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SPOKEN LANGUAGE : SOME SPECIFICS & A PERSPECTIVE*

ASOKE KUMAR DATTA

Abstract : The paper presents the formal composition of the *Prof. Suniti Kumar Chatterji Memorial Lecture-III*. Objective research on speech in India began in late sixties with the availability of instruments for objectively quantifying different aspects of speech. One of the pioneering research institutes in India engaged in this effort was Indian Statistical Institute (ISI). This paper presents the synopsis of the work done for about five decades there in relation to the dialect Standard Colloquial Bengali (referred to as Bangla hereinafter) among some other spoken languages. The presentation attempts to make it intelligible to students of spoken languages. It includes a discussion of the paradigm of research in spoken language. It is necessary because an intimate wholesome inquiry in spoken language needs to span two branches of knowledge gathering namely, subjective and objective. In the objective domain the paper discusses two different approaches for representation namely, spectral and time domain representations of speech sounds. The subjective categorization of some units of speech sounds is discussed. The objective cues for cognition of different phones are discussed in some details. Some new approaches, alternative to the traditional approach in spoken language research, which were experimented upon in ISI find some mention in the article. The paper also spells out some of the author's confusions related to certain units of spoken language and approaches traditionally used in language research. Finally the article advocates for the holistic approach in place of reductionist approach for a spoken language. A tentative model for spoken language research is also prescribed.

Key Words: artificial, spoken, perception, phones, speech, words

1.0. Introduction

The paper presents an overview of spoken language from the point of view of artificial intelligence (AI). A pure linguist's view, as I understand, seems to be an abstract ideational domain talking about formal things mostly focussed on subjective entities like semiotics including semantics and structures like grammar. These views also include the acoustics though primarily through cognitive images. Thus this domain can be thought of as a rationale based on subjectivity. Speech may also be viewed from the view point of hard sciences. This branch of science is primarily of western origin. We may trace its origin to the famous definition of reality by Democritus of Adbera. He said that reality is atom and void and thence the modern science meticulously adhered to this reality of strict material objectivity. The part of the natural world which represented the conscious wilful activity of the life

forms and was subjective was thrown out of the window for good. I have also heard of a school of thought which professes that we cannot know the reality as we live in a shadow world. As the source of light creates the shadow of an object, likewise our sensory organs, with their limitations, transforms nature into images of it and we live therein. We therefore can never have access to the true nature of reality as we have no idea of other objective parameters of reality that our sense organs cannot glean.

However, this knowledge does not resolve the confusion; it only transliterates it by adding an adjective 'shadow' before 'objective' or 'subjective'. Could there be another reality called public subjectivity? For example, let us take the statement 'the sun rises in the east'. This is no 'pointer reading'. This is a subjective reality common to many men. This public subjectivity bridges the two apparently disjoint sets, 'subjective' and 'objective'. It might transform some subjective realities into what we call objective reality. I believe, most of the so-called objective realities, we know of, belong to this class, unless they are axiomatic. So it makes sense to ponder over the universe even if we call our concept of it as a shadow. This is not to bore the audience but to enumerate the difficulties faced by hard technology to interact with an intelligent activity, one like language which is said to be the highest form of intelligent activity of human being. In my somewhat long association (Dutta Majumder et al. 1968) since late 60's with the spoken language as an AI student I oscillated between hard objectivity of acoustics and the subjectivity of cognition and ultimately settled (if I may call so) on what I may term as 'subjective-objectivity'. The following is a chronicle of this journey.

2.0. Spoken Language

I consider speech as the most common natural language of the human being despite the common practice of calling written language as the natural language. To me the written language is a highly reformed artificial language. Speech is almost unbridled. Like a sprinting gazelle it runs its own way. Being a subjective process and carrying the most knotty load of semantics, it really does not care much for the rules of grammar. Strangely, as my association with speech lengthened, my confusion grew with it. The confusion lies everywhere; in the search for objectivity of acoustics of speech, in understanding the subjectivity of cognition, in the search of their relationship, even in the doubt of the relevance of the chosen fundamental units of understanding speech, namely the phones/phonemes and the word, and finally, the reductionist approach of understanding speech. When I hear a speech, do I hear the phonemes first, then the words, then the message? I am not very sure.

2.1. Phones

Let me begin with the phonemes, rather the phones in the objective acoustic domain (Datta et al. 1978, 1985). Let us consider the nonsense syllable 'ɔkɔ'. Figure 1 presents both

spectrograph (upper half) and the signal (lower half) of 'əkə'. The three bars in between represent the states of the articulator and the glottis and a coloured bar represents the subjective hearing of the different segments. If we listen to the portion indicated by the double headed arrow tagged as 'k', the objective phone [k], which by definition consists of a silence followed by a burst, we do not hear [k], instead hear just a click. Similarly, if we listen to the objective portion representing the vowel [ə], which is defined to be the uninterrupted voice passing through the oral cavity, we hear the first red bar as [ək] the last red bar as [kə]. If you hear the signal assigned by the green bar below, you hear [əkə]. Up to this is elementary; we all know this from our school days, only nobody pointed out the vagueness of definition of phones which follows. If one takes two vowel signals representing [ə] and put the signal for [k] in between you don't hear [əkə], you hear only /ə/. One cannot just stitch together phones to make speech. In the continuum of natural speech there is no isolated vowel or isolated consonants, at least one cannot define boundaries. They are often in the mind of the listener. If one examines carefully a sentence taken from a normal conversation and microscopically examine them they will find lots of missing phones and non-speech sound items. Speech is a very complex and intricate interaction between different articulators, generated by neuro-motor commands controlled by the intention to convey a message. Coarticulatory (Ohman 1966) and anticipatory influences can go quite far. To me, phones do not represent fundamental robust objectively distinct units of speech in a real speech signal. It is a casual import from written language.

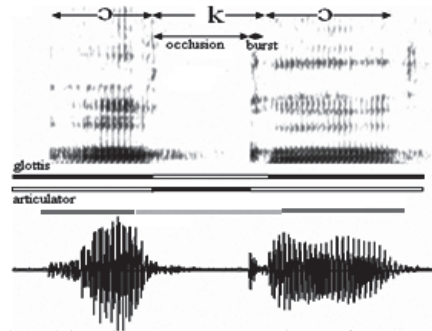


Figure 1: Objective representation of a VCV syllable

2.2. Words

My other confusion is about the objectivity of 'words' in spoken languages. I, along with many others in India and abroad, tried to find word boundaries objectively from speech signals. These searches became elusive in the sense that the recognition rate (87%) (Das Mandal et al. 2006) and the consistency was much below practical usability. I also doubt that anybody could subjectively detect even some words from continuous speech in a language unknown to him with a reasonable degree of confidence. I feel that units like

phones, words, phrases, grammar are needed to put the natural phenomena of speech in a reductionist perspective. It is likely that these concepts have been imported in speech from the written script without proper application of mind. I am not sure though. I shall await the opinion of scholars in this regard. While the relevance of such an approach has undoubtedly been useful for written languages, I cannot see its relevance in speech. The model which fits so well in artificial languages is, I am afraid, useless for natural speech. However it is possible, using signal processing to cut out portions consistently and robustly from speech which represent semantic chunks, often a group of words. To me these could be important elements in understanding speech. This will be elaborated later. I have reasons to believe that human brain, like many of its cognitive behaviour, does not use reductionist model in understanding speech. I think that the understanding of speech is a holistic process triggered by the association of certain key phrases without an order. Unfortunately I have no *proof* to offer. These are some of the problems an AI student faces with speech.

3.0. Objective representation of speech

It may be in order to refer several instrumental setups necessary for the extraction of the objective parameters directly from the speech sounds. Some of the instruments used in this field are electronic palatograph (EPG), elctroglottograph (EGG), spirometers, cine-fluorography, ultra-sonography, sound spectrographs, endoscopy and video graphs, etc. It is also possible to use sound spectrography to estimate some objective properties in the absence of a particular important instrumental set up. One needs to understand that these instrumentations are necessary to find the objective basis of categorization of units of speech as well as the mutual interactions of these units in continuous speech.

