Review of General Systems Theory in Rural Community Development: A Contextual Application

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Abstract
Community development is a very complex activity especially in developing countries where all facets of development are undergoing gradual metamorphosis. Ludwig Von Betalanffy provided a framework which can be used to describe some of many factors involved in community development. Such concerns as, assessing power and influence, the dynamics of inter-group relationships can be understood using system theory. Terms such as systems, system boundaries, energy, feedback and system balance are used to describe information surrounding community development practice in the developing countries e.g. Nigeria. Betalanffy and his colleagues postulated the General System theory in community development, but we are concerned about its application against the backdrop of the intrinsic characteristics of communities in the developing world. We found that community systems are social organizations that do not operate in the same way as natural organisms. System theory did not provide alternative to closed systems that may be experiencing the impetus for change due to endogenous factors. We recommended that system theory cannot suffice in community development except efforts are made to consider the peculiarity of a community; and to overcome entropy factors in a community is to invest in the community's assets rather than felt needs approach.

Keywords: *Rural community Development, systems, Energy and Citizen Participation.*

Introduction

Community development is a process where community members come together to take collective action and generate solution to common problems. The community wellbeing which comprises economic, social, environmental and cultural factors often evolve from this type of collective action being taken at the grassroots level. *The key word here is; collective action. Collective action expresses itself in citizen participation.* To a large extent community development is said to be a complex activities borne out of the fact that citizen participation, that is the driving force to achieving community goals through collective action, is difficult to achieve. A lot of interest surrounds community actors and power brokers, these interests are supported by sentiments and in that regard; they tend to assuage the entire community system to the extent that it becomes almost impossible to achieving collective action and collective goals.

A community system is a particular type of social system distinguished by several characteristics. First and foremost, there must be the existence of people for a community to be regarded as a

community. These people who are involved in the system have a sense and recognition of the relationship and areas of common concerns with other members of the community. A community is a social system that has longevity, continuity and is expected to persist. The operations and management of the system depend largely on voluntary cooperation with minimal use of sanction or coercion. Furthermore, the community embodies a multi-functional nomenclature because of divergent expectations of respond and produces many things and also attune to many dimension of interaction. Intergroup and interpersonal relationships form a platform of sentiments that the community is compelled to pay attention in order to achieve peace and harmony.Ludwig Von Bertalanffy provided a framework which can be used to describe some of the many factors involved in community development. Such concerns as assessing power and influence and the dynamics of intergroup relationships can be understood using system theory. In this study we examined system theory by Von Bertalanffy against the backdrop of the peculiarities associated with communities in developing countries. How they operate, the power brokers, absence of infrastructures, low literacy level in most cases etc.

Literature Review System

A system is defined by Von Bertalanffy as "a set of elements standing in interaction" In other words, group of things which have something in common. This includes any grouping with any sort of relationship; a collection of people, a forest, the planets, rabbits on a hill-side, a pile of rocks, etc. provided it is possible to identify a group of things, this cluster can be seen as a system (Tamas, 2000). Placing this definition side-by-side with a community of people; which is our concern, it paved the way to conclude that every typical community is a system because the people exist in clusters and having something in common. The authors of system theory recognize the fact that there could be sub-systems that exist in the larger system. A good example of this would be a single household in a village. The activities inside that house would be seen as taking place within asystem. First is the family group where that particular household belongs and which in turn exists within the larger system of the village itself. The village can also be seen as a sub-system, one out of a number of communities which together comprise an even greater system, the region or territory in which they all are located (Tamas, 2000). When you locate a community within a large system or a sub-system, one thing is paramount, people must interact at any level be it sub-system or larger system. Community development theory chooses to treat communities as conventional systems. Community development theory accepts the fact that it is natural for people to have regular arrangement for social interactions. The purpose of community interactions is:

- To become more responsible
- Organize and plan together
- Develop healthy lifestyle options
- Empower themselves
- Reduce themselves
- Create employment and economic opportunities
- Achieve social, economic, cultural and environment goals

Community development is about improving the quality of life. Effective community development results in mutual benefit and shared responsibility. Any system that is adopted for the community and in order for the system to be practicable must be seen to be carrying with it all these values that make community development work. Community development ranges from small initiative within a small group to large initiatives that involve the, broader community. Against this back drop therefore effective community development should be:

- A long term endeavour
- Well-planned
- Inclusive and equitable
- Holistic and integrated into the bigger picture
- Initiated and supported by community members
- Of benefit to the community
- And grounded in experience that leads to best practices

