

*The International Seminar on Regional Politics, Administration and Development 2020 (INSORPAD2020), STISIPOL Raja Haji, Riau, INDONESIA, 14-15 October 2020*

RP002

## **Information-Energy Conversion Process and the Ecological Bane of Public Administration in Nigeria**

**Usman Abbo<sup>\*a</sup>, and Abdulrazak Yuguda Madu<sup>b</sup>**

<sup>a</sup>Department of Public Administration, Faculty of Management Science, Bayero University Kano Nigeria

<sup>b</sup> Department of Public Administration, Faculty of Administration, Ahmadu Bello University Zaria Nigeria

\*Corresponding author e-mail: shagari59@yahoo.com

### **Abstract**

The generic interaction between Administrative institution and ecological variables is a topic which has generated a considerable amount of empirical inquiries and theoretical speculations within the field of Comparative Public Administration, where number of models and frameworks were advanced by scholars in attempt to established a sound theoretical footing to that aspect of Public Administration. One of such models is the Dorsey's Information-Energy-Conversion which describes an Administrative system as developed to the extent that it possesses information and energy as well the capacity for its processing and the means for its conversion. The information-energy model focuses on the interaction of three ecological variables which are energy, information, and energy conversion and their relationship with Administrative system. This paper attempt to test the conceptual relevance of the Information-Energy Model in explaining the ecological predicaments of the Nigerian Public Administration. The paper developed and discussed a contextually driven schema where Information is configured to involve the societal attributes such as norms and values, sectionalism, ethnicity and sectarian sentiments prevailing within the Nigerian environment, Energy is constructed to indicate the labor force in the Nigerian Public Administrative institutions while Energy conversion is defined as the manpower training and development programmes within the Nigerian Public Administrative system. The paper argued that the predicaments of Public Administration in Nigeria is premised on the fact that the forces emanating from the ecological variables such as norms, values, sectarianism, ethnicity and schism (i.e. the information) plays greater role on its labor force (i.e. the energy) than the Administrative energy conversion process (manpower training and development), therefore administrative behaviour in Nigeria is a product of the Public official's environment not the school or training he/she received.

**Keywords:** Public Administration, ecology, energy conversion process, Nigeria

### **1. INTRODUCTION**

Public Administration and its environment influence each other and the understanding of the dynamics of this reciprocal process is necessary in unveiling the intricacies and the structural encumbrances affecting the smooth operation of public administrative institutions (Gogu, 2016). Public bureaucracy is a social institution which is continuously interacting with the economic, political and socio-cultural sub systems of a society. Bureaucracy is not only affected by these environmental systems but also affects them in

turn (Siswoyo, 2020). Thus, the understanding of the interdependence of public bureaucracy and its environment becomes crucial in unveiling the structural hindrances that may negatively affect the quality of public service delivery in the sense that, the outputs of public institutions are shaped by their social, economic, cultural and political environment (Матюшенко & Надюк, 2017). Therefore, in order to understand better the real nature, operations and behaviour of a particular administrative system, one should identify and understand deeply the various environmental factors influencing it. The ecological approach therefore becomes useful in understanding administrative realities since environmental forces determines how an administrative system operates in practice.

Against the above background, it is imperative to note that modern governments have witnessed a major shift in their roles and responsibilities in recent years where the role of Public Administration in fulfilling the government's objectives is more important within the changed context (Boin, & Lodge, 2016). Consequently, it has become more important to understand the structural and ecological barriers that may likely impinge on the effective service delivery of public institutions. The ecological approach to the study of Public Administration was proposed when the models of western Administrative system were found to be insufficient in solving administrative problems in third world countries (Романенко, 2016).

Within the academic community, particularly between the late 1940s and early 1950s, scholars such as Robert Dahl (1947), and Dwight Waldo (1952) were already challenging the universality of the American Public Administrative System; Wallace Sayre (1958) and Herbert Kaufman (1956) highlighted the issue of its contextual significance in comparing Public Administrations. These academic environments provided Riggs with favorable conditions for formulating his comparative framework for public administration based on a contextual or ecological perspective and a structural-functional approach (Umoh, 2016). Ecological approach is the understanding of the dynamics of the process of interaction between administrative systems and their surrounding environments.

