The Applicability of Karl Popper's Piecemeal Social Engineering in Nigeria:

Prospects and Challenges

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Abstract. This paper sets out to interrogate the applicability of Karl Popper's piecemeal social Engineering in the governance of a democratic society with particular reference to Nigeria. Firstly, it sets out to examine Popper's theory of social engineering as well as piecemeal social engineering. It proceeds to ascertain the extent to which piecemeal social engineering can be applied and the likely challenges that a social engineer will encounter in its application. The paper notes that the piecemeal approach is a useful method in alleviating human suffering and misery. It also has the advantage of tackling only very urgent needs of the people with the resources available. But the paper equally highlights some bottlenecks that may hinder the operation of this theory in several countries, especially Nigeria. Prominent among the hindrances is the fact that only a society populated by persons with critical thinking skill can implement it the way Popper postulated. Overall, the paper rates the use of piecemeal social engineering high in achieving an inclusive governance that ensures citizens participation. Again, it notes that the adoption of the piecemeal approach will create space for the opposition parties to be part of governance through critical contribution to government programs. The paper finally recommends that piecemeal engineering can be implemented in a democratic society through some adjustments and arrangements. Firstly, is the need to have an arm that coordinates the feedback mechanism for government projects. Secondly, the parliamentary oversight function should coordinate with relevant state agencies in determining projects that will relieve human suffering as well as calling attention to problems arising in the course of implementation. The parliamentary committee can also be vigorously involved in monitoring policy implementation and articulate the opinion of their constituents in respect to the impact of the policy. In this way, the piecemeal social engineering can perfectly be integrated into the existing political arrangements.

Keywords: Piecemeal, Social Engineering, Piecemeal technology, Critical Rationalism, Social engineer

1. Introduction

Social engineering is the application of human knowledge and techniques to the resolution of social problems, in the same way that an engineer applies his technical knowledge in handling technical and scientific problems. This theory was propounded by Karl Popper as a response to the rising influence of Marxism. Being a philosopher of science, he propounded a theory of social governance that is based on the principles of scientific thought and capable of addressing the shortcomings of Marxism and capitalism.

Ingemar Nordin (1994) observes that;

> The application of scientism to social issues became fashionable in the 19th century, when August Comte, envisioned a social engineering analogous to the successful physical engineering. The new social science called social physics by Comte was to be based purely on measurable and observable entities. Its aim was to find the complex differential equations that could describe the objective social change. Armed with these equations the social engineer would then be able to apply them in solving social problems and mould society as a whole in utopian fashion. In this technocrat vision, the scientist is the expert.

The development of the physical sciences had tremendous effect in the perception and study of the social sciences. Gradually, the approach to issues in the social sciences began to adopt scientific approach and interpretations. The design and reformation of social institutions and policies were also likened to the art of an engineer. If someone who works on mechanical devices is an engineer, someone who works on social problems is also an engineer. While the former is called a mechanical engineer, the latter is called a social engineer. It is this kind of thinking that gave rise to social engineering as a terminology in social science. While this thinking and understanding was a leap forward in the study of social sciences, it equally led to the propounding of utopian social theories as well.

Popper observes that the tendencies of historicism and social engineering can both be found in Plato's philosophy. Though Plato believes in a perfect state that does not change, he also believes that to every

kind of decaying thing, there exists a corresponding form that does not change (Popper, 1966:21). His belief that the process of decay can be halted or arrested in the words of Popper, shows that in addition to his historicism, Plato also believes in the ability of human activity in arresting social change and decay. So his historicism is with limitations (Popper, 1966:21). It is then not out of place to say that he believes in a form of social engineering. This is because he admits that by human social action social decay can be arrested.

Bettina Leibetseder (2011:11), notes that the term social engineering is often used interchangeably with other words like social technique, social technology, efficiency engineer, political science engineering, technocracy, social pedagogy etc. The term social engineering is an attempt to introduce scientific methods to political governance. Social engineering is based on the understanding that our society and its attendant problems can be worked upon to make it better. It is the application of human knowledge and techniques to the resolution of social problems, thereby enhancing the quality of governance delivered to the people.