3.1. Spectral Representation of speech

Let us recall the traditional approach in the acoustic representation of speech first and talk about the confusion later. The traditional universally used approach for objectivity in speech acoustics is the spectral transform. Almost five decades ago Gunnur Fant (Fant 1970), often called the father of modern speech science, said that phones can be objectively defined by the behaviour of 'Formants'. For these five decades scientists considered formants to be solely responsible for cognition also. Numerous acoustic and psycho-perceptual experiments have been conducted worldwide to prove this. Neuro-physiological structures in the inner ear and the cochlear pathways have been found confirming spectral processing. Even neurons giving out 'auditory spectra' is detected. There has been no question about the all pervasiveness of formants in primary cognition related to speech. However in late 80's and early 90's some small doubts peeped in the mind of a group of Artificial Intelligence (AI) students in ISI (Datta 1993). The history of the pursuit of this doubt would be one of the mainstays of my talk today.

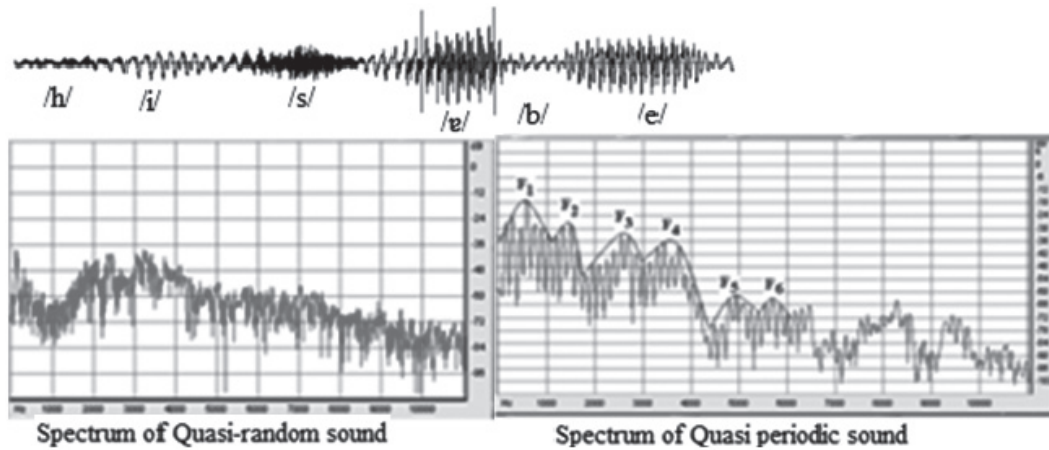


Figure 2: Illustration of spectral structure of speech sounds

Let me begin with some examples of the traditional objective representation of speech. Figure 2 illustrates the signal as well as the spectral structure of speech sounds. Upper section of the figure presents the signal representing the Bangla word ‘hisabe’ pronounced as */hifəbe/*. (An interesting point to note is that I found almost all */h/* in Bangla words I examined to be aspirated vowels). The lower section represents the spectrum of a quasi-random sound */f/* and the spectrum of the quasi-periodic sound */e/* showing formants. Formants are resonances in the spectral structures. One may notice that the spectral structure of quasi-random sounds shows no regularity which is characteristic of non-repetitive noise signals. On the other hand, quasi-periodic signals show regular harmonic structure (red line). If one draws the envelope (black line) one gets the resonances of the articulatory pathways. These are known as formants. The first two formants are held to be primarily responsible for categorisation of place of articulation of phonemes. It may be in order to explain quasi-periodicity (Sengupta et al. 2001, Teagre et al.1990) in the context of speech sounds. Contrary to the common approach of comparing voice production with reed vibrations in musical instruments, the vibration of vocal folds are quite complex. Figure 3 schematically illustrates the mechanism of voice production.

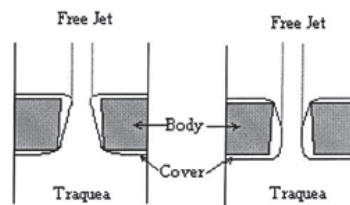


Figure 3 : Formation of free jet in supra-glottal tract

The vocal folds are mucous covered pliant tissues. The outer part usually referred to as ‘cover’ consists of the epithelium and the superficial layers overlaying the deep layers of

the vocal ligaments and muscles known as the body. Because of this inherent non-rigidity random variations occur in the oscillatory motion caused by the air streaming past them. The origin of these perturbations are to be sought either at the source or near the source in some sort of vertical flow created by the air streaming past the edge of vocal folds. The opening and closing of the tract is caused not by the motion of the rigid 'body' but by the semi-fluid motion of the 'cover'. During oscillations the cover of the vocal folds propagates a surface mucosal wave in the direction of the airflow. The body remains quasi-stationary. The glottal fold is considered as quasi steady and incompressible. The bulk of the flow is frictionless and laminar. Due to abrupt changes at the glottal exit, boundary layers separate from the wall and cause a free jet downstream. The air exits the glottis in a free jet and becomes turbulent. This is the source of random perturbations. These random perturbations are of three types: Jitter (variation in F_0), Shimmer (variation in amplitude) and Complexity Perturbation (variation in shape). Random perturbation cognitively manifest as a quality of voice. If it is too low, the voice appears to be mechanical and hornlike, if it is too large the voice appears harsh (Choudhury 2006-7).

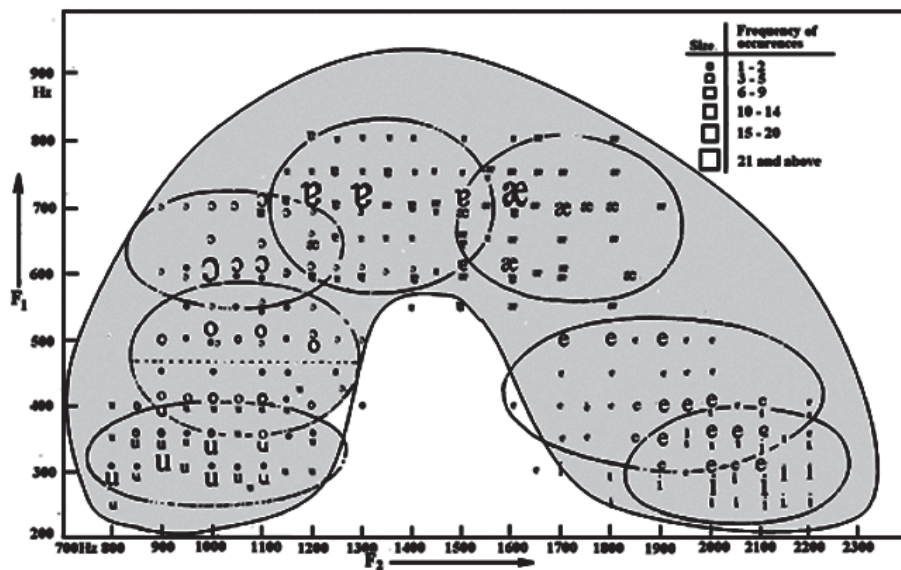


Figure 4 : Distribution of Bangla vowels in F_1 - F_2 plane (Datta 1988,1989)

Figure 4 shows the distribution of Bangla vowels in F_1 - F_2 plane. The vertical axis represents F_1 and the horizontal axis F_2 . F_1 increases with decreasing tongue height. The oval represents the spread of a vowel cluster, the axes being proportional to the standard deviations of the vowel clusters. The vowels are distributed in a space shaped like a boomerang. The almost free space between the two arms of the boomerang is occupied in

Bangla by lateral and rhotics. One may notice the overlaps between the vowels. The overlaps are generally between the adjoining vowels and on an average is 20%. The objectivity of the discrimination between vowels in formant plane is thus obvious.

