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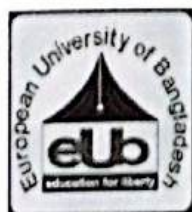
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Editorial Note

European University of Bangladesh is now 5 years old having more than 300 teaching faculty with brilliant academic and research background. As many as fifty research-based articles were received from them and therefore the second issue was somewhat delayed mainly due to relatively longer selection process. In spite of this, we take great professional pleasure in finding the enthusiasm amongst our young researchers.

This Second Issue contains 8 (Eight) articles covering wide range of subjects including the review of Social Business, and Entrepreneurship experiments of the Noble Laureate Prof. Mohammad Yunus, various aspects of bureaucracy. The third and fourth articles relate to mathematical modelling. The fifth and sixth articles dwell on water quality assessment in Dhanmondi lake in Dhaka city and customer behavior towards soft-drink industry in Bangladesh. The seventh article deals with modernism, postmodernism and metamodernism while the eighth article dwells on towards Borderlessness: The way out of universal partitioning.

Most of these articles have been written on the basis of research works undertaken by the young teachers leading to their Ph. D. degrees. This is a very positive sign. It is really interesting to find two encouraging events happening almost simultaneously, namely, this young university is preparing very fast to start relocating its permanent campus by the end of August, 2017 and quite a good number of the young teachers are preparing to complete their Ph. D. research works. Both these two events are really encouraging. This multidisciplinary journal vows to support these efforts undertaken by young researchers. We believe research is the most effective engine for creation of new knowledge, revising the old knowledge and replacing the obsolete ones. The development of a country depends largely on the magnitude and diversity of research works undertaken by the scholars. We want to supplement their efforts with our humble resource.

Prof. Dr. Mokbul Ahmed Khan
Editor

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Entrepreneurship Development & Social Business: Conceptual Framework

Farzana Alam*

Key Words: Entrepreneurship, Development and Social Business.

Abstract: This paper gives a brief narration of the conceptual framework of Social Business and Entrepreneurship Development with particular reference to the experiments of Grameen Telecom Trust (GTT). The paper highlights that social business is a "non-loss non dividend company", dedicated entirely to achieving a social goal; while entrepreneur refer to the person who organizes, manages and assumes the risk of business. This paper covers the theoretical and practical issues covering social business, entrepreneurship, experiments of social business by Grameen Telecom Trust (GTT) and various other technical issues as innovated by Nobel Laurel Prof Dr. Mohammed. Yunus. This paper is a part of an ongoing Ph.D thesis of the author. The paper also covers the problems, issues and future of social business projects sponsored and implemented both by GTT and other organizations both at home and abroad.

Chapter-I: Introduction

"I shall send poverty to museum"- was the bold declaration of Nobel Laurel Prof. Dr. Yunus [1]. This may appear meaningless slogan. But when one comes across the success stories of Grameen Bank from 1983 to-date in a poverty-stricken country like Bangladesh, this slogan sounds highly meaningful. This has been expressed through the recognition of the world community by awarding Nobel Peace Prize to Grameen Bank and its propounder Prof. Dr. Mohammad Yunus. Entrepreneurship Development through Social Business is one of his many great innovations. A modest attempt has been made here to briefly review the Entrepreneurship Development and Social Business initiated by Prof. Yunus through Grameen Telecom Trust (GTT).

Chapter-II: Social Business and its Conceptual Framework

While trying out various approaches, Prof. Yunus, the exponent of Social Business, moved from one level to another level of his conceptual framework. He moved from microcredit to a much broader concept, which neatly includes microcredit itself. His new concept, Social Business, brought about fundamental change in the architecture of our capitalist economy by bringing it closer to a complete and satisfactory framework, freeing it from the basic flaws which lead to poverty and other social and environmental ills. It may be mentioned here that the economists have built their whole theory of business on the assumption that human beings do nothing in their economic lives besides pursue selfish interests. The theory concludes that the optimal result for society will occur when each individual's search for selfish benefit is given free rein. This interpretation of human beings denies any role to other aspects of life-political, social, emotional, spiritual, environmental, and so on. While

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criticizing the traditional theory of capitalist economy, he states that once we recognize this flaw in our theoretical structure, the solution is obvious. We must replace the one-dimensional person in economic theory with a multidimensional person - a person who has both selfish and selfless interests at the same time.

When we do this, our picture of the business world immediately changes. We see the need for two kinds of businesses: one for personal gain, another dedicated to helping others. In one kind of business, the objective is to maximize profits for the owners with little or no consideration for others. (In fact, in the pursuit of maximum profit, many people do not mind even harming people's lives knowingly.) In the other kind of business, everything is for the benefit of others and nothing is for the owners - except the pleasure of serving humanity. The second kind of business, built on the selfless part of human nature, has been named as social business by Prof. Yunus. This is what the traditional capitalist economic theory has been lacking.

In a social business an investor aims to help others without making any financial gain himself. The social business is a business because it must be self-sustaining - that is, it generates enough income to cover its own costs. Part of the economic surplus the social business creates is invested in expanding the business, and a part is kept in reserve to cover uncertainties. Thus, the social business might be described as a "non-loss, non-dividend Company," dedicated entirely to achieving a social goal.

Social business has been conceived by its propounder as a selfless business whose purpose is to bring an end to a social problem. In this kind of business, the company makes a profit - but no one takes the profit. Because the company is dedicated entirely to the social cause, the whole idea of making personal profit is removed from this business. The owner can take back over a period of time only the amount invested.

There are two kinds of Social Business. One is a non-loss, Non-dividend Company devoted to solving a social problem and owned by investors who invest all profits in expanding and improving the business. Grameen Danone is an example of this type of Social Business. The whole objective of this company is to solve the problem of malnutrition by selling affordable yogurt fortified with micronutrients. Grameen Veolia water, which addresses the problem of arsenic-contaminated water by selling pure water at a price the poor can afford, is another example of this type of social business.

The **second kind** is a profit-making company owned by poor people, either directly or through a trust that is dedicated to a predefined social cause. Since profits that flow to poor people are alleviating poverty, such a business is by definition helping to solve a social problem. Grameen Bank, which is owned by the poor people who are its depositors and customers, is an example of this kind of social business.

Social Business Vs Social Entrepreneurship

"Social entrepreneurship" relates to a person. It describes an initiative of social consequences created by an entrepreneur with a social vision. [2] This initiative may be a non-economic initiative, a charity initiative, or a business initiative with or without personal profit. Some social entrepreneurs house their projects within traditional non-governmental organizations (NGOs), while others are involved in for-profit activities. In contrast with social entrepreneurship, social business is a very specific type of business - a non-loss, non

dividend company with a social objective. A social business may pursue goals similar to those sought by some social entrepreneurs, but the specific business structure of social business makes it distinctive and unique.

A foundation, for example, is a charitable organization created to disburse funds from one or more donors who seek to create social benefits through their giving. A foundation is not a social business: It is not financially self-sustaining, it normally does not generate any income through business activities, and it does not have an "owner" the way a social business does. Under the laws of most countries, foundations and other non-profits are not owned but rather governed by boards of directors under guidelines established by the state.

However, a foundation could own a social business. In fact, it could be an excellent use of foundation monies to establish social businesses within the organization's sphere of interest. When a foundation gives a grant to a traditional NGO, the money is spent to establish or support charitable programs, and hopefully it provides some benefits to the community. But in any case, the money is soon spent, and in most cases the NGO is soon applying for another grant to continue its work.

By contrast, if a foundation were to provide investment money with which to launch a social business, the business could create social benefits while generating the income to sustain itself. Over time it would repay the original investment, which means the foundation would get its money back and be able to use it for some other worthy purpose. Meanwhile, the social business would chug along, doing good in the world and, if it is well run, expanding and spreading its influence in ever-widening circles throughout the society.

In a similar way, a traditional NGO, which is a non-profit, charitable organization, could also own a social business. It would need to be separated from the NGO for legal, tax, and accounting purposes. But as long as the social business shares the same social objectives as the NGO, it seems that such an investment would be a wise and potentially powerful tool for pursuing the NGO's charitable goals.

Social Business is thus defined by Professor Yunus as a financially sustainable organization created to solve a social problem. Whereas original investments may be recouped, all potential profits are reinvested to further increase the organization's social impact. [3]. In order to make the concept of Social Business more clear, seven golden rules have been put forward by its propounder. These are as follows:

- (i) Business objective will be to overcome poverty, or one or more problems (such as education, health, technology access, and environment) which threaten people and society; not profit maximization.
- (ii) Financial and economic sustainability.
- (iii) Investors get back their investment amount only. No dividend is given beyond investment money.
- (iv) When investment amount is paid back, company profit stays with the company for expansion and improvement.
- (v) Gender sensitive and environmentally conscious.
- (vi) Workforce gets market wage with better working conditions.
- (vii) Do it with joy [4].

An analysis of these Seven Principles, a number of critical issues came forward. First Choice of the right Focus Area. Like any other business, Social Business focuses also three critical issues while choosing right focus are, namely, (a) clear idea about core capabilities and potential business interest of the company; (b) clear understanding of the problems and the pressing needs of the targeted geographical area and (c) clear understanding of the land scope of stakeholder, legal issues and activities of players. Thus, Social Business is always about funding the right balance, the best solution between the contradicting requirements of social and business all the times. [5].

Second Critical Stage is the designing a Successful Business Model. This model was initiated by Yunus Centre in January 2013 through its well-acclaimed First Design Lab. Encouraged by its success; Yunus Centre decided to organize Design Lab every month. During the Design Lab, a good number of young entrepreneurs used to present their social business design in front of experienced business executives and social activists, to seek their advice. This would do two things, it would encourage people to come up with social business ideas; and develop this platform as a sounding board for getting the concept of social business more business-ready through its application in concrete situations. The Third Stage is continuously Learning and Adapting. Social Business evolves a process of continuous experiments of learning and adaptation process involving time, efforts, trial and error. The Fourth Stage is the Building of Efficient and Sustainable Operations. Social Business aim to translate initial investments into self-perpetuating impact well into the future, but such long-run benefits can only be achieved if efficient, sustainable operations are put in place. To remain viable over the long term and increase the social impact they deliver, social businesses must structure operations and partnerships effectively, hire and retain the right talent, and design operations to be as lean and efficient as possible. Although these objectives are the same as in any business, social businesses face particular challenges in addressing them effectively. The Fifth and final stage is Managing for Impact. The moment of truth for a social business is finding out whether success has been achieved - and can be sustained and increased. Success means two things: delivering real social impact and doing so self-sustainably, without the financial support of corporate partner or outside donations. Both of these outcomes can and should be measured and managed. While most companies are used to managing financial returns, managing social impact is often new undertaking.

Measure and Manage social impact as rigorously as Financial Results. Although social-impact outcomes may seem intangible or difficult to evaluate, clear metrics can help quantify the impact of a social business on the target population. As a minimum, social impact should be measured along two dimensions: the impact on each beneficiary and the number of targeted beneficiaries reached.

Chapter-III: Entrepreneurship Development & Social Business of Grameen Telecom Trust (GTT)

Although Entrepreneur is defined as the person who organizes, manages and assumes the risk of a business, Grameen has added a set of new connotations to the term. In the perlace of Grameen, new entrepreneurs are called "Nobin Udyokta (NU)". NU refers to the potential entrepreneurs, who are selected through a process of identification of potential of potential investors and making them self-reliant through traditional profitable business following the social business model. This model was initiated by Grameen Telecom Trust (GTT) in the

year 2013. The well-pronounced slogan for this programme runs: "We are not job-seekers, we are job givers" and "Turning unemployment into Entrepreneurship". This NU programme was in fact, undertaken by GTT to solve a serious unemployment problem created amongst thousands of educated youths, who were children of the beneficiaries of the country-wide micro-credit programme of Grameen Bank and were educated under its Education Loan Programme. The children of the existing members of Grameen Bank (who are continuing for last 3 yrs.) or who were members of GB for 7 yrs. in the past, were eligible to become N.U. initiated by GTT. The main objectives of the N.U. Programmed were:

- (i) To identify new entrepreneurs from the members of GB, help them to set up their own businesses and thereby making them owners of their own businesses where they will become self-reliant and also will create jobs for others.
- (ii) The NU will prepare their own business plans, which may be taken either of the following forms:
 - (a) He/she may own his/her intending parent's business, through transfer of ownership for expansion purpose;
 - (b) They may make their business plans copying from other successful business;
 - (c) They may make their business plans on the basis of their own experience gathered from their previous working places;
 - (d) They may prepare their business plans by utilizing their own knowledge and skills gathered through previous education and training.

While guiding the NU, the GTT specified the following types of business:

- (a) These businesses will be managed strictly following the model of Social Business under the purview of the GTT.
- (b) The responsibilities of selection of NU, determination of the requirements of investment capital, management system of the projects, monitoring etc. will be with the relevant departments of GTT.
- (c) Each of the projects will be treated either as solely GTT financed unit, or as Joint Venture business unit with GTT and NU.
- (d) Until the recovery of full amount invested by GTT, or until GTT participation continues, these social business projects will be run under the supervision of GTT.

While specifying the modality of converting the loan into equity, GTT included in its charter the following conceptual framework:

From Loans to Equity

Impact of this shift from loans to equity to create social businesses is far reaching. This has a possibility of addressing the issue of global problem of youth unemployment, or unemployment for that matter, in a sustainable and a replicable way. It is simple, but very effective. It has moved the issue from traditional prescription of job creation through promoting profit-maximizing investments or investments in large infrastructure projects by governments, to simple, sustainable, and direct micro equity financing of the business of the unemployed person himself within a social business format. Here the action directly aims at the very person whose problem is to be solved. It is not an uncertain by-product of an enterprise intended for profit maximization. In a social business the investor solves problem

by creating a business. In this NU case the investor solves the problem of youth unemployment (needless to say, the method can be used in any type of unemployment situation whether the young, or the old). Investor, in a social business, does not take any profit from his investment, except for getting his investment money back. The NU is responsible for paying back whatever money he received as equity within an agreed period. This offers an exciting opportunity for any entrepreneur. Imagine what a thrill it is for a young entrepreneur entering the business world for the first time.

Since entrepreneur is getting fund from its investor-GTT, there arises the questions of relationship between Investor and entrepreneur i.e. NU. GTT specifies this issue very clearly.

Relationship between Investor and NU

The entrepreneur may have some or no shares in his business. He can be the managing partner or a paid manager of the business owned by the investor. Investor will be monitoring the performance of the manger/ managing partner, but will not get involved in the actual running of the business. As the business makes profit, the investor receives his dividend. When he has received enough dividends to equal the amount of equity he has invested, he stops taking further dividend. It is time for him to move on to the next investment with the money he got back. But his objective will not be achieved until he establishes the entrepreneur as the owner, because his intention was to transform a job-seeker into a job-giver. This was his objective. If his intention had been merely to create job for a young unemployed person, his objective would have been achieved right at the start. Even if he holds on to ownership of the business, the business would already be a successful social business. But his objective was bigger than just providing employment; it was to transform a job-seeker into a job-giver that is, creating an entrepreneur. This he does by selling the shares to the entrepreneur following social business guidelines.

Question comes, what price would he charge to the entrepreneur for his shares? He is entitled to sell them at the book value, or at the market value of the shares. Both these values are higher than the face value because the business has already paid back the original investment amount. According to social business guidelines, investor can sell his shares at the market value, but he has to reinvest the additional money he receives beyond the face value, into another social business, or in the same social business. In other words the investor cannot enjoy additional value created by his investment. In selling the shares of a NU business, the investor will take an amount equivalent to the original investment amount plus additional fixed sum of 20% over it. This additional amount is called "share transfer fee". The entrepreneur finds it very attractive offer, because, firstly he is buying the shares at the face value, not at the book value. That itself is a big gain for him. Secondly, fixed charge of 20% on the original equity over the entire payback period is a rather modest amount to pay to the own shares. For example, if the entrepreneur is paying back the investment amount of Tk. 1.0million he will have to pay back a total fixed amount of Tk. 1.2 million irrespective of how many years it takes to pay back the money. Instead, if he had borrowed the money from a bank his interest burden will grow each day, making the total repayment burden twice or thrice the original loan amount in a few years.

What would be the justification for charging the "share transfer fee" in the NU programme? Two reasons were put forward: one, in social business shares are transferred at market value. In NU programme the entrepreneur is asked to pay the amount equivalent to face

value, which would be much smaller than the market value in a successful business. Two, investor in the case of NU programme is not a passive investor. He is very active investor. He prepares the entrepreneur to become an efficient entrepreneur, arranging training for him, providing guidance to him, monitoring his business performance, providing support services, bearing the business risk, helping him to handle emergencies etc. Fixed amount of 20% is only a small fee for covering all these services over a period of several years.

Identification and Implementation

Whole process begins with the identification of potential NU. The implementation structure of the investor, which has village level staff to work with the entrepreneurs, is responsible for identification of the potential entrepreneurs, helps them develop their business plans, and prepare the Nus to make presentation of their plans to the participants of the Design Lab.

The whole process starts with the home visit of the potential entrepreneur and getting to know him and his family in all details, captures his dreams and fears, and tries to build confidence in him. Informal discussion in small groups of 4 or 5 takes place to let them get to know each other. Once a sizable number (say 30 to 35) of young men or women have been contacted the village staff will organize an orientation and identification camp in a village. Experienced camp leaders will attend the camp to carry out the identification and confidence building process. Participants learn the rules and procedures of NU programme, ask questions to get a clear picture of the programme. They assess each other's business plans, strength of their business will. Camp leaders give them business games to play and test their problem solving quality.

At the end of an intensive get-to-know-your-entrepreneur exercise, camp leaders make a short list of the participants who have impressed them as entrepreneurs likely to succeed, in the first round of selection. The rest are assured that they are kept in the waiting list they'll be invited in the next camp. In the mean time they can prepare themselves to present a better performance next time.

The short-listed candidates then go through second round of project development exercises, in another convenient location, on a later date. Entrepreneurs selected in this round are invited to Dhaka where they'll give final shape to their business plans and give them a professional appearance with the help of trained staff of the investors. Project summaries are prepared in English for a five minute presentations at the Design Lab where the entrepreneur has to defend his project. Usually after all this long process of preparation Design Lab does not find any ground to reject any project. Participants give some good advice and flat some issues to help better implementation. In rare cases an entrepreneur is asked to modify his plan to make further improvement and present it to the next Lab.

Once the project is approved, handholding process for implementation begins. Investor and the entrepreneur now go through a process of bonding together for a successful journey ahead. All regulatory issues are thrashed out, necessary documentation is completed. Monitoring and accounting training are completed. Funds are released and business starts rolling. Grameen Communication, a Grameen software company, has developed an accounting and monitoring software to collect MIS and accounting information from every

NU business on a daily, weekly and monthly basis. Daily figures are sent via text messages. All information accumulates at the central server, which produces reports for each investor on daily, weekly, monthly or for any other period as the investor would like to have.

Social Business Village

Next step in NU programme is to deepen it by giving it an institutional structure and vision. This is to be done by creating Social Business Villages (SBV). To make it an autonomous and economically viable entity, GTT starts with a Union, lowest local government unit in Bangladesh, covering a cluster of about 20 villages, as the "greater village". This village unit is being developed as a Social Business Village.

Each SBV will have a Social Business Fund and a Social Business Incubation Company. Incubation company will promote the idea of social business, help develop business plans, bring successful social businesses from outside to replicate, create joint ventures with companies from outside the village, network with other Social Business Villages, invite non-resident villagers who are engaged in professional activities outside the village, or the country, to help build up the Social Business Fund and invest in social businesses in their own village. Bangladeshi people have a very strong emotional attachment to their own villages. No matter how long they are away, how far they are away, from their villages, they still feel a strong bond with village. SBV programme may reconnect them to their villages in meaningful ways.

A Social Business Village will qualify to call itself as such only after it is formally recognized at the annual Social Business Day celebration which is held regularly on June 28 every year. Minimum qualification requirement for applying for this recognition is to create at least 25 NU projects and 5 other types of social business successfully.

In respect to the invitation, individuals, foundations, and businesses contact GTT, if they are interested in creating their own Social Business Villages. GTT helps them set up appropriate structures to do that, like Social Business Fund, and Incubation Company. Services are offered to manage the Fund and the company under management contracts. Grameen Telecom trust will select three unions among those who will contact GTT, to provide matching funds. For these three unions, Grameen Telecom Trust will invest an amount of money equal to whatever amount the union can mobilize on its own. In these cases both the Social Business Fund and the Incubation Company will be managed by Grameen Telecom Trust.

This will be an interesting experience of joint venture between Grameen Telecom Trust and the unions in creating Social Business Villages.

New Solution for an Age-old Problem

When promotional activities were carried out for distribution of credit amongst the poor women in early years of Grameen Bank, many experts around the world insisted that credit may work for only very limited number of entrepreneurial poor people. Entrepreneurship is a rare quality in people. It is rarer in poor people; they claimed to counter the proposition that "All human beings are entrepreneurs, with no exception". But the experiment of GB and GTT has established that poor people have all the capabilities of becoming viable entrepreneurs.

Social Business may bring a fail-proof new solution for an age-old problem, i.e. the problem of unemployment. It has application everywhere - poor countries, rich countries, urban areas, rural areas, tribal areas, isolated areas, anywhere. It does not have to be restricted to any particular group. The young, the old, men, women, the literate, the illiterate, all are good candidates for becoming entrepreneurs. All human beings have their basic creative power. That, backed up by social business framework is all it needs for the success of "turning unemployed into entrepreneurs [6].

Not only would this save people from extreme frustration and the depression of being unemployed, it would give people a new life, new hope and new mode of enjoyment. Everyone would become an active and productive citizen. In the process it would create a new economy. There would be no wastage of human creativity. It would save people from state dependency.

As the first step in this process we may begin by getting busy with turning unemployment into entrepreneurship in social business villages to solve the human problems with efforts of their own people. If we succeed in doing it, we can move confidently in the direction of creating a world without unemployment and without dependence.

References

Prof. Mohammad Yunus, with Karl Weber: "Building Social Business": The New Kind of Capitalism that Serves Humanity's Most Pressing Needs, The University Press Ltd, Dhaka, 2010

Prof. Dr. Mohammad Yunus, The Power of Social Business: Lessons from Corporate Engagements with Grameen, BCG/Yunus Social Business / 2013, P-8.

Prof. Dr. Mohammad Yunus, Seven Principles of Social Business, GTT, 2013

Emmanuel Marchant, The Power of Social Business: Lessons from Corporate Engagements with Grameen, BCG / Yunus Social Business / 2013, P-13.

Prof. Dr. Mohammad Yunus Social Business, "Investing for Social Benefit: Yunus Social Business Incubator Funds," 2013.

Building Social Business, Mohammad Yunus, The University Press Limited, Dhaka, Bangladesh, 2013.