The global fund to fight AIDs, tuberculosis and Malaria, refers to community system as community-led structures and mechanisms used by communities through which community members and groups interact, coordinate and deliver their responses to the challenges and needs affecting their communities. They went further to state that many community systems are small scale or informal whereas others are more extensive. They may be networked between several organizations and involve various sub-systems. However, it is the community initiative at any particular time that determines the size and scale of the system. Although initiatives were supposed to be nurtured from small scale to large scale; the stakeholders involve and the community-based organizations or groups that may be part and parcel of that initiative will determine its configuration. After all we are aware that communities are configured according to situation affective them. Von Bertalanffy's system undermines the role of individuals and groups as part of the system, according to Global fund, a community system comprises community-led structures and mechanism used by communities to coordinate and deliver their responses to the challenges affecting them. Communities could coordinate and deliver their responses through philanthropists, community-based organizations, the government etc. As far as a community system is concern; all these constitutes the sub-system inside the community. Furthermore on community systems we have what is called community systems strengthening (CSS) which is an approach that promotes the development of informed, capable and coordinated communities and community-based organizations, groups and structures. It involved a broad range of community actors, enabling them to contribute as equal partners alongside other actors to the long term sustainability of interventions at the community level.

System Boundary

Bertalanffy stated that each system is defined by some sort of boundary. A boundary can be thought of as an imaginary line which determines what is inside and what is outside of a system. He further stated that system boundaries can be drawn wherever any observer wishes, and for any purpose. He gave example of a village, that it may be convenient to see the community as a cluster of different households or family groups. In this case boundaries would be imagined which marked out these families. At other times, it may be convenient to show the different age groups in a community. According to

Kailashi (2015), the distinctive features of community development is the participation by the people themselves in efforts to improve their levels of living with reliance as must as possible on their own initiative, self or mutual help and make them more effective. As important as participation in a community system, it behoves on stakeholders to ascertain that marginalization and neglect of the minorities and of course the grassroots constitute a boundary.

What determines openness of the system boundary between the community and the outer world would be the case of communication (passage or transmission of information). If there were roads, or television and telephone link which permitted free exchange of goods and information across boundary between the village and the rest of the world, that system could be said to be very open. Unfortunately though, there are rural areas in Nigeria that are neither motor able nor having access to telephone, or as the case may be, such areas are close because there is not communication between the people and the outer world. Those who are referred to as grassroots in this text are those who by their condition are not part and parcel of the decision making process yet decisions are made on their behalf. Example, students, orphans, physical challenged, women and children. All of them are actors in community development but there is a boundary imposed by marginalization and neglect of these classes of people to the extent that their voices are not heard even though they are knowledgeable.

The goal of development may never be achieved by importing sterile stereotypes from the metropolis which do not correspond to their economic reality and do not respond to their liberating political needs (Kailash, 2015). There is class conflict between the haves and the have-nots. The conflicts in it constitute a boundary as there is no communication between the two groups. All these factors were not captures in Von Bertalanffy's systems theory. In other words, community system is more complex than the way Bertalanffy thought. Beyond participation is the distinction between public participation and citizen participation.

Some scholars make use of citizen participation thereby restricting participation only to those who possess all rights of citizenship of the land. But public participation is rather more accommodating because it includes those who may not be citizens in the land but they are part and parcel of the development process. The wave of migration can bring immigrants to harbour a neighbourhood; and they can contribute to self-help project (Robinson & Green. 2010).

This immigration clause was not included in system theory when the theory was describing open and closed systems. Systems theory puts it that a system is closed because of lack of roads, television or telephone services. But communication can boycott all these agents and pas through migrants. The African communities were regarded as closed in the pre-historic days. But missionaries and traders found their way into Africa's Dark Continent through water ways and trans-Atlantic trade. The problem with systems theory is that communities are social organizations and therefore there can be no strict polarization as the case with natural organisms (Amagoh, 2008).

Energy in System Theory

The various things which pass across the boundaries of systems can be called energy or influence. There are different forms of this influence. A human being requires

physical energy in the form of food in order to service. We also use other forms of influence which can be termed social power or psychological energy. This "energy" which is often in the form of information, is usually the main product of human relationships and is a necessary element in the functioning ofsocial systems. Systems theory did not categories system when applying the energy clause. In developing countries there are rural settlements that do not depend on information for their existence. As a matter of fact, they live in secluded hamlets or farm settlements. Their survival is determined by availability of food and the lives of their flocks. Information as energy may be potent for cosmopolitan communities or systems. In the northern part of Nigeria, the culture created separate settlements for strangers called Sabon Gari to avoid a mix-up of stranger cultures and the indigenous culture. When this happens, a situation of open and closed systems surfaces, while the indigenous city is closed to intrusion by stranger elements, the Sabon Gari area becomes an open system for both indigenes and non-indigenes. Therefore it becomes also deterministic because it will depend on individual choices, it there are educational institutions erected in the open system and children from the closed system move to study in the open system's schools; they go back to the closed system with information from the open system.