It has been known for a long time that subjective categorization of vowels in terms of the height and the front back position of the tongue hump is strongly related to the first two formants. A recently reported technique (Pfitzinger 2003) enables one to represent formant data, together with fundamental frequency (F_0) values, into the traditional perceptual evaluation of the category of a vowel utterance in terms of height and backness of the tongue. The following equations have been used for converting the formant data into perceptual parameters of tongue height (h) and backness (b):

$$h = 2.621 \log(F_0) - 9.031 \log(F_1) + 47.873$$

$$b = -0.486 \log(F_0) + 1.743 \log(F_1) - 8.385 \log(F_2) + 59.214$$

Figure 5 below is drawn from the formant data of figure 4 along with the value of corresponding fundamental frequency F_0 using the aforesaid equations. One may note that this diagram represents the average of the normal pronunciations of SCB speakers taken from continuous speech, not those of erudite phoneticians imitating common SCB vowels either from single vowels and/or from those embedded in selected words. This possibly is the first report that gives the statistical estimates of the articulatory positions of Bangla vowels as spoken by common people in natural speech. It is also an example of obtaining subjective categories from large scale objective data compilation in an Indian context. A close perusal of it also indicates that there may be a need for a relook to fix the IPA symbols for Bangla vowels.

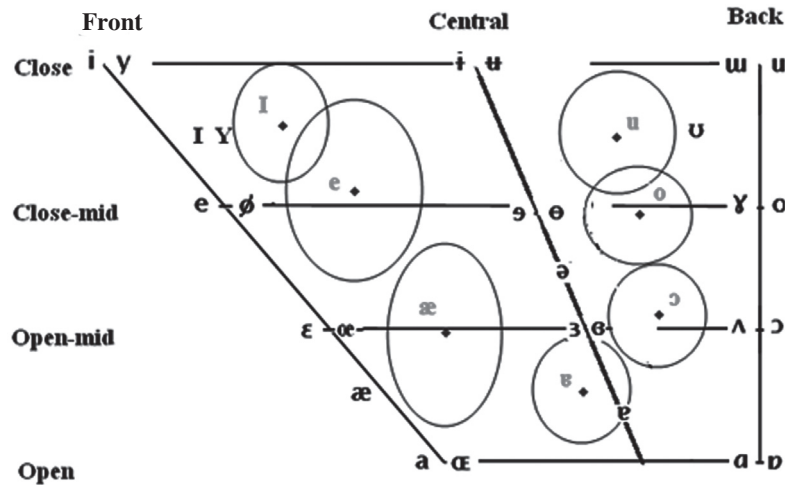


Figure 6 presents formant transitions representing articulatory movements for four unvoiced unaspirated Bangla plosives (Datta 1980). It is a common knowledge that for the voiced and aspirated counterparts, the transitions do not significantly change. CV transitions are marked by white lines. One may notice from figure 5 that the transition of F1 and F2 are different for different places of articulation. While F1 transition is always downwards towards the burst, since at the point of release tongue always touches the palate and F1 is related to the height, F2 movement can both be upwards and downwards. The F2 transition varies normally according to the place of articulation of the consonant relative to the adjoining vowels. There is no F2 transition for [k] in [ɐkɐ] since it has almost the same place of articulation as that of the vowel.

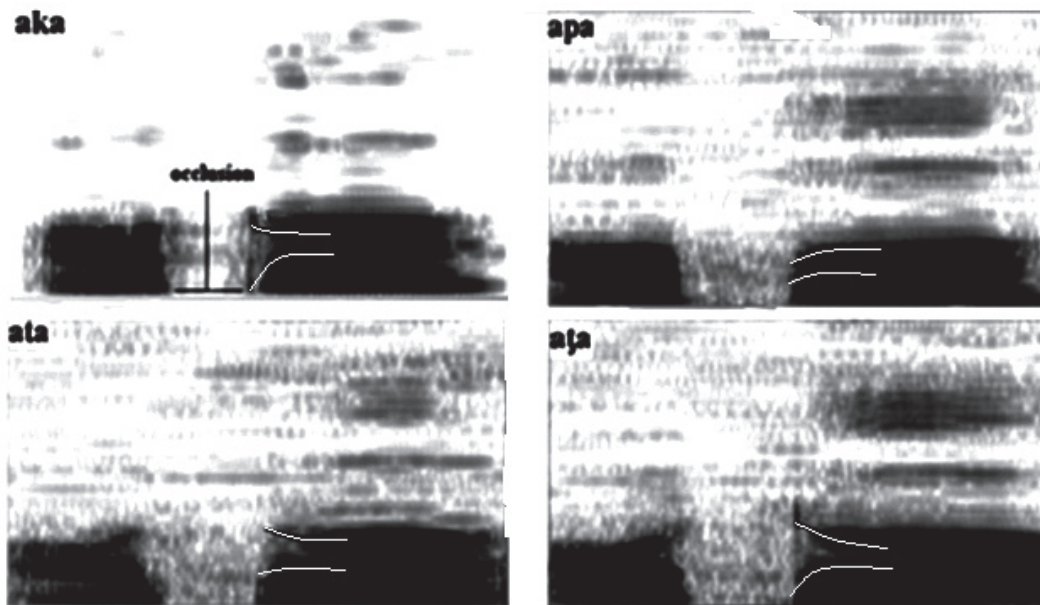


Figure 6: Formant transition representing articulatory movement for plosives

Aforesaid observation represents the flavour and the basics of the traditional model for both cognition and objective representation of speech sound. The vowels are represented by the formant structure at the quasi-steady state of the nucleus vowel, other vowel-like sounds like glides and diphthongs by both the steady states and transitory movements of the formants, place of articulation of consonants primarily by the transition of formants in VC/CV coarticulatory stages.

4.0 Alternative Hypothesis

As far as I know, nobody has ever questioned the traditional mode for cognition of speech. Some Jacks in ISI decided to probe this belief. The beginning was however, the objective representation. This entailed a prolonged engagement with speech signals on screen of oscilloscope, later on computer screens enabled them to recognise the signals in its time series form. We could recognise the vowels from their traces.

4.1 Time Domain Representation

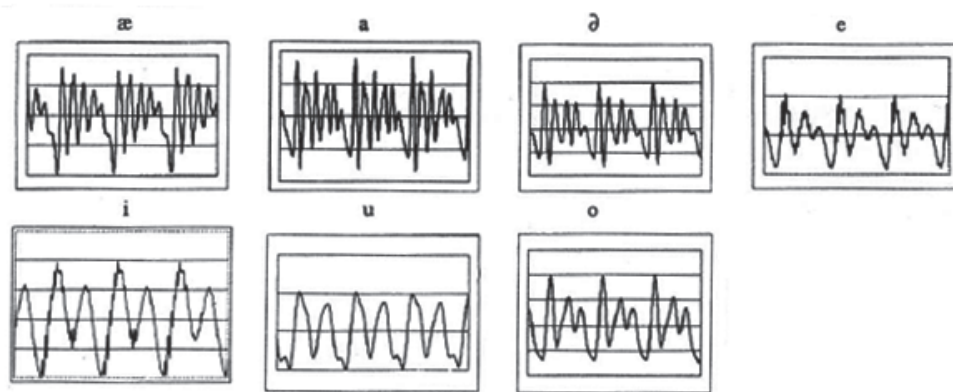


Figure 7: Representative signals of 7 Bangla vowels

Figure 7 shows the representative signals of 7 Bangla vowels. One can easily see the repetitive nature of the signals. One can also note that they are visibly distinguishable. This visual distinction led to the development of an alternative time-domain representation of speech both for Automatic Speech Recognition [12] and Text to speech synthesis (Dan et al. 1993) in ISI. It has been found that five parameters, namely (a) Peak to Peak Distance, (b) Number of Zero Crossings, (c) Perturbation Area (d) Extrema Rate, and (e) Intrinsic Intensity of the vowel, can distinctively determine the shape of the wave periods representing the vowels. As the definitions of these parameters is not felt required for the present lecture, it is not included here. These are described in detail elsewhere (Datta 1991, Das Mandal et al. 2003). It has been shown that the same parameters may be used to classify plosives according to their places of articulation [Das Mandal et al. 2007].

It has been noticed that while a pitch period can extend for more than 10 milliseconds, the perception of phonetic quality depends only on a small segment [13], about 1.5 msec. of the pitch-period measured from the epoch (Figure 8). This discovery led to the development of a new chapter in the domain of concatenative speech synthesis in early nineties again in ISI. This procedure has been used for singing synthesis too.

