



**FEDERAL UNIVERSITY OF TECHNOLOGY
MINNA**

**LEVERAGING ADVANCES IN
TRANSPORT DEVELOPMENT:
TO WHERE IS NIGERIA HEADING?**

By

JAIYE JEHOSHAPHAT DUKIYA
BURP, MTech, PhD (RTP, MCILT)
Professor of Urban and Regional Planning

INAUGURAL LECTURE SERIES 65

21ST JUNE, 2018



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This 65th Inaugural Lecture was delivered under
the Distinguished Chairmanship of:

Professor Abdullahi Bala, FSSSN,
Vice-Chancellor
Federal University of Technology, Minna

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ISSN 2550 - 7087

Published by:

University Seminar and Colloquium Committee,
Federal University of Technology, Minna.

21st June, 2018

Design + Print:

Global Links Communications, Nigeria

☎: 08056074844, 07036446818



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PREAMBLE

An inaugural lecture is glorifying as a man or woman getting married and it comes with some trauma as a woman in the labour room who after delivery forget the agony. I am glad today because it is my turn to give the fourth series in the Department of Urban and Regional Planning and being the sixth in the School of Environmental Technology.

Mr. Vice-Chancellor, sir.

As a professor of Urban and Regional Planning (URP) whose research orientation and perspectives have widened to include areas of interest such as Environmental Impact Assessment, Remote Sensing Applications, Transportation Planning and Management, my major area of emphasis is on the application of technology to transportation and this has INFORMED the choice of my topic for today's Inaugural Lecture titled: ***Leveraging Advances in Transport Development: To Where is Nigeria Heading?*** This invariably reflect the multidimensional nature of urban and regional planning as a discipline concerned with providing answers to *What, Where, Why, How and the Impacts* of the built environment, but also gives discourse on man's most fundamental needs of overcoming the friction of space since their needs are not always *in situ*.

I will like to quickly establish the fact that there are many areas of specialization in transportation generally without conflicting interest and areas of focus, which include:

Transport Geography which is a sub-discipline of Geography that seeks to understand the spatial organization of mobility by

considering its attributes and constraints as they relate to the origin, destination, extent, nature and purpose of movements. It investigates the movement and connections between people, goods and information on the earth's surface.

While **Transport Engineering** is one of the essential civil engineering disciplines, impacting roadways, bridges, transit stations, airports and sea ports etc. It focuses on the structural design and implementation of large public and private infrastructure systems that connect our physical world; while applying technology and scientific principles to the planning, functional design, operation and management of facilities for any mode of transportation in order to provide for the safe, efficient, rapid, comfortable, convenient, and economical.

Transport planning on the other hand involves developing model and techniques for: forecasting origin and destination of trips, modal choice, trip distribution, future travel demand and determining supply and improvements to the transport infrastructure thereby reducing energy use. It also uses planning methods to predict, represent and quantify: the evolution of land use in cities, travel attributes such as trip purpose, travel decisions, including modal split. Planning models then examine the feasibility of projects and policies through cost-benefit and scenario analysis.

Transport Economics is a branch of economics founded in 1959 by American economist John R. Meyer that deals with the **allocation of resources** within the transport sector. It has strong links to civil engineering and it differs from other branches of economics in that the assumption of a space-less, instantaneous economy does not hold. It is assumed that demands peak advance ticket purchase is often induced by lower fares and that the networks themselves may or may not be competitive. A single trip (the final good, in the consumer's eyes) may require the

bundling of services provided by several firms, agencies and modes.

On the other hand, Transport Management (Technology and Studies) is concerned with the optimization of the utilities of all the transport modes thereby making right product and services available at the right time, right price and at right place while leveraging on IT technological advancement for Real time transportation tracking. It is concerned with routing and scheduling which is most fundamental in supply chain or logistic management as it address all costs associated with inbound and outbound transportation modes.

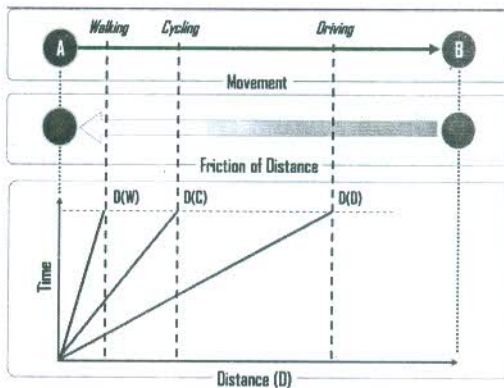
Membrane Transport is a bit isolated from the rest so far discussed but is more related to liquid conveyance from one location to the other in human system as human body is about 60-70% water (99% water, 0.83% ions and 0.17% organics). Passive-mediated transport facilitated diffusion (High to Low concentration), while active transport: from Low to High concentration may require energy or membrane potential.

1. History of Transport

Transportation is as old as man on the planet earth as man moves from one point to another in search of basic necessities of life. From human portorage to the use of donkey and horses for the conveyance of goods around 3500 BC Later on wheel was invented. The industrial revolution actually revolutionize the transport sector at the end of 18th century Transport innovation has bridged locations that previously seemed impossible and the increase in speed has enhanced quicker interaction along development corridors within and between the main urban centres or peripheries. It is generally agreed among scholars that transportation occupies a crucial place in the process of economic development (Olukoju, 1996).

Transport development in Nigeria has impacted greatly on the socio-economic growth of the nation as it over depend on road transport system. The demand for transportation facilities is a derived demand as a means to an end According to Anyanwu et al (1992) the history of road transport in Nigeria can be traced back to 1904 when Lord Luggard attempted the construction of a mule road linking Zaria and Zungeru both in the Northern parts of Nigeria. The same road was later extended from Zaria to Sokoto, Katsina and Maiduguri, although, the road linking Ibadan and Oyo constructed in 1906 is recorded to be the first motorable road ever constructed in Nigeria. Of all freight movements to and from the sea-ports, two-third are now been conveyed by road, while up to 90% of all other internal movements of goods and services take place by roads.

Automobiles have made great contributions to the growth of modern society by satisfying many of its needs for mobility in everyday life. The rapid development of the automotive industry, unlike that of any other industry, has prompted the progress of human society from a primitive one to a highly developed industrial society. The inimitable goal of transportation is to overcome space, which is a function of a variety of human and



physical constraints such as distance, time, political system and topography. Collectively, they attract a friction to any movement, generally known as the friction of space which can always be partially circumscribed as in Fig. 1.

Figure 1. Transport mode and friction of space.