Farewell to the Weberian Bureaucracy in Bangladesh: Sociological and Administrative Analysis

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Key words: *Weberian Bureaucracy, Post-Bureaucracy and Bureaucratic Reforms*

Abstract: *Bureaucracy in the 21st century is undergoing dramatic change in many parts of the developing and developed world. Traditional bureaucracy of Max Weber seems to be misaligned with modern accounts of change within the civil service and modern politico-bureaucratic systems. Globalization and the pluralization of service provision are the dynamic forces behind these changes. Hierarchy, rule bound behavior etc. seem hard to quadrangle with the changing environment characterized by governance, new public management and post-modernity. Policy, service and decision making problems faced by governments are ever more complex, global and wicked, rather than linear, simple and national in focus. Traditional bureaucracy seems to have become redundant overnight. Nowadays, bureaucratic performances need to be enhanced in order to ensure consistent level government performance to achieve state goals. Post-bureaucracy facilitates a holistic process which introduces organizational aims, team and individual objectives development, effective measurement and assessment of employee performance, the matching of rewards to good performance and the provision of feedback. The shift from weberian bureaucracy to post-bureaucracy develops constructive and supportive mechanisms for public employee development and acquisition of skills which are crucial for organizational success in Bangladesh.*

Introduction

Weberian bureaucracy possesses certain compensation. By promoting specialization, a certain level of expertise would be achieved; a hierarchical arrangement of offices would improve coordination and reaching goals and objectives; and by separating bureaucracy from ownership, the organization would be rational. Although this view of bureaucracy is commonly called ideal type, Weber does not suggest that the variables can be empirically verified. It will be more accurate to say that his analysis is designed to capture the spirit of administration. He personally defines an ideal type as internally consistent in form. Max Weber defines bureaucracy in terms of characteristics. Scholars observe that there are two problems in this identification. The first stems from trying to translate characteristics from the ideal into the real world. In practice many of the Weberian characteristics are inconsistent. Bureaucracy should be appointed to office on the basis of merit and technical

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competency (Pollitt, 2009). Subordinate office has to obey the directives of the higher offices. Professionally trained bureaucrat, however, the authority may emanate from his sphere of competence rather than an organizational hierarchy. The professional may orient his behavior toward his clients in terms of his professional standards or performance expectation rather than by bureaucratic standards. Thus certain strains are imposed on the professional working in a public bureaucracy. The second problem is the assumption that structural arrangements present meaningful insights into behavior. Weber provides a functional analysis of bureaucracy whereby a social structure is explained by showing how each of its elements contributes to its persistence and effective operations. There are some problems that develop when bureaucracies are perceived purely in terms of characteristics. Tensions arose in the plant over the need for expertise on the one hand and the need for obedience on the other (Pollitt, 2001). A number of studies demonstrate the importance of unofficial practices and informal relations within bureaucratic structures.

Ideal type bureaucracy of Max Weber cannot tell the whole story of modern bureaucracy. It was well aware of the different situations of the bureaucracy that existed in the developed countries. Some bureaucracies did not conform to this ideal type. Although bureaucratic setup is modernized but practices are induced by extra-bureaucratic factors and results in favoritisms in administration, corruption, nepotism in recruitment and shortage of technical personnel. Officials are aloof from the people, administration is static in nature and imperfect team work among the employees are very common phenomena in the bureaucratic system of underdeveloped countries which are not suitable to meet the aspiration of developmental goal (Tarek, 2005). These drawbacks, obviously hinders the development of the bureaucracy in the under developed countries.

Post-bureaucracy is an informal inter-personal relationships by reducing chain of command and formal relationships. It focuses on the subordinate's decisions and preferences thereby keeping spirit of innovation and entrepreneurship (Rice, 2004). Fundamental principles of post-bureaucracy are (a) acting strategically by taking initiative, (b) reflecting an understanding which is trying to remove the distance between itself and environment and appreciating flexibility, (c) open systems and (d) more effective use of social capital. Use of information and shining out of information-based power relationships are basic factors of post-bureaucracy. The contemporary literatures on bureaucracy and various forms of post-bureaucratic organizations show that the conventional view of bureaucracy has gradually lost its traditional status (Josserand, Teo and Clegg, 2006). Weberian bureaucracy is incompatible with more recent and fluid images of society, market and world of business. Post-bureaucracy is not simply a matter of reform or a minor change in management style, but a change in the values of bureaucracy in society and the relationship among various organs of government (Grey, 2007). This paper has been written based on secondary materials i.e. related journals, books and reports on bureaucracy and post-bureaucracy following the case study method of research. Most of the data are qualitative in nature and the qualitative descriptive method has been applied for in depth analysis of the farewell of weberian bureaucracy and emergence of post-bureaucracy in Bangladesh.

Fundamentals of Weberian Bureaucracy

Max Weber considered as the founder of the systematic study of modern bureaucracy in elaborating the process of bureaucratization, analyses the causes behind the growth of bureaucracy. Due to the development of money economy the beginning of extensive employment of officials forces bureaucracy to flourish. Weber observes the advancement of bureaucracy due to the increasing size of states and organizations (Bolin and Harenstam,

2008). The process of bureaucratization also increases because of the increased volume of administrative task. The growth of wealth and property influences the need for large scale organization like bureaucracy. However, Weber believes that a bureaucratic organization is technically superior to all other forms of administration, so that bureaucracy dominates.

Bureaucracy of Max Weber may be viewed from different standpoints like concept of authority and powers, organization structure and function, universality etc. Max Weber presents his ideal type of bureaucracy after analyzing the concepts of authority and power which are the most prominent phenomena in any organization. Authority refers to a person's potential for influencing others, but the word authority has implicit in it the notion of legitimacy or ethical sanctification. Authority and power is a reciprocal. In another words, authority is the right to do something (Jamali, Khoury and Sahyoun, 2006). Power is the ability to do the same. Max Weber discusses three types of authority i.e. Traditional, Charismatic and Legal rational. Traditional authority is based on traditions and customs of the society. It always exists in all the societies. It is the authority of eternal yesterday, for example, the authority of a monarch. Charismatic authority is derived from some extraordinary qualities of the person which makes other person to do something according to his wish. In charismatic authority, submission always rests upon devotion to charismatic person. The absolute personal devotion and confidence in revelation, heroism or other qualities of individual is the basis of leadership (Siebers, 2009). However, in Weber's legal-rational authority submission does not rest upon devotion to charismatic or aristocratic person which is always most widely used word for getting obedience, In any organizational hierarchy under legal-rational authority, every person has delegated authority for making certain decisions or taking certain actions.

Weberian bureaucracy is a formal organization confined by rules and regulations rigidly with impersonal bias. In bureaucratic organization, clear-cut division of labor among the officials are designed which is rational and each position is accomplished by the legal authority and concentrated on this specific job (Hendry, 2006). Officials of the organization are organized on the hierarchical basis. Bureaucratic authority of the officials is hierarchically and it is organized within the organization. The scope of individual authority is clearly defined. Bureaucracy includes a specialized administrative staff and management. The specialization helps the organization running smoothly. Regular functions of bureaucracy are designed by a system of rules and regulations. Based on these rules and regulations, decisions are made. Personnel are recruited in the bureaucratic organization on the basis of competence.

Bureaucratic personnel remain impersonal in their contacts with the public. They also maintain their relationship with other organizations only in terms of their official rules. Traditional bureaucracy has recognized norms and conduct among their officials to run the organization. Administrative acts, decisions etc. are maintained for the sake of organizational continuity and for achieving of the purpose or uniformity or action (O'Flynn, 2005). Though Weberian construction is a model only but it has had a long range effect on the thinking of organization. Bureaucracy deals with the structural and functional sides of the organization for functional efficiency but it avoids human side totally. His ideal type of bureaucracy has been criticized from different angles. Some have criticized about his method, others about his purpose and model.

Demands for Bureaucratic Reform

1. Theoretical Demand

Bureaucratic reform is a difficult exercise in any country, as it requires transformation of the civil service structure and behavior of civil servants. But it is increasingly recognized specially in this age of globalization that no country can afford to continue with a civil service that is unable to meet the requirements of the changing situation (McSweeney, 2006). Democracy, transparency, accountability, and rule of law are all key ingredients, of good governance. Good governance cannot be realized if meaningful reforms are not formulated and implemented. But it needs to be emphasized at the outset that for bureaucratic reform to be effective these must be supported with simultaneous political and economic reforms. World Bank created the demand of bureaucratic reform and it is quite emphatic about what should be the key objectives of these reforms in both developing and developed countries. These core goals, as discussed below, have already been implemented in some countries with considerable success (Van Dijk, Jan, 2006). First one is privatization and deregulation. Several countries have taken steps to privatize delivery of public services in the areas education, health care, strategic industries, and natural monopoly. Second one is market-like mechanisms. Where core functions (social policy functions) were not outright privatized, a range of market-like mechanisms was introduced to imitate effects on the market. The scope of market-like mechanisms include periodic market testing of services provided by the public sector against invitations to bid from the private sector, and setting up of internal market mechanisms in some selected areas like health care, social care, and education. Third one is decentralization. Decentralization, devolution and transfer of power at lower level legal entities are considered key goals of any reform as these limits the power of the state as represented by the national government. Fourth one is debureaucratization. Debureaucratization significantly contributes to cost-consciousness, efficiency, and effectiveness in the civil service and protects rights of private citizens as consumers and clients' vis-à-vis state organizations. Transparency, accountability, and public service integrity are closely linked with debureaucratization.

2. Global Demand

Weberian bureaucracy is reformed throughout the world since 1970s based on the following list of 16 agenda (World Bank, 1998, 1996).

i. Institutional Capacity Enhancement for Policy Making

For public sector to be effective it must possess strong central capacity for macro-economic management and strategic policy formulation skills and capacity. It must have mechanisms to delegate, discipline, and debate policies among government agencies and open and maintain institutionalized links to stakeholders outside the government and thereby providing scope for transparency, and accountability and encouraging feedback. Many industrialized countries and much of East Asia show many of the characteristics indicated above. MITI of Japan and Economic Planning Board of South Korea are elite agencies often playing quite important role in setting their countries economic courses. Powerful central agencies are delegated authority to develop policies that will achieve the leaders' long-term objectives. Public-Private Council in Malaysia provides input and oversight from private firms into national policy process.

ii. Strengthening Service Delivery Mechanisms

Many governments have put in place a number of institutional mechanisms to improve service delivery. Greater use of markets, contracting out service delivery to private firms or NGOs is generating competitive pressures and viable alternatives to public provision for users seeking better quality at lower cost. Some governments have created performance-based agencies in the public sector and entering into formal contracts with these agencies, providing them greater managerial flexibility while holding them accountable for specified outputs. Others are depending on the core public sector, emphasizing accountability in the use of inputs, meritocratic recruitment and promotion, and the cultivation of organizational unity to foster loyalty and improve performance. For increasing citizen voice such mechanisms as user-participation, client surveys, published benchmarks are used to bring about external pressures for better service delivery.

iii. Market Mechanisms to Improve Delivery

Governments are depending increasingly on market mechanisms to improve delivery of contestable services in view of their limitations in terms of budgetary allocations and paucity of resources. Deregulation and unbundling of activities in state-dominated industries i.e. electric power generation led to significantly lower unit costs and a rapid expansion in services. Other innovations i.e. voucher and capitation grants have enhanced opportunities for competition in the provision of some social services in education and health sectors.

iv. Public-Private Partnership

Where competition in the market is not feasible it may still be possible to foster competition for the market. Governments under such circumstances can contract with private firms, selected through competitive bids, to provide services. Contracting out is now a widespread practice in many countries. In Brazil contracting out road maintenance to private contractors resulted to savings of 25% over the use of government employees. Leases have increased technical efficiency of water supply in Guinea and of the operation of Port Kelang in Malaysia. Governments are also contracting out delivery of social services especially to NGOs as they are perceived to be committed to high quality. The Netherlands has long contracted with NGOs for providing education services. In Uganda government has entered into partnerships with NGOs to deliver both preventive and curative health services previously in the public domain.

v. Strengthening Public Sector

Public sector, in spite of greater private participation, continues to deliver a large number of services. So the challenge here is to create an enabling environment that provides incentives for better performance. Some industrialized countries have devised ways to increase competition within the public sector, to improve delivery of services for which neither the market competition nor contracting out is feasible. In the United Kingdom an internal market has been created within the National Health Service (NHS) by transforming local health authorities and groups of general practitioners into purchasers of hospital services on behalf of their patients. This arrangement has created competition among hospitals acting as a decentralized mechanism for reallocating resources. Post-bureaucratic reforms in industrialized countries have broken up the core public sector into a series of distinct business groups or special-purpose agencies. These public agencies have better managerial flexibility in allocation of financial and personnel resources. It results greater accountability. Sweden and some other Nordic countries have long divided cabinet

ministries from agencies with specific purposes. Nearly two-thirds of the civil service in the United Kingdom has now been moved into executive agencies charged with specific delivery functions. Singapore in the 1970s created statutory boards to provide efficient service. In Sub-Saharan Africa, performance-based agencies have been created to achieve tax collection targets in Ghana, Uganda and Zambia.

vi. Strengthening Street-level Bureaucracy

Developing countries with weak capacities in setting up performance-based agencies, contracting out and ensuring proper accountability for results are not feasible options for many services. The challenge is particularly acute for street-level bureaucracies whose operators interact daily with people they serve, are geographically dispersed, are granted substantial discretion, and produce outputs that are difficult to monitor and are not subject to competitive pressure.

vii. Performance Enhancement

An important starting point in raising the emphasis on performance within public sector organizations is greater clarity of purpose and task. Colombia, Mexico, and Uganda have introduced performance measurement to orient managers to achieve desired results. New Zealand has stressed outputs as performance measures while Australia, Colombia, and Uganda emphasized on outcomes- impact of outputs on beneficiaries- combined with ex-post evaluation.

viii. Financial Capacity Improvement

As public sector outputs are usually difficult to measure and monitor, financial control and accountability are required to keep managers honest, prevent the poor use or abuse of public resources and improve service delivery. Bolivia, China, Indonesia, and Moldova have written sound accounting principles into law, backed by strong professional associations both within the government and in the private sector to modernize their financial accounting and auditing systems.

ix. Enhancing Public Ethics

Mechanisms for enhancing the loyalty, motivation, and competence of the public bureaucracy are urgently required to improve delivery of many services. The public bureaucracy in France, Germany, Japan, and Singapore all make continuous efforts to ensure that the loyalties of a small group of professionals are fundamentally aligned with the interests of the state. Job security is important here.

x. Ensuring Citizen's Right

Clients and beneficiaries can exert powerful pressures to improve performance where internal monitoring and enforcement capacity is weak. Feedback mechanisms such as client surveys are used in India, Nicaragua, and Uganda to increase transparency and improve accountability by making more people aware of the agency's performance. Citizen Charters, in which agencies publicly commit themselves to minimum standards of service provision - as applied in Belgium, Malaysia, Portugal and United Kingdom - can lead to increased external and internal pressures to meet performance targets and help focus attention of clients and staff on service quality.

xi. Ensuring Personnel Motivation and Capacity Enhancement

Capable and motivated civil servants are the lifeblood of an effective state. Pay is important in this context but so are merit-based recruitment and promotion and organizational unity. It is believed that meritocratic recruitment and promotion restraint

political patronage and attracts and retains more capable and qualified civil servants. A healthy organizational unity encourages civil servants closer identification with organizations goals, reduces costs of making people play by the rules and nurtures internal partnerships and loyalty.

xii. Merit-based Recruitment and Promotion

Merit based bureaucracy helps bring in efficient and high-quality people, confers prestige on public service positions and can do a great deal to motivate performance. Merit-based recruitment and promotion systems are broadly of two types. One is Mandarin Systems, i.e., as found in France, Germany, and Japan are based on highly competitive entrance requirements premised on closed-entry and the other is hierarchical systems. Open recruitment systems as exist in New Zealand and USA are more flexible, decentralized and increasingly market-driven system of civil service recruitment allowing managers to match job requirements with available skills including hard-to-find technical expertise.

xiii. Satisfactory Compensation

Service compensation must not be allowed to fall far behind private sector. In Singapore civil servants are much better off than their counterparts in USA. They receive on average emoluments same as the private sector. To raise public sector salaries and correct fiscal imbalances many countries have embarked on measures to reduce employment, decompress the wage structure and raise average pay in the civil service.

xiv. Building Group Unity

Effective and capable bureaucrats share a commitment to their organization's objectives. organizational unity includes a common understanding about what is desirable and undesirable behavior, manifested in formal and informal norms and grounded in a set of objectives, and a devotion to upholding the honor of the group, based on common understanding.

xv. Combating Corruption

Usually any reform that increases competitiveness of the economy will reduce incentives for corrupt behavior. Reducing official discretion may prove effective in lessening corrupt behavior. Such measures include: clarify and streamline laws in ways that reduces official discretion; contract for services with a private company, possibly a foreign firm with no close ties to the country; make rules more transparent; introduce market-based schemes that limit the discretion of regulators; and adopt bureaucratic reforms that introduce competitive pressures into government.

xvi. Formulating Independent Watchdog Institutions

Independent watchdog institutions that are part of the government can also curb corruption. Some countries have independent anti-corruption commissions that can investigate allegations and bring cases to trial. Most famous is Hong Kong's Independent Commission against Corruption that reports exclusively to the highest authority and has extensive powers. Singapore and Botswana have similar agencies. Ombudsmen hear citizen's complaints and can help increase accountability of government agencies. Nordic countries provide best examples of this practice. Whistleblower statutes protect and reward public employees who report malfeasance of co-workers or government contractors. USA provides one of the best examples.

Farewell to the Weberian Bureaucracy in Bangladesh

The regime of 1996-2001 appointed a new Public Administration Reforms Commission (PARC) in 1997 chaired by A T M Shamsul Haque, a retired senior bureaucratic figure, which completed the report in June 2000. With a view to achieving socio-economic development of the country, PARC was constituted to ensure good governance. The government set up the Commission on the eve of a new era when the whole world was moving fast to incorporate the concept of post-bureaucracy. Improving transparency, efficiency, accountability, effectiveness and dynamism; bringing institutional and procedural changes necessary to attract investment; prevention of wastage and improvement of service delivery to ensure value for money; combating corruption; devolution of authority; and rationalization of existing manpower etc were the key suggestions of PARC (Ahmed, 2002).

Hence, PARC mentioned legal, regulatory and procedural changes, that is, necessary to implement reform proposals including an institutional arrangement for the implementation of Commission prescribed recommendations. However, the Commission came up with two interim and two long term recommendations to remove the hindrance to better bureaucratic efficiency. These were grade wise instead of class wise identification of employees and raised merit quota in the government service. PARC recommended that merit should be the basis of appointment and senior management pool should be introduced. It also suggested ensuring equitable scope for promotion. Moreover, the system of Annual Confidential Report (ACR) form may be amended and accordingly merit, efficiency and integrity should be maintained. The retirement age should be raised from 57 to 60 years and there should be no contractual appointment with reference to the duty post of the government. All the recommendations have not been implemented by the government yet. PARC (Public Administration Reform Commission) enables citizens to pay all of their bills at one time and one place by the proposed reform. Previously, people faced the troublesome of making several payments of bills for four utility services - telephone, power, gas and water at different times and places (GoB, 2000).

People had to pay in separate banks on the specific days of each month. This entailed a great deal of problems for users, who had to run between branches and waited in the queues for hours. One Stop Utility Bill Payment System was inaugurated in 2003 to remove those problems. In the present system, a subscriber can pay bills of all utility services in one bank, greatly reducing costs of time and travel (The Daily Star, 13 September 2003). On 23 February 2004, the Anti Corruption Commission (ACC) Bangladesh was established through an act promulgated that came into force on 09 May 2004. On 22 November 2004, it inaugurated its journey with a mission of making a difference to the Nation's anti-corruption initiatives with a fresh mandate. However, government abolished its predecessor the Bureau of Anti-Corruption on the same day. Although initially, it could not make the significant impact, but immediately following its reconstitution in February 2007, the ACC start working with renewed vigor and impetus duly acceding to the United Nation's convention against corruption that was adopted by the General Assembly way back on 31 October 2003 (<http://acc.org.bd/about.php>).

However, the Code of Criminal Procedure (Amendment) Ordinance 2007 heralded the long awaited separation of the Judiciary from the Executive. This ordinance was captured in the Code of Criminal Procedure (Amendment) Act in 2009. However, to ensure the independence of the higher judiciary, it is important to make further reforms. Particular attention is required to ensure professional caliber and

Bangladesh National Human Rights Commission was established in 2008 to promote and protect human rights. Investigation of complaints; promoting awareness; advising and assisting government in the formulation of policy and legislation; and encouraging ratification and implementation of international human rights treaties etc are the key functions of the Commission include. This Commission now requires urgent support from the government and development partners to build an active and effective institution. The initiation of e-governance was another PARC's recommendation. Including information systems, the process of computerizing systems has started. However, the government of Bangladesh has still a long way to go. Websites for maximum ministries are now available online, some containing useful information. The Ministry of Finance of the Government of the People's Republic of Bangladesh has developed software for budget planning, sensitivity and impact analysis.

The Ministry of Communication of the Government of the People's Republic of Bangladesh has created a database containing information about contractors and tenders. It has also established a project monitoring system for tracking progress of projects. Bangladesh Planning Commission under the Ministry of Planning of the Government of the People's Republic of Bangladesh has developed an internal network, capability for videoconferencing, a digital library, and has created software for interfacing between the development and revenue budgets (The Daily Star, 13 September 2003). Administration should be free from politicization. It also should be pro-people. Efficiency, seniority and merit will be the basic requirement of appointment and promotion in public service. Right to information and e-governance service will be introduced throughout the whole country. A permanent Pay Commission will be set up for civil servants.

These four bureaucratic reform initiatives have been declared as the political commitment of the ninth parliamentary democratic government to make Digital-Bangladesh. This is also known as Vision-2021 which consists of four pillars: (a) developing human resources for the 21st century, (b) connecting citizens in ways that is most meaningful, (c) taking services to citizen's doorsteps, and (d) making the private sector and market more productive and competitive through the use of ICTs. E-Governance is composed of three major components. First, G2C (Government-to-Citizen) involves interaction of individual citizens with the government. Second, G2B (Government-to-Business) refers to the interaction between the private organizations and the government. Third, G2G (Government-to-Government) involves interaction among government officials within both a government office and government offices. The regulatory/legal framework of Bangladesh Public Administration has not yet been improved to accommodate the growing needs of the electronic world. An e-mail has still less official value. It cannot be also considered as a legally acceptable mode of communication in public sector offices. However, recently government formed laws to protect against cyber-crime and slowly the concern of e government is being incorporated in every sectors specially education, health and other development activities.

The concept of Citizen's Charters reached the shores of Bangladesh in 2000. The Public Administration Reform Commission (PARC) recommended the establishment of Citizen's Charters in a number of public agencies. On 21 May 2007, the Government of Bangladesh circulated an official order to prepare Citizen's Charter, especially in those parts of the public sector that provided basic services to the people. The circular required that the service information should be disseminated widely. Many government agencies have prepared Citizen's Charters and send those to the field offices to display prominently from that time. The primary objective was that people could find and read them easily. And there they were still hanging when the Civil Service Change Management Program (CSCMP), a project implemented by the Ministry of Public Administration with the technical assistance of the UNDP, was asked to raise the wider public awareness on the Citizen's Charter.