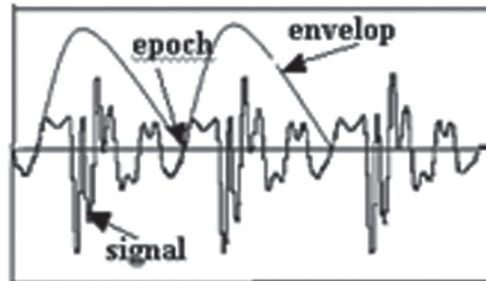


Figure 8 : Epoch of a pitch-period

4.2 Cognitive Behaviour

The aforesaid fact has been used to generate new signals to demonstrate that formant frequencies are neither necessary nor sufficient for cognition of vowels or plosives. Let us refer to figure 9. It shows three pitch periods. First one is taken from an utterance of vowel /ɔ/ and the second from vowel /e/. The portion A from /ɔ/ is copied and added in front of the portion B from /e/, pasted together and then passed through some selected filters to generate a new period shown as the last one in figure 8. If this new period is pasted several times consecutively to produce a signal of length say about 100 milliseconds, one would hear the vowel /ɔ/. If one extracts the formant frequencies of this signal it will be of vowel /e/. In this way 13 different vowel segments, each of length about 400 milliseconds were prepared representing seven vowels having contradictory formant indications [Datta et al. 2011].

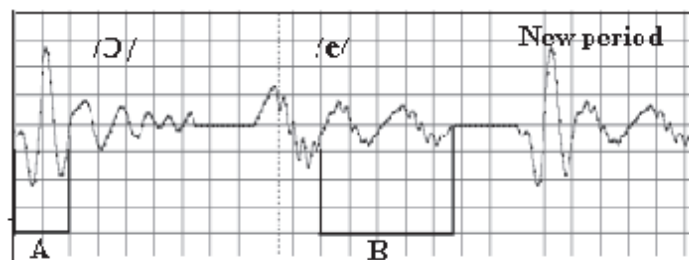


Figure 9 : Illustration of alternative vowel signal preparation

Figure 10 illustrates the process for straightening transitional movements of formants while retaining perceptual indicators for the place of articulation of the plosives. The red portions show what we believe to be the perceptual cue for tongue movement. The trick is to replace the rest of a period by the signal represented by the gray. This is the portion which represents the formant structure of the succeeding vowel. The whole signal is then treated with selected filters. The same process is repeated for the VC segment.

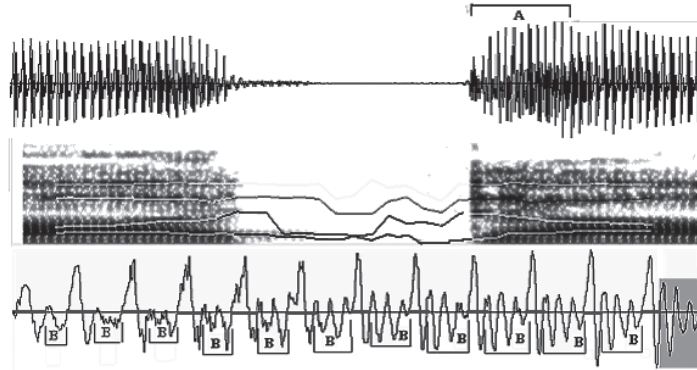


Figure 10: Illustration of signal preparation with VCV utterance /eʃe/

The transformed VCV signal is shown in figure 11.

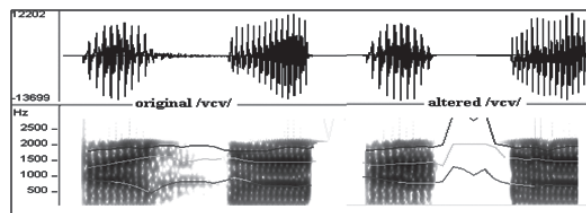


Figure 11: Example illustrating straightening of the formant transitions

Altogether 22 VCV utterances are used to prepare 22 separate altered sound files. Those VCV are chosen which normally reveal large transitions. As stated earlier the altering consisted of flattening the formant transitions.

All these signals (13+22) were used for listening tests by 30 native SCB speakers. The results conclusively demonstrated (Datta et al. 2011) that formants are neither necessary nor sufficient for cognition of vowel category or the place of articulation of plosives. I should point out, we did not prove that human cognition does not use formants for cognition of speech sounds.

5.0 Summary

I failed to fully comprehend the usefulness of a word, particularly as a fundamental semantic unit, in speech. When I look at a book I can identify the words because they are separated by a blank space. As reported earlier, one can find word boundaries objectively with only a little over 85% success rate. If I look at the speech signals of sentences consisting of words like /rɛdzputrɔ/, /dinɔbondhu/, etc. I hear each of the aforesaid words broken into

two by stress as indicated by the accent mark in the above examples. May be it is so, because in Bangla the first syllable of a word is said to be stressed.

It is well known that a listener can detect only about 40% of the phonemes when they listen to an unknown language. I am not aware of experiments on the perceptual capability of listeners with regard to the detection of words in an unknown language. I surmise this would not be great either. Thus a student of AI is faced with a paradoxical situation. One cannot decipher a message unless one knows the language. One cannot know a language unless one can extract the cognitive elements, like words necessary for deciphering the message.

Up to this are statements on fact findings. What do they import?

It often pays to question even the well established notions.

Time domain parameters provide representation of speech sounds which is as good as spectral domain representation.

Spectra are not the only objectivity responsible phenomena for cognition of speech. Human cognition is difficult to understand because the brain may be using more than one algorithm for a particular task. (I may be allowed to report one of my experiences in visual cognition. It was sometimes in mid eighties one of my associate students was studying illusory contours. When he used a low pass spatial filter, the illusory triangle came out objectively. Around the same time an article was published in the American Journal of Psychology (if I remember correctly) that an area in the striate cortex of Rhesus monkey exists which is involved in spatial filtering. It was exciting. About a year later another article was published in the same journal which reported that in human the brain rarely uses this area in cognition. It was doubly exciting. Probably the brain found a better algorithm for the task.)

The spoken language is direct man-to-man communication; it does not require any further transformation for getting the message. Artificial language on the other hand, transmits artificial codes which have to be interpreted to obtain the semantics of different messages. Interestingly this interpretation, I believe, has to be through verbalisation.

6.0 A Skeleton Model for Spoken Language

It appears to me that speech being fundamentally different from artificial languages and the existence of so called smallest crisply defined fundamental units like phonemes, words etc., being vague, a reductionist approach is not the proper paradigm. Moreover, the semantic information is highly contextual. In such a situation a holistic approach seems to be more appropriate. Let us begin with a set Θ of key element 's' having a binary semantic value, 'TRUE' or 'FALSE'. These key elements are perceptually and objectively segmented portions of the continuum of speech signals. These elements, the disjunct chunks of signals have

consistent existence. Let me illustrate this with an example of the spoken sentence /dinobondhubhorbælykəʃirnoditetʃhipniyefikeregelen/. Signal processing gives out the following chunks /dinobondhubhorbæly/, /kəʃirnodite/, /tʃhipniye/ and /ʃikeregelen/. All possible permutations, I_k , of these 's's will give the same message though the texts are different. Let us consider a commutative and transitive operation $\oplus$ on elements of θ such that for $s = s1 \oplus s2$, all the $s, s1, s2 \in \theta$. $\oplus$ is basically a concatenation. The θ is a spoken language (Figure 12) and θ is closed with respect to the operation $\oplus$.