Discussion

The system theory conceives community system through a holistic approach. This approach is a conscious effort to place emphasis on the functional relationships among parts and the whole. The presumption is that it does not require dealing with everything at the time. Dealing with any aspect related to community systems is done in a way that keeps in mind the whole and other parts (Cook & Ogilvy, 1979).This theory suggests that there is one piece of the system on which everything else depends. Strategically therefore, it is not necessary to directly consider things beyond the chosen segment. The ideal is that a trickle down process is normal. It has to do with the notion that if the most important part is improved, it is the nature of thing benefits will seep-down through the rest. This of course may not hold water exactly the way it is presented. This is because the hope on trickle-down effect has failed in developing countries. Nkom (2000) stated that during the 1950s and 1 960s development strategies to alleviate poverty centred on growth maximization. Based on this arrangement, the poor were expected to gain from the "trickles down" of the benefits resulting from overall rapid growth. It was growth first, followed by gradual trickling down of the benefits to the poor in the country. Experience has shown that the *trickle down* approach as in order developing countries did not work as poverty was found to have increased instead of decreasing. In the case of community system in developing countries; just in the same way as growth maximization was expected to trickle down on the poor did not work, so also dealing with one segment of the whole and expecting that other parts will be affected will amount to misconception.

Social Organizations versus Natural Organizations

Social organizations are complex; complex systems are deterministic in nature and evolve through a phase of instability which eventually reaches another threshold where a new relationship is established between its internal and external environments and itself (Sullian, 2004). At this juncture, a tripartite relationship is established thereby creating a complex platform of operations. Bertalanffy's systems theory is community

development did not envisage a form of complexity because it was conceived after a natural organism whose condition is static and predictable. The community system is managed by man and man has the capacity to manipulate the system to suite his choice. The environment of a natural organism can affect the culture of an organism just in the same way as that of man. The difference is that in the case of man, he could create the enabling environments to suit his purpose. There is a thin line separating boundary from environment. In the case of systems theory, there is a demarcation between the two concepts; in a social organization such as the community, the two concepts are inextricably interwoven. Energy flows along obvious boundaries either from one sub-system to the other or village to village or from person to person. All these units of energy movement constitute the environment of decision making in the community. Environment in this case is imaginary rather than physical. That is why it difficult to adopt the Bertalanffy's system theory in totality when dealing with a social organization likes a community.

Entropy in System Theory

According to Von Bertalanffy (1968) the term "entropy" has been used to describe a force or tendency which is present in all systems. All systems tend to "run down", and to progress to a stage reduced coherence and eventually completely random order. They tend to consume all the energy which they have available and eventually stop function or *fall apart.* In closed systems, according to Bertalanffy, this is illustrated by extinguishing of the candle flame when all the oxygen in the sealed jar is consumed. At this point the energy and the relationship of element required to maintain the order of a burning flame, no longer exists. The same thing occurs in organic systems which receive insufficient food; they die and their bodies eventually decompose. So also a lack of affection has a similar effect on a child's psychological development, Families can be considered as systems, with the husband/wife bond as its central unifying force, if there is an insufficient amount of social energy of the approximate king (love) exchanged between a husband and wife, there is likely to be some sort of break down in their ordered relationship and the bond between them could weaken. A unified family system could deteriorateinto a less harmonious condition.

For the child that lacks affection it could lead to psychological torture and eventual breakdown because of evidence of age and ignorance. For a husband and wife who lack the energy called 'love' may not breakdown except where there is no money. Money has the same tow vowel, 'o' and 'e' that love has. The two are complementary to each other. Although this analogy is unscientific it is a fall out of common sense reasoning to the fact that the family system does not function in the same way as the organic system. Once the organism lacks food, it will die, it makes sense. But man will not die because of absence of love or collapsed relationship. Money can serve as alternative in most cases.

It is correct to say that in large communities where there can sometimes be an abundance of entropy-related forces. Such as disunity, poverty, injustice backbiting etc. it is often difficult to maintain the highly ordered forms of cooperation and social cohesiveness which are needed to foster harmony or well-being among the people. Where these vices exist, it prevents the people from working together in harmony to achieve mutually accepted goals for their collective betterment. One of the tasks of community development is to help communities find ways of reducing or countering the

tendency towards entropy which exist in all the systems.