The project toured the country, organizing workshops and consultations in several districts and divisions. During those workshops they brought together hundreds of field officers, citizens and civil society organizations to discuss the current state of the first generation Citizen's Charter in their locality in an honest, constructive and forward looking manner. It had actually led to improved services and how the Initiative could be taken forward. At the same time, the project visited individual field offices, civil society organizations and non-governmental organizations. Bangladesh has very rich experience on PPP (Public-Private Partnership) recently, especially in respect of the scope of NGOs (Non Government Organization) activities and social service (Begum, 2000). The sectors of PPP in Bangladesh are health, education, infrastructure development, tourism, ICT sector and industries. The government plays a great role in PPPs as it forms a means to increase the quantity and quality of infrastructure investment. Legal and regulatory issues in relation to PPP should be sorted out (The Daily Star, 2 June 2008).

Sociological Analysis

Political and economic power structures of Bangladesh differ little from that of most other impoverished nations around the world. It has a number of well organized interest groups such as the military, the public bureaucracy, private business, the trade unions, religious groups, the civil society and the donors that largely determine political decisions. Nevertheless, interest groups tend to be fractious and are frequently overlapping and divided. This disintegration results in much contention and distrust. Such commitment of democratic government is considered as a driving force behind the proper implementation of bureaucratic reform efforts. In Bangladesh, the experiences of the last four decades suggest that the political leadership has never been serious in its attempt to overhaul the bureaucratic system (Khan, 1998). The major political parties always emphasize reforming the bureaucratic system, while campaigning for electoral victory. They hardly translate their intention into reality after assuming power. With elections every five years short-run political calculations have dominated bureaucratic decision making, however, the political leadership perceives the immediate political costs of bureaucratic reforms to outweigh the long-run benefits. Consequently, in the Bangladesh context political commitment is circumscribed by patron client relationship, which is responsible for distracting the political leadership from embarking on comprehensive reform programs (Sarker, 2004b). The disappointing results of the reform efforts during the era of Traditional Public Administration may be seen partly as a consequence of political factionalism and the deeper structural relationships between political and bureaucratic actors in Bangladesh.

There are a large number of literatures that identifies various barriers of the implementation of bureaucratic reform. Collective action by the bureaucracy is seen as an accepted norm of behavior and each political party fears the cost of resisting such collective pressures. The party in power fears bureaucratic disruptions, loss of votes and loss of control over the bureaucratic machinery so as to be able to use it for partisan gains. The use of the machinery of state for partisan and personal gain has given the administration a sense of immunity to reform and forged a collusive bond between state, politics and business (Subhan, 2002). Consequently, the citizens' interest has largely been sidestepped. All the reports of bureaucratic reform are paved with good intentions and propose scores of ways in which administration may be reformed, but they do not expose the political economy of politico bureaucratic entente in Bangladesh which serves as the most powerful driving force in retaining the old bureaucratic order (Sarker, 2004a). However, lack of capacity of the state is an important factor that hinders the implementation of bureaucratic reform (Polidano, 2001; McCourt, 2002; Sozen and Shaw, 2002). This incapacity is manifested in the institutional, technical, bureaucratic and political arenas of a country like Bangladesh

(Wallis and Dollery, 2001). The rule of law is in limbo. The state appears to be a captive to predatory interests (Sarker, 2004a).

Regulatory agencies responsible for maintaining law and order have not performed according to the letter of the law. Massive corruption and underhand deals with criminals have made them virtually ineffective and there has been a systematic abuse of the office of the police force by politicians (CPD, 2001). However, the judicial system is subjected to some fundamental and procedural problems. The police and the criminal justice authority, in the hands of the executive branch of government, has simply eroded their autonomy and bred a tendency to the misuse of power for personal and political gain by members of the influential quarters in Bangladesh (U.S. State Department, 2001). Bangladesh Public Administration has been plagued by both political and bureaucratic corruption; however, it is an old phenomenon. Bribery, abuse of authority, nepotism, favoritism, patronage, theft and deceit etc almost all forms of corruption are found in politics and administration in Bangladesh: (Khan, 1999; Haque, 2001a, 2001b). The large scale non-implementation of existing rules and regulations has created an environment of laxity in the structure of administration in Bangladesh. The general perception is that the general people are harassed and humiliated by public officials at different levels of administration. The relationship between public officials and the general people has taken the shape of benefactor and beneficiary. People are also unaware where and how to take the benefits of public offices. Even if a public official wants to inform people about the services of the organization provides, the present environment of secrecy does not allow doing so. Behavior and actions of public officials are fettered by specific laws and regulations, such as, Official Secrets Act 1923. Decision making power and authority is highly centralized and violates existing instruction in many cases. Hence, an outmoded hierarchical structure, slow decision making process and cumbersome procedures diffuse responsibility and nullify the sense of accountability (Sarker, 2004b).

Post-bureaucracy is typically used in developed countries to improve existing institutions where the bureaucracy is already conversant with basic public management processes. Solid institutional frameworks, rule of law, proper control structures, checks and balances, the civil service system and accountability systems are all absent or ineffective in most developing countries including Bangladesh (Arellano, 2000). Western countries have changed the precepts of classical organization theory as a way of reinventing government. Most developing countries have failed in that direction except for some good intentions. Bureaucratic system in Bangladesh has demonstrated its deficiencies in establishing a rule-based system and enforcing a control structure, resulting in numerous dysfunctional consequences during the last fifteen years.

Administrative Analysis

Sozen and Shaw (2002) argued that the applicability of post-bureaucracy is partly dependent upon the nature of relations between the state and civil society. Caiden (2001) also argued that public pressures and people's expectations of better services have played a significant role in successful implementation of reform programs in the developed world. However, these relations remain problematic in the developing countries like Bangladesh. The legitimacy of the state is also a factor to be reckoned with while assessing the applicability of post-bureaucracy in many developing countries. Minogue (2001) argues that the more unified and centralized the system of political control and power, the easier it is to introduce new approaches to the management of public services. Scholars have also come up with explanations of the question that why a market-based reform program such as post-bureaucracy should face problems in the developing countries.

There is a serious concern pertaining to the presence of the market economy in the developing countries, which tends to have an informal economy with relatively weak specification of property rights and other formal processes to regulate economic activity. Corruption in administration is also a serious problem in the developing countries like Bangladesh. While post-bureaucratic prescriptions of contracting out and privatization sound well to curb corruption, it can be argued that in a system that is already corrupt and over politicized they will merely increase opportunities for private accumulation and patronage distribution (Haque, 2001a, 2001b). Signs are already evident in the privatization of state enterprises in Bangladesh. Bureaucratic reform measures are ill-conceived and unclear about their objects; Bangladesh failed to integrate bureaucratic reform with socio-economic development; the politically motivated bureaucratic reforms are geared to partisan or individual interests rather than overall national interests; and the resistance from civil servants who perceive their interests to be adversely affected as a result of the implementation of the proposed reform (Sarker, 2004b). Comprehensive bureaucratic reform has to be seen in the context of the role and influence of the public bureaucracy especially in the developing countries. In Bangladesh, however, bureaucratic reforms have faltered for lack of appreciation and support by the civil servants who are responsible for implementing reforms that are likely to impact on them (World Bank, 1996).

Most civil servants see reform attempts as downgrading their present status, position, and power and orchestrate resistance to frustrate reform implementation. Lack of political leadership further bolsters bureaucratic resistance to reforms. Such issue is particularly important when the Bangladesh government has the post-bureaucratic reform agenda on the table (Sarker, 2004a). Politicization of administration creates serious problems in the implementation of reform initiatives. It has become as serious in Bangladesh as its ramifications are detrimental to the basics of administration. Politicization of the service delivery system based on the politician-bureaucrat nexus gets preference in the system. Public servants are also politicized for petty party or sectional interests (Zafarullah and Khan, 2001). All governments have tried, more or less, to entice civil servants for petty party interests over the last forty years since independence. The culture of partisanship has seriously infected the bureaucracy to a point where professional advancement is unrelated to performance or integrity. It is an impossible task to reform the Public Administration system along the NPM model with this pattern of politicization of administration in Bangladesh (Sarker, 2004a).

Conclusion

Bureaucracy in Bangladesh has been molded by the structural rigidities of an inherited colonial system of administration as well as by the consequent behavioral patterns of bureaucrats. The behavioral pattern of bureaucrats has been dramatically altered due to change of social, economic and political factors. Excessive reliance on hierarchy, elaborate formal rules and procedures, excessive control, lack of trust in subordinates and diffusion of accountability etc damaged both the structure and procedures of public bureaucracy and the behavior and attitudes of the public officials. As a result, public bureaucrats play many dysfunctional roles in the bureaucratic reform efforts carried out by the successive governments in Bangladesh. In spite of much reform measures, the quality of public services is still low and the process of service delivery is also inefficient and sometimes ineffective. Bangladesh is still striving for national consensus since independence, which has had an impact on many major policy issues, including that of administrative reform. A positive movement has yet to be developed among the political parties as how to respect each other. Each regime during the era of Traditional Public Administration has sought for

bureaucratic reform in the abandoning or ignoring the efforts of previous governments. Instead of continuing with previous plans and seeing them through to implementation, they form new committees and commissions with new chairmen and members. This is probably due to the tradition of appointing committees for implementation which are headed by senior administrative figures. Strong political commitment of the political leadership (legislative branch of the government) is necessary to make the reform programs effective because they are bound to yield both high political and economic payoffs to the government itself. The political leadership requires a clear, long-term vision, a readiness to investigate and make explicit the factors that drive behavior in designing incentives to encourage a proactive attitude toward implementing administrative reforms. The executive branch of the government also needs to act promptly to restore discipline in the governing system through positive instruments of order, protection, provision, redress and rule. Ombudsman, Human Rights Commission, Independent Anti Corruption Commission and the judicial branch of the government can play a vital role to ensure the effectiveness of the administrative reform process. The role of civil society is also very crucial in Bangladesh. Chambers of Commerce and Industries, NGOs, Transparency International, etc. are making some headway in pressuring the government to pursue bureaucratic reforms. The government has to promote private sector as well as civil society organizations to help articulate the voice of citizens in demanding better governance. Adaptation of an incremental approach rather than a comprehensive and radical approach to bureaucratic reform in order to the farewell of weberian bureaucracy is necessary for Bangladesh now. This will help to build up support for further administrative reforms by demonstrating the potential benefits of present reform initiatives and provide useful lessons for managing the process of change in future.

References

- Ahmed, S. G. (2002) Public Administration in the Three Decade, In Chowdhury, A. M. and Alam, F. (eds.) *Bangladesh: on the Threshold of the Twenty-First Century*. Dhaka: Asiatic Society of Bangladesh.
- Arellano G. D. (2000) Challenges for the New Public Management: Organizational Culture and the Administrative Modernization in Mexico City (1995-1997). *American Review of Public Administration*, Volume 30.
- Bolin, M. and Harenstam, A. (2008) An empirical study of bureaucratic and post-bureaucratic characteristics in 90 workplaces, *Economic and Industrial Democracy*, Volume 29, No. 4.
- Caiden, G. E. (2001). Administrative Reform. in: Farazmand, A. (ed.) *Handbook of Comparative and Development Public Administration*. New York: Marcel Dekker.
- Center for Policy Dialogue (CPD). (2001). Policy Brief on Administrative Reform and Local Government. *CPD Task Force Report*. Dhaka: CPD.
- Government of Bangladesh (GoB). (2000) *Report of the Public Administration Reform Commission*. Dhaka: Bangladesh Government Press.
- Grey, C. (2007) Bureaucracy and Post-Bureaucracy. in: Knights, D. and Willmott, H. (eds.) *Introducing Organizational Behaviour and Management*, London: Thomson.

Haque, M.S. (2001a) Recent Transition in Governance in South Asia: Contexts, Dimensions and Implications. *International Journal of Public Administration*, Volume 24.

— (2001b). Privatization in Developing Countries: Formal Causes, Critical Reasons, and Adverse Impacts. in: Farazmand, A. (ed.) *Privatization or Public Enterprise Reform? International Case Studies with Implications for Public Management*. Westport, Conn.: Greenwood Press.

Hendry, J. (2006) Educating managers for post-bureaucracy: the role of the humanities, *Management Learning*, Volume 37, No. 3.

Jamali, D., Khoury, D. and Sahyoun, S. (2006) From bureaucratic organizations to learning organizations: an evolutionary road-map, *The Learning Organization*, Volume 13, No. 4.

Josserand, E., Teo, S. and Clegg, S. (2006) From bureaucratic to post-bureaucratic: the difficulties of transition, *Journal of Organizational Change Management*, Volume 19, No. 1.

Khan, M.M. (1998) *Administrative Reform in Bangladesh*. Dhaka: University Press Limited.

— (1999) *Political and Administrative Corruption: Concepts, Comparative Experience and Bangladesh Case*. Dhaka: Transparency International, Bangladesh Chapter.

McCourt, W. (2002) *New Public Management in Developing Countries*. in: McLaughlin, K., Osborne, S.P. and Ferlie, E. (eds.) *New Public Management: Current Trends and Future Prospects*. London: Routledge.

McSweeney, B. (2006) Are we living in a post-bureaucratic epoch? *Journal of Organizational Change Management*, Volume 19, No. 1.

Minogue, M. (2001) *The Internationalization of New Public Management*. in: McCourt, W. and Minogue, M. (eds.) *The Internationalization of Public Management: Reinventing the Third World State*. Cheltenham, UK: Edward Elgar.

O'Flynn, J. (2005) *Adding Public Value: A New Era of Contractual Governance?* Presented at the PAC Annual Conference - Public Administration and Management, University of Nottingham, 5 - 7 September, University of Nottingham, United Kingdom.

Polidano, C. (2001) *Administrative Reform in Core Civil Services: Application and Applicability of the New Public Management*. in: McCourt, W. and Minogue, M. (eds.) *The Internationalization of Public Management: Reinventing the Third World State*. Cheltenham, UK: Edward Elgar.

Pollitt, C. (2009) Bureaucracies remember, post-bureaucratic organizations forget? *Public Administration*, Volume 87, No. 2.

— (2001) Clarifying Convergence: Striking Similarities and Durable Differences in Public Management Reform, *Public Management Review*, Volume 3, No. 4.

- Sarker, A. E. (2004a). New Public Management in Bangladesh: Chasing a Mirage? *Indian Journal of Public Administration*, Volume 47.
- (2004b) Administrative Reform in Bangladesh: Three Decades of Failure. *International Public Management Journal*, Vol. 7, No. 3.
- Rice, M. (2004) Organizational Culture, Social Equity and Diversity: Teaching Public Administration Education in the Postmodern Era, *Journal of Public Affairs Education*, Volume 2.
- Siebers, H. (2009) Post-bureaucratic organizational practices and the production of racioethnic inequality at work, *Journal of Management and Organization*, Volume 15, No. 1.
- Sobhan, R. (2002) *The Political Economy of the State and Market in Bangladesh*. Dhaka: Center for Policy Dialogue.
- Sozen, S. and Shaw, I. (2002) The International Applicability of 'New' Public Management: Lessons from Turkey. *The International Journal of Public Sector Management*, Volume 15.
- Tarek, M. A. (2005) *Development Administration: Concept and Issues*. Dhaka: Mouli Prokashoni.
- The Daily Star. (June 2, 2008). Public-private partnerships: Opportunities for Bangladesh. Mamun Rashid.
- The Daily Star. (September 13, 2003). One stop utility bill payment in wings.
- United States State Department. (2001) *Human Rights Report, Bangladesh*. Washington D.C.: United States State Department.
- Wallis, J. and Dollery, B. (2001) Government Failure, Social Capital and the Appropriateness of the New Zealand Model for Public Sector Reform in Developing Countries. *World Development*, Volume 29.
- World Bank. (1998) *Strengthening Public Administration Training in Bangladesh*. Washington DC: the World Bank.
- (1996) *Bangladesh: Government That Works Reforming the Public Sector*. Dhaka: University Press Limited.
- Zafarullah, H.M., and Khan, M.M. (2001) Bureaucracy in Bangladesh: Politics Within and the Influence of Partisan Politics. in: Farazmand, A. (ed.) *Handbook of Comparative and Development Public Administration*. New York: Marcel Dekker.
- Van Dijk, Jan (2006) *The Network Society: Social aspects of new media*, Second Edition. London, Thousand Oaks, New Delhi: Sage.

An Analytical Technique for Solving Second Order Strongly and High Order Nonlinear Duffing Equation with Slowly Varying Coefficients in Presence of Small Damping

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Keywords: HP and KBM methods, Duffing equation with slowly varying coefficients and high order nonlinearity

Abstract: Based on the He's homotopy perturbation (HP) and the extended form of the Krylov-Bogoliubov-Mitropolskii (KBM) method, an approximate technique has been developed for obtaining the approximate solutions of second order strongly and high order nonlinear Duffing equation with slowly varying coefficients in presence of small damping. The first approximate solutions obtained by the presented method show a good agreement with the corresponding numerical solutions for the several damping effects. The implementation and efficiency of the presented method has been explained by an example.

Introduction

Most of the phenomena in the real world are essentially nonlinear and described by nonlinear differential systems. So, the study of nonlinear differential systems is very important in all areas of applied mathematics, physics, engineering, medical science, economics and other disciplines. In general, it is too much difficult to handle nonlinear problems and it is often very difficult to get an analytical solution than a numerical one. Common methods for constructing approximate analytical solutions to the nonlinear differential equations are the perturbation techniques. Some well known perturbation techniques are the Krylov-Bogoliubov-Mitropolskii (KBM) [1-3] method, the Lindstedt-Poincare (LP) method [4, 5], and the method of multiple time scales [4]. Almost all perturbation methods are based on an assumption that small parameters must exist in the equations, which is too strict to find wide application of the classical perturbation techniques. It determines not only the accuracy of the perturbation approximations, but also the validity of the perturbation methods itself. However, in science and engineering, there exist many nonlinear problems which do not contain any small parameter, especially those appear in nature with strongly and high order nonlinearity in presence of small damping. Therefore, many new techniques have been proposed to eliminate the "small parameter" assumption, such as the homotopy perturbation method (HPM) [6-9], variational iteration method [10], energy balance method [11], etc. Arya and Bojadziev [12] have presented time depended oscillating systems with small damping, slowly varying parameters and delay. Sachs et al. [13] have presented simple ODE models of tumor growth and anti-angiogenic or radiation treatment. He [7] has obtained the approximate solution of nonlinear differential equation with convolution product nonlinearities. In recent years, He [8] has developed some new approaches to Duffing equation with strongly and high order non-linearity without damping. He [9] has presented a new interpretation of homotopy perturbation method. He [10] has presented the variational iteration method for strongly

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nonlinear differential systems without damping. Uddin et al. [14-16] have presented an approximate technique for solving strongly cubic and quadratic nonlinear differential systems with damping effects. Also Uddin et al. [17] have developed an approximate analytical technique for solving second order strongly nonlinear generalized Duffing equation with small damping. Recently Islam [18] has presented an analytical technique for solving second order strongly damped nonlinear oscillator with a fractional power restoring force. Belendez et al. [19] have presented the application of He's homotopy perturbation method to Duffing harmonic oscillator without damping. From our study, it has been seen that the most of the authors [6-9, 19] have studied non-linear differential systems with small nonlinearity and without considering damping effects. But most of the physical and engineering problems occur in nature in the form of nonlinear differential systems with small damping effects. In this thesis, we are interested to present a coupling technique for solving second order strongly nonlinear differential systems with high order nonlinearity in presence of small damping based on the He's homotopy perturbation and the extended form of the KBM methods but the classical perturbation techniques are unable to tackle this situation. The presented method transforms a difficult problem under simplification, into a simple problem which is easy to solve, especially with high order non-linearity. The advantage of the presented method is that the first approximate solutions show a good agreement with the corresponding numerical solutions.

The Method

Let us consider the second order ordinary differential systems modeling with high order nonlinearity in presence of small damping in the following form:

$$\ddot{x} + 2k(\tau)\dot{x} + v^2x = -\varepsilon_1 f(x, \dot{x}), \quad (1)$$

where the over dots denote differentiation with respect to time t , v is a constant, ε_1 ($\varepsilon_1 = 1.0$) is a parameter which is not necessarily small, $k \geq 0$, $2k$, is the linear damping coefficient, $\tau = \varepsilon t$, is the slowly varying time, ε is a small positive parameter and the coefficients in equation (1) are varying slowly in that their time derivatives are proportional to ε , $f(x, \dot{x})$ is a given high order nonlinear function which satisfies the following condition:

$$f(-x, -\dot{x}) = -f(x, \dot{x}). \quad (2)$$

We are going to use the following transformation to change the dependent variable

$$x = y(t)e^{-kt}. \quad (3)$$

Now differentiating equation (3) twice with respect to time t and substituting the values of \ddot{x} , \dot{x} and x into equation (1) and then simplifying we obtain

$$\ddot{y} + (v^2 - k^2)y = -\varepsilon_1 e^{kt} f(ye^{-kt}, (\dot{y} - ky)e^{-kt}). \quad (4)$$

According to the homotopy perturbation method [6-9, 14-17] Eq. (4) can be re-written as

$$\ddot{y} + \omega^2 y = \lambda y - \varepsilon_1 e^{kt} f(ye^{-kt}, (\dot{y} - ky)e^{-kt}), \quad (5)$$

where

$$\omega^2 = \nu^2 - k^2 + \lambda.$$

(6)

Here ω is known as the angular frequency of the nonlinear differential systems and is a constant for undamped nonlinear oscillators. But for the damped nonlinear differential systems, ω is a time dependent function and it varies slowly with time t and λ is an unknown function which can be evaluated by eliminating the secular terms from particular solution. To handle this situation, we are interested to use the extended form of the KBM [1, 2] method by Mitropolskii [3]. According to this method, the solution of equation (5) can be chosen in the following form:

$$y = a \cos \phi,$$

(7)

where a and ϕ vary slowly with time t . In physical problems, a and ϕ are known as the amplitude and phase variables respectively and they keep an important role to the nonlinear physical systems. The following first order differential equations are satisfied by amplitude a and phase variable ϕ :

$$\begin{cases} \dot{a} = \varepsilon A_1(a, \tau) + \varepsilon^2 A_2(a, \tau) + \dots, \\ \dot{\phi} = \omega(\tau) + \varepsilon B_1(a, \tau) + \varepsilon^2 B_2(a, \tau) + \dots, \end{cases} \quad (8 \text{ a,b})$$

where ε is a small positive parameter, A_j and B_j , $j = 1, 2, 3 \dots$ are unknown functions.

Now differentiating equation (7) twice with respect to time t with the help of equation (8) and substituting the values of \ddot{y} , \dot{y} , y into equation (5) and then equating the coefficients of $\sin \phi$ and $\cos \phi$, we obtain

$$A_1 = -a\omega'/(2\omega), B_1 = 0, \quad (9)$$

where prime denotes differentiation with respect to τ . Now inserting equation (7) into equation (3) and equation (9) into equation (8 a,b), we obtain the following equations:

$$x = a e^{-k t} \cos \phi, \quad (10)$$

$$\begin{cases} \dot{a} = -\varepsilon \omega' a / 2\omega, \\ \dot{\phi} = \omega(\tau). \end{cases} \quad (11 \text{ a,b})$$

First approximate solution of equation (1) is given by equation (10) with help of equation (11a,b) by the presented method. Usually the integration of equation (11) is performed by the well-known techniques of calculus [4, 5], but sometimes they are calculated by a numerical procedure [4-9, 14-17, 20]. Thus, the first approximate solution of equation (1) is determined.