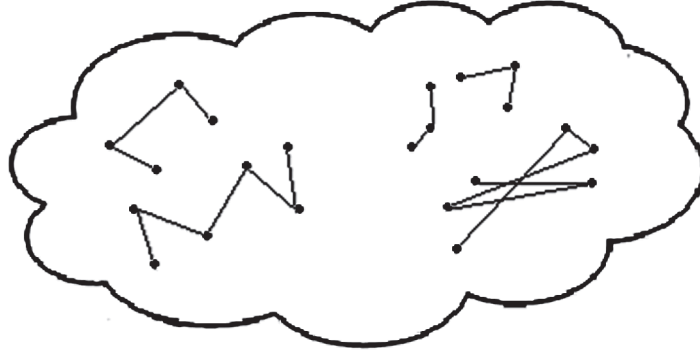


Figure 12: The schematic representation of a tentative model for spoken language

The operation $\oplus$ is a mapping of θ into itself. $\oplus$ on a specific cohesive subset θ_k produces the image subset $I_k \in \theta$ which relates to a specific message. For example let $\theta_k = [\text{emi}, \text{kəl}, \text{kolkətə}, \text{d'əbo}]$. Then a four-fold operation $\oplus$ will produce I_k with cardinality of ${}^4p_4 = 24$. All the 24 elements will have equivalent messages. Some of them are /emikəlkolkətəd'əbo/, /emikəld'əbokolkətə/, /emikolkətəkəld'əbo/, /emikolkətəd'əbokəl/, etc. θ_k is a cohesive set. The cohesiveness of θ_k is important. Figure 13 shows all elements of I_k corresponding to $\theta_k = [\text{emi}, \text{kəl}, \text{kolkətə}, \text{d'əbo}]$.

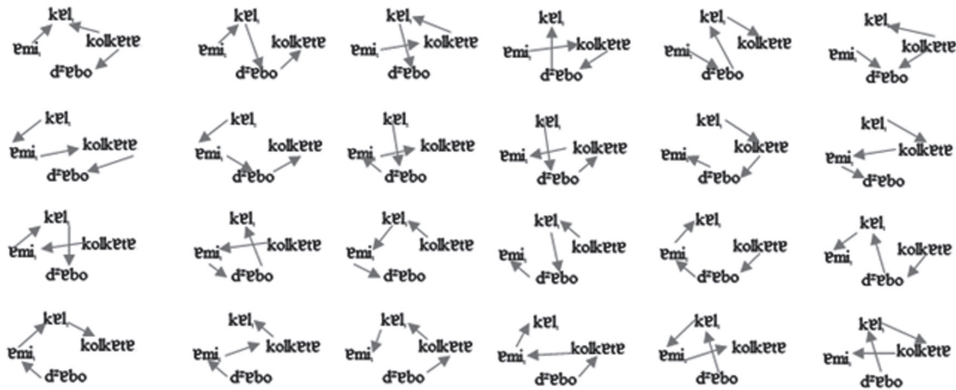


Figure 13: Example of message construction in spoken language

This cohesiveness is fundamental. Let us consider the subset $\theta_l = [\text{emi}, \text{goru}, \text{poti}]$. The 3-fold operation would produce I_l the semantic value of the elements of which in Bangla would be 'FALSE'. This subset is not cohesive.

One may say that the semantic value in normal linguistic sense of an element s_k is the subset I_k generated by all possible iterative operations of $\oplus$ on the cohesive subset ${}^c s_k$, all elements of I_k being 'TRUE'.

The aforesaid is the skeleton of a postulated model for spoken language. If this has any potential I am sure scholars will take up rigorous formalisation and extension to explain various properties of spoken languages.

It is interesting to note that all of the elements of I_K above carry the same overall semantics. This reveals a distinctive property of a natural language, speech. Spoken language transmits basic meanings directly, not mere messages. Let me clarify what I imply by basic meaning through an analogy. While working on emotion Hevner listed 66 English adjectives signifying differentiable emotions. Human-Machine Interaction Network on Emotion (HUMAINE) classifies all of them into 10 basic groups.

The aforesaid formalisation of a spoken language seems to be attractively simple. One may note that θ also contains all possible linguistically defined words, at least embedded in chunks, if not occurring as a single element. I am not sure if it is possible to extract them mechanically from θ . However, it is possible to extract a subset θ_w which consists of all shortest chunks which occur in other chunks. The elements of θ_w may be considered to play a role equivalent to the 'words' in written language.

I believe that in Bangla a fixed order does not exist between three types of phrases namely, subject (S), object (O) and verb (V). In the same vein, this classification for chunks has no relevance here. In such a scenario, I feel, the concepts of 'parts of speech' and 'karaka' relations will also be irrelevant. For other languages, one has to figure out whether this holds any relevance. I shall give an example. Let us consider the spoken message / bẽt̥er̥mmat̥ʰerdzʰoldies̥d̥əb̥h̥et̥k̥h̥et̥b̥h̥elob̥əse/. Chunking of the speech signal provides the following chunks, /bẽt̥er̥m/, /mat̥ʰerdzʰoldie/, /s̥d̥əb̥h̥et̥/ and /k̥h̥et̥b̥h̥elob̥əse/. It is obvious that chunking removes the need of both 'parts of speech' and karaka relations. One may argue however that the chunks may bear the label of 'parts of speech'. But because all

the possible permutations of these chunks convey the same meaning, S, O and V become meaningless and so is the need of 'parts of speech'. What is the grammar here? Whatever I said in this paragraph is my view and may be taken only as an idiosyncrasy. I shall wait till they are disproved.

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THE NEW NDA GOVERNMENT AND SINO-INDIAN RELATIONS : EXPECTATIONS AND UNCERTAINTIES*

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While it has been two years since the new National Democratic Alliance (NDA) has been in power and hence a holistic assessment cannot be reached for this short span, some expectations can be charted out on the foreign policy front in general and on China in particular. Since May 2014, after the new NDA government was formed a number of foreign policy initiatives have been undertaken with some on China as well. Structurally while the India-China relations were conditioned by the last several decades of interactions and issues such as the unresolved territorial dispute, Tibet, China's nuclear and conventional arms support to Indian neighbourhood and entry into the Indian Ocean, the new leaders in both countries have tried to take several initiatives to go beyond the constraints. Even though much progress has been achieved specifically in high level leadership exchanges, trade and economic cooperation, people-to-people contacts and the like, a number of uncertainties have also crept in the bilateral relations.

Elections and after

Indian Prime Minister Narendra Modi and his government which came to power in May 2014 have identified a few broad areas as focus of its foreign policy. These have some implications for the India-China relations as well. Firstly, it is the election campaign promise of “*vikas*” (development) in the backdrop of declining growth rates and recession. As a result, the new government stressed “Make in India” policy of expanding the manufacturing sector, which could enhance the employment figures. The Bharatiya Janata Party (BJP) in its election manifesto and the President's address to the Joint Session of the Parliament on June 9, 2014 –all have outlined these. The foreign policy implication of this aspect is to re-calibrate for the domestic agenda, i.e., stress on economic diplomacy and gear up the establishment towards attracting investments, expanding trade, enter into multilateral institutions aimed at economic issues (like the BRICS New Development Bank, Asian Infrastructure Investment Bank and others). PM Modi gave an interview to the China-state run CCTV two days before the May, 2015 visit to China stating his objectives: that he is looking “forward to working out a roadmap for qualitatively upgrading our economic relations and seek greater Chinese participation in India's economic growth, especially in transforming India's manufacturing sector and infrastructure”. The agreements in China indicated to the direction of economic development - the business deals are

worth \$10 billion signed at Beijing and \$22 billion at Shanghai, in addition to \$20 billion announced by President Xi Jinping in 2014 for the next five years.

Secondly, the new government promised to protect sovereignty and territorial integrity issues affecting the country. Candidate Modi speaking at Pasighat in February, 2014 criticized the “expansionist mindset” of China [in its claims on Arunachal Pradesh] and the futility of such postures in the 21st century. After becoming the PM, Modi not only repeated the same phrase of “expansionism” in his Japan sojourn but also made efforts at raising the Strike Corps meant to protect borders with China. During the visit of President Xi Jinping to Delhi in September, 2014 – overshadowed by the Chumar build-up of an estimated 1,000 Chinese military troops - Modi stated in his media interaction to the conditional normalization of relations with China thus: “a climate of mutual trust and confidence; respect for each other’s sensitivities and concerns; and peace and stability in our relations and along our borders are essential for us to realize the enormous potential in our relations.”¹ Another instance is the terrorism issue which has been configured as the number one security challenge for both India and China. The Zaki-ur-Rehman Lakhvi’s and Masood Azhar’s cases and Beijing’s position in this regard at the United Nations Security Council meetings on counter-terrorism became a contentious issue. In November, 2015, Indian Home Minister, Rajnath Singh visited Beijing and concluded agreements on counter-terrorism.² 2015 also witnessed the 5th Hand-in-Hand joint training programme between the two armies at Kunming in October with the participation of 144 troops from each side.³ Nevertheless, the unrelenting position of China on its “procedural” and “technical hold” on five cases of Pakistan-based terrorists wanted by the Indian side, has left a bad taste in India. Indian unhappiness about the above cases also coincided with the e-visa issuance initially to Uighur activists like Dolkun Isa and later their cancellation – suggesting that not only the Tibet issue but also the Uighur issue has come to the fore in the India-China relations in the recent times.