Ecology is a concept borrowed from Biology. It deals with organisms' inter-relationship and their climate. The interplay of living organisms and their physical and social environment is studied. It is concerned with how to establish equilibrium between species and their climate. In Biology, it is known that for its growth, a certain plant needs a specific environment, soil, humidity, temperature, etc. In a different climate, a plant that can grow well in a specific climate will not do so (Lu, 2017).

Similarly, each society 's development is dictated by its own history, economic structure, beliefs, political system, and so on. Ideas and institutions are influenced by the characteristics of their social structure and its physical environment; since a plant is unable to develop in another environment, institutions are unable to survive in a different social environment (Liu & Mao, 2017). Therefore, in order to understand the rationale behind the poor performance of public institutions in developing countries of the world, an understanding of the ecology of Public Administration is important.

The model of Dorsey is one of the most important in understanding the ecology of Public Administration. Dorsey attempts to explain changes in bureaucratic evolvement in terms of changes in ecological factors. The model therefore, explores the unique features of

bureaucracy in developing nations and it is suitable for understanding variations in administrative behavior across nation-states in the sense that each society has its own social, economic, politically symbolic, and communicative qualities which individually and collectively influenced and formed its administrative systems. To this end, this work will examine the assumptions of Dorsey's Information-Energy-Conversion and its relevance to the poor performance of the Public administrative system in Nigeria.

## **2. THEORETICAL FRAMEWORK**

The model by Dorsey is a conceptual extension of the work of two anthropologists, White (1949) and Cottrell (1955), who tried to understand the cultural and social evolution of societies as a result of their energy and knowledge resources in the late 1940s and early 1950s. Dorsey has merged different elements of the work of both White and Cottrell with a generous sprinkling of Deutsch's (1963), cybernetics, shifting the dependent variable from sociocultural development to bureaucratic development. The result of this combination is the information-energy model (Dorsey, 1962). The information-energy model focuses on the interaction of three ecological variables (energy, information, and energy conversion) and their relationship to a bureaucratic development. Energy is the independent variable and is believed to affect bureaucratic development through the factors, information and energy conversion that intersect and dissect (Dorsey, 1962).

There is a certain amount of potential energy inside the social and physical climate of each nation-state, as conceptualized by Dorsey. This energy can be in the form of water transportation and power, fossil fuels, or a substantial working population. Similarly, information occurs in the nation-state framework. Typically, this information is converted from existing sources of potential energy within the state; however, it can be imported from other states in the form of technology as well. Dorsey claims that as the established sources of energy and the amount of information increase within a nation-state they promote energy conversion or economic growth. Therefore, the extent and nature of the conversion of energy is positively related to the amount of resources and information exchanged within the political system (Dorsey, 1962, 1963).

It is imperative to note that, of the two variables, energy and information, the latter is markedly more important than the former in stimulating higher energy conversion rates. Dorsey theorizes that the general degree of growth of a social system is an indication of its levels of energy conversion ... [which] relies on the knowledge available, processed and circulating inside the system (Dorsey, 1963: 321). The amount and type of information available represents the quantity and methods of releasing, extending, and consuming energy. Perhaps best summed up by Dorsey himself is the final relation between energy conversion and bureaucratic development:

As the levels of energy conversion rise, the political, social and economic structures undergo transformations. The structural patterns and processes sufficient for low energy; [underdeveloped] societies must be replaced by or transformed into different patterns of structures and processes in societies of rising energy levels (Dorsey, 1963: 320).

To this end, based on Dorsey 's Model, in information-energy conversion one of the systemic trends or processes to be transformed is bureaucracy, in the sense that as the levels of economic growth or energy conversion increase, the bureaucracy becomes more differentiated and modernized. We therefore, argued from the above conception of the information-energy model that the socio-cultural variables existing in Nigeria constitute a systemic impediment to the growth of the country's Public Administration. The remainder of this paper is dedicated to probing the validity of this assertion.

### **3. OPERATIONALIZATION**

Dorsey (1963: 320) defines energy in a given social system as not only fuels, water power, etc. used to run machines but also the energy expended in the physical and other activities of the people as well as domesticated animals used for human purposes. Using Dorsey's conceptual definition as a guide we define energy as the ability to affect some change of form, time of space in physical relationships, that is, to do work. So in simple connotation energy involves the quality and quantity of labor force (employees) in Public Bureaucracy.