Example

As an example of the above procedure, let us consider the second strongly nonlinear differential systems with high (9th) order [7, 8] nonlinearity in presence of small damping as the following form:

$$\ddot{x} + 2k(\tau)\dot{x} + \nu^2 x = -\varepsilon_1 x^9, \quad (12)$$

(32)

where $f(x, \dot{x}) = x^9$. Now using the transformation equation (3) into equation (12) and then simplifying them, we obtained

$$\ddot{y} + (v^2 - k^2)y = -\epsilon_1 y^9 e^{-8kt}. \quad (13)$$

According to the homotopy perturbation [6-9,14-17] technique, equation (13) can be written as

$$\ddot{y} + \omega^2 y = \lambda y - \epsilon y^9 e^{-8kt}, \quad (14)$$

where ω is calculated from equation (6). According to the extended form of the KBM [1-3] method, the solution of equation (14) is obtained from equation (7).

From the trigonometric identity, we obtain

$$\cos^9 \varphi = (\cos 9\varphi + 9\cos 7\varphi + 36\cos 5\varphi + 84\cos 3\varphi + 126\cos \varphi)/256. \quad (15)$$

For avoiding the secular terms in particular solution of equation (14), we need to impose that the coefficient of the $\cos \varphi$ term is zero. Setting this term to zero, we obtain

$$\lambda a - \frac{126\epsilon_1 a^9 e^{-8kt}}{256} = 0, \quad (16)$$

which leads to

$$\lambda = \frac{63\epsilon_1 a^8 e^{-8kt}}{128}. \quad (17)$$

Putting the value of λ from equation (17) into equation (6), we obtain the following frequency equation:

$$\omega^2 = v^2 - k^2 + \frac{63\epsilon_1 a^8 e^{-8kt}}{128}. \quad (18)$$

From equation (18), it is clear that the frequency of the damped nonlinear physical systems depends on both amplitude a and time t when $t \rightarrow 0$ then equation (18) yields

$$\omega_0 = \omega(0) = \sqrt{v^2 - k^2 + \frac{63\epsilon_1 a_0^8}{128}}, \quad (19)$$

where ω_0, a_0 are known as the initial frequency and amplitude of the nonlinear physical systems.

Integrating the first equation of equation (11 a), we get

$$a = a_0 \sqrt{\frac{\omega_0}{\omega}}. \quad (20)$$

Now putting equation (20) into equation (18), we obtain a six degree polynomial in ω in the following form:

$$\omega^6 + p\omega^2 + r = 0, \quad (21)$$

where

$$p = k^2 - v^2, \quad r = -\frac{63\epsilon a_0^8 \omega_0^4 e^{-8kt}}{128}. \quad (22)$$

Finally, the first order analytical approximate solution of equation (12) is obtained as follows:

$$x = a e^{-kt} \cos \varphi \quad (23)$$

$$\begin{cases} a = a_0 \sqrt{\frac{\omega_0}{\omega}}, \\ \varphi = \varphi_0 + \int_0^t \omega(\tau) d\tau, \end{cases} \quad (24 \text{ a,b})$$

where ω_0 is obtained by equation (19); ω is calculated from equation (21) by using the well-known Newton-Raphson method and a and φ are given by equation (24 a,b).

Results and Discussions

In this thesis, we have extended He's homotopy perturbation method for solving the second order typical [7, 8] strongly nonlinear differential systems with high order nonlinearity in presence of small damping. It is almost impossible to solve the strongly nonlinear differential systems, especially with high order nonlinearity by the classical perturbation methods [1-5, 12]. But the suggested method has been successfully applied to solve the second order strongly nonlinear differential systems with high (9th) order nonlinearity in presence of small damping. The first order approximate solutions of equation (12) is computed with small damping and high order nonlinearity by equation (23) and the corresponding numerical solutions are obtained by using fourth order Runge-Kutta method. The variational equations of the amplitude and phase variables appeared in a set of first order differential equations. The integration of these variational equations is performed by the well-known techniques of calculus [4, 5]. In the lack of analytical solutions, numerical procedure [4-9, 12, 14-19] is applied to solve them. The amplitude and phase variables change slowly with time t . The behavior of amplitude and phase variables characterizes the oscillating processes and amplitude tends to zero in presence of small damping as $t \rightarrow \infty$. Presented technique can take full advantage of the classical perturbation method. It is also noticed that the presented method is also capable to handle the typical second order weakly ($\epsilon_1 = 0.1$) nonlinear differential systems with high order nonlinearity in presence of small damping. Comparison is made between the solutions obtained by the presented technique and those obtained by the numerical procedure in Figs.1-2 for both strongly ($\epsilon_1 = 1.0$) and weakly ($\epsilon_1 = 0.1$) nonlinear differential systems high order nonlinearity in presence of with small damping for small amplitude. In Figs.1-2, it is seen that the solutions obtained by the presented method show a good agreement with those solution obtained by the numerical procedure with several small damping effects.

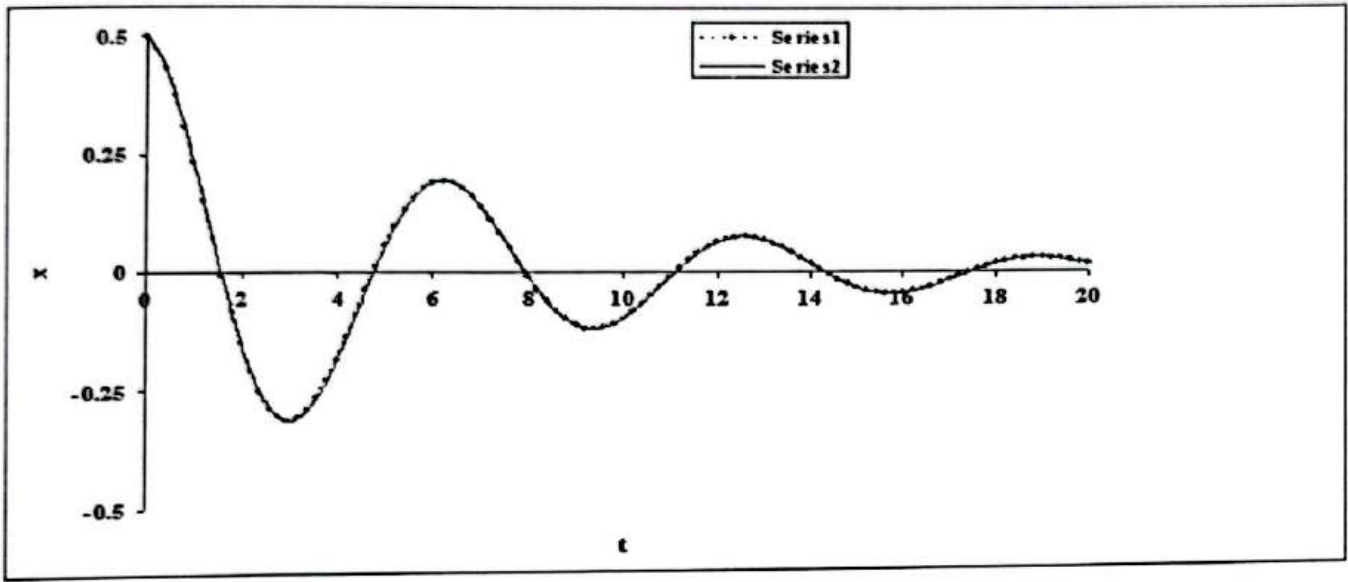


Fig. 1(a). First approximate solution of equation (12) is denoted by dotted lines (-•-) by obtained the presented analytical technique with the initial conditions $a_0 = 0.5, \varphi_0 = 0$ or $[x(0) = 0.5, \dot{x}(0) = -0.07853]$ with $\nu = 1.0, k = 0.15, \varepsilon_1 = 1.0, \varepsilon = 0.1$ and $f = x^9$ and the corresponding numerical solution is denoted by solid line (-).

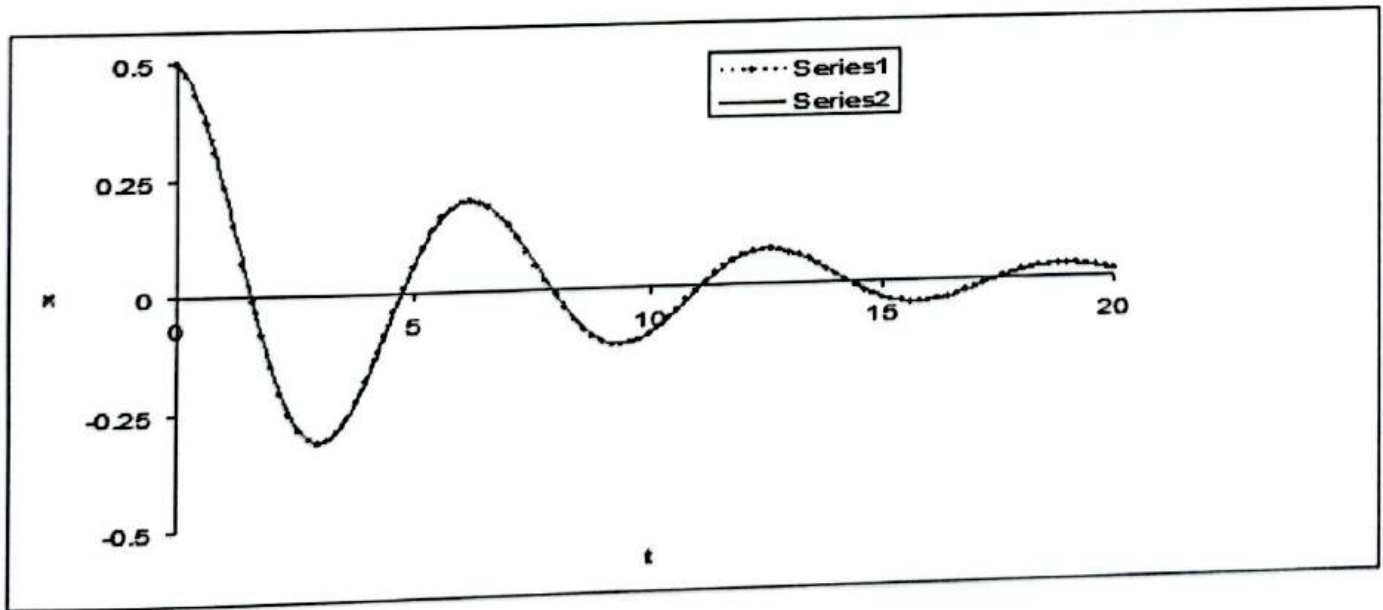


Fig. 1(b). First approximate solution of equation (12) is denoted by dotted lines (-•-) obtained the presented analytical technique with the initial conditions $a_0 = 0.5, \varphi_0 = 0$ or $[x(0) = 0.5, \dot{x}(0) = -0.07535]$ with and $\nu = 1.0, k = 0.15, \varepsilon_1 = 0.1, \varepsilon = 0.1$ and $f = x^9$ the corresponding numerical solution is denoted by solid line (-).

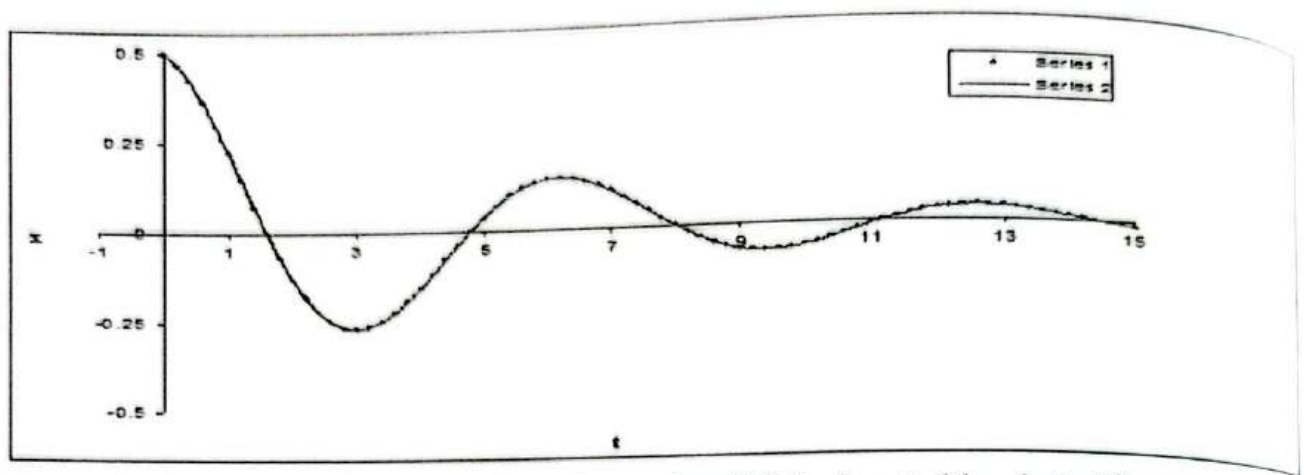


Fig. 2(a). First approximate solution of equation (12) is denoted by dotted lines $(-\bullet-)$ obtained the presented analytical technique with the initial conditions $a_0 = 0.5, \varphi_0 = 0$ or $[x(0) = 0.5, \dot{x}(0) = -0.10360]$ with $\nu = 1.0, k = 0.15, \varepsilon_1 = 1.0, \varepsilon = 0.1$ and $f = x^9$ and the corresponding numerical solution is denoted by solid line $(-)$.

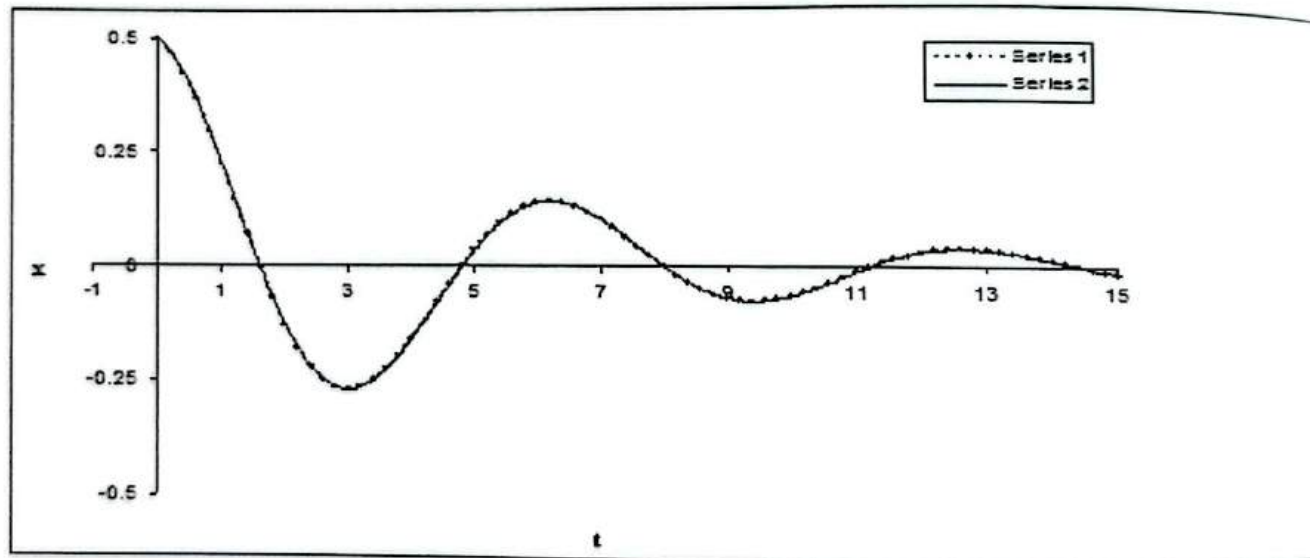


Fig. 2(b). First approximate solution of equation (12) is denoted by dotted lines $(-\bullet-)$ obtained the presented analytical technique with the initial conditions $a_0 = 0.5, \varphi_0 = 0$ or $[x(0) = 0.5, \dot{x}(0) = -0.10360]$ with $\nu = 1.0, k = 0.15, \varepsilon_1 = 1.0, \varepsilon = 0.1$ and $f = x^9$ and the corresponding numerical solution is denoted by solid line $(-)$.

References

- Krylov, N. N. and Bogoliubov, N. N., 1947, "Introduction to Nonlinear Mechanics", Princeton University Press, New Jersey.
- Bogoliubov, N. N. and Mitropolskii, Yu. A., 1961, "Asymptotic Methods in the Theory of Nonlinear Oscillation", Gordon and Breach, New York.

- Mitropolskii, Yu. A., 1964, "Problems on Asymptotic Methods of Non-stationary Oscillations (in Russian)", Izdat, Nauka, Moscow.
- Nayfeh, A. H., 1981, "Introduction to Perturbation Techniques", John Wiley and Sons, New York.
- Murdock, J. A., 1991, "Perturbations: Theory and Methods", Wiley, New York.
- He, Ji-Huan, Homotopy Perturbation Technique, J. Computer Methods in Applied Mechanics and Engineering, Vol. 178, pp. 257-262, 1999.
- He, J. H., 1998, "Approximate Solution of Nonlinear Differential Equations with Convolution Product Nonlinearities", Journal of Computer Methods in Applied Mechanics and Engineering, Vol. 167, pp. 69-73.
- He, J. H., 1999, "Some New Approaches to Duffing Equation with Strongly and High Order Nonlinearity (I) Linearized Perturbation Method", Journal of Communications in Nonlinear Science & Numerical Simulation, Vol. 4, No. 1, pp. 78-80.
- He, J. H., 2006, "New Interpretation of Homotopy Perturbation Method", International Journal of Modern Physics B, Vol.20, No. 18, pp. 2561-2568.
- He, J.H., 1999, "Variational Iteration Method: a Kind of Nonlinear Analytical Technique: Some Examples", International Journal of Nonlinear Mechanics, Vol.34, No. 4, pp. 699-704.
- Ganji, D.D., Esmailpour, M. and Soleimani, S., 2009, "Approximate Solutions to van der Pol Damped Nonlinear Oscillators by Means of He's Energy Balance Method", International Journal of Computer Mathematics, Vol.87, No. 9, pp.2014-2023.
- Arya, J. C. and Bojadziev, G. N., 1981, "Time Dependent Oscillating Systems with Damping, Slowly Varying Parameters and Delay", Acta Mechanica, Vol. 41, pp. 109-119.
- Sachs, R. K., Hlatky, L. R. and Hahnfeldt, P., 2001, "Simple ODE Models of Tumor Growth and Anti-angiogenic or Radiation Treatment", Journal of Mathematical and Computer Modeling, Vol. 33, pp. 1297-1305.
- Uddin, M. A., Sattar, M. A. and Alam, M. S., 2011, "An Approximate Technique for Solving Strongly Nonlinear Differential Systems with Damping Effects", Indian Journal of Mathematics, Vol. 53, No.1, pp. 83-98.
- Uddin, M. A. and Sattar, M. A., 2011, "An Approximate Technique For Solving Strongly Nonlinear Biological Systems with Small Damping Effects", Journal of the Calcutta Mathematical Society, Vol. 7, No.1, pp. 51-62.
- Uddin, M. A. and Sattar, M. A., 2011, "An Approximate Technique to Duffing Equation with Small Damping and Slowly Varying Coefficients", Journal of Mechanics of Continua and Mathematical Sciences, Vol. 5, No. 2, pp. 627-642.
- Uddin, M. A., Ullah, M. W. and Bipasha, R. S., 2015, "An Approximate Analytical Technique for Solving Second Order Strongly Nonlinear Generalized Duffing Equation with Small Damping", Journal of Bangladesh Academy of Sciences, Vol. 39, No. 1, pp. 103-114.
- Islam Md. Saiful, 2017, "An Analytical Technique for Solving Second Order Strongly Damped Nonlinear Oscillator with a Fractional Power Restoring Force", M.Sc Thesis, Dept. of Mathematics, KUET, Khulna, Bangladesh.

Belendez, A., Hernandez, A., Belendez, T., Fernandez, E., Alvarez, M. L. and Neipp, C., 2007, "Application of He's Homotopy Perturbation Method to Duffing Harmonic Oscillator", *International Journal of Nonlinear Science and Numerical Simulation*, Vol. 8, No. 1, pp. 78-88.

Alam, M. S. and Sattar, M. A., 1997, "A Unified Krylov-Bogoliubov-Mitropolskii Method for Solving Third Order Nonlinear Systems", *Indian Journal of Pure And Applied Mathematics*, Vol. 28, pp. 151-167.

A Study on Almost Continuous Function

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Keywords: Topology, Continuity, Almost Continuous Function.

Abstract: In this article we investigate some formulas of almost continuous function and relationship of this function with other functions. We discuss the characteristics of almost continuous function. Some properties of almost continuous function and relationship developed together with converse of these relations imposing extra condition have been investigated. Here, we present theorems forms as equivalents of the relationship between these formulas.

Introduction

In 1966, Husain [2] define the concept 'almost continuous' and in 1968. M. K. Single and A. R. Single [10] define the concept 'almost continuous but different form with Husain's [2] definition.

We will present in this article some theorems, results and new properties about almost continuous mappings. Also, in this article, we should distinguish between the definition of this formula of the sense of single [10] and Husain [2].

The two definitions are different and we have found in topology and map book, that the definition of this formula of the sense of singles [10] which it was mentioned in the means of nearly continuous.

The function $f: X \rightarrow Y$ is almost continuous in the sense of Stallings[3] if given any open set $W \subset X \times Y$ containing the graph of f , there exists a continuous function $g: X \rightarrow Y$ such that the graph of g is a subset of W .

The function $f: X \rightarrow Y$ is almost continuous at $x \in X$ in the sense of Husain [2] if for each open set $V \subset Y$ containing $f(x)$, the closure of $f^{-1}(V)$ is a neighborhood of x . If f is almost continuous at each point of X , then f is called almost continuous.

The function $f: X \rightarrow Y$ is called almost continuous at $x \in X$ in the sense of Singal and Singal [10] if for each open set $V \subset Y$ containing $f(x)$, there exists an open set $U \subset X$ containing x such that $f(U)$ is a subset of the interior of the closure of V . If f is almost continuous at each point of X , then f is called almost continuous.

SOME IMPORTANT DEFINITION

Topology:

Let X be a non-empty set. A class T of subsets of X is a **topology** on X if and only if satisfies the following axioms:

- a X and \emptyset belong to T
- (ii) The union of arbitrary number of sets in T belongs to T .
- (a) The intersection of finite number of sets in T belongs to T .

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Then the numbers are then called T - open sets or simply open sets and the pair (X, T) is called a topological space.

Homeomorphic Spaces:

Two topological spaces X and Y are called **homeomorphic or topologically equivalent** if there exists a bijective (i.e., one-one and onto) function $f: X \rightarrow Y$ such that f and f^{-1} are continuous. The function f is called a **homeomorphism**.

Almost Continuous:

A function $f: X \rightarrow Y$ from a topological space X into a topological space Y is said to be **almost continuous** if for each $x \in X$ and for each regular open set V containing $f(x)$, there exists an open set U containing x such that $f(U) \subset V$.