The social engineer is one who believes that "man is the master of his own destiny and that; in accordance with our aims we can influence or change the history of man just as we have changed the face of the earth" (Popper, 1966:22). It is an understanding that human intellectual capabilities are not limited to physical engineering only, but social as well. Popper observes that just as the job of the physical engineer is to design, remodel machines, the job of the piecemeal social engineer is to design, run and reconstruct social institutions (Popper, 2002:53). History for him is created by man just as man has created other things like houses, aeroplanes and other machines.

2. Piecemeal Technology

Popper introduced a term he called piecemeal technology. An attempt will be made here to explain what Popper means by attaching technology to piecemeal. An understanding of this is crucial to the understanding of Piecemeal Social Engineering. The word technology easily takes one's mind to engineering design and the practical outcomes of scientific innovations.

According to Popper, the term piecemeal technology refers to technological approach to social sciences or to social engineering. He sometimes refers to it as piecemeal social technology. He maintains that it is the combination of "Piecemeal tinkering with critical analysis" (Popper, 2002:53). Therefore, piecemeal technology is the attitude of applying the principles of conjectures and refutations in an attempt to assess the practical correctness of social policies and scientific theories. Catarina Leao (2015:15), states that it provides the structural framework from where Piecemeal Social Engineering can grow and is shaped as a particular mind-set in approaching scientific theories and social policies. It is the environment found in open societies which allow the application of piecemeal social engineering. Thus, Popper observes that Piecemeal Social Engineering is the practical application of the results of piecemeal technology.

Popper contends that besides helping us in the fundamental task of selecting problems, the technological approach imposes a discipline on our speculative inclinations (which, especially in the field of sociology proper, are liable to lead us into the region of metaphysics): for it forces us to submit our theories to definite standards, such as standards of clarity and testability (Popper, 2002:53). Criticism is a feature of the social sciences which has largely been responsible for the progress recorded so far in the discipline. The subjection of policies and proposals to criticism is a key factor in accelerating social progress.

3. Piecemeal Social Engineering

The word piecemeal denotes actions done or released in small proportions or quantity. It can also refer to stage by stage, bit by bit and gradually. The opposite of piecemeal is whole or holistic. It is not out of place to note here that the central pursuit of Popper's political thought is to set out the principles of piecemeal social engineering as the most realistic political alternative for mankind. Piecemeal Social Engineering can be defined as a process of social development which entails tackling societal problems critically and reflectively in small steps and stages. Popper notes that piecemeal tinkering combined with critical analysis is the main way to practical results in the social as well as the sciences. He maintains that

the social sciences have developed largely through the criticisms of proposals for social improvements (Popper, 2002:53).

Herald Stelzer (2016,376) rightly posits that there are some basic values that help safeguard the open society as well as piecemeal social engineering. These values incudes individual freedom, minimum application of the use of coercion and the neutrality of the state. These forms the foundation upon which an open society is built. And since piecemeal social engineering can only operate within the context of an open society, these values are not negotiable. Again, a critical culture devoid of dogmatism must form the dominant mode of political thought.

The piecemeal social engineer adopts a means of searching for, and fighting against the most urgent evils, of society, rather than searching for and fighting for, it's ultimate good. (Popper, 1966:159). Popper insists that the piecemeal method is an approach which is methodologically sound. He contends that the politician who adopts this method may not have a blueprint in mind, and may not hope that mankind will one day realize an ideal state and achieve happiness (Popper, 2002:59). The piecemeal social engineer adopts or tackles issues and problems on piecemeal basis rather than an elaborate plan of projection to attain an ideal state. So rather than approach political problems by trying to eradicate all ills at once, piecemeal social engineering favours handling them in bits.

However, Popper is not saying that an ideal can never be realized. Rather he is of the opinion, that the journey has to be in bits or in phases and with necessary adjustments as policies are put on trial. Again, he is opposed to sweeping restructuring involving all segments of the society at the same time. The struggle to attain an ultimate good which eradicates all social evils, though appealing, is not realistic. Such dreams have always been unattainable not because innovators and practitioners are not serious. The dynamics of human society is that there are always unforeseen variables which alter initial plans and permutations.

The following highlights can be made of the piecemeal social engineer. Firstly, he does not believe in redesigning the entire society as a whole. He rather approaches it through small adjustments with the aim of always improving upon them. Secondly, the piecemeal engineer is aware we learn only from our mistakes and success. He is a learner and do not possess any sense of having arrived. He understands that much of what he

ought to know will unveil itself at the level of social practice. So he proceeds step by step, cross checking the progress made with the expected or desired result. Thirdly, he avoids embarking on reforms that are complex and capable of leading him into a dead end. Fourthly, he does all within his power to ensure that the reform do not create additional suffering on the masses.