Information is described by Dorsey (1963: 320) as a kinetic process which requires the systematic abstraction, organization, accumulation, and transmission of increasing amounts of information ... organized knowledge ... about empirical reality. Keeping Dorsey's language definition in mind, we define information as the ecological variables such as norms, values, sectarianism, ethnicity and schism.

Energy conversion on the other hand, is defined by Dorsey as a kinetic process; it involves the releasing, expanding, and consuming of energy. In his writings, Dorsey (1962: 40; 1963: 321) suggests that scientific agriculture, electric power, steam engines, and gasoline motors may be used as indicators of energy conversion within a society. In operationalizing energy conversion, we define it as the capacity of affecting changes on employees through manpower training and development.

### **4. DISCUSSION AND ANALYSIS**

In Nigeria, public institutions have suffered a number of setbacks because of their multiple service delivery issues. The bureaucratic institutions responsible for the delivery of public goods and services have lost public's trust. The civil service has continued to exhibit weak institutional frameworks, inefficient administrative processes, negative attitude to work, and the insatiable appetite of individuals for wealth at all costs, resulting in low productivity (Umoh, 2016).

The position of this paper is that the socio-cultural variables existing in the country constituted the most devastating hindrance to the development of public institutions which resulted to the above quagmire this is because as argued by Riggs (1998), "the relative continuity of 'traits' is a mark of culture". In order to understand any society, it is therefore important to know its social structures namely; family structure, religious sects, political parties, business corporations and even social classes. These parameters seriously affect systems of administration.

To this end, the interplay among energy, information and energy conversion to a large extent affect the administrative development of a nation-state. In Nigeria, the primordial nature of the employees in the Public Administrative system makes them a very difficult energy to convert. This is because the socio-cultural forces emanating from ethnic and sectarian cleavages constitute the most dominant source of information circulating within the system and as conceptualized by Dorsey the degree of development of a social system is an indication of its levels of energy conversion which relies on the information available, processed and circulating inside the system (Dorsey, 1963: 321).

An average Nigerian public servant is a product of sectarianism with high propensity to hate anything that does not conform with his/her sectarian narrative. The formal system of energy conversion i.e. schools, colleges and universities therefore become too weak in transforming the behavioural patterns of public servants as the ideas, knowledge and skills propagated in these institutions failed to work on the psyche of the employees because it has collided vehemently with the sectarian narrative and dispositions that was deeply engraved in their minds.

The result of this collision lead to perverted administrative behaviour within the Nigerian Public Administrative system where ideals bureaucratic notions such as professionalism, merit, impersonality and formality are overpowered by ethnic and regional loyalties. The significance of this thus goes down to the administrative level where important administrative processes such as recruitment, training, promotion, etc. are influenced by considerations for ethnic representation. This is often attained at the expense of the basic requirements for knowledge, competence, experience and efficiency. This is a departure from the ideal Weberian construct of bureaucracy. The primacy of region, clan, ethnic or primordial attachment over national loyalty underlies the tendency of administrators of public organizations to turn over public offices and resources to themselves or members of their group.

It is the conception of this paper that of all the variables in Dorsey's model information is the most potent when it comes to administrative behaviour, this is because humans are only capable of making change of sort when they are equip with right knowledge and attitude. So in a situation where the knowledge is distorted by sectarian narratives man becomes destructive of the very system he is supposed to construct. The importance of schools, colleges, universities and other training institutions as the mechanisms for energy-conversion is therefore undermine by these sectarian narratives.

It is imperative to note that man is a product of his social environment hence significant portion of his behavioural patterns are structurally determines for him by those in charge of his upbringing, it is therefore not uncommon for a top public official to work against organizational goals and objective in a bid to fulfil his/her ethno-religious yearnings. In Nigeria the type of training and education received by Government officials are just secondary motivating factors when it comes to administrative behaviour, the primary motivating factors are therefore ethnic, regional and religious sentiments (Abbo, & Kura, 2018).

Thus, any radical reform of the Public Administration system will almost certainly cause revolutionary powers to clash with the traditional routine that is deeply ingrained in citizens and if the traditional routine wins (as is always is the case) Public Administrative

entity will eventually cease to be innovative, goal-setting and problem-solving because sectarianism will prevail in employment, promotion training and high-level workforce growth. Sectarianism in administration is usually thought to generate indiscipline, favoritism, corruption, and decreasing morale (Ukwandu, & Ijere, 2020).