Continuous Function:

Let (X, T) and (Y, T^*) be two topological spaces, A function $f: X \rightarrow Y$ is said to be **continuous at a point** $x \in X$ if and only if the inverse image $f^{-1}(H)$ of every open set $H \subset Y$ containing $f(x)$ is a superset of an open set $G \subset X$ containing x .

Almost Weakly Continuous:

A function $f: X \rightarrow Y$ is said to be **almost weakly continuous** if $f^{-1}(V) \subset \text{Int}(\text{Cl}(f^{-1}(V)))$ for every open set V of Y .

Delta Continuous:

A topological space (X, T) is said to be a **Delta Continuous** provided every nonempty open subset of X is dense in X .

T_1 - Space

A topological space (X, T) is a **T_1 - space** if and only if for any pair of this points $x, y \in X$ there exists an open set G such that $a \in G, b \notin G$.

Hausdorff Space:

A topological space (X, T) is a **T_2 -space or Hausdorff space** if and only if there exists open sets G and H such that $a \in G, b \in H$ and $G \cap H = \emptyset$, for each $a, b \in X$.

Super Continuous:

A function $f: X \rightarrow Y$ from a topological space X into a topological space Y is said to be **super continuous** if for each $x \in X$ and each open set V containing $f(x)$ there is an open set U containing x such that $f(U) \subset V$.

Some Examples:

Example 1:

Let $X=Y=\{a, b, c\}$. Let the topology on X be indiscrete and topologies Y with $\{\emptyset, Y, \{a, c\}, \{b, c\}, \{c\}\}$. Let $f: X \rightarrow Y$ be given by $f(a) = a, f(b)=f(c)=b$. Then f is almost continuous at $x \in X$ in the sense of Singal and Singal [10] and the subspace $f(X) = \{a, b\}$ of Y has the discrete topology. Thus, both $\{a\}$ and $\{b\}$ are open in the subspace topology giving immediately that $f: X \rightarrow f(X)$ is not almost continuous at $x \in X$ in the sense of Singal and Singal [10].

Example 2:

Let $X=Y=\{0, 1\}$ where X has the indiscrete topology and Y has the discrete topology. Then the identity function $i: X \rightarrow Y$ is almost continuous at $x \in X$ in the sense of Husain [2], X is connected, but $i(X) = Y$ is not connected.

Example 3:

Let $X = \{a, b, c, d\}$ and $T = \{X, \emptyset, \{a, b, c\}, \{a, c, d\}, \{a, b\}, \{a, c\}, \{c, d\}, \{a\}, \{c\}\}$. Let $Y = \{x, y, z\}$ and $\sigma = \{Y, \emptyset, \{x, y\}, \{z\}\}$. Let $f: (X, T) \rightarrow (Y, \sigma)$ be a function defined as follows $f(a)=x, f(b)=y$ and $f(c)=f(d)=z$. Then f is almost continuous in the sense of Singal, almost open but not open [10]. There exists $V = \{y, z\} \in \text{PO}(Y)$ such that $\text{Cl}(f^{-1}(V)) \neq f^{-1}(\text{Cl}(V))$.

Let $X = \{a, b, c\}$, $\zeta = \{\emptyset, X\}$, $\tau = \{\emptyset, X, \{b\}, \{a, c\}\}$ and $\mu = \{\emptyset, X, \{a, b\}\}$. Define $f(X, \zeta) \rightarrow (X, \tau)$ by $f(a) = a, f(b)=c$ and $f(c)=c$.

Example 4:

Let g be the identity function from (X, T) onto (X, μ) . Then f is continuous, g is almost continuous, and yet $g \circ f$ is not almost continuous.

Lemma 1:

If $f: X \rightarrow Y$ is an open mapping. Then $f^{-1}(Cl(B)) \subseteq Cl(f^{-1}(B))$, for any subset B of Y [3].

Lemma 2:

Let $f: X \rightarrow Y$ be an open mapping. Then $Int(f^{-1}(B)) \subseteq f^{-1}(Int(B))$ for any subset B of Y [4].

Corollary:

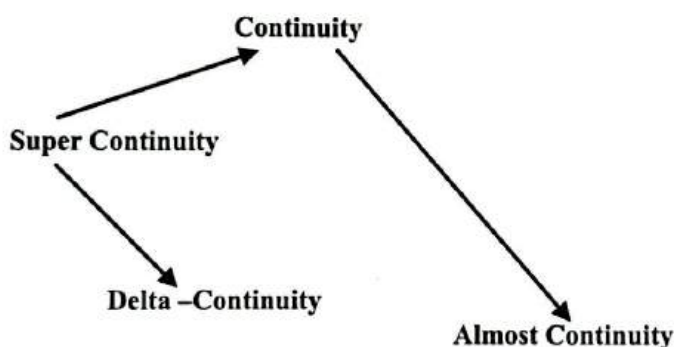
If a function $f: X \rightarrow Y$ is open and almost continuous at $x \in X$ in the sense of Singal and Singal [2] then $Cl(f^{-1}(V)) = f^{-1}(Cl(V))$ for every $V \in SPO(Y)$ [6].

Proof:

Since f is open, $Cl(f^{-1}(S)) \supseteq f^{-1}(Cl(S))$ for every subset S of Y . Therefore, this follows immediately from above theorem.

A function $f: X \rightarrow Y$ is said to be almost open and almost continuous at $x \in X$ in the sense of Singal and Singal if and only if $f(U) \in Int(Cl(f(U)))$ for every open set U of X .

For a function $f: X \rightarrow Y$ we have following implications:

**Some important theorem:****Theorem 1:**

If A is a subset of a metric space X and $f: X \rightarrow A$ be an almost continuous in the sense of Husain [2], then A must be a closed subset of X and every convergent sequence of A has a unique limit.

Proof:

Since A is a subset of a metric space X , therefore X is a Hausdorff space, because every metric space is a Hausdorff space. So A must be a closed subset.

Let $\{x_n\}$ be a convergent sequence in A and $a \in X$ is a limit of this sequence. If possible let $b \in X$ be another limit of the sequence $\{x_n\}$. Since $a \neq b$ and X is Hausdorff, there exists open sets G and H such that $a \in G$, $b \in H$ and $G \cap H = \emptyset$.

Now G contains all but a finite number of terms of $\{x_n\}$. Since $G \cap H = \emptyset$, H can contain at most a finite number of terms of the sequence $\{x_n\}$. As H is an open set containing b , this means that b is not a limit of the sequence $\{x_n\}$.

Theorem 2:

Let $A \subseteq \mathbb{R}$ and T the upper limit topology on \mathbb{R} for which the class of all open closed interval $(a, b] = \{x \in \mathbb{R} : a < x \leq b\}$ is a sub base. If $f: \mathbb{R} \rightarrow A$ is almost continuous in the sense of Husain then A must be closed and every convergent sequence of A has a unique limit.

Proof:

Let $a, b \in \mathbb{R}$ and $a \neq b$. Assume $a < b$ and choose $G = (a-1, a]$, $H = (a, b]$. Then G and H are T open and $a \in G$, $b \in H$, $G \cap H = \emptyset$. Therefore \mathbb{R} is Hausdorff. Since $A \subseteq \mathbb{R}$ and $f: \mathbb{R} \rightarrow A$ is almost continuous function in the sense of Singal [10] therefore A must be closed [7]. Last part follows from the previous theorem.

Theorem 3:

If A be the subset of a first countable space X in which every convergent sequence has a unique limit and $f: X \rightarrow A$ be almost continuous in the sense of Husain then A must be closed subset of X .

Proof:

Suppose X be a first countable space in which every convergent sequence has a unique limit. If this space is not Hausdorff then there exists two distinct points $a, b \in X$ such that every open set containing a has a nonempty intersection with every open set containing b and vice versa. Take nested neighborhood basis $B_a = \{G_1, G_2, G_3, \dots\}$ at a and $B_b = \{H_1, H_2, H_3, \dots\}$ at b respectively. Then $G_n \cap H_n \neq \emptyset$, for every $n \in \mathbb{N}$. Let $x_n \in G_n \cap H_n$ for every $n = 1, 2, 3, \dots$. Then $\{x_n\}$ converges to a for $x_n \in G_n$ for every n . $\{x_n\}$ also converges to b because $x_n \in H_n$ for every n .

This contradicts the hypothesis that every convergent sequence in X has a unique limit. So X is Hausdorff. Since $f: X \rightarrow A$ is almost continuous in the sense of Husain, A must be closed subset of X .

Theorem 4:

If X be a T_3 -space and $f: X \rightarrow A$ be an almost continuous function in the sense of Singal [10] retraction of X onto A then A must be a closed subset of X .

Proof:

X is a T_3 -space means X is a regular T_1 -space. Now $a, b \in X$ imply there exists closed set $[a]$ and $b \notin [a]$. For which applying the property of regularity we can find open sets G and H such that $[a] \subseteq G$ and $b \in H$ and $G \cap H = \emptyset$. This shows that a and b have disjoint neighborhoods. Therefore X is a T_2 -space [8]. Now applying theorem we find A as a closed subset of X .

Conclusion

In this article we have tried to develop the concept of almost continuous functions in the sense of Singal and Husain. We have also investigated the characteristic and distinctness of these two types of almost continuity in topological spaces.

References

- Gauld D. Greenwood S. and Reilly I. (1991), On Variation of Continuity, Topology Atlas. Auckland New Zealand.
- Husain T. (1982), Topological and map, Springer Verlag Publications.
- Kumar M.K.R.S.V. and J.K.C. College (1991), between semi closed sets and semi pre closed set A.M.S classification.
- Levine N. (1961), A decomposition of continuity in topological space, Amer.Math.monthly. 68, p (44-46).
- Levine N. (1963), semi-open sets and semi-continuity in topological space Amer. Math Monthly, 70, p (36-41).
- LONG, P.E. (1971), An Introduction to General Topology, Charles E. Merrill Publ. Co. Columbus, Ohio, USA.
- Mashhour A.S., Adb El-monsef M.E and El-Deeb S.N. (1982), On pre continuous and weak pre continuous mapping, Proc.math.phys. soc.Egypt, 53, p(47-53). Egypt.
- Mashhour A.S., Hasanein I.A. and El-Deeb S.N. (1983), α -continuous and α -open mappings, Acta math. Hung., 41, p (213-218).
- M. K. Singal and Asha Rani Singal, (1968), Almost-continuous mappings, Yokohama Math J. 16, p(63-73).
- Sharma, J.N. (1977). Topology. Krisna Prokason and Mondir Publications.

Water Quality Assessment of Dhanmondi Lake in Dhaka City

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Keywords: *Dhanmondi Lake; Water quality assessment; Standards; pH; BOD5; COD;*

Abstract: *Dhanmondi Lake is one of the recreational area for people of the Dhaka city. Lakes can be important habitats for a variety of aquatic life, as well as an aesthetic resource to communities. Various causes are responsible for polluting water of the lake; some natural causes are mixture of biodegraded portion of animal and plants to pure water. It also receives untreated sewage and sewage polluted surface run off from adjacent residence and communities. This study focuses on the assessment of the water qualities of Dhanmondi Lake. For these purposes, samples were collected from five different locations in the year of 2016 and the average value is considered. It is also notable that, only wet season (May-August) is considered. The various parameters of water such as pH, color of water, turbidity, Dissolved oxygen (DO), Biological Oxygen Demand (BOD5), Chemical Oxygen Demand (COD) are examined. It was observed whether the level of the parameters exceed or within the permissible limit of Bangladesh standard. The water quality of the lake is required to restore for aquatic life and as an aesthetic resource of communities, as well as it can be a good source of supply water in near future. This goal can be achieved by proper treatment of sewage water and public awareness should be raised as well. Poor water quality also vastly affects the surrounding locality.*

Introduction

Dhanmondi being the biggest residential area of Dhaka city, it has always been very important to keep the Dhanmondi Lake healthy and attractive as it serves so many environmental and recreational purposes for the people of Dhaka city. But in the era of urbanization and industrialization it is very pathetic to observe that all of our natural resources including the lake, river water are degrading its quality day by day and posing more threats to our existence. The urbanization process itself involves the pollution cycle, which is becoming worse with the speedy growth of population. The recent studies indicate that the lake water has already reached a dangerous state in terms of parameters like total solid in the water, level of alkalinity, turbidity of water, available dissolved oxygen and biochemical oxygen demand etc. In recent time, due to excessive population pressure, unawareness of user's, lack of enforcement of legal matters, very few of her water bodies retain good water quality and biodiversity. A number of investigations have been carried out in some lakes situated in and around Dhaka metropolis area to evaluate their

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water quality. There is need to assess the water quality of Dhanmondi lake to find out the solution of pollution of water.

Objectives

1. To assess overall water quality of Dhanmondi Lake in Dhaka city.
2. To study Variation of water quality of different points of sources of the lake area.

Research Methodology

Selection of the Sample collection points

The selection of sample collection points based on some factors such as, number of residential buildings, hospitals, shopping malls, supermarket, people gathering place. However, the main factor for the selection of sample collection points is the number of residential buildings. In table - 1, which has given below in Zigatola and Dhanmodi 5 have more than two hospitals or diagnostic center and also have shopping mall.

Table-1: The locations and number of residential buildings responsible for water pollution of Dhanmondi Lake

Location	No. of Residential Buildings
Zigatola	16
Dhanmodi 5	17
Robindro Shorobor	29
Kalabagan	47
Dhanmondi 32	13

Sampling

Plastic bottles were used for sample collection. They were first cleaned with tap water and detergent, then with distilled water. Samples have been collected from 5 different locations in wet seasonal periods of the year in order to evaluate the Lake water quality. Water Samples have been collected in continuous basis after every 3 weeks. A range of water quality variables have been measured in this zone, Wet Period (May- August, 2016) over a period of 4 months as 70 percent of the total rainfall occurs during this period of the year. Between this period of May 2016 to August 2016 total 30 water samples have been collected and analyzed.

Laboratory Test of Samples

Laboratory test of samples have been done in regular basis. All the 30 (thirty) samples handle with care and the standard lab test procedures have been followed to analyze physico-chemical parameters of the collected water samples. Visual inspection for color, smelling for odor, pH meter for pH, and turbidity meter for turbidity, titrimetric determination of DO, BOD₅, COD, etc. All the result analyzed and compare with standard value.

Results and Discussions

A test procedure was conducted for five samples collected each time at five locations for Dhanmondi Lake. The first, second, third and fourth batches of water collection of Dhanmondi Lake were for in the month of May, June, July and for August respectively.

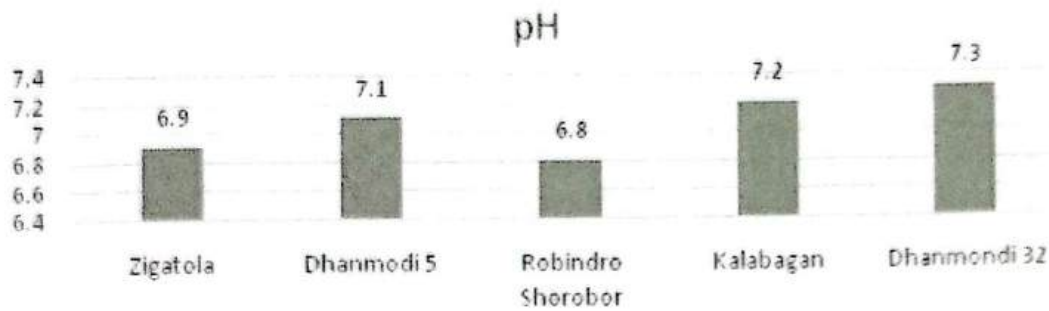


Fig. 1. Average value of pH(mg/l) of different locations of Dhanmondi Lake

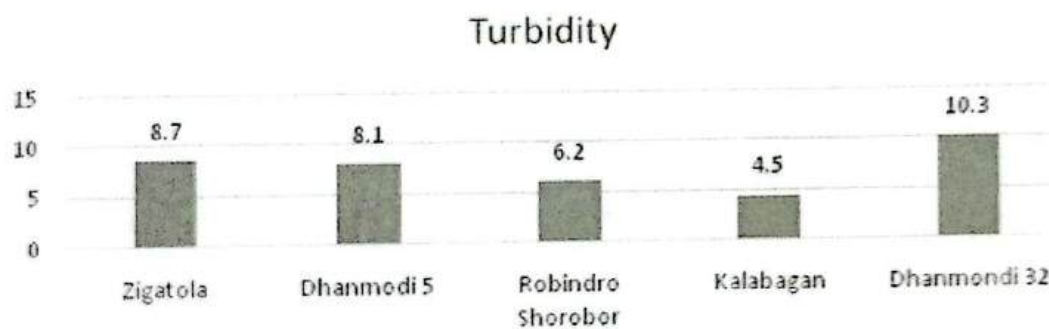


Fig. 2. Average value of Turbidity (NTU) of different locations of Dhanmondi Lake

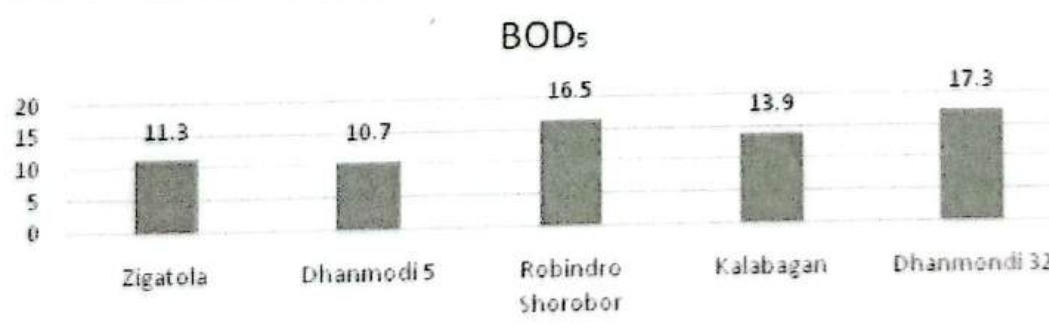


Fig. 3. Average value of BOD5 (mg/l) of different locations of Dhanmondi Lake

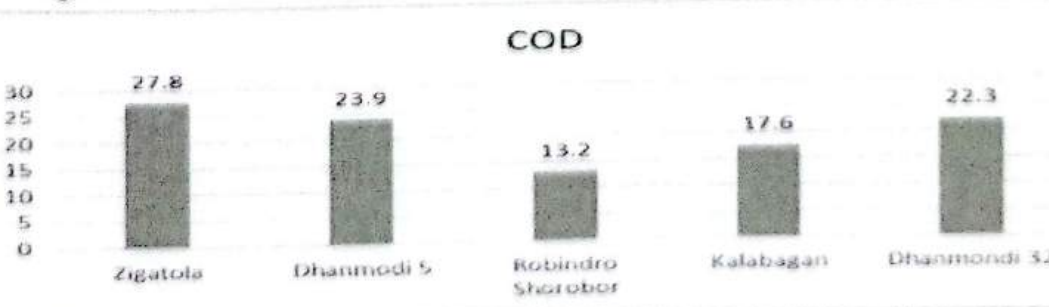


Fig. 4. Average value of COD (mg/l) of different locations of Dhanmondi Lake

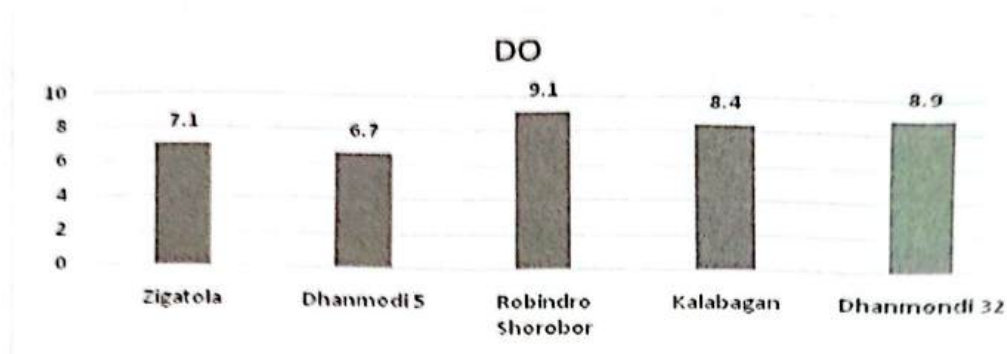


Fig. 5. Average value of DO (mg/l) of different locations of Dhanmondi Lake

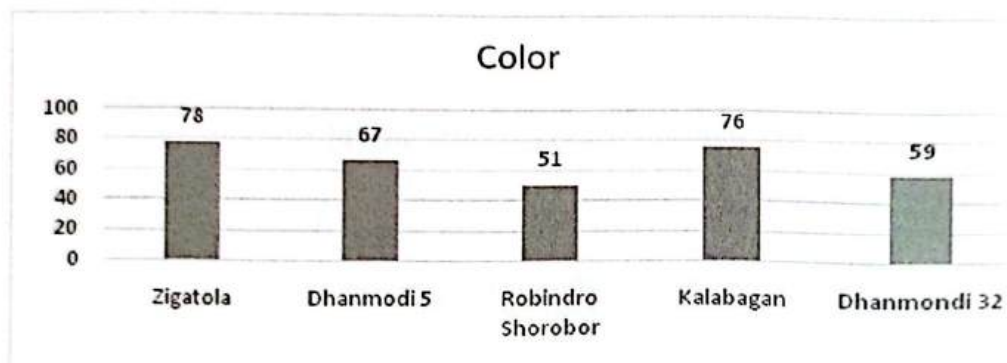


Fig. 6. Average value of Color (Pt-Co) of different locations of Dhanmondi Lake

From Figure 1. pH value of the lake varies from 6.8 to 7.3. The standard range as ECR'97 6.5 to 8.5. Therefore, it satisfies the standard value. The lake water was alkaline mostly.

From Figure 2. Value of Turbidity observed at Dhanmondi 32 is more than 10 NTU, which is more than the permissible limit according to ECR'97 (10 NTU). This could be due to suspended matter like clay, colloidal particles and other organisms present in water.

From Figure 3. Minimum BOD₅ value of the lake water is 10.7 mg/l, where permissible value for drinking water is 0.2 mg/l. So, the source is not recommended for drink purpose.

From Figure 4. Minimum COD value of the lake is 13.2 mg/l, which is much higher than the standard limit for drinking water (4.0 mg/l) according to ECR'97. Such a high value indicates presence of organic pollutant. So, the lake can be strictly prohibited as potential water source.

From Figure 5. The minimum limit of DO is 6.0 mg/l, the DO values of lake observed during experiments varies from 6.7 mg/l to 9.1 mg/l. The observed values of DO are above the minimum limit which indicates that DO available in lake water is sufficient for microorganisms.

From Figure 6. The value of color of the existing water ranges from 51 to 78 Pt-Co unit whereas ECR'97 standard range is 15 Pt-Co unit, so the color is very much higher than permissible limit.