4. Justification of Piecemeal Engineering

The piecemeal method according to Popper can be reasonably justified based on the reasons discussed below.

People are more likely to support a project which targets the resolution of immediate social problems than an ideal project. The problems of injustice, hunger, oppression, unemployment and other issues of suffering are more pertinent needs of the people. The daily challenges that people are grappling with are more important to them than any other project that has no direct bearing on the current suffering of the people. Therefore, the population are most likely to show support for it than they will for an indeterminate ideal of creating a society that never yet existed on earth.

The simple nature of the blueprint for the piecemeal method makes it simple and comprehensible. Sometimes they are blueprints for single institutions like health or educational reforms (Popper, 1966:59). Its uncomplicated nature makes it reasonably comprehensible by the average citizen. They understand its nature, scope and even possible challenges.

The piecemeal blueprint is less risky and therefore less controversial Popper, 1966:159). The risk involved in the implementation of the programme is quite minimal, and even if something goes wrong in the process of implementation, it can easily be corrected. Since the piecemeal method involves less risk, not much technical expertise may be needed for its actualization. Again, because it is not controversial, little opposition will stand on the way of its implementation. There is no policy that is error proof, but the piecemeal approach is imbedded with a capacity to adjust and readjust in the process of execution.

The piecemeal approach is not based on a complicated dogmatic blueprint only known by experts. Therefore, it can be implemented via reason and not force. The nature of piecemeal policy is such that it does

not involve great sacrifice on the part of the people. It is unlike large scale revolutionary programmes which require people to pay a heavy price today so that they can enjoy tomorrow. The natural tendency is that people will resist the change. So the government will need the application of force to get the people to cooperate. But it is not so with piecemeal engineering.

5. Critical Rationalism and Piecemeal Social Engineering

Popper (1966), admitted that Marx, Socrates, Kant and Hegel were all rationalists. But he noted that there were limitations in their rationality, which made them fall short as the basis of unity of mankind. The rationalism of Marx and Hegel were hampered by their insistence that our ideas and opinions are determined by our class interest and national interests respectively. In defining rationalism, Popper notes that;

> Rationalism is an attitude of readiness to listen to critical arguments and to learn from experience. It is fundamentally an attitude of admitting that I may be wrong and you may be right, and by an effort we will get nearer to the truth. It is an attitude which does not lightly give up hope that by such as argument and careful observation, people may reach some kind of agreement on many problems of importance; and that, even where their demands and their interests clash, it is often possible to argue about the various proposals, and to reach-perhaps by arbitration-a compromise which because of its equity, is acceptable to most, if not to all (Popper, 1966: 225).

Popper traced the genesis of critical rationalism to the philosophy of Socrates. The Socratic method of midwifery of knowledge is critical in nature. Through the dialectic method of questioning, one is able to discover more truth. Popper writing about the value of the Socratic Method observes that, those eager to learn are helped to free themselves from their prejudice; thus they may learn self-criticism, and that truth is not easily attained. But they may also learn to make up their minds, and to rely critically on their decisions, and on their insight (Popper, 1966: 129). Hans Albert (2006:7), observes that,

> the open society as has been characterized by Popper is a society whose members have the possibility to decide freely about how to lead their lives and to participate in the decisions about

their common affairs. By the institutionalization of competition and criticism in all social realms, such societies are in a condition to find new solutions for problems of all kinds, to analyse and to discuss these solutions, and to come to reforms.

The piecemeal social engineering relies essentially on criticism for its operation. One can rightly assert that the major tool needed for piecemeal social engineering to work is critical rationalism. So in Popper's philosophy, epistemology and social practice are not separable. The epistemology of the open society is actually critical rationalism. In fact, the entire philosophy of Popper ranging from his philosophy of science is founded on the principle of critical rationalism.

Writing on Popper's rationalism, Roberta Corvi (1997: 65) observes that critical attitude is not only the most important feature of science, but distinguished the pre- Socratic dawn of philosophy, which began the tradition of discussion through arguments and objections, as well as dogmatic assertions. He points out that Popper rates ideas as the greatest legacy the Greeks bequeathed to civilization. The great civilization and scientific progress that mankind has made over the years was because there was a break away from the dogmatic to the critical mode of thought. It is the application of this principle to political thought and action that ensures social progress. The open society as well as the piecemeal social engineering is built upon the tradition of critical rationalism.