Another inter-related feature is the infrastructure projects connecting borders. The BJP manifesto and the presidential address suggested to building world-class infrastructure, including the “expansion of railways in hilly states and North-east region.”⁴ This is following China’s recent initiatives on dual-use infrastructure projects in Tibet coinciding as well with the elevation of the Tibet Military Command in the Chinese military hierarchy and missions.⁵ India intends to construct 14 railway lines and 73 roadways (3,812 km) along its borders with China and Pakistan. These will be built according to the Minister of State for Defence, Rao Inderjit Singh by 2018.

According to the Ministry of Development for the North-east Region report, the following are the projects being undertaken as a part of the road construction activity on the India-China border areas:

- Arunachal Pradesh – 27 roads, Sikkim- 6 roads.
- ITBP is constructing 8 stretches in Arunachal Pradesh (5 roads -271.04 km) and Sikkim (3 roads – 103 km). Work is ongoing with 5 roads almost being completed upto 60%.
- BRO is constructing 15 stretches in Arunachal Pradesh (13 roads -1326.77 km) and Sikkim (2 roads – 47.28 km). Probable year of completion - 2016.
- BRO has completed 10 stretches in Arunachal Pradesh.

Of the 73 roads, 61 are being handled by the Border Roads Organisation and 12 by Central Public Works Department. Out of the 61 roads, 27 are to be constructed in Arunachal Pradesh, 12 in J&K, 14 in Uttarakhand, 5 in Himachal Pradesh and 3 in Sikkim. 17 of these roads were completed by late 2013.

In October 2014, India began a survey of constructing over 1350 km of railway lines across the borders with China. The proposed line includes the following:

- Misamari-Tawang Railway line 378 kms
- Assam-Arunachal Pradesh, north Lakhimpur- Silapthar line 248 kms
- Assam-Arunachal Pradesh, Murkongselek-Pasighat-Tezu-Parshuram Kund-Rupai Siding line 256 kms
- Himachal Pradesh-Jammu and Kashmir, Bilaspur-Mandi-Manali-Leh 498 kms

By July 31, 2015, the Railway Ministry announced “final local survey” of the above projects. The Defence Ministry, in the light of the difficulties expressed by the Railway Ministry, is likely to fund the railway construction projects worth an initial estimate of Rs 1.4 lakh crores.

Thirdly, the NDA government identified the Indian neighbourhood as its foreign policy priority. It was reflected in the invitation to the South Asian neighbours to Prime Minister Modi’s swearing-in ceremony, and in his choice of Thimphu for his maiden foreign visit. The presidential address also identified China, Japan, Russia, the US and the EU; but it is clear that India’s relation with the US and Japan is poised to be on the upswing. Specifically on China, the address, while reiterating the “strategic and cooperative partnership” agreement of 2005, stated that the new government “will engage energetically” with Beijing. The new Prime Minister had made 40 visits abroad in two years. The focus of these is the neighbourhood and also conveying messages to the “extra regional” powers to acknowledge the Indian position. Prime Minister Modi told the press after the talks with China’s Premier Li Keqiang in May, 2015 visit to China, “I stressed the need for China to reconsider its approach on some of the issues that hold us back from realizing full potential of our partnership”. Modi was referring to the perennial problems in the bilateral relations, viz., continuing cooperation between China and Pakistan specifically in Pakistan occupied Kashmir⁶, the unresolved territorial dispute and others.

A number of events took place in 2014-16 between India and China. These include the 18th Special Representative meeting between NSA Shiv Shankar Menon and State Councillor Dai Bingguo in January, the 5th Strategic Dialogue between the two foreign ministries at the Foreign Secretary level (in August, 2013), the 3rd Strategic Economic Dialogue in March, the visit of Foreign Minister Wang Yi to New Delhi on June 8-9 as “special envoy” of the President, Vice President Hamid Ansari (accompanied by Minister of State for Commerce Nirmala Sitaraman) in late June (the first such visit since 1994) and later Army Chief Bikram Singh to Beijing from July 1-6. Prime Minister Modi and President Xi Jinping met at Fortaleza at the sidelines of the BRICS meeting in July. 2014 has been christened as the Year of Friendly Exchanges; both countries also planned to organise a cultural event, the “Glimpse of India” and to promote Chinese language, launched the “Chinese Bridge” language competition and compiled an “Encyclopaedia of China-India Cultural Contacts”. 2015 has been designated as Visit India Year while 2016 as Visit China Year for promoting people-to-people contacts.⁷ To cap these events in 2014, President Xi Jinping visited India in September – the third such visit ever by a Chinese President after Jiang Zemin’s 1996 and Hu Jintao’s 2006 visits⁸.

Modi-Xi met several times so far with the significant ones being:

- Fortaleza meeting of the BRICS in July 2014
- September 2014 Xi’s visit to India
- G-20 meeting in Australia
- Modi’s visit to Xian-Beijing May, 2015 – “two major powers in the region and the world”
- Ufa meetings of BRICS and SCO in July, 2015

Subsequently, Prime Minister Modi visited China in mid-2015⁹. He signed 24 agreements with Premier Li Keqiang that range from outer space cooperation to civil nuclear cooperation, from sister-city cooperation to an additional consulate, from skill development to expanding educational exchange programmes, from broadcasting to tourism, from a new leaders’ forum at the provincial level to yoga colleges¹⁰.

Then came in quick succession Vice President Li Yuanchao’s visit to Delhi in November, 2015, Vice-Chairman of the Central Military Commission Gen. Fan Chanlong’s visit in late 2015, followed by Defence Minister Parikkar’s visit to Beijing in April, 2016¹¹. There was also the 19th Special Representative meeting held at Beijing by the visit of NSA Ajit Doval¹² and the interactions between Foreign Minister Sushma Swaraj with her counterparts in Russia and China for the trilateral meeting. Earlier Swaraj visited Beijing, for the same trilateral meeting in January-February, 2015 where she mentioned about a possible ‘out of the box solution’ to the territorial dispute and ‘synergy-based cooperation’ on the Chinese Silk Road projects. She had also conditionally accepted

the Bangladesh-India-China-Myanmar Economic corridor which was mentioned in Modi-Xi statement in September, 2014 provided it ensures “peaceful, stable and cooperative environment.”

Despite these signals of the “three consensus” on border stability, economic cooperation and people-to-people contacts, it is also not lost on either side that their objectives and actions could go tangentially opposite to the bilateral ties. The cases are President Xi Jinping’s controversial announcement of \$46 billion in Islamabad in April, 2015 for infrastructure projects passing through the disputed Kashmir region. Also, Modi’s new government which invited SAARC leaders for the inaugural function included Tibetan Parliament-in Exile Lobsang Sangay among the invitees¹³.

Modi’s neighbourhood policy is also seen as strengthening India’s position in the neighbourhood of South-Asia and the Indian Ocean region. Modi’s visits to Thimpu and Kathmandu; later to Sri Lanka and Bangladesh, to Indian Ocean (Seychelles, Mauritius), to Naypyidaw for the East Asian Summit and long-term arrangements with Bangladesh (land and islands settlements) have all contributed to improvement in relations where China has been making inroads recently.

In the meanwhile two significant events happened that could influence the long-term Indian foreign policy. On July 20, 2015 Foreign Secretary S. Jaishankar delivered the IISS Fullerton Lecture in Singapore. He stated that India’s “foreign policy dimension is to aspire to be a leading power, rather than just a balancing power”. Later, NSA Ajit Doval who stated in Beijing in 2014 for an “orbital jump” in bilateral relations, spoke on August 3, 2015 at Mumbai, that India “should not punch below our weight or over our weight. We must punch proportionately”. While the reflections of this policy are not clearly visible, except in the climate change deal at Paris, where India committed for solar energy initiative with France and the Indian Army is chasing terrorists in hot pursuit inside Myanmar, a new resolve in the Indian establishment is evident recently.