Conclusion

Apart from scenic beauty, Dhanmondi Lake has great economic and environmental value. During extremely dry seasons, the lake retains considerable amount of water. Nevertheless, recent pollution of Dhanmondi Lake blocked the natural flow of water. In order to assist the natural processes of groundwater recharge, maintenance of aquatic life and ecological balance and for turning the lake and surrounding areas into recreational places, planned development of the lake is very much essential. Saving the lake from the pollution should be a priority concerns for the sake of environment. Awareness development program is necessary to stop unauthorized activities that seriously lead to pollution of the lake and surrounding environment. Our lack of knowledge about environmental management and indifferent attitude towards protection of the environment have turned these beautiful water body into a sink of pollution, receiving numerous unauthorized sewage outlets, surface run-off, urban drainage discharges and even solid waste from various sources. These practices have caused enormous harm to the lake's environment and its subsequent degradation in many ways. A coordinated plan for Dhanmondi Lake should be taken as considering the ecology of the lake, the causes of natural and cultural water quality problems, the reasons for lake water pollution, the techniques for restoring and protecting lake, the legal issues, the financial realities for taking some initiatives, which require financial allocation and availability of resources. Routine research work with wide public awareness, government participation and government regulations can save the water of Dhanmondi Lake as well as Dhaka metropolitan city and thus a safe and sound water environment can be made for future generations.

References

- Ahmed M. F. and Rahman M. M., (2010), Water Supply and Sanitation, ITN- Bangladesh, ISBN: 984-31-0936-8.
- Peavy, Howard, (1985), "Environmental Engineering", McGraw-Hill International Edition, United State of America.
- Ahmed, F. M., Rahman M. "Drinking Water Quality Standards", "Water Supply & Sanitation-Rural and Low Income Urban Communities" ITN- Bangladesh.
- GOB (Government of Bangladesh), (1997), "Environmental Conservation Regulation 1997", Government of the people's Republic of Bangladesh.
- Ahmed M. (2013), Water Quality and Pollution Sources of Gulshan Lake, International Journal of Information Technology and Business Management, Vol.16 No.1. ISSN 2304-0777.
- Alam M. S. (2014), Assessment of Water Quality of Hatirjheel Lake in Dhaka City, International Journal of Technology Enhancements and Emerging Engineering Research, Vol. 2, Issue 6. ISSN 2347-4289.
- Islam et al. (2015), Investigation of Water Quality Parameters from Ramna, Crescent and Hatirjheel Lakes in Dhaka City, Journal of Environmental Science & Natural Resources, 8(1): 1-5, 2015, ISSN 1999-7361.

Customer Switching Behavior towards Soft Drink Industry of Bangladesh

Mushfeka Binte kamal*

Key Words: Customer, Switching, Behavior, Soft-Drink, Price, Quality

Abstract: Customer switching behavior can be seen as serious risk to the wealth and profitability of the firm. Therefore, it is important for the companies to develop an understanding of what the customer's decisions are influenced by. At present marketers are motivated to address the customer switching behavior in order to ensure long-term relationships with their customers. Meanwhile customers have become more mobile and better informed than ever before, are increasingly able to get precisely what they want, when they want it, and at the price. To meet these exacting desires, new and different products and services appear unceasingly in customers' aspect. Due to these reasons, the marketing environment has become more competitive. This paper is aimed at investigating the pattern of customer switching behavior of soft drink industry in Bangladesh. People changes soft drink brands because their taste changes. The reasons of customer switching behavior in the Bangladesh Soft Drink Industry are Price, Poor Quality, Customer Satisfaction & Sales Promotion offers of different soft drink company. They prefer the taste, quality, price and offer. The research revealed that prices and sales promotion have the most effect on the customer switching behavior in the Bangladesh Soft Drink Industry. Customer switches brands when they found low prices and more offers like coupons, free gifts and quiz contest.

Introduction

Nowadays many business organizations are operating in a highly competitive market environment. Drucker (1999) states that, the basic function of marketing is to attract and retain customers at a profit. However, a critical issue for the continued success of a firm is depends on its capability to retain its current customers and make them loyal to its brands (Dekimpe et al, 1997). Nowa day, customers are well informed about the products and possess the intrinsic of brands & tastes. To meet the exacting desires, new and different products and services appear unceasingly in customers' aspect. Due to these reasons, the marketing environment has become more competitive. Manufactures have policy strategies to create and retain customers for their product in the competitive marketing environment. Therefore concept of customer switching behavior has been popular among the general public, business people, professionals and academic; and has gained universal recognition. As a consequence, contemporary marketing managers attempt to address the customer switching behavior. Thus, knowledge on customer switcher behavior is widely known and practiced in most of the organizations. This paper will focus on the reasons of why the customers switch from one soft drink brand to other in Bangladesh.

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Research Objective

The research objectives are given below:

1. To give an overview of customer switching behavior in the Soft Drink Industry of Bangladesh
2. To find out the reasons why do the customers switch from one brand to other brand of Soft Drink.
3. To analyze customer preference patterns and its influence on competitive market environment.
4. To recommend for improving the quality, taste, fashion of soft drink industry in Bangladesh that will reduce customer-switching behavior tendency.

Literature Review

The researchers meticulously reviewed different papers and articles related to the topic. Intrinsic of different research papers and author's views have been focused here. According to Sheth (2002), Customer switching is defined as an act of being loyal to one-service categories but switch from one service provider to another because of dissatisfaction or any other related problems. Previous studies have examined various antecedents of customer switching including pricing, switching cost, customer satisfaction, and ethical problems, among others. However, despite the large number of studies that examined various antecedents of customer switching behavior (Nasrin, 2012).

As per the study of Abarajithan (2011), the following factors influences customer's behavior during the time of purchase of the product. These factors are the reasons of customers switching behavior in any types of product industry.

Ragelstated that (2011), the factors that drive a customer to switch depend on the nature of the business, but generally, poor service quality is a major culprit. For example, customers might abandon your business because the low-quality service is not meeting their needs, forcing them to opt for one of your competitors (Ritter and Vagn Freytag, 2004). Alternatively, they might abandon your business because they believe the poor service is not worth what you are charging. In this case, they might do without the type of service you are providing rather than opt for a competitor. Either way, you lose.

As per the research analysis of Berning (2013), boredom is another possible driving force of consumer-switching behavior, according to the book "Consumer Behavior," by Wayne D. Hoyer and Deborah J. Mac Innis. When your product or service is no longer new and exciting to consumers, they might leave just for the sake of variety. Restaurants, for example, must balance offering traditional favorites with new items that create excitement and intrigue (Gans and King, 2012).

According to Breen, (1971), from a customer's cognitive conception, price is something that must be given up or sacrificed to obtain certain kinds of products or services. Pricing, in the context of banking, has additional components. The rise in products' price can influence customers to shift the brand. Similarly, in a qualitative study of customer switching among services, Cova (2007) reported that more than half the customers had switched services due to poor service/price perceptions. This finding suggests that unfavorable price perceptions may have a direct effect on a customer's intention to switch. Sales promotion is another popular promotional activity that businesses adopt. As Elfhag, (2003) said, sales promotion is one-way focused marketing activity whose basic purpose is to create awareness to the customer's behavior. According to Berning, (2013) sales promotion is the activity that

is one-way focused marketing activity whose basic purpose is to create awareness to the customer's behavior. According to Berning, (2013) sales promotion is the activity that increases sales for a certain period. Sales promotion helps to achieve target sales volume by providing the customers some extra enticements. Coupons, competitions, and contests, price offs are offered as a sales promotion for increasing the sales. Jobber, (2007) said that sales promotions are frequently mistaken for publicizing.

Many researchers have provided different definitions of customer satisfaction. Hussain (2014) stated "satisfaction is not the pleasure of the experience; it is an evaluation rendered that the experience was at least as good as it was supposed to be". Simon (2009) conceptually considered satisfaction as "an outcome of purchase and use resulting from the buyer's comparison of the rewards and costs of the purchase in relation to the anticipated consequences". Based on previous definitions, Fiore (2007) offered a formal definition that "satisfaction was the customer's fulfillment response and it was a judgment that a product or service feature, or the product or service itself, provided a pleasurable level of consumption-related fulfillment". Customer satisfaction is often recognized as a main influence in the formation of customers' future purchase intention (King, 2012).

Conceptual Framework

The following framework exhibits the factors that influence customer behavior in switching from one brand to other brand of soft drinks.

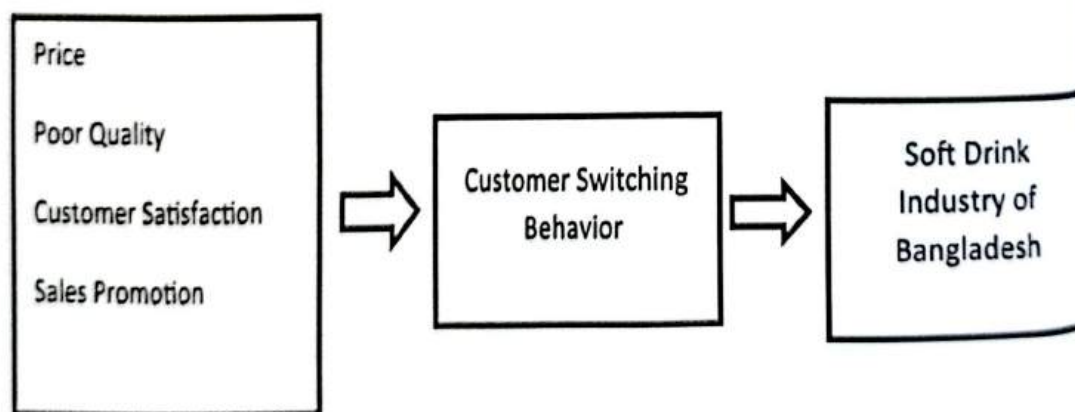


Figure 3: Conceptual Framework

Methodology

In this article, research initiative used deductive research approach. As the researcher does not dispatch any unused ideas & models from this research paper, and the researcher has accumulated the truths from samples and reused those records with divergent sorts of research rationalities for the accomplishment of the research so the deductive research approach is ideal for this research study.

The researcher had practiced quantitative research technique to accomplish this research study because the deductive research approach is set for the research. The researcher has collected data from the 100 samples and analyzed the data statistically, so the quantitative research method is best suited the research study.

In this research study, probability-sampling method was used by the research. The analysis takes after the system of the study strategy for the social event of information production

Result Analysis and Findings

Demographic Variables

The demographic variable shows that, among the 100 respondents, 70% are male and 30% are female. Most respondent are from the age group 16-25 and the percentage is 34.28%. The lowest numbers of respondents come from over 45 years old age group. Among 100 samples, 30 are married and 70 are unmarried, 30% are full time employed, 73% are part time employed and 27% are unemployed. In case of income status, 43 respondents earn below TK10000 because most of the customers of soft drink are young generation and 20 respondents earn in between of TK21001- TK30000.

Table 1: Demographic Variables

Gender		
	Frequency	Percent
Male	70	0.7
Female	30	0.3
Total	100	1
Age		
	Frequency	Percent
5-15	19	0.328571429
16-25	30	0.342857143
26-35	19	0.185714286
36-45	17	0.071428571
Over 45	15	0.071428571
Total	100	1
Marital Status		
	Frequency	Percent
Married	30	0.3
Unmarried	70	0.7
Total	100	1
Employment Status		
	Frequency	Percent
Fulltime employment	73	0.73
Parttime employment	27	0.27
Total	100	1
Income		
	Frequency	Percent
Below TK10000	43	0.43
TK11000 TK20000	30	0.30
TK21000 TK30000	20	0.20
Above TK30000	7	0.07
Total	100	1

Correlation Analysis

Correlation analysis shows the relation among the independent and dependent variables. Here, the dependent variable is Customer Switching Behavior and the independent variables are Price, Poor Quality, Customer Satisfaction and Sales Promotion. The correlation rate among the price & Poor Quality is 0.94, with Sales Promotion, it is 0.57 and with Customer Switching Behavior, it is 0.61. Again, the correlation rate between the poor quality & Customer Switching Behavior is .90, with Customer Satisfaction it is 0.39. The correlation rate between Sales Promotion and Customer Switching Behavior is 0.67. The entire correlation rate is positive and the table displayed that a positive correlation exists in the middle of all the variables. The correlation rate above .5 to 1 is strong and below .5 is less strong.

Correlations Matrix					
	Price	Poor Quality	Customer Satisfaction	Sales Promotion	Customer Switching Behavior
Price	1.00				
Poor Quality	0.94	1.00			
Customer Satisfaction	0.27	0.39	1.00		
Sales Promotion	0.57	0.00	0.19	1.00	
Customer Switching Behavior	0.61	0.90	0.82	0.67	1.00

Table 2: Correlation Analysis

Regression Analysis

As Customer Switching Behavior of Bangladesh soft drink industry is measured as the dependent variable, the table displays the regression value is 0.559 then it teaches that independent variables have consequence on the dependent variables by 55.9%. Therefore, the independent variables Price, Poor Quality, Customer Satisfaction and Sales Promotion have influence on dependent variable Customer Switching Behavior by the rate of 55.9%. It replicates that independent variables have a huge effect over the dependent variable.

Model Summary for Dependent Variable Positive Perception				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.679	0.660	0.559	0.602
a. Predictors: (Constant), Price, Poor Quality, Customer Satisfaction, Sales Promotion				

Table 3: Model Summary for the Dependent Variable Customer Switching Behavior

The coefficient table expresses the separate greatness beyond the dependent variable Customer Switching Behavior. This chart mentions that each variable over whelms positive effect on the dependent variable yet this varies after variables to variables. Now the price has the beta of 0.644, Poor Quality 0.543, Customer Satisfaction 0.23 & Sales Promotion

also adapts a beta of 0.442. It displays that prices & sales promotions put the most effect & the lowest effects are put by Customer Satisfaction over the dependent variable Customer Switching Behavior.

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients t		Sig.
			Std. Error			
1	(Constant)	7.121	1.220		5.835	0.000
	Price	0.078	0.137	0.644	0.570	0.570
	Poor Quality	-0.141	0.115	0.543	-1.229	0.222
	Customer Satisfaction	-0.162	0.101	0.237	-1.609	0.111
	Sales Promotion	-0.188	0.105	0.442	-1.802	0.075
a. Dependent Variable: Customer Switching Behavior						

Table 4: Coefficients

Conclusion

The objective of the research is to find out the customer switching behavior in the soft drink industry of Bangladesh. The research objective was fulfilled through the research work. The research result shows that people changes soft drink brands because their taste changes. The reasons of customer switching behavior in the Bangladesh Soft Drink Industry are price, poor quality, customer satisfaction & sales promotion offers of different soft drink company. They prefer the taste, quality, price and offers. The result also shows that prices and sales promotion have the most effect on the customer switching behavior in the Bangladesh Soft Drink Industry. Customer switches brands when they found low prices and more offers like coupons, free gifts and quiz contest. There is some recommendation has been given, such as to improve the quality and provide more special offers to customers can reduce customer-switching behavior tendency.

Recommendation

Some recommendation has been given to reduce customer-switching behavior tendency in Bangladesh's soft drink industry. The results of the study have shown that brand is a very determining factor of the consumption. The good branding strategy, promotion strategy & packaging can reduce the switching cost. If soft drink companies charge maximum rates, the companies will continue to lose customers. It is therefore wise for soft drink companies to reduce their own costs so as to provide other benefits to customers like reduced product costs, for example, the soft drink companies will reduce the prices of their pet bottles to attract more young customers. If the local soft drink companies want to increase market share than they need to optimize stores revenues in urban sites is to offer specific, targeted promotions to soft drinks consumers. This will decrease the customer switching rate in our country.

Reference

Abarajithan, W. and Ragel, V. (2011). The Study of Customer Switching Behavior Toward Carbonated Soft Drink Market. SSRN Journal.

- Berning, J. and McCullough, M. (2013). Advertising Soft Drinks to Children: Are Voluntary Restrictions Effective?. *Agribusiness*, p.n/a-n/a.
- Breen, C. (1971). Customer Switching Systems. *Bell System Technical Journal*, 50(4), pp.553-565.
- Carù, A., & Cova, B. (2007). *Consuming experience*. London, United Kingdom: Routledge.
- Elfhag, K., Tholin, S. and Rasmussen, F. (2008). Consumption of fruit, vegetables, sweet and soft drinks are associated with psychological dimensions of eating behavior in parents and their 12-year-old children. *Public Health Nutrition*, 11(09).
- Fiore, A., & Kim, J. (2007). An integrative framework capturing experiential and utilitarian shopping experience. *International Journal of Retail & Distribution Management*, 35(4), 421-442.
- Gans, J. and King, S. (2012). Regulating Endogenous Customer Switching Costs. *SSRN Journal*.
- Hussain, K. and Rizwan, M. (2014). Customer loyalty and switching behavior of customers for Pepsi in Pakistan. *pag*, 4(2), p.129.
- Jobber, D., 2007. *Principles and Practice of Marketing*. 5th ed. Berkshire Maidenhead: McGraw-Hill Education Shoppe hangers Road.
- Jha, N. (2008). *Research Methodology*. Chandigarh: Abhishek Publications.
- Ketchen, D. and Bergh, D. (2006). *Research methodology in strategy and management*. Amsterdam: Elsevier JAI.
- NasrinDanesh, S., AhmadiNasab, S. and Choon Ling, K. (2012). The Study of Customer Satisfaction, Customer Trust and Switching Barriers on Customer Retention in Malaysian Hypermarkets. *IJBM*, 7(7).
- Ritter, T. and Vagn Freytag, P. (2004). Challenges in Understanding Customer Behaviour. *Cust. Behav.*, 3(3), pp.229-233.
- Samuels, W., Biddle, J. and Emmett, R. (2009). *Research in the history of economic thought and methodology*. Bingley: Emerald JAI.
- Sheth, J. (2002). A Generic Concept of Customer Behaviour. *J. Cust. Behav.*, 1(1), pp.7-18.
- Simon, H. (2009). The crisis and customer behavior: eight quick solutions. *Journal of Customer Behaviour*, 8(2), pp.177-186.

Modernism, Postmodernism and Metamodernism: A Cultural Seismology

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Key Words: *Modernism, Postmodernism, Metamodernism and Cultural Seismology*

Abstract: *Trendsetters come and launch new trends in literature, arts, culture and history. In the wake of the First Great War, the European society suffered shockingly when a new trend or movement necessarily took place in literature, arts, culture and history. It was called Modernism. As an offshoot of Modernism, Postmodernism was evolved to reach the tail-end of the century. But, the latter trend proved too cynical and aggressive to bring about universalization of humanity and globalization of the socio-cultural forces. In 1995, a Bengali poet, named Mohammad Nurul Huda from Dhaka, Bangladesh, put forward a new literary and cultural concept-theoretically. The name of the concept is Metamodernism, which is gaining ground gradually world-wide, posing rather a threat of elimination to the just preceding trend, called Postmodernism. This paper attempts to offer a cultural seismology of all the three trends, highlighting on the latest one, called Metamodernism.*

Introduction

Modernism in literature and culture has been the name of an idea for about a century or more. The idea started working in literature and culture as a movement in the disturbed, transformational period of European history during the First World War. It contained and incorporated in literature the sensibility of transformation of the War. The Modernist movement initially contained also the rising sense of crisis. The greatest of the modern works were written around or across the Great War, and expressed the physical and mental turmoil of mankind when exile often became not merely an artistic mission but also a terrible necessity. Thus, a cultural seismology factor became necessary for the critics and reviewers of arts, culture and history, who attempted to record the shifts and displacements. In the phases of literary, cultural and social history since then, the critics and reviewers have marked certain hallmark tendencies which are widely known as Modernism, Postmodernism, Post-Postmodernism.

The poets, artists and the proponents of Modernism since the time have demonstrated and inculcated in their pursuits a historicist feeling that they live in totally novel times, and that they are derivatives not of the past but of the surrounding scenario, as if it is a fresh condition of the human mind. It is, as if, a condition which their art has explored, felt through, and has also sometimes reacted against. The term, Modernism, thus covers a variety of trends, but mainly subversive of the earlier trends called Realism and Romanticism. The trend is significantly disposed towards abstraction consisting of Impressionism, Expressionism, Cubism, Futurism, Symbolism, Imagism, Dadaism, Surrealism etc. In some nations, Modernism has worked central to the evolution of their literary artistic tradition; while for others it has simply seemed to visit and then go away. So, it could be argued that the twentieth century artistic tradition is made up, not of certain specific and essential trend or strand, but of two roughly antithetical trends or strands-though meeting from time to time.

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From the idea of two streams of Modernism evolves the scope and potentiality of abundance of several versions of Modernism. Thus, what Kermode calls Neo-modernism and some others call Post-modernism, involves a change falling from and around Dada. It is still a tradition, a wayfarer who has not lost his way forward.

But the literary and cultural society of both the east and the west has experienced excesses of modernist tendencies in the writings of D.H. Lawrence, particularly in his novel 'Lady Chatterley's Lover'. Sigmund Freud in his 'The Interpretations of Dreams' has attempted even to interpret the character of Hamlet in Shakespeare's Hamlet, in terms of Oedipus complex, which is quite contrary to the textual evidences of the masterpiece. Diametrically opposite to what is called mother-son physical attraction in Hamlet, there is plenty of dialogues and soliloquies in the play showing total disgust of the protagonist towards his mother Gertrude, accompanied by expressions of desire to commit suicide because of supreme depression created in the mind of Hamlet. In the name of modernism they have attempted to make derogatory comments about Hamlet-Gertrude bilateral relations, setting an example of perversion of taste and temperament. In view to curb down the excesses of modernism of this type, a compromise of tendencies has been sought for by literary critics and personalities; and one such masterly hand to boost up a concept is Professor Mohammad Nurul Huda, a poet, widely known in the Indian sub-continent as a peace-messenger. He has come forward with a formula of peace and reconciliation of seismology arising out of the discourses of modernism. He has named the form Metamodernism.

Jean-Francois Lyotard presented his article, "The Postmodern Condition: A Report on Knowledge" in 1974. In that article he predicted that no knowledge will survive that can be converted into computer language. Learning will no longer be associated with training of the minds-- with teachers training students. For the transmission and storage of information will no longer depend on individuals, but on computers. Information will be produced and sold. Nations will fight for information the way they used to fight for territory. Information will zip around the globe at the speed of electricity and people will try to stop it. The role of the state will grow weaker. Taking the place of states, huge multinational corporations will dominate.

Lyotard asserts that myths legitimize themselves. They make themselves believable, just by the telling. And at the same time they legitimize the society in which those myths are told. The teller of the myth does not have to argue or prove. In the vibrations of the chant, the beat and the rhythm--the sense of natural time is dissolved and the awareness opens to mythic time, to narrative time. According to Lyotard, nursery rhymes and some repetitive forms of contemporary music attempt to enter to the same space of mythic time. The narrator gains authority to chant the chant because he has heard it chanted to himself. Anyone listening gains the same authority merely by listening. Lyotard calls big stories, stories of mythic proportions, metanarratives or grandnarratives accountable for explaining and subordinating all lesser, little and local narratives. Lyotard adds, some other narratives are the philosophy of Marxism, or the narrative of Christian salvation or the like. But, according to Lyotard, since World War Second, people no longer believe in these grandnarratives. Postmodern society is a society in which no one narrative-- big or little-- no one language dominates. In Postmodern societies many micro-narratives are jammed together. And a carnival of narratives replaces the monolithic presence of one metanarrative. Postmodern society is made up of millions and millions of incompatible little stories--micro-narratives. And not one of these little stories can dominate or explain the rest. Lyotard's definition

Postmodernism put forward this way, is regarded as 'Incredulity towards metanarratives', continues to have great influence on framing the theory of Postmodernism till today.