However, Popper seems to have taken for granted that all human beings possess the right equipping to meaningfully engage in critical rational discourse. And in a society where everyone feels that his own idea is the best, who then becomes the moderator of these ideas as to agree on which one is the best. At the personal level, the application of critical rationalism will not encounter any problem. It actually enhances individual growth in knowledge as one learns from his mistakes and failures.

But its application in the partisan political context may prove very problematic. Political parties and actors hardly concede to the criticism of the opposition. This is more so in less developed countries. In such countries, the influence of traditional thought patterns still play greater role in shaping the intellectual disposition of the political class. Joseph kiruki (2011:29), observes that in Africa, our ways of life are still beset with taboos in respect of food, politeness, sex, relationships, social,

cultural and political affiliations. The challenge however, he contends is letting the power of critical logic and reason penetrate and influence our cultural taboos. African culture and development can only make progress if critical attitude is also adopted as part of the culture. Therefore, to fully implement piecemeal social engineering in the political arena, demands that the society will be open and have politicians who are honest enough to constructively criticize, and honestly accept superior argument. This gives relevance to political opposition as they can contribute their views and opinions in governance.

6. Practical Application of Piecemeal Social Engineering

Popper might have propounded the piecemeal social engineering based on the challenges of governance in Europe. But since democracy is a universal concept, its application cannot be localized. This then implies that even emerging democracies should be encouraged to adopt the piecemeal approach. It is record that Nigeria and other developing nations are contending with basic issues of democratization and governance which makes it difficult to effectively implement successfully certain democratic ideals. In addition, the country is yet to recover from several years of military dictatorship. This no doubt presents peculiar challenges to social engineering. But on a general note, there are some problems in Nigeria, which only a piecemeal engineering approach can resolve. Consistently, Nigeria has witnessed serious issues of abuse of power, rights violations, authoritarianism and uncoordinated approach to development. These problems are part of the issues, Popper set out to address through piecemeal social engineering. While developed nations are expanding the frontiers of freedom through social media, some developing nations like Nigeria are contemplating legislation to limit the use of social media.

Karl Popper wrote extensively on the viability and practicality of Piecemeal Social engineering, yet he did not outline any method for its application. Maybe he is avoiding falling into the trap that previous theorists like the Marxists fell into by advancing utopian blueprint. Since piecemeal engineering is a scientific social programme, it is left in the hands of each social engineer to operate it based on peculiarities and situations within his own community. What Popper offered remains a guide which hope-

fully, if well applied will result in genuine political and social progress.

However, a few guides can be gleaned from Popper's work which can sufficiently help in the implementation of Piecemeal Social engineering by a desiring social engineer. As noted earlier, the Piecemeal Social Engineer seeks to tackle the most serious evil in the society. In every society or community, the piecemeal approach should seek to identify, what is considered as the most serious problem confronting the community or society. As this is identified, efforts and resources are channelled to it. However, the Piecemeal Engineer does not approach the resolution of this problem as an expert who has all the solution in his head. Popper seems to have taken for granted that it is fairly easy to identify what constitutes the most challenging problems of every society. He affirms that the existence of social evils, that is to say, of social conditions under which people are suffering can be comparatively well established. Those who suffer can judge for themselves and the others can hardly deny that they would like to change places (Popper, 966:168). Popper takes it for granted that everyone will easily agree on what constitutes suffering. This is true, but there may be a challenge in determining the prioritization of the suffering to determine which one gets attended to first.

Popper (1966:169), contends that by using the piecemeal method men will get over the greatest practical difficulty of all reasonable political reform, namely the use of reason, instead of passion and violence, in executing the programme. He has so much confidence in the method because of his avowed commitment to the efficacy and potency of human rationality. Political problems are not intractable when subjected to reason. There is equally no policy or programme that will not be actualized if the critical rational input of the citizens is harnessed.

This implies that the piecemeal method is based on the principle of critical rationalism, and is operated within an open democratic society. Outside such a society, the piecemeal method is virtually impossible. This is because, the method proceeds by debates and criticisms and progress attained through the lessons learnt in the course of the debates and criticisms. One will readily agree with Popper that the greatest problem encountered in practical politics is the issue of passion beclouding reason. This makes agreements impossible as self-interest overrides national interest. In developing countries, the pursuit of personal/group interest is

the basis of financial and political corruption. So, rather than governance alleviate human suffering, it creates more of it. Popper insists that through critical rationalism, the greatest challenges confronting mankind can effectively be handled. The resort to violence is only an evidence of the failure or absence of reason.