Coinciding with the above, the envelope of India in Modi’s government seems to be expanding. India has an “extended neighbourhood” with Central Asia, “digital neighbourhood” with the United States, Prime Minister Modi’s visit to Mongolia yielded “spiritual neighbourhood” with this country. India’s “Act East Asia” policy – outlined during Prime Minister Modi’s visit to the United States in September, 2014 and firmed up during President Obama’s visit to India in January, 2015; it gained traction with the Prime Minister Modi’s visits abroad including Tokyo in August-September, 2014, Myanmar in November during the East Asian Summit meeting, Australia for the G-20 meeting and the tri-nation visit to China and Mongolia and South Korea in May-June, 2015. While traditionally, the 1991 onwards “Look East Asia” policy covered China, Japan, South Korea and South-East Asia, Mongolia has now been mentioned (during

Prime Minister Modi's visit to Ulan Bator) for the first time as a part of the ambit of this policy. Although the "teeth" of this policy – hard power, specifically in the naval domain - is yet to be explicitly exhibited, the diplomatic initiatives during this visit should be able to cushion the subsequent thrusts. With 55 percent of Indian trade today passing through these regions, India is expected to unveil its military dimension as well¹⁴. Significantly, during the visit of Japan Prime Minister Shinzo Abe to New Delhi in December, 2015, both agreed to enhance maritime cooperation, including Japan joining the US-India Malabar exercises "permanently".¹⁵

The civil nuclear dimension is becoming prominent in the Indian foreign policy recently. After the recent civil nuclear agreement with Sri Lanka, where India plans to train Sri Lankan scientists in various peaceful uses of nuclear programme, India on the one hand got explicit support from Seoul and implicit nod from Beijing to the membership of the Nuclear Suppliers Group that is crucial in securing civilian nuclear materials and technologies. On the other hand, India had signed an agreement with Mongolia to establish a nuclear centre for health aspects. Mongolia had also before signed agreements for supply of uranium to India. In the joint statement issued with Premier Li Keqiang, one prominent missing point is the NSG membership for India, although China "took note of India's aspirations to become a member of the NSG".

Economic issues

On the economic front, if "vikas" is a major electoral plank of the new government, much is expected in this direction. In 2015, India grew at an estimated 7.2 percent, overshadowing the Chinese "new normal" economic growth rate of 6.9 percent, although India has to maintain such growth rates for the next two to three decades if it has to catch up with China. Most of the new Prime Minister's visits abroad are to raise foreign direct investments in the country. Skill India, Make in India, Sagarmala, infrastructure projects including the Chabahar port investments in Iran are all seen in expanding the economic profile of India¹⁶.

China's connection in this seems to be marginal despite the announcements of reaching a bilateral trade volume of \$100 billion target by 2015 (it reached about \$72 billion in 2015) and investments in manufacturing zones and infrastructure projects. While the trade deficit since 2007 till 2015 amounted to more than \$200 billion, China's investments have not been able to reach more than \$3.2 billion by this period¹⁷.

Nevertheless, some initiatives are made by both the countries. India joined the Asian Infrastructure Investment Bank as number two investor, in addition to the New Development Bank of the BRICS¹⁸. Also, in January, 2016, the Reserve Bank of India opened inter-bank foreign exchange market in China (opened for 13 more since November, 2015)¹⁹. The Asian Infrastructure Investment Bank, proposed in 2013, finally took off

in January, 2016. Fifty Seven countries are part of this bank meant to finance infrastructure projects with an initial outlay of \$100 billion. According to the Articles of Agreement, China, India and Russia are largest stakeholders with a 30.34 per cent, 8.52 per cent, 6.66 per cent stake, respectively. Their voting shares are calculated at 26.06 per cent, 7.5 per cent and 5.92 percent.²⁰

Expectations & Uncertainties

The above brief analyses of the new government's policies and its relations with China suggest that the expectations and realities have not been completely matched, specifically as several uncertainties have begun to creep in recently. Foremost, as two "simultaneous rising" countries in Asia, China and India have several expectations. Both intend to rise peacefully with the expectation that the bilateral relations are conducted peacefully and the borders remain stable and peaceful. However, despite the Border Defence Cooperation Agreement of 2013, reiterated during Parikkar's visit to Beijing in April, 2016, border domination efforts of China and periodic border transgressions have upset New Delhi's calculations. While last one year saw decrease in investments in the Strike Corps (to be based at Panagarh), it is expected that the Indian armed forces, despite the confidence building measures with China, are likely to increase investments in maintaining conventional and strategic deterrence.

Secondly, on the economic front, mounting trade deficits are leading to calls on the Indian front to take recourse to corrective measures such as anti-dumping duties against Chinese goods, security curbs on Chinese firms, in addition to insisting on market mechanism implementation by China²¹.

Thirdly, at the larger landscape in Asia and beyond, strategic uncertainties loom large for India. China's recent initiatives on the Silk Road and Asian Infrastructure Investment Bank and others make it clear that today the country is knocking at the gates of international levers of power. This is a signal that the current leadership in China is moving away from Deng Xiaoping's dictum of "*taoguang yanghui*" [keeping a low profile] to exhibiting capabilities. China realizes that it is facing "increasing external impediments and challenges" – as the May, 2015 White Paper on China's Military Strategy argued - and yet it wants to expand its global and regional imprint. The white paper is unequivocal on this count. It orders that "the armed forces will ...effectively secure China's overseas interests." The armed forces will "safeguard China's security and interests in new domains" and "maintain regional and world peace". With more than half of the economy of China now dependent on exports and imports mainly coming from the seas, the naval forces are now ordered to "protect the security of strategic SLOCs and overseas interests". Not only will the country's navy operate expeditionary forces henceforth but it will also contribute to the maritime might of the country. China's two ocean strategy – in the

Pacific and the Indian Oceans²² – forward bases in South China Sea, Arabian Sea and in the Gulf of Aden will provide the navy with power projection in addition to the hardware it is acquiring recently. After 22 naval contingents sent to the Gulf of Aden since 2008, and successful evacuation of Chinese national from war-torn Egypt, Libya, Syria and Yemen recently, China today feels confident in “open seas protection” in the Indian Ocean region as well.

Overall, while the new NDA government came into being with development as the electoral plank and was partially successful in increasing growth rates, the foreign policy dimension of this aspect is still to be configured due to several uncertainties as the unresolved territorial dispute with China, its growing influence in the South Asian and the Indian Ocean region and the like. Despite several visits and arrangements, a number of problems beset India’s relations with China.

Notes

- ¹ In April 15-May, 2013 nearly 200 Chinese military patrols intruded 19 kilometers inside the Indian territory in the western sector at Dapsang Plains. Subsequently, in September, 2014, coinciding with President Xi Jinping’s visit was the Chumar incident of over 1000 troops buildup. This was followed again by such incidents in the same area in September and November, 2015. During the visit of Vice Chairman of Central Military Commission of the PLA in November, 2015, Gen Fan Changlong suggested that at all levels confidence building measures be undertaken. See “China-India border remains stable: official” *People’s Daily* November, 17, 2015 at <<http://en.people.cn/n/2015/1117/c90000-8977724.html>>
- ² “China, India to step up counter-terrorism cooperation” *People’s Daily* November 22, 2015 at <<http://en.people.cn/n/2015/1122/c90000-8980072.html>>
- ³ “China-India joint anti-terrorism training” *People’s Daily* November, 2015 at <<http://en.people.cn/n/2015/1026/c98649-8966931.html>>
- ⁴ China had recently completed a 258 km rail line from Lhasa to Xigaze in August, 2014 at an estimated cost of \$2.1 billion and plans to build another 435 km line from Lhasa to Nyingqi prefecture that is north of Arunachal Pradesh at a cost of about \$5 billion. The Lhasa to Nyingqi route is closer to the Indian borders. In December, 2014, China’s Foreign Minister Wang Yi, on a visit to Nepal, signed a bilateral agreement for extending the railway line from Xigaze to the Nepalese borders. Later, Ji Guogang, director of Tibet’s Development and Reform Commission, stated that as a part of the 13th Five Year Plan proposals the railway line (of about 253 km) from Xigaze will be extended to Gyirong (35 km from Resuowa in Nepal) and Yadong (near Sikkim).
- ⁵ See Kou Jie “China raises Tibet Military Command’s power rank” *The Global Times*, May 13, 2016 at <<http://www.globaltimes.cn/content/982843.shtml>>
- ⁶ See on China’s troops presence in the region, Yao Xinyu, “Purely fictitious! Indian media claims Chinese troops will soon be deployed in Pakistan” *People’s Daily* March 14, 2016 at <<http://en.people.cn/n3/2016/0314/c98649-9029979.html>>
- ⁷ “Xi congratulates on launch of ‘Visit China Year in India’” *People’s Daily* January 17, 2016 at <<http://en.people.cn/n3/2016/0117/c90000-9005035.html>>
- ⁸ See the joint statement of Xi-Modi “Joint Statement between the Republic of India and the People’s Republic of China on Building a Closer Developmental Partnership” September 19, 2014 at <<http://en.people.cn/n3/2014/0919/c90000-8980072.html>>