Von Bertalanffy's system theory did not provided an answer to this common phenomenon of entropy. As rightly stated; every community especially in developing countries suffers from entropy related factors that tend towards disharmony. It is rather difficult to suggest a lasting solution except by the application of experiences carried out elsewhere, For instance, there is the Dudley street neighbourhood initiative (Green & Goetting, 2010). The philosophy behind DSNI was to build on the local assets rather than to focus on the needs of residents. Dudley street is located in Boston's Roxbury District one of the poorest areas in Massachusetts (USA). Approximately 35% of the families in the area live below the poverty line, and the neighbourhood contained many abandoned buildings, a large number of vacant lots and a persistent drug problem. The DSNI began in 1984 when the Riley Foundation, a Boston area community foundation, decided to make an investment in the neighbourhood. Local residents challenged the plan presented by the Riley foundation because it was not *their* plan. In response to this initiative, residents established DSNI, which had 31 members Board of Directors, with the majority of them consisting of local residents. There were more than 2,500 voting members of DSNI and the organization employs approximately 16 fill-time staff.

The organization launched several projects that were immediately successful, including removal of illegal refuse dumps on Dudley Street and even provision of affordable housing for residents. Part of DSNI success was due to its combining the role of developer of low income housing and provider of social services with the role of community organizer. The most controversial project of the DSNI was their program to take eminent domain of 30 acres of vacant land and develop it as a land trust. The DSNI had strong support from the city government for this project, so the scaled through. The DSNI took control of more than 1.300 abandoned parcels of land in the neighbourhood, converting them into parks, gardens and other public spaces as well as 400 single-family and cooperative homes for low-and-middle-income residents. DSNI organized a youth committee to address young people's concerns about recognizing the various cultures in the neighbourhood, sponsored several multi-cultural festivals that were able to carry the residents along. The fail-out of this arrangement is the whole question of community development project in line with the peoples so called felt-needs does not play out in all communities. There are communities that need total salvation because both human development index is non-existent coupled with lack of infrastructures. Two things can be responsible for lack of harmony in such a community and may not make any sense asking them about their felt need appears to be most pressing need but where the people need almost everything that you can afford, then there is a problem. Their level of poverty may be such that their most pressing need may be money to buy food because they are hungry. Where the youths are into drugs like the Dudley streets, they might just ask you for money to buy drugs. in that community you should rather go there to invest by mobilizing local assets and put them to use the by the residents, Assist them to explore their environment because they are too poor to notice anything good around them.

Conclusion

System theory in community development as presented by Von Bertalanffy suggested an alternative strategy to dealing with system as potent an instrument as the theory may appear; this examined the potency of its applicability in communities situated in the developing world This study exposed a lot of challenges that make the application of the theory in communities of the developing world a difficult task. The study first of all underscores the fact that the theory takes precedence from natural organisms whereas the community system is a social organization whose parts that make up the whole do not act like natural organisms. The study further found that system theory undermined the role of individuals and groups as part of a system. As a social organization the community system is contrived by those individual and groups that make up the system. Unlike the natural organism that is moulded by the environment or atmospheric condition.

The system theory did capture marginalization and neglect of the less privileged whose voices are left to the background and not head. That boundary can oftentimes be imaginary than physical. The study examined the fact that it is more difficult determine a boundary in terms of the flow of information across boundaries and the community immigration of foreigners into negates the question of citizenship to embrace what could be regarded as public participation in making in a community. The system theory believes in dealing with what it refers to as major part that will eventually affect the whole in terms of benefit. But this study departs from that nation because the idea of dealing with a part that will have a trickledown effect in community has failed in the course of growth maximization to reduce rural poverty. The best thing to do is to deal meticulously with each part as they present their distinctive characteristic.

Communities in the developing world are evolving. As they metamorphose, they present new challenges and attention. Dealing with such a scenario requires selective approach to issues. System theory did not provide an alternative to entropy-related factors that are capable of disharmony in a developing community; however this study found that where entropy factors do not allow for peace to reign in a community and disunity is taking a toll on the community, it becomes impossible to determine that is the felt need of the people. Instead an intervention program to invest in the community will be the alternative strategy to develop the community.

- Every community has its differences that are intrinsic to their culture and development.
- The application of system theory should direct at the peculiarities of the system in focus because what is applied in community "A" and is successful, may not exactly achieve the same result in community "B".

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