In the practical sense, Popper is saying that the most urgent evil or suffering should be identified and agreed upon. This then is followed by debates on how to address it and resolve it. The debates should produce a consensus on how to resolve the problem. The resolution of the problem now proceeds through trial and error or conjectures and refutations until the problem is finally handled. What serves as conjectures and refutations is a continuous appraisal through self- criticism and public criticism. It is the critical input made into a programme or project that refines and perfects its implementation. This has a positive impact on the quality of the final product delivered.

In piecemeal social engineering, reforms are carried out through small adjustments which can be continually improved upon (Popper,1957:61). Though there are many challenges confronting the society, the piecemeal engineer is not too ambitious as to claim to have the capacity to handle all at the same time. He clearly understands the need to proceed gradually, assessing the impact as well as the unintended consequences of the reform. This approach is very crucial because if a political or social reconstruction goes wrong, its negative impact creates more suffering for the people it is designed to help. This explains why the piecemeal engineer does not engage in complex and holistic social engineering.

It is worthy of note that even in our contemporary society, various degree of piecemeal approach has become a common feature. There is hardly any government policy that does not from time to time witness adjustments. The adjustments may be arising from insufficient funds, or unforeseen circumstances which were not taken into consideration at the inception of the project. So, the modern society is not a stranger to policy adjustments. However, this is not a conscious desire to follow piecemeal approach. What Popper is contending for, is a situation where the piecemeal along with its critical rational method is adopted as the standard modus of operation in a democratic open society. This will definitely require some constitutional provisions to entrench the principle. Though Popper

didn't mention this aspect, but a certain degree of constitutional provision needs to be put in place before it can be practically implemented.

To practically implement piecemeal social engineering may require that a few arrangements be put in place. Firstly, there is need to have an arm that coordinates the feedback mechanism for government projects. Secondly, the parliamentary oversight committees should coordinate with relevant state agencies in determining projects that will relieve human suffering as well as calling attention to problems arising in the course of implementation. The parliamentary committee can also be vigorously involved in monitoring policy implementation and articulate the opinion of their constituents in respect to the impact of the policy. Again, town unions, youth organizations and other community based organizations, which are common feature in Nigerian communities has the potential of being the channels through which community input will enrich government policies. In this way, the piecemeal social engineering can perfectly be integrated into the existing political arrangements in Nigerian democracy.

Again, implementing the piecemeal social engineering may also involve a re-education of the population on how to think scientifically and objectively. This definitely is a big task, since it is going to involve changing the way people think, as well as their general perception of what is right and wrong.

7. Areas Piecemeal Social Engineering Can Be Applied in Nigeria

One major issue confronting Nigeria is poverty. Though the country is blessed with abundant natural resources, the effect of such resources appears to have generated few billionaires and a mass of poor people across the land. Poverty has remained one the major challenges in Nigeria. Adebukola (2014), observes that majority of Nigerians live below the poverty line most especially in the rural areas and urban slums. The national Bureau of Statistics 2019 poverty and inequality report shows that 82.9% million Nigerians are considered poor. (National Bureau of Statistics, 2020). One of the major reasons for governance is to uplift the living standard of the people. A government can only claim to be making

progress in this direction if the poverty rate is put on a steady decline. This may have informed Popper's insistence that piecemeal social engineering ought to target reduction in human misery and suffering. After sixty years of independence, poverty seems to be on the increase, the billions of dollars earned from oil notwithstanding. World bank poverty alleviation report, 2016, indicates that growth in the gross domestic product of Nigeria (GDP), failed to translate into poverty reduction. This can only be explained by the way government allocates its resources to projects that have little direct impact on the living conditions of the people. It is only the adoption of piecemeal approach towards governance that will compel the state to channel resources towards programs and projects that will alleviate human suffering and poverty.

This will also have the ripple effect of saving Nigeria the huge material and human cost of fighting insurgency and banditry. A close look at the insecurity situation in Nigeria suggests that it is linked to poverty. The Northeast and Northwest has the highest rate of poverty in Nigeria, and incidentally is the operational base of Boko haram and bandits. Again, the south- south zone generates close to 90% of the county's foreign exchange earnings and yet remains one of the least developed in terms of basic infrastructure. On monthly basis, billions of Nigerian currency are allocated by the central government to states in these zones. The only explanation for increasing poverty and lack of infrastructural progress are the way resources are appropriated to projects that have no direct bearing on the critical needs of the people. However, if piecemeal principles are applied, resources will be allocated based on the most urgent problems of the community with a view to reducing human misery. Therefore, adoption of piecemeal method will eliminate both insecurity and banditry since they are direct result of poverty.

A key ingredient in piecemeal social Engineering is openness and community participation. This seems to be one of the best ways to fight corruption. Corruption thrives in Nigeria because governance is conducted in secrecy, and it is almost a taboo to criticize government policies and its officials. Piecemeal social methodology treats idea from the angle of conjectures and refutations, thereby recognizing fallibilism as a means of progress. Stelzer (2016, 378), opines that it will help us improve our knowledge and political institutions. It therefore implies, that the applica-

tion of Popper's philosophy will go a long way in the enthronement of a critical culture within the political space. This can easily be done taking advantage of the recent passage of the freedom of information act (FOI) by the national assembly.

It is also on record that Nigeria has been plagued by ethnicity and religious division since independence and the divide is becoming dangerously more glaring by the day. Currently, it seems only a few benefiting from the present status quo, still has faith the corporate existence of the country as presently constituted. This has led to increasing calls for restructuring and even self-independence by some minority ethnic nationalities. The application of Piecemeal social engineering entails the adoption of rationalism as part of the social and political culture. This shifts emphasis from ethnic consciousness to cross fertilization of ideas for national collective growth.

The nature of piecemeal policy is such that it does not involve great sacrifice on the part of the people and is implemented in such a manner that is devoid of force and its attendant human suffering. This makes piecemeal approach the best approach in the exploitation of mineral resources in Nigeria. The oil rich Niger Delta has witnessed degradation of their environment by oil companies in connivance with the Nigerian government. This had resulted in series of protests by the host communities and some community leaders like Ken Saro-wiwa had to pay with their lives. The application of piecemeal social engineering will likely be the game changer because it has the potentials of redefining mining activities in such a manner that doesn't involve inflicting suffering on host communities. This will go a long way in reducing the tension between the oil companies and government on the one part, and the host communities.

8. The Challenges of Applying Piecemeal Social Engineering in Nigeria

One of the greatest challenges facing piece meal social Engineering is the failure of Karl Popper to provide a practical guide to its implementation. The details involved in applying it in concrete social context were not provided. The onus therefore, is on those who wish to apply it to work out the details of its application in their own local context. The task

would have been less tasking if a model was set up. Though theoretically and philosophically convincing, it leaves an average reader in doubt as to the possibility of its application in real life situations. The explanations he offers are not clear enough to qualify as a practical guide. He notes that the piece meal social engineer will, accordingly, adopt the method of searching for, and fighting against the most urgent evils of society, rather than searching for, and fighting for its ultimate good (Popper,1966:167). It can be gleaned from this, that the piecemeal approach is not about seeking ultimate solution on how to remodel and eliminate all evils in the society. Its focus at each point is the most urgent evils of society. This raises the challenge on how the evils can be measured so as to arrive at a comparative index of the ones that are most urgent. Popper's answer to this could be that it should be decided through the democratic process.

In practical politics, there are various interest groups all clamouring for attention in terms of policy implementation by the government. It is possible that each interest group might perceive its own need as actually the most urgent evil or need. The point being stressed here is that reaching agreement on the most urgent evil or the most pressing need is not an easy task. Popper believes that men are rational and as such can always agree on what is reasonably obvious. In practice, it hardly works that way, because there is a great measure of selfish interest involved in politics. This is because each politician is out to represent an interest group. They are not moralists or philanthropic social workers. There are even some that represent the interest of corporate organisations whose business activity might be causing the suffering. Megil Allan (2006), contends that identities and commitments rooted in places other than scientific rationality seem unavoidable in the social and political order. In the political arena, there are people who represent religious, ethnic and other interests and their rationality is constrained by the interest and philosophy of the group they represent. So it appears there is a limitation to how far rationality can become the sole guiding principle in practical politics. However, the reliance of piecemeal meal social engineering on dialogue and critical discussions, power to resolve all major differences.