Maladies of postmodernism are not far to seek. The avant-garde has entered the streets and become instinctive or radical behavior. In Post-modernism, we are in a new stylistic age in which the enterprise of humanism and civilization desperately attempts to reinstate newer values by the subversions of forms. Anarchism and revolutionary subjectivism predominate; the uniqueness of the work vanishes; the cults of impersonality and pure forms are done away with; art is either action or outrage or play. In a spectacular essay, called 'POSTmodernISM', Ihab Hassan has explored some of the continuities and discontinuities, stressing that the new mood assumes a totally technological and dehumanized universe. In order to save the present day literary and cultural world from running rapidly downhill towards the ever darkening shadow of anarchism, atheism and dehumanization it is an urge pronounced by interested corners that a mid-way line is drawn between the polar extremes. The renunciation of anything elemental has not been accepted by all. Rabindranath Tagore (1861-1941), the late modernist, and sometimes postmodernist when he raises his voice for the Africans (Africa, 1935), has spoken out his position on the question of relation between man and man, between man and soil and between man and nature. Much earlier, in 1912, in his poem number 73 of English 'Gitanjali' ('The Song Offerings') Tagore made it known to the Europeans that he is all out for human relations. Not only that, but the poem also speaks of the divine presence in each and every object of nature and with every man in this world:

"... I feel the embrace of freedom
In a thousand bonds of delight.
Thou ever pourest for me
The fresh draught of the wine
Of various colours and fragrance
Filling this earthen vessel to the brim.
My world will light its hundred different lamps
With thy flame
And place them before the altar of thy temple.
No,
I will never shut the doors of my senses.
The delights of sight and hearing and touch
Will bear thy delight.
Yes,
All my illusions will burn into illumination of joy,
And all my desires ripen into fruits of love."

Modernism, and Post-modernism, have, then, their distinct phases, lines and traditions. But there is great profit if an attempt is made to relate and reconcile them. In reviewing the many realignments and reassessments of the train of modernistic tendencies, Malcom Bradbury and James Mcfarlane in their famous essay on Modernism, suggest:

"...the earlier and the wider we push in our attempts to get at the roots of Modernism, the more we are likely to ask questions about the relationship between Modernism and two of the essential mental and artistic movements of the nineteenth century: Romanticism and positivistic.

Naturalism. A number of critics have been tempted to see modernism as a resurgence of Romanticism, though conceivably in a more extreme and strained form of pure irrationalism... recent scholars like Geoffrey Hartman, Harold Bloom, ...Hillis Miller, who, in various ways propose a continuity into Modernism of the primary Romantic concerns with consciousness, with self-object relationships, and with intensified experience."

But Bradbury and Macfarlane, in trying to find a way out for reconciliation and compromise, have fought back a great deal in their way to interpret Modernism. There are good many others who are manifestly desperate to advance and dig cracks in the noble heart of literature, culture and society by pushing forward such drastic philosophies as Existentialism and Nihilism.

The poets and the literary critics in the late twentieth century were looking for the emergence of an outstanding and newer literary tendency which would sufficiently contain the above mentioned trends of Modernistic literature and culture up to a tolerable extent, and would, side by side, look forward to address the attraction of what is universal. Mohammad Nurul Huda, a poet, essayist and translator, made a declaration in 1995, in Bengali, and sought for an aesthetic legitimation of his declaration. A facsimile of the declaratory poem in Bengali written by Poet Nurul Huda, which we may term as Manifesto of Metamodernism.

Poet Huda in his Bengali poem, made this observation that a new brand of modernistic literature and culture should find place in the history of critical theories which would contain such elements as may be rated "all-time modern." He termed the concept 'Metamodernism' and outlined its aesthetic formula as follows:

- 1) Personness →
 - 2) Extension of the essence of personness-
 - 3) Return to personness →
- Or,
- 1) Trace symbolized as personness →
 - 2) Extension of the symbolized personness →
- Or word-play or language game or rhetoric or images- →
- 3) Reconstructing and surrendering and returning to basic archetrace.
- For example,
- 1) Tree root →
 - 2) Tree trunk branches → sub-branches → joints leaf buds leaves and flowers
blossoms → fruits →
 - 3) From fruit to kernel to seed to tree

In the introduction to 'Mouladhunik', meaning 'Metamodern', originally published in 1995, as has been mentioned earlier, poet Huda in fact promulgated the manifesto of 'Metamodern' literature. In the manifesto, poet Huda mentioned the word 'archetrace' with particular emphasis, meaning that the origin of any creation has a historic significance which always undergoes a process of aesthetic reconstruction in the various phases of a poet-creator's life. Again, in the last paragraph of his essay entitled 'Towards the aesthetics of Metamodern' (p. 85, Metamodern and Other Tendencies) he reiterates that a person or a poet-creator undergoes "a process of aesthetic reconstruction in every possible details so that the trace perceived or symbolized returns with an exact image that may be tested on the basis of Derridean deconstruction. A Metamodern work of creation is, indeed, a work of supreme human mind that can both construct and deconstruct what it traces out to create an equivalent to its archetrace."

A synopsis of the Bengali facsimile quoted above, convey the following message to us:

As the universe is on the brink of a postmodern breakdown and is on the verge of a catastrophic beginning marked by its ending, so the basic formation of all things both three dimensional or four dimensional or multi-dimensional, whether material or immaterial-is indivisible; and so, whosoever believes or disbelieves in the manner of existence of such a re-cycle, passes through a metamodern life-cycle; and so, the creation of this universe, initiated with an archetrace, is ultimately an artistic creation. It is, therefore, resolved that:

- * The initial and the last of the universal truth is metamodernism or unimodernism. There is no other truth, and no need of a further aesthetic truth, apart from this truth; Metamodernism or unimodernism is my permanence. It means that with myself do extend or expand my own self;
- * Metadernism or unimodernism is my all-time presence;
- * Metamodernism or unimodernism is my singularity as well as plurality;
- * Metamodernism or unimodernism is my nothingness and fulfillment;
- * Metamodernism or unimodernism is my inward self and outward self;
- * Metamodernism or unimodernism is my teachership-preachership and studentship;
- * Metamodernism contains my main limb, all of my limbs, all-absorbing limbs: it is premodernism, postmodernism and tertiary modernism;
- * Metamodernism is past and future; it is all-time;
- * Metamodernism is the essence of personness;
- * Metamodernism is the root of creations, the extension or expansion of creations and return to the root of creations;
- * Metamodernism is the essence of all essences;
- * Metamodernism is that great explosion of I and You who represent that unnumbered rays of light scattered all around to create the petals of the world-the minutest I who have given birth to the most magnificent of every 'I' and all 'I's;
- * The Metamodern 'I' have a beginning but no end, because my end signifies my beginning again;
- * The Metamodern 'I' is the timelessness of time and the timeliness of time;
- * The Metamodern 'I' is the placelessness as well as the placeness of place;
- * The Metamodern 'I' is the terrible version of beauty, and also the beauty in what is terrible;
- * The Metamodern 'I' is the world-symbol and the all-pervasive symbolism;
- * The Metamodern 'I' is the transfer of my identity from one symbol to another;

- * The Metamodern 'I' is the image, simile and metaphor coming back to symbol;
- * The Metamodern 'I' is the You-ness of myself;
- * The Metamodern 'I' is the inertia of rest and the inertia of motion; it is the speed and the hearing; the stagnant and the motion;
- * The metamodern 'I' is my ever renewable process of original process;
- * 'We' and 'You' and 'They' are the endless music of the Metamodern or unimodern, the ever spreading branches of trees like the canopy of the sky and the ever sprouting roots lying under the earth;
- * Metamodernism is centrifugally coming back to what is the center;
- * Metamodernism is centripetally going back to get going centrifugal;
- * Metamodernism is the essence of existence;
- * Metamodernism is local while universal and universal while it is local.

Thus, what poet Huda offered in his poem composed in Bengali in 1995 is an explanatory definition of Metamodernism. It is very clear and elaborate. It is understood that Metamodern literature would make possible an all-pervading and versatile reconciliation between apparently opposing ideas whatever. It seems to exclude any idea of oscillation like the like. In 2010, cultural theorists Timotheus Vermeulen and Robin van den Akker speak of Metamodernism as a "structure of feeling" that oscillates between modernism and postmodernism like "a pendulum swinging between innumerable poles." Vermeulen says that "Metamodernism is not so much a philosophy-which implies a closed ontology-as an attempt at a vernacular, or... a sort of open source document, that might contextualize and explain what is going on around us, in political economy as much as in the arts." Poet Huda elaborately asserts his manifesto that Metamodernism is a philosophy which silently and unidentifiably active even before the advent of Modernism, and will continue to prevail even after Postmodernism, because its basis lies in choosing an archetypal prefix 'meta' in the term Metamodernism has the implication of Plato's metaxy which confirms its basis to persist.

We can cite the example of Bangladesh National Assembly building in Dhaka as an architectural structure of sublime height and magnificent archetypal as a Metamodern of creation. The plan of the grand architecture came from the brain of Muzharul Islam (1923-2012), Louis I Kahn, Stanley Tigerman and Paul Rudolph. This architecture speaks truly of its own land, nature and climate. At the same time, it images the colour of the soil of independent Bangladesh and how she blooms out at dawn with the rise of the morning sun. The piece of architecture as an artefact symbolizes the aesthetic taste and temperament of the nation called Bengali. At the same time, it embodies in its monumental physical appearance all that is romantic and anthropological about the nation and also all that is symbolic of her hopes and aspirations of all times.

Robert Frost (1874-1963) is a poet who encompasses in his poems the latest of modernistic tendencies, such as loneliness, anxiety, helplessness, frustration and sex and death, that plus a simpleton treatment of insignificant objects of nature, such as a rejected piece of paper or a piece of pebbles, thereby showing his metamodern or all pervading attitude towards poetry. In spite of being reconciliatory with a polar extreme diversity of objects, he remains mostly subjective-objective, as well as symbolist-imagist. He is lyrical like the romantic poets in impression but actually an existentialist like Samuel Becket. In his poem, Birch

the swing of the birches implies the ideal human attitude balanced between what is realistic, and, at the same time dissatisfaction with it. The treatment of puberty in the poem, 'Birches' reminds one of Freud or Lawrence, to the extent of the gesture, posture and physical articulations, but yet in a subdued language of metaphor and synecdoche. The act of going up and coming back in the poem may imply tumescence and detumescence. There is a pattern of psychosexual imagery in the poem, comments Dr. Gauranga Mohanta in his book, 'Robert Frost: A Critical Study in Major Images and Symbols'. Also, there is situation in it when he contemplates the grace of heaven, but he ultimately comes back to the real world of love and tribulations. Let us look at the text of the poem:

When I see birches bend to left and right
Across the lines of straighter darker trees,
I like to think some boy's been swinging them.
But swinging doesn't bend them down to stay
As ice-storms do. Often you must have seen them
Loaded with ice a sunny winter morning
After a rain. They click upon themselves
As the breeze rises, and turn many-colored
As the stir cracks and crazes their enamel.
Soon the sun's warmth makes them shed crystal shells
Shattering and avalanching on the snow-crust-
Such heaps of broken glass to sweep away
You'd think the inner dome of heaven had fallen.
They are dragged to the withered bracken by the load,
And they seem not to break; though once they are bowed
So low for long, they never right themselves:
You may see their trunks arching in the woods
Years afterwards, trailing their leaves on the ground
Like girls on hands and knees that throw their hair
Before them over their heads to dry in the sun.
But I was going to say when Truth broke in
With all her matter-of-fact about the ice-storm
I should prefer to have some boy bend them
As he went out and in to fetch the cows-
Some boy too far from town to learn baseball,
Whose only play was what he found himself,
Summer or winter, and could play alone.
One by one he subdued his father's trees
By riding them down over and over again
Until he took the stiffness out of them,
And not one but hung limp, not one was left
For him to conquer. He learned all there was
To learn about not launching out too soon
And so not carrying the tree away
Clear to the ground. He always kept his poise
To the top branches, climbing carefully

With the same pains you use to fill a cup
 Up to the brim, and even above the brim.
 Then he flung outward, feet first, with a swish,
 Kicking his way down through the air to the ground.
 So was I once myself a swinger of birches.
 And so I dream of going back to be.
 It's when I'm weary of considerations,
 And life is too much like a pathless wood
 Where your face burns and tickles with the cobwebs
 Broken across it, and one eye is weeping
 From a twig's having lashed across it open.
 I'd like to get away from earth awhile
 And then come back to it and begin over.
 May no fate willfully misunderstand me
 And half grant what I wish and snatch me away
 Not to return. Earth's the right place for love:
 I don't know where it's likely to go better.
 I'd like to go by climbing a birch tree,
 And climb black branches up a snow-white trunk
 Toward heaven, till the tree could bear no more,
 But dipped its top and set me down again.
 That would be good both going and coming back.
 One could do worse than be a swinger of birches.

Poet Mohammad Nurul Huda's own poem, 'I, The I' is another typical example of a Metamodern poem. The text of the poem contains a character called 'I' which is subject-object simultaneously, and is singular and plural at the same time and same place. It is the personness and all the emanations of a person. It is time present, time past as well as time future. It is the anthropological history of mankind, of the flora and fauna, of the land and oceans, from the beginning of genetic creations to their ultimate destination. It is all and all and is symbolically all in one:

'I, The I

....
 The I whom I know
 Did not come merely from his parents,
 Nor from metaphysical kith and kin, born or unborn,
 Nor from his friendly foes or brutal enemies;
 The I whom I know
 Was born once and manytimes, never to die,
 The I whom I know always has to lie
 On some soil or a soul,
 And it does fly and fly, and always fly
 Yes, it flies
 From one petal to another,
 From one semen drop to another,

From one tear drop to another,
From one eye-sparkle to another;

... ..

I am indeed the I
Born out of wedlock of black and white,
Unlike Luther or Kennedy or Obama outright,
Unlike Che the warrior or Regan the terror,
Unlike Russel the thinker or Laden the tanker,
Unlike a banker, unlike a beggar

...

...

Bengali poet, Kazi Nazrul Islam's 'Bidrohi'-the Rebel, may also be cited as a glaring example of Metamodernism. The indomitable spirit of a man, and at the same time, of a nation, and of mankind in time past, present and future is embedded in the text of the poem. The persona of the poem is one more Prometheus, one more perennial symbol of rebellion for all times, which is as potentially powerful as to construct and deconstruct alternately. It is simultaneously modernist, post-modernist, post-colonial, post-post-modernist and post-post-colonial. It is within the periphery of all such critical ideas, and without. It is God-less, yet coming back to God; it is self-less, yet coming back to self; it is personal, yet universal; it is monophonic, yet polyphonic, as poet Huda would like to interpret. It is vertical and transcendental, to the best and the most. As such, it can stand out as the finest example of a metamodern poem, in so far as the tendencies of metamodernist poems, identified by poet Huda in his Bengali poem 'Mouladhunikota', published in 1995, and English article 'Towards the Aesthetic Metamodern', published in 2014, under the cover of a book of essays entitled "Metamodern and Other Tendencies". Let me quote from Kazi Nazrul Islam's poem, Rebel, translated by Syed Sajjad Hussain,

The rebel

Hail, my Hero, rebel eternal!
Say: I out-top the great Himalayas in titanic majesty,
Abashed and humbled, the snow-capped mountain bows its head before me.
Sublime, I tower far above the infinite spaces of the universe,
Above the sun, moon, planets and stars, above the seat of heaven itself.
I am an ever-lasting wonder, the invincible victor whose stature dwarfs all.
I yield to none in submission, nor know tenderness.
I am the tempest's ferocity, the breath of the cyclone,
Ruin's image, a terror, irresistible, impetuous, uncontrollable.
I trample on bonds, obey no lay, recognize no rule.
I sport with loaded boats in my revels and send them down to the sea's bottom
without mercy.
I am a torpedo, an explosive mine.
I am the spirit of Silvia, the destroyer.
I am the summer's storms always seething with turbulence,
I am the wild wind:
I crush and sweep away all in my path.

I can be seen in the riotous rhythm of the dancer and heard in the soft melody of song,
 Moving as I wish, ever free, unrestrained, fearless, I challenge my enemies;
 Bravely I battle with death.
 I am the fury of the hurricane, terrifying like a pestilence, impulsive, lawless.
 Ever subdued,
 The bubbling wine of life fills my impassioned heart.
 I am the flame which burns on sacrificial altars,
 I am both votary and scared fire,
 I am peaceful homestead as well as desolate graveyard,
 I create and destroy.
 I am the end, the finale of night and day.
 Great Indra's child
 I bear the luminous moon in my arms and brilliant sun on my brow.
 I carry the lover's lute in one hand and the trumpet of war in the other.
 I hold inside me, like Siva, the pale-throated one,
 All the liquid venom churned up at creation's dawn.
 I cradle Ganga's waters in my locks.
 I am both Joy and Grief.
 I am the demonic power which will overwhelm all on Earth's last day.
 I am tranquility as well as commotion;
 I am youth's crimson flesh, a rebuke to God's pride.
 I am the violence of the typhoon, the impulse of the ocean,
 Resplendent like the glee of the sea's raging waves.
 Dauntless, I speed across the measureless distances of earth and sky, like a gate,
 on the back of winged mounts.
 I am the quenchless fire in subterranean volcanoes, dark with no glow.
 I leap from region to region unhampered, reckless, while the earth trembles in dis-
 underneath.
 Alike I duel with primeval dragons and grapple with Gabriel's flaming wings.
 My parentage is divine.
 I am restless and unquiet and give no peace to my mother, the earth.
 I am Orpheus' lyre as well as lord Krishna's flute-
 able to lull the ocean to sleep with my strains.
 When I rage and thunder all hell's mansions shake in terror, - their flames snuffed out.
 I am both earth-bound and ethereal, Indomitable, immortal, blessed with unfading youth,
 a menace to man and god and demon,
 the ultimate mystery at the heart of eternity.
 I roam heaven and earth and underworld, unbound, unchained while they quake at
 my tread.

I am weary of strife, but I would have no rest until the skies have creased to
ring with the groans of the tyrant's victims and tyranny itself lies dead, vanquished.
I am the implacable foe of cruel blind Destiny which rules the universe,
The whimsical despotic deity whom I despise,
I, the eternal rebel who never submits.

Metamodernism has the potentiality as well as pervasiveness. The concept is gradually gaining ground as a discourse of academic studies. It has been welcomed by many a scholar. Recently a thesis has been submitted by one Mr. Alexandra Dumitrescu (in 2014) for the degree of Doctor of Philosophy, University of Otago, New Zealand. The thesis paper cites the poetry of William Blake-'The Songs of Innocence' and 'The Songs of Experience', and a novel by Arundhati Roy-'The God of Small Things' as the genuine texts, in which Metamodern tendencies of literature are obviously present. The said research paper gives the observation that metamodernism is a paradigm in which connection with fellow humans, and indeed with all sentient beings and with nature, is valued.

With this, I hope that Metamodernism or Unimodernism, the latest of the literary concepts so far emerged in the arena of arts and culture, has been presented to the readers so as to bring to light the progress of ideas and the progress of times pertaining to the study of critical theories. Metamodernism or Unimodernism is expected to provide a broad-spectrum possibility and wider vista for the critics of literature and culture and the readers as well, in comprehending the texts of literature in a more befitting way, overcoming the seismic tribulations offered earlier in the vast enormity of critical theories since 1960. Metamodernism is universalization and globalization with a vastness of canvas as good as to address any new idea, evolutionary and progressive.

References

- Butler, Christopher (2002), *Postmodernism: A Very Short Introduction*, OUP, UK.
- Huda, Mohammad Nurul (2014), *Metamodern and Other Tendencies*, 1st edition, Banglaproakash, Banglabazar, Dhaka.
- Bradbury, Malcom and James McFarlane (eds.) (1991), *Modernism*, Penguin Books, UK.
- Huda, M.N. (2009). Mouladhunikota (Concept of Metamodernism in poetic form in Bengali), in Sat Bochorer Kobita (Poems of Sixty Years), Lekhalekhi, Dhaka.
- A Manifesto of Metamodernism (Internet Information).
- Towards a Metamodern literature-A Ph.D. thesis paper submitted to the University of Otago, New Zealand, 2014, by Mr. Alexandra Dumitrescu.
- The Rebel (Bidrohi), a poem by Kazi Nazrul Islam, the national poet of Bangladesh;
- "Kabitabangla" edited by Nurul Huda, Mohammad, the poem 'I, The I' June 2015.
- Huda, M.N. (2014), *Poetry of Kazi Nazrul Islam in English Translation*; Nazrul Institute, Dhanmondi, Dhaka.
- Lyotard, Jean-Francois (1974), *The Post-modern Condition*, Paris.
- Tagore, Rabindranath (1912), *Gitanjali*, Macmillan Publication, London.
- Shakespeare, William, *Hamlet, Prince of Denmark*.
- Mohanta, Dr. Gauranga, *Robert Frost: A Critical Study in Major Images and Symbols*; Shrabon Publishers (2009); Aziz Super Market, Dhaka.
- Intermeyer, Louis, ed. (1946), *The Pocket Book of Robert Frost's Poems*, New York: Washington Square.

Towards Borderlessness: The Way Out of Universal Partitioning

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Key Words: Borderlessness, partition, peace, humanity, internationalism

Abstract: Peace is freedom of the mind from annoyance, distraction, anxiety and obsession. There is a resilient connection between peace and borderlessness. Although the concept of borderlessness encourages political and psychological peace, it is surely very challenging to translate it into reality. There is a lot of exchange of cultures happening in a borderless world, both physically and psychologically. As India experienced the bitter test of partition in 1947 where religious views overflowed on humanism, poets, novelists and essayists have raised cry for wiping out border, especially the political border in the subcontinent that has brought nothing but misery for the innocent folk. One of the most famous Bangladeshi modern novelists Syed Waliullah has presented this utter misfortune in his short story, *The Story of a Tulshi Plant*. This paper intends to present the concept of border between nations and its adverse effects on humanity, even on the belongings in 1947, the time of partition, from the light thrown in Syed Waliullah's short story with references to some prominent writers like Rabindranath Tagore, Amitav Ghosh and Mohammad Nurul Huda who have dealt on the subject of humanity and borderlessness with the noble vision to establish peace in this heterogeneous world society.

Introduction

United States of America, the super power of the world, is nowadays a hot talk for countries for its extreme issues on border as it has recently introduced the ideals America First, keeping behind the issue of humanity. Though the USA has been formed and got the present affluent shape by the skills and manpower of immigrants, now it has become hardliners in the issue of immigration. A huge number of immigrants from America goers are now the victims of their rigid attitude towards 'others'. Though we are living in a so-called globalized world, in the question of border everybody is unyielding and no one wishes to sacrifice a little. This approach has begotten the problems of separation, conflicts and confusion. This border exists within men, religions, nations, regions, continent, and it is multileveled - geographical, psychological and cultural. Because of these multilayered borders, the world once experienced the ruler like Hitler's concentration camp in the time of Second World War and now it is experiencing brutality against Rohingya in Myanmar.