## 5. CONCLUSION

All said and done, the conception of this paper is that the predicaments of Public Administration in Nigeria is premised on the fact that the forces emanating from the ecological variables such as sectarianism, ethnicity and schism (i.e. the information) plays greater role on its labor force (i.e. the energy) than the Administrative energy conversion process (manpower training and development). Therefore, administrative behaviour in Nigeria is a product of the Public official's environment not the school or training he/she received hence for the personnel in the public sector organizations to be innovative, there is therefore the need for a monitoring or "feedback" system to continually scan the administrative environment in anticipation of environmental variation and make necessary adjustments in the administrative practice to adapt to the prevailing circumstance. This is because the Nigerian Public Administrative system as it is constituted today is very unique in terms of its ecology so any reform strategy that fail to take cognizance of such ecological uniqueness is bound to fail.

## REFERENCES

- Abbo, U., & Kura, K. M. (2018). Comparative Administrative Reforms; Nigeria, Malaysia, Philippines and Brazil. *Global Encyclopedia of Public Administration, Public Policy, and Governance*, Springer Nature Switzerland AG 2018A.
- Boin, A., & Lodge, M. (2016). Designing resilient institutions for transboundary crisis management: A time for public administration. *Public Administration*, 94(2), 289-298.
- Cottrell, F. (1955). *Energy & society: the relation between energy, social change, and economic development*. Author House.
- Dahl, R. A. (1947). The science of public administration: Three problems. *Public administration review*, 7(1), 1-11.
- Dorsey, J. T. (1962) "An information-energy model," pp. 37-57 in F. Heady and S. L. Stokes (eds.) *Papers in Comparative Public Administration*. Ann Arbor: Institute of Public Administration, University of Michigan.
- Dorsey, J. T. (1963) "The bureaucracy and political development in Viet Nam," pp. 318-359 in J. LaPalombara (ed.) *Bureaucracy and Political Development*. Princeton: Princeton Univ. Press.
- Deutsch, K. W. (1963). *The nerves of government; models of political communication and control* (No. 04; JA73, D4.).
- Gogu, M. C. (2016). Adaptive management: from ecology to public administration. *Global Journal of Sociology: Current Issues*, 6(2), 24-28.
- Kaufman, H. (1956). Emerging conflicts in the doctrines of public administration. *The American Political Science Review*, 50(4), 1057-1073.
- White, L. A., & Carneiro, R. L. (1949). *The science of culture: A study of man and civilization* (Vol. 105). New York: Grove Press.

- Liu, Y. H., & Mao, B. (2017). The Strategy of Promoting the Executive Power of Government from the Perspective of Administrative Ecology. *Journal of Wuhan Polytechnic*, (1), 3.
- Lu, J. (2017). Organizational Ecology, Institutionalism, and Nonprofit Advocacy Engagement. *The Journal of Nonprofit Education and Leadership*, 7(3).
- Матюшенко, О. І., & Надюк, З. О. (2017). Directions of improvement for public administration institutional structure in field of ecology at regional level. *Аспекти публічного управління*, 5(1-2), 5-12.
- Романенко, Є. О. (2016). Public administration of processes for supporting of inner ecology safety in Ukraine: organizational and legal aspect. *Public administration aspects*, 4(1-2), 67-73.
- Riggs, F. W. (1998). Public administration in America: Why our uniqueness is exceptional and important. *Public Administration Review*, 22-31.
- Sayre, W. S. (1958). Premises of public administration: Past and emerging. *Public Administration Review*, 18(2), 102-105.
- Siswoyo, M. (2020). The Impact of Toll Road Development: An Analysis Based on Public Administration Ecology. *Journal of Southwest Jiaotong University*, 55(3).
- Ukwandu, D. C., & Ijere, E. S. (2020). Public sector reforms and national development: A situational analysis of post-independent Nigeria. *Africa's Public Service Delivery and Performance Review*, 8(1), 1-7.
- Umoh, N. R. (2016). *The ecology of Nigeria's public administration and employee motivation in the plateau state civil service (2004-2014)* (Doctoral dissertation).
- Waldo, D. (1952). Development of theory of democratic administration. *The American Political Science Review*, 46(1), 81-103.