One of the tasks of the social engineer is the challenge of designing new social institutions and reconstructing and running those already in existence (Popper, 1957:59). The first challenge is that for social engineering

to thrive, there has to be knowledgeable social engineers, Social engineers who are not only capable of constructing and reconstructing social institutions, but has the ability to run them as well. Popper didn't give any details on how such experienced social engineers should be raised or recruited. This seems to create a technical hitch in the implementation of piecemeal social engineering. Perhaps, he assumes that if a democratic open society is in place and critical attitude becomes the dominant mode of thought, political and social actors will naturally become social engineers. It is necessary to understand that Popper is not advocating piecemeal engineering as technical, complex engineering operated only by experts, who know the principles and the operation of the machines. In piecemeal engineering, everyone is a learner, learning through mistakes. What is needed for piecemeal social engineering to operate is a political class ready to look out for their mistakes and learn from it. Such political class will value critical discussions and encourage same in the entire society.

The lack of openness, poor attitude to criticism and vestiges of traditional thought patterns that are inconsistent with open society is a serious limitation in implementing piecemeal social engineering in many developing countries like Nigeria. But one interesting thing is that Popper did not prescribe a uniform piecemeal approach. This therefore, allows each country or regime to determine how to tailor it to its own peculiar situations and circumstances. The acid test however, is that the system must ensure freedom and openness to criticisms.

Looking at Popper's emphasis on freedom and critical culture within the democratic space, it is obvious that he favours a liberal democratic culture. This is because only a truly liberal political environment can provide the political space to accept varying opinions and constantly adjust policies in line with such opinions.

This presupposes that all the political actors abide and operate by the principle of critical rationalism. By implication, the piecemeal method can only work side by side with the principle of critical rationalism. Again, it can only function effectively within an open society, where parochial and ethnic interests no longer affect the way men reason. Popper (1966 168-169), argues that,

> If it is easier to reach a reasonable agreement about existing

> evils and the means of combating them...then there is also more hope that by using the piecemeal we may get over the most practical difficulty of all reasonable political reform, namely the use of reason, instead of passion and violence in executing the programme.

Thus, the open society and its democratic programmes are anchored on the use of reason. This places critical reasoning as the bedrock of Popper's political theory.

This approach may not attract much enthusiasm among Nigeria at the initial stage, because every sector and social group is clamouring for government presence. To be relevant politically, a government has to make its impact felt in all the nooks and crannies of the country, even if there are no resources to finish the projects. This explains the presence of several abandoned government projects across Nigeria. To garner the peoples votes, bogus and unrealistic programmes are sometimes articulated by political parties and sold to the public, who themselves are attracted by such. Just as earlier noted by Popper, a utopian blueprint is more appealing and generates enthusiasm among the people. The temptation to resort to utopian blue print may be more appealing to the politician because he needs the vote of everyone to win. If the politician adopts the piecemeal approach, his blueprint will not be all encompassing enough as to carry every constituency along.

One other challenge is that the piecemeal method requires that a reasonable percentage of the population should be conversant with critical thinking to be able to meaningfully make quality rational input into government programmes and policies. If this is not the case, it can result in dictatorship of the elite. This is a situation where a few well informed and critical minorities speak on behalf of the entire society and by so doing defeating the overall aim of the piecemeal method. This implies that for the method to be realized fully in any society, the art of objective and constructive criticism must be a common ideal shared by the entire members of the society. This skill is not common in Nigeria yet.

A few criticisms have been levelled against piecemeal social engineering by some philosophers. There are reservations people have expressed about the method especially in relation to the free market ideology. Adopting the piecemeal social engineering makes the government a

dominant player in the economic life of the people and the society. Nicholas Dykes (http://www.libertarian.co.uk/lapubs/philn/philn065.htm) observes that economic interventionism and welfarism were intellectually demolished years ago and as such has lost relevance. Continuing, he argues, that piecemeal social engineering in Britain, has reduced its once proud people to a state of near serfdom. This is because, it has created an enormous dependency culture in which a third of the people are parasites on the remainder, while incessant deficit spending and inflation, required to pay for the engineering, have not only destroyed untold billions of hard earned savings, but have tied the massive burden of an incalculably vast mortgage around the necks of our children and grandchildren.