mea.gov.in/bilateral-documents.htm?dtl/24022/Joint_Statement_between_the_Republic_of_India_and_the_Peoples_Republic_of_China_on_Building_a_Closer_Developmental_Partnership>

- ⁹ See the joint statement between Modi and Li “Joint Statement between India and China during Prime Minister’s visit to China” May 15, 2015 at <http://mea.gov.in/bilateral-documents.htm?dtl/25240/Joint_Statement_between_the_India_and_China_during_Prime_Ministers_visit_to_China>
- ¹⁰ One Yoga college was established at Kunming in November, 2015. See “China-India Yoga College opens in Kunming” *People’s Daily* November 15, 2015 at <<http://en.people.cn/n3/2015/1115/c90000-8976826.html>> and “China-India Yoga Conference held in Kunming” *People’s Daily* May 19, 2016 at <<http://en.people.cn/n3/2016/0519/c90000-9060189.html>>
- ¹¹ Strengthening the October, 2013 Border Defence Cooperation Agreement in maintaining border stability, hotlines between military operational commanders and others were part of this visit. See Chen Heying, “China, India mull military hotline” *The Global Times* April 19, 2016 at <<http://www.globaltimes.cn/content/979108.shtml>>. Also, China’s navy for the first time participated in the International Fleet Review in February, 2016 at Visakhapatnam. See “Chinese Type 054A frigates attend India’s Int’l Fleet Review” *People’s Daily* February 5, 2016 at <<http://en.people.cn/n3/2016/0205/c90000-9014563.html>>
- ¹² See “China, India have “extensive, deep, candid” talks on boundary issues” *People’s Daily* April 21, 2016 at <<http://en.people.cn/n3/2016/0421/c90000-9047493.html>> and “Chinese premier underlines peaceful settlement of boundary issues with India” *People’s Daily* April 22, 2016 at <<http://en.people.cn/n3/2016/0422/c90000-9048064.html>>
- ¹³ When Lobsang Sangay won once again as the Prime Minister in the 2016 elections, China denied any legitimacy associated with such elections. See “China denies legitimacy of ‘election’ by so-called Tibetan ‘government-in-exile’” *The Global Times* May 3, 2016 at <<http://www.globaltimes.cn/content/981219.shtml>>
- ¹⁴ Sumantra Maitra “Indian footprints in the South China Sea” *People’s Daily* April 19, 2016 at <http://en.people.cn/n3/2016/0419/c90883-9046433.html>. On the emerging equations in US-India relations see Shi Lancha, “India’s Sino-US hedging sticks to old balance” *The Global Times* April 28, 2016 at <<http://www.globaltimes.cn/content/980650.shtml>>
- ¹⁵ Commenting on this, China’s foreign ministry spokesman Hong Lei expressed reservations on Indo-Japan cooperation. See “China warns against provoking confrontation in the South China Sea” *People’s Daily* December 15, 2015 at <<http://en.people.cn/n3/2015/1215/c90000-8990745.html>>
- ¹⁶ “India to invest 20 bln USD to develop Iran’s Chabahar port” *The Global Times* April 11, 2016 at <<http://www.globaltimes.cn/content/978013.shtml>>
- ¹⁷ One exception is that of the Wanda Group’s investment in the real estate sector. See “China’s Wanda to develop \$10b park in India” *People’s Daily* January 26, 2016 at <<http://en.people.cn/n3/2016/0126/c90000-9009449.html>>
- ¹⁸ “China, BRICS New Development Bank sign documents on headquarters in Shanghai” *People’s Daily* February 28, 2016 at <<http://en.people.cn/n3/2016/0228/c90785-9022402.html>>
- ¹⁹ “More foreign institutions allowed on China’s forex market” *People’s Daily* January 12, 2016 at <<http://en.people.cn/business/n3/2016/0112/c90778-9002639.html>>
- ²⁰ “AIIB formally established in Beijing” *People’s Daily* December 26, 2015 at <<http://en.people.cn/business/n3/2015/1226/c90778-8995831.html>>
- ²¹ Zhang Hui, “India will suffer if security checks on Chinese firms tighten: expert” *The Global Times* April 6, 2016 at <<http://www.globaltimes.cn/content/977370.shtml>>

²² According to Rear Admiral Yin Zhuo China's role in the Indian Ocean is going to expand in the coming years. See Yuan Can, "China's presence in Indian Ocean legitimate, military expert says" *People's Daily* March 18, 2016 at <<http://en.people.cn/n3/2016/0318/c90000-9032455.html>>

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SUNITI KUMAR CHATTERJI AND BANGLA GRAMMAR*

PABITRA SARKAR

1

The evolution of ideas does not always follow a straight, simple course. One idea does not end on a certain day, terminating its life convincingly, nor does another idea begin right away thereafter. There are overlaps and great works often situate themselves in such overlapping spaces. I would say that Suniti Kumar Chatterji's *The Origin and Development of the Bengali Language* (1926), his *magnum opus*, is such a work. It is somewhat anachronistic, as historical and comparative linguistics, of which it is one of the finest specimens, was officially given a farewell more than a decade earlier, in the teachings of Ferdinand de Saussure (1857-1913). I don't know if Suniti Kumar was aware of Saussure's book (organized by his students) *Cours de Linguistique Générale* (1916) when it was first published in French. He must have read it later, by which I mean, during or after his expansive research on the historical evolution of Bangla was done. Even if he had an early exposure to Saussure's theories, that could scarcely detract him out of his chosen course, which was to write a definitive history of Bangla. Therefore, *ODBL* stands as a great and glorious anachronism in the history of linguistic ideas, harking back an earlier idea, but one that has enriched the science of linguistics.

The above prefacing is to point at another widely but wrongly held belief that historical and structural linguistics, the so-called 'diachronic' and 'synchronic' studies of language, stand poles apart of each other and there is hardly any common ground between the two. On the contrary, there is a lot to share and exchange. Unless one has a sound knowledge of the structure of a language, one cannot write its history, which has to deal with the sounds, morphs, syntagms located at appropriate levels of the language. Hence a thorough knowledge of the structure of the language is a precondition in the writing of the history of the same. All our historians of language, like, Suniti Kumar Chatterji, Sukumar Sen, Md. Shahidullah, Bijay Chandra Majumdar and others—had a notion of how the language, especially its standard variety, was organized at the appropriate levels. And it is the same structure that goes into making a grammar. Although there are various kinds of grammar according to the orientation of the linguist and the use and target audience assigned to the grammar (Sarkar 2005/2013:25-59) the structure of the language will act as the foundation stone of any grammar that one can imagine.

2

Apart from *ODBL*, Suniti Kumar wrote two ‘grammars’, of Bangla. One is his *Bengali Self-Taught* (1927), which was written primarily for non-native learners of the language, and the other is his Bangla work *Bhasha-Prakash Bangala Vyakaran* (1939, *BPBV* henceforward). The target audiences were not the same for the two, hence their nature and scope were predictably different. His *Bengali Phonetic Reader* (1928), a reworking on his more linguistically oriented ‘Bengali Phonetics’ published in *JOSOAS* (1921), