1985
- Under 17 of the 2nd FIFA Tournament,; Canada 1987
- Under 20 (Flying Eagles) of the FIFA Championship, Chile 1987
- Super Eagles of the African Cup of Nations, Tunisia 1988
- Under 17 team of the FIFA Championship, Scotland 1989
- Super Eagles of the African Cup of Nations, Algeria 1990

I must state here that 'politics in high places' saw me voluntarily withdraw my services from the national teams. Nonetheless, I have been involved in the training of athletes/coaches/medical personnel to the Olympic Games (1988-200), All-Africa Games (1991-2003), etc. (Please see Makanju 2002, 2003). Suffice it to mention here that Makanju (1996d) is devoted to the special issue of elite female athletes, the need to understand them and the peculiar problems they face.

In the area of sports, my involvement was not limited to consulting as a sports psychologist alone. Makanju and Adebawo (1988) studied skill acquisition in sports among primary school children and concluded

that both live and symbolic modelling are efficacious tools for the acquisition of sports skills. The 'live' group, however, performed significantly better than the 'symbolic' group. This study has, therefore, made a case for continued use of both coaching by experts and use of audio-visual methods in training athletes. Makanju (1993a&b) attempted to document and appraise the state of development in Nigeria sports, as well as review the activities and achievements of various national sports associations: a needed exercise to enable us chart the right course for sports development in Nigeria.

DRUGS AND BEHAVIOUR

Psychopharmacology is the study of drugs, specifically with a focus on their behavioural or psychological effects. It has been described as a hybrid area benefiting from contributions of biology, physiology, biochemistry, medicine and psychology. Makanju (1983a) in what has now become a standard reference article in the field, investigated the behavioural and anti-convulsant effects of an aqueous extract from the roots of a tropical tree known as *Clausena anisata* (WILLD). The extract was discovered to possess up to sixty percent protection effect against convulsion induced with the ingestion of chemicals. The study was widely acclaimed and accepted to the extent that the author was invited to attend and present his findings to the 1983 conference of the American Society for Pharmaceutics and Experimental Therapeutics in Philadelphia – USA. Makanju (1983b, 1986) also investigated the comparative effects of some autonomic drugs on isolated tissues (*rectum*) of the Lizard (*Agama agama*) and the Tortoise (*Kinixys Croca*), as well as the effect of temperature variation on such muscular responses to the neurotransmitter – acetylcholine and noradrenaline. Findings of these studies have implications for how the Sympathetic and Parasympathetic divisions of the Autonomic Nervous system function.



Makanju (1993d) in a revised version of an article presented at the First Biennial National Conference on Alcohol, Tobacco and other Drugs in Nigeria (Jos, 24th – 27th June, 1991), discussed the issue of drugs in sports. Enumerating the classes and methods of abused substances in sports, as well as psychological factors involved, the paper sounded a note of warning to Nigerian sports administrators that it might just be only a matter of time before Nigerian athletes were caught for doping. This was deduced from the content analysis of athletes' responses given to carefully worded items on a questionnaire: for example, (i) nearly all athletes - respondents in a survey claimed to be aware that some other athletes abuse drugs – such abusers of banned substances were however never identified by name and, were always 'not a close friend' of the respondents; (ii) the perennial emigration of Nigerian athletes to the USA and Europe where they may be exposed to the influence of performance enhancing drugs, which they in turn can introduce to their Nigeria-based counterparts, etc. It was not quite a year after the conference that the first Nigerian to be caught and banned, for using performance enhancing drugs surfaced. Since then, many other Nigerian athletes have followed suit and, the problem seems to be getting out of hand.

It is pertinent to note here, that my work in this area, has been recognised by the United Nations Drug Control Programme (UNDCP) to the extent that in 2000/2001, I was appointed a National Consultant to the body and the publication of a book on our investigation into substance abuse in Nigeria is expected any moment from now.

OTHER WORKS

I have served as a consultant to many organisations over the years. Most of the time, I am usually commissioned to write papers that will bring in psychological theories, methods and applications to bear on major national issues and policies. In all these assignments,

psychology has never failed to deliver, impress and contribute its quota. Many of these commissioned papers have been compiled into a book "Psychology Applied to Human Problems in Nigeria: A book of Readings" and published in 1996. The topics covered at such workshops, conferences and meetings are multifarious and, they touched on such areas as Population Management, Human Rights, International Relations and, Interpersonal Skills Training/Acquisition. Suffice to mention that the submissions made at such fora have gone a long way in making policy formulation and implementation more interesting, more effective and perhaps more humane.

RECOMMENDATIONS

Having discussed some applied areas of psychology, what these areas have to offer in terms of solving our problems in Nigeria, as well as the contributions of the author to the body of psychological knowledge, one feels compelled to make the following recommendations to the Government of Nigeria and other employers of labour.

- (i). That psychology be specifically and formally brought into all facets of life, such as important social institutions like the Police, Armed Forces, Federal Road Safety Corps, Prisons, Immigrations, Customs as well as other ministries and parastatals like Health, Education, Justice, Environment and Physical Planning, Youth and Sports, etc., should be made aware of what they can benefit from psychology and therefore, bring in psychologists into their organisation. It is not just bringing in psychologists, but such professionals must be judiciously employed and deployed, as well as their recommendations appropriately applied;
- (ii). Many of the problems Nigeria and her people face require a change or shift in attitude – our people's attitudes to themselves,

to others, to how they are governed, to the environment, to health, etc., this implies that we must tackle this through education/acclulturation. It is hereby suggested that the Nigerian Educational Research and Development Council (NERDC) be made to find a central place for psychology in the social studies curriculum both at the primary and secondary school levels. Such desirable shift in attitudes concerning, patriotism, safe sex, breast-feeding, environmental-concern, health-consciousness etc. can be subtly inculcated in our children early in life by incorporating those concepts in their curriculum;

(iii). There is, probably a need to also tackle some of the aforementioned problems at the tertiary level. Therefore, a compulsory university-wide course in psychology may be desirable despite the already choked syllabus, which has led to the deletion of some of such courses in the recent past.

(iv). Finally, the Federal Government should as a matter of urgency give a charter to the Nigerian Psychological Association which will then be legally empowered to regulate, and coordinate the practice of psychology in Nigeria. Such a body will be able to ensure that only those individuals with specialised training and appropriate certification can call themselves psychologists. This will be useful in preventing the entry of individuals without the necessary credentials into the practice of psychology. Also, such a body will be able to, from time to time, call the attention of Government to culturally relevant findings and discoveries in psychology that could be employed in making life more abundant for our people.

CONCLUSION II

Over many millennia and according to evolutionary theory, man, through the Darwinian postulation of 'natural selection, had battled many odds, obstacles and catastrophies, and survived them. The so-called "survival of the fittest" has endowed *Homo sapiens* with the cultural, cognitive, physical and physiological prowess to survive. In the course of this lecture, we have been able to show that some of man's behaviour can threaten the survival of the individual if not that of the species. Psychology as a discipline has through its research findings, methodology, theories and, applied areas provided man with additional tools to make survival easy and readily achievable. In fact, psychology has even gone a step further by providing ways and means of helping man to be the best that he can be.

Mr. Vice-Chancellor, Sir, gentlemen of the Press, distinguished ladies and gentlemen, my submission is that psychology as a discipline has come a long way in its short existence. It has been accepted and employed by nations of the first world and, this acceptance on their part, has more than enabled them to widen the distance between them and us in terms of development and potentials. Nigeria and Nigerians must open their minds to the 'gospel' of psychology and provide themselves with the tools to make things better and life more abundant for us all.

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