It is not fair to equate Popper's piecemeal social engineering with the welfare state. While welfare state employs the mechanism of state intervention, it will be an unfair representation of Popper's views to conclude that his political thought is identical to that of the welfare state. Piecemeal social engineering is not about social security and financial and economic subsidy to the economically lazy or the creation of economic parasites. The piecemeal approach has its focus on the appropriate manner in which social transformation, which is the focus of all governments, should be pursued so as to ensure social and economic leverage. It is not a programme to give alms to the less privileged. The problems Dykes alleges were created by the British welfare policy were actually problems that arose due to non-application of piecemeal social engineering. This is because one of the focuses of piecemeal social engineering is to avert unintended consequences in the implementation of government programmes and policies. Again, it seeks to minimize avoidable suffering. Popper feels it is morally wrong for people to go through suffering, which can be avoided and it is the duty of the state to ensure that people do not pass through unnecessary suffering.

Conclusion

There have been lots of political theories in history all seeking to address human needs and usher better living condition. Piecemeal social engineering is Popper's attempt to offer a better alternative to authoritarianism and fascism. This work has been able to expose piecemeal

engineering as a theory, and equally tried to establish that it is possible to practically apply it in the governance of a democratic society. Particularly relevant is its application to the numerous social and political challenges facing Nigeria as a nation. It has the capacity to resolve the lingering ethnic issues, corruption as well as engendering a culture of political openness and critical culture in social engineering. However, the paper equally highlights major constraints that may hinder its application in Nigeria. On a final note, piecemeal social engineering has the potential of assisting nations overcome several social and political challenges as well as creating a broad platform for citizens' participation in governance through constructive critical inputs.

Bibliography

Adebukola, F. O. (2014), Interrogating the influence Poverty on Insecurity in Nigeria, *International Journal of Humanities and Social Sciences* vol. 4 No.12, pp. 221-227.

Corvi, Roberta (1997). *An Introduction to The Thought of Karl Popper.* London, Routledge.

Dykes, Nicholas, *Debunking Popper*: *A critique of Karl Poppers Critical Rationalism* http://www.libertarian.co.uk/lapubs/philn/philn065.htm

Federal Republic of Nigeria Poverty work Progam (2016), Poverty Reduction in the Last Decade ACS19141-Revised-public-pov-assesssment-final.pdf accessed 15/11/2020.

Hans, Albert (2006). 'Karl Popper and Philosophy in the Twentieth Century', in *Karl Popper*: *A Centenary Assessment*, Ian Javie, Karl Melford and David Miller (eds), England, Ashgate.

Ingemar, Nordin (1994). "The social Engineering: State Monopoly Versus Market Pluralism" *Economic Notes*, *no.56* London, Libertarian alliance.

Kiruki Joseph (2011). 'Philosophical Fundamentals for Sustainable Development in Kenya: Karl Popper's Perspective', in *Current Research Journal of Social Sciences* 3(1).

Leibetseder, Bettina (2011) 'A Critical Review of the Concept of Social Technology', in *Social Technologies*. 1(1).

Leao, Catarina (2015). *Into the Practical Application of Piecemeal Social Engineering*: *Challenges and Solutions*, Unpublished M. A. Thesis submitted to the Institute of Political studies of the Catholic University of Portugal, 2015.

Megil, Allan (2006). 'Popper and Marx as Freres Ennemis' in *Karl Popper*: *A Centenary Assessment*, Ian Javie, Karl Melford and David Miller (eds), England, Ashgate.

National Bureau of Statistics (2020), *2019 Poverty and Inequality in Nigeria Report, Abuja, Nigeria*

Popper, Karl R (1966). *The Open Society and its Enemies vol. 1*, New Jersey, Princeton University Press.

Popper, Karl R (1966). *The Open Society and its Enemies*, *vol*. 2, New Jersey, Princeton University Press.

Popper, Karl R (1962). *Conjectures and Refutations,* New York, Basic Books Publishers.

Popper, Karl R (1957). *The Poverty of Historicism*, New York, Routledge and Kegan Paul.

Shearmur, Jeremy (1996). *The Political Thought of Karl Popper,* London, Routledge,

Stelzer, Harald (2016). Principles and policies: What can we learn from Popper's "Piecemeal Social Engineering" for Ideal and Nonideal Theory? In *Philosophy of the social sciences* 2016, Vol. 46(4) 375-89, SAGE.