Borders beget borders. The religious border especially the border between Hindu and Muslim has emerged long time ago in Indian subcontinent. During the reign of East India Company, English was exported as the means of civilizing the people of this area who ultimately created a new kind of educated middle class, a new border. It brought religious revivalism through each community, and intensified economic competition. Gradually

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Hindus and Muslims, who were educated, developed hostile relations in political ideas, outlook of life, philosophy, literature and other aspects of life. Even some reformist movements failed to bring them back to think apart from religious borderlines. The minds of the middle class of India, both Hindu and Muslims, were compartmentalized into neat boxes of religion. Even on the question of British rule the educated Indian did not come to the same conclusion because of religious matter. Professor Razzaq says, "The inability of Hindu and Muslim to sit round a table and devise a common program in the political field was the inability of the educated Hindu and the educated Muslim to do so. This failure was conditioned by the early manner of the intellectual development, a development which is continuous down to our day." (Razzaq 1957)

Thus when the British left this continent they divided the area into two parts on the basis of religion namely India and Pakistan. After that, a new border emerged inside Pakistan that paved the ways of Liberation War in 1971 resulting in the sovereign state of country Bangladesh.

The people are talking about renaissance, enlightenment and globalization, but they can hardly keep themselves away from the petty mindedness and the concerns of domestic interests in practical life. The optimistic writers always uplift the flags of humanity for a peaceful world. Authors like Rabindranath Tagore, Sayed Walliullah, Amitav Ghosh and Mohammad Nurul Huda identify border as a meaningless word. They have also found that the geographical borders are nothing but absurd lines which create separation in humanity by preventing the people to climb to the height of internationalism. Throughout their writings they have kept suggesting the people to have a borderless world where there will be no discrimination but a conformity which will ensure global peace for all the people. The partition of 1947 has become one of the major themes in the writings of Sayed Walliullah and Amitav Ghosh especially in *The Story of a Tulshi Plant* and *The Shadow Lines* respectively by them where the misery and the sufferings owing to the partition have highly been emphasized. The ideas of diaspora and deconstruction are also reflected in Amitav Ghosh. Rabindranath Tagore and Mohammad Nurul Huda argue for internationalism and borderless world to stop the brutality of nationalism. The speeches of Tagore gradually develop towards the concept of internationalism. Poet Huda's peace procession on the theme of borderlessness paves the way for heightening humanity. Indeed, all the authors have pointed out that the root of all conflicts is border and suggested to wipe out its existence.

The Story of a Tulshi Plant: a tale of unbearable misery for India Pakistan partition in 1947

Sayed Walliullah (1922 -1971) is one of the most prominent authors in Bangla literature who concentrated almost all of the aspects of human life including the psychological aspects. In Bangladeshi literature, he successfully brings the stream of consciousness technique and he is equally aware of social and political problems that people had to face in his life time. Among a lot of social problems the partition is most significant that he experiences in 1947 which left many people homeless and vagabond. Like a lot of innocent people he also had to move from his own place. His writing got the language of human inner self during that time. *The Story of a Tulshi Plant* is one of his short stories where we come to know about the unbearable sufferings of a folk of young people from West Bengal looking for a habitable place in Bangladesh.

In the story there are some homeless Muslims vying on Tulshi plant, a spiritual and religious plant for the Hindu community. In this short story the miseries of both the Hindu

and the Muslim community, forced to leave their home have been reflected. In the story, the only existence of a Tulshi plant becomes the emblem of innocence and culture, placed at the epicenter of fascination on partition.

"The Partition of India in 1947 was, on the one hand, a gory consummation of a long process of mutual demonizing and dehumanizing by Hindu and Muslim extremists. On the other, in the post-independence era, it became a model of violent conflict resolution invoked and emulated by ethnic and religious extremists and the hawkish establishment in India and Pakistan" (Ahmed 2010).

In this story through a religious emblem like Tulshi plant the author represents a time when the two prominent religious groups namely Hindu and Muslim come close to fighting for their own land according to their specific religion border. In fact, that was not the decision of common people but the decision of some political convictions that created the wall of religion ignoring the conformity of language, culture and above all brotherhood which made the common man the victim. These people became the victims of the utmost level as they lost their properties and the land they were born in.

The Tulshi plant is a significant herbal plant that is worshipped in every pious Hindu family. The story is told by placing the Tulshi plant at the center. It became the mirror of the psychology of the people of that time. The partition between the two groups who used to practice the humanity at first came to know the border line of religion which creates problems in the habitual flow of their life. They started thinking another party as their enemy as the reason of their bad luck. Even their attack came to the Tulshi plant that had been discovered in a waste house as they wanted to wipe out all kinds of existence of Hinduism from that house.

Walliullah shows his mastery in narrating the situation of bohemian life of a working class people. Not only the Muslim people but the misery of Hindu people did not remain silent here in the short story. The portraits of the vagabond young people became the universal picture of border consciousness. Men like Kader, Matin, Modabber, Younus exist all the times and all the ages.

The trends of capturing the property of migrated Hindu people have been portrayed in the story. The amusements of homeless people after getting a shelter in the time of displacement and their conflicted attitude after discovering the existence of a Tulsi plant exposes the truth of religious border and its extremity that suppresses humanity. On the evening of discovering the Tulsi plant the young men participated in the evening gathering as usual but the topic of the discussion changed remarkably from trivial to serious. After the argument and counter arguments between fundamentalist Modabber and left aligned, humanitarian Moksud everybody admits that it was none but the Hindu community who is responsible for the partition.

The last portion of the story hints at the universal aspects of human psychology. When the Tulshi plant was first discovered, extremist Modabber argued to remove it from the house as it is related to Hinduism; but as a result of Matin's persuasion everybody agrees to keep it. From that day someone silently took care of the plants and within few days it became fresh and green. But after the entrance of police he did not take care of it any more. Matin is the possessive quality of human being that inspires to dream of his surroundings for that reason Matin thought about gardening and having a deck chair in the garden. Or because the man himself is vulnerable he does not bother his surroundings. The situation created in 1947 was all about border. The religious border paved the ways of geographical border.

well as psychological border creating initiates the chaos and turmoil among the people. In spite of having same history and same origin the religion border was created that brought the people from home to the street. The agony of searching shelter created more and more problems which heighten the border between them. Sayed Walliullah, with his deep understanding of human psychology presents a chunk of poor people who became the victims of border during partition. Their extreme attitude towards the innocent Tulshi hints at the inner self of human being as they left the Tulshi plant after the interruption of the police. The last line of the story says a lot to the human beings. The notice of police left the people in the verse of existence crisis top to the bottom. In fact, it is not the plants kingdom to take care of grievances and tears of human beings; it is obviously a moral obligation for human being to take care of grievances and tears for others including the Tulshi plant. But something called border prevents people to flourish their humanity and forget their moral obligation.

The Shadow Lines: the aftermath of partition that creates hatred within future generation.

The Shadow Lines is the novel that deals extraordinarily with the after effects of the Partition in 1947, especially with the Partition on the Bengal border. It is important to note that Amitav Ghosh (1956) is one of the major Indian-English novelists who is preoccupied with the Bengal Partition. Three of his novels namely *The Circle of Reason*, *The Shadow Lines* and *The Hungry Tide* deal with problems of the 1947 Partition in Bengal. He also looks at the continual refugee problem that led to it and thus highlights one of the most irritated and long-standing unresolved issues of post partition sub continental political affairs. *The Shadow Lines* takes up the theme of border and explains its negative aspects on national identity. The agony of partitions continues generation after generation though in different ways, but cannot bring anything good for the people.

"At the origin of India and Pakistan lies the national trauma of Partition, a trauma that freezes fear into silence, and for which *The Shadow Lines* seeks to find a language, a process of mourning, and perhaps even a memorial." (Kaul, 1995)

The Shadow Lines by Amitav Ghosh represents the political and economic growth of India in two families-one of them is Bengali and another is English, the Datta Chaudhari family and the Price family. These families knit on multiple levels with three generations namely Jathamoshai, Thamma and Ravi, the narrator. The novel expresses the memories of the characters in the two families. We find the protagonist of the novel, Tridib, in 1960 in Calcutta through the 8 years old narrator, Ravi, his cousin. The narrator adores because of his deep knowledge of history and his perspective on events and people. Through the memories of the family members, Ghosh also explores the history and growth of the city of Calcutta and India, from World War II, through the bloody partition years, the Dhaka and Calcutta riots in 1963 and 1964, which continued to the late twentieth century. Therefore, the memories of the characters become the shadow lines. It is the unseen web to connect people and history together. The novel's major theme explores the ways in which personal lives are entwined and influenced by political and historical forces. The novel begins in Calcutta, moves to Delhi where the narrator goes to school, and ends in London.

Thamma, one of the major characters of the novel, lived through the horrible nightmare of the partition of her native Bengal region from India. Her chief ambition is to reunite the

entire family, particularly to return her uncle, Jethamoshai, from Dhaka. Jethamoshai did not leave his birth place, Dhaka during the partition. When his nearest and dearest ones, who were forced to leave their loving land, asked him to go with them to Kolkata, he said, "I was born here, and I will die here."

Thamma wishes to see the border between India and Pakistan from plane and she is the representative of fatal outcomes of partition bearing the extreme views towards the opposite community. Her bewilderment is expressed pathetically when she needs visa to visit her own country. After the death of her grandson she comes to a conclusion that to separate two countries by borderlines or the erection of walls has no importance. Ravi, the post-partition generation expresses a mature concept regarding borders. Having intimate knowledge of communal disturbance he became more philosophical.

The Datta Chaudhari family and the Price family in London are joined together by the friendship of their patriarchs. But, unfortunately they are torn apart when Tridib rescues May from a mob during the Dhaka riots, and both Tridib and Jethamoshai are killed by the mob. These deaths have a symbolic significance. This sacrifice "can shake the monopoly of the government's authority, can break the illusion of difference creating distance and distance creating difference, can expose the arbitrariness and atrocity of drawing "shadow lines"... can hail humanity over politics, can place relations of the heart over borders of the nation..." (Roye, 2011)

Though the partition apparently took place to solve the problems, ultimately it creates the wall between two different religions sharing the same language, ethnicity even culture which caused problems like riots between the Hindus and the Muslims. It was just the outer phase; the psychological effects of border were deeply grounded. The borders are nothing but absurd, fictive and illusive. Let us quote from *The shadow Lines*:

"When I turned back to my first circle I was struck with wonder that there had really been a time, not so long ago, when people, sensible people of good intention, had thought that all maps were the same, that there was a special enchantment in lines; I had to remind myself that they were not to be blamed for believing that there was something admirable in moving violence to the borders and dealing with it through science and factories, for that was the pattern of the world. They had drawn their borders, believing in that pattern, in the enchantment of lines, hoping perhaps that once they had etched their borders upon the map the two bits of land would sail away from each other like the shifting tectonic plates of Gondwanaland. What had they felt, I wondered, when they discovered that they had created not a separation, but a yet-undiscovered irony - the irony that killed Tridib: the simple fact that there had never been a moment in the four-thousand-year-old history of that map, when the places we know as Dhaka and Calcutta were more closely related than Calcutta, had only to look into the mirror to be in Dhaka; a moment when each city was the inverted image of the other locked into an irreversible symmetry by the line that was to set us free - our looking-glass border. (Ghosh 1995)"

Amitav Ghosh lays importance on intercivilizationism and negates the medieval notion of communalism. He contributes to the idea of growth and progress of civilization among the religions of the world. His notion is that there may be exchanges between two or more

civilizations and helping each other to flourish and going on living. Unless there is a situation of import and export of ideas, visions, philosophy between no civilizations can last long. According to Amitav Ghosh, on culture limit cannot be imposed through some illusionary lines called borders. Rather culture is a process of circulation that has nothing to do with national borders. In this line Robert Dixon, in a critique of Ghosh, argues: "The characters in Ghosh's novels do not occupy discrete cultures, but dwell in travel in the cultural spaces that flow across borders - the shadow lines drawn around modern nation states." (Dixon, 1996).

The borders between nations are like shadow lines of hatred and hostility out of national sentiments or humanism. The narrator also shows how ordinary people try their best to seek mutual sympathy among various ethnic groups of the subcontinent and they don't bother about borderlines.

Rabindranath and his ideas of internationalism and borderlessness

Rabindranath (1861-1941), the first ever Nobel laureate of Indian subcontinent, did not talk about a particular nation but his ideology was universality. He did not keep himself confined to the idea of mere nationality. He rather envisioned internationality. His internationalism leads to a borderless world, a world of peace and tranquility where silly nationalism cannot create any brutal problem; it's the world to think big and think positive.

The early writings of Rabindranath upheld the idea of nationalism, but with his maturity he could understand that nationalism is nothing but narrowness and a way to brutality. He found that extreme nationalism may become the cause of great loss of humanity breeding discrimination among people. He concludes that man should worship the one and only humanism to ensure peace. Many issues were there to teach Rabindranath universality. Firstly it was his family that practiced a particular religion named Brahma. This sect of Hinduism believed in the existence of one and only God. The theology of Brahma seemed to have influenced Tagore's ideas for a borderless world. Secondly, Tagore was also influenced by the ideology of Russian Revolution which used to inculcate the philosophy of 'Dictatorship of the Proletariat' all over the world. The concept of socialism of that period helped Tagore to uplift his universal consciousness. His bold voice against nationalism has been expressed in his famous essay "Nationalism". He said,

"For the sake of humanity we must stand up and give warning to all that nationalism is a cruel epidemic of evil that is sweeping over human world of the present age and eating into its moral vitality." (Rabindranath 1917)

He also said,

"We must make room for man, the guest of the age, and let no Nation of this age obstruct his path." (Chawdhuri 2011)

Rabindranath did not concentrate on any kind of ritual based religion, but he laid emphasis on justice and humanity. There is a similarity between German philosopher Goethe and Tagore in terms of the ideology of internationalism.

The greatest speeches given by Rabindranath were mostly on the subject of internationalism. He wanted to impart a lesson that is grounded on all nations, out of all barriers of petty selfishness. He kept aside the arrogant and brutal nationalism that gives nothing but pain to humanity. He wrote:

"Where the mind is without fear and the head is held high
Where knowledge is free
Where the world has not been broken up into fragments
By narrow domestic walls
Where words come out from the depth of truth
Where tireless striving stretches its arms towards perfection
Where the clear stream of reason has not lost its way
Into the dreary desert sand of dead habit
Where the mind is led forward by thee
Into ever-widening thought and action
Into that heaven of freedom, my Father, let my country awake." (Rabindranath 1912)

Observing this, the great political leader, Jawahar Lal Neheru wrote about him: "This great and highly sensitive man was not only a part of India, but also a part of humanity and freedom everywhere, and his message is for all of us." (Chawdhuri 2011)

Rabindranath was a great mind and his thinking of internationalism did not remain confined to his writings and speech. Rather he introduced a new pattern of education system close to the earth and humanity. He realized that without making the future generation the worshipper of humanity, hope for internationalism was impossible. Like the Soviet Union he thought of bringing about a revolution in the field of education system able to lead Bengali nation to the path of internationalism. In Bolepoore, Santiniketan he established a university named Biswabharati where the efficient artists, teachers, philosophers and scholars from all religions came to impart education. These people used to come from different parts of the world with their vast knowledge to spread world culture among the students so that they could be able to develop their own culture with the touch of different cultures. This is what we call internationalism, to be one with many. If it could be ensured, narrow, heartless and radical nationalism would give way to the making of a nation with one soul and one identity. Tagore led his education system towards the path of borderlessness meaning the peace for the Bengali nation imbued with one single spirit, as well as peace for the world as a whole. Sugata Bose and Ayesha Jalal wrote, "The claim to universality was perhaps most eloquently stated in the works of Rabindranath". (Chawdhuri 2011)

Tagore was not a political personality. His concern about Bengal and the Bengali was that of spiritual peace and serenity. In the introduction to his Nobel winner *Geetanjali* W.B. Yeats has made an eloquent and elaborate interpretation of what Tagore's poetry represents:

"A tradition, where poetry and religion are the same thing, has passed through the centuries, gathering from learned and unlearned metaphor and emotion, and carried back again to the multitude the thought of the scholar and of the noble. If the civilization of Bengal remains unbroken, if that common mind which---as one divines---runs through all, is not, as with us, broken into a dozen minds that know nothing of each other, something even of what is most subtle in these verses will have come, in a few generations, to the beggar on the roads. When there was but one mind in England, Chaucer wrote his *Troilus* and *Cressida*, and thought he had written to be read, or to be read out---for our time was coming on apace---he was sung by minstrels for a while. Rabindranath Tagore, like Chaucer's forerunners, writes music for his words, and one understands at every moment

that he is so abundant, so spontaneous, so daring in his passion, so full of surprise, because he is doing something which has never seemed strange, unnatural, or in need of defense. These verses will not lie in little well-printed books upon ladies' tables, who turn the pages with indolent hands that they may sigh over a life without meaning, which is yet all they can know of life, or be carried by students at the university to be laid aside when the work of life begins, but, as the generations pass, travelers will hum them on the highway and men rowing upon the rivers. Lovers, while they await one another, shall find, in murmuring them, this love of God a magic gulf wherein their own more bitter passion may bathe and renew its youth. At every moment the heart of this poet flows outward to these without derogation or condescension, for it has known that they will understand; and it has filled itself with the circumstance of their lives." (Yeats 1912)

But, the problems about the soul of Bengal and the spiritual and cultural bond that he cherished about the nation throughout his life, was showing its ugly face during the thirties in the language of political demonstrations. "As the result of the 'Government of India Act of 1935,' whatever he and Mahatma Gandhi thought about India as a whole and the Bengali nation in particular, got totally shattered and coalesced to make a tragedy." (Hossain, 2002) The Hindu-Muslim divide in Bengal became the political problem for the Bengali as a nation and the Indian sub-continent had to be partitioned. Mahatma Gandhi started his 'fast unto death' but to no hopeful outcome.

There was an in-fight in Tagore's mind as to the success of his endeavors to bring about unity of the diverse communities of Bengal and therewith the unity of Bengal herself. The more intense that in-fight was growing, the more incumbent he was becoming in his lectures, writings and the composition of songs. In all these attempts to narrow the probable gaps or cracks prevailing in the society of Bengal perennially, Tagore did persistently carry on his personal drives to abridge all kinds of differences. He felt Bengali as a nation, as a good as he felt Bengali as a language and literature, and also that the rivers the Padma and Ganges with her panoramic natural beauty of flora and fauna as an identity that he depicted in the Chinnapatrabali-the anthology of letters. Tagore's journey was an eternal journey to save things from falling apart. The British imperial power was playing the game of "Divide and Rule"; local factions were provoking differences. Aware of all this maladies, Tagore continued his march onward to the mission of unity and peace, and with that a borderless Bengal is having the water of the Ganges and the Padma flowing for time immemorial.

Poet Mohammad Nurul Huda and his peace procession towards borderless world
Poet Mohammad Nurul Huda (1949) from Bangladesh has emerged during the current decade as the leader of peace processions, with a mission and vision of borderless spiritual peace among the nations of Asia. The contemporary poet Mohammad Nurul Huda started a new kind of procession named 'Peace Procession' taking the theme of borderlessness. This very term was introduced by Mr. Huda himself. He identified the existence of border everywhere and argued that unless its existence is removed, there will be no peace in the world. Rather the complications and conflicts will increase. Many of his poems like Borders talk about the borderless world.

Poet Mohammad Nurul Huda is, perhaps, a bit more direct and straightforward in identifying the crux of the question of border between nations. When he asserts that there is the gloom of border hovering in the peoples mind, and that gloom pervades the culture,

peoples mind, and that gloom pervades the culture, power and prejudice of the nation, borderline between two nations becomes visible. Out of the intellectual border is born the geographical and physical border. What is inside becomes overt at the outside. In one of his poems, entitled Borders, poet Huda points at the question of the apartheid too. He writes:

"Border are there
Border were there
Visible and invisible
Borders are everywhere.
Borders of geography
Borders of hierarchy
Borders of vision
Borders of confusion
Borders of body and mind.
Today in South Asia
Today beyond South Asia
Let us vote for
Borders of no kind." (Huda, 2015)

When the people of a certain nation suffer from the sense of superiority of color and physical shape, they tend to belittle the national identity of other nations by way of erection of physical as well as psychological wall between them. Such a wall may emerge as a wall of colonial domination in the long run. The sense of ethnic superiority can even develop to the extent of military superiority resulting in fatal clash of nations. There are examples of such clashes in history. The ethnic gap between nations is as bad as injustice. Poet Huda terms the gap the thing of the past -of the medieval age and pronounces its departure. He chants down with the borders:

"How long shall they stay?
Let us undo them not today
Rather yesterday." (Huda, 2015)

Conclusion

From the above discussion, it can be said that there is no use of border in uplifting humanism, rather it creates anarchy. In The Story of a Tulshi Plants the issue of the controversy between the religious groups expresses a bitter experience of shelterless people. That story is quiet similar with the Mr. Ghosh's The Shadow Lines where the generation after generation develops a sense of hatred towards the opposition groups which they are hardly responsible for. The universal poet Rabindranath prescribes internationalism and he goes for a multicultural society with a sense of international conformity. The very contemporary poet Huda looks for borderless territory through which he can go to a peaceful world. Aiming at peace, Bertrand Russell, the great philosopher has spoken of total borderlessness among the nations; he has called for a 'World State' for political peace and the free mixing of male and female for domestic peace. T.S. Eliot has urged for 'Shantih,' in 'The Waste Land,' meaning spiritual peace in the Sufi line. Apart from English and American literature, Bengali literature is not far behind to speak of peace. Indeed, all of these pragmatic authors talk for the humanity. Though their expressions are different, everybody draws their conciliation in meaninglessness of borders and focuses on a borderless world. Hopefully, when the multilayered borders will go in extinction, the world peace will be ensured.

Reference

- Chowdhuri, Kabir (2011), Rabindranath: Antarjatikatabad. Dhaka: MurdhaNa Publications.
- Dixon, R. (1996), Traveling in The West: The Writing of Amitav Ghosh. The Journal of Commonwealth Literature.
- Ghosh, Amitav (1995). The Shadow Lines; New Delhi: Oxford University Press.
- Hossain, Md. Asif (ed.) (2002), Rabindranath Tagore. Dhaka: World Book Distribution Centre.
- Ahmed Istiaq, (2010), The 1947 Partition of India: A Paradigm for Pathological Politics in India and Pakistan. Journal Asian Ethnicity, available at <http://www.tandfonline.com>
- Huda, M.N. (2015), Borders, Kobita Bangla
- Kaul, Suvir (1995), Separation Anxiety: Growing up Inter/National in The Shadow lines. pp. 268-286.
- Roye, Susmita (2011), Partition and Expatriation in The Shadow Lines: The Hysteria of History, Amitav Ghosh's The Shadow Lines: A Critical Anthology, Ed. Sandip Ain, Delhi: Worldview Publications.
- Star Weekend (2017), Abdur Razzaq The Myth And The Man, May 19.
- Tagore, Rabindranath (1917), Nationalism. San Francisco: The Book Club of California, Norwood Press.
- Yeats, W.B. (1912), Introduction of Gitanjali (English), England: MacMillan.
- Yeats, W.B. (1912), Gitanjali (English), England: MacMillan. Poem: 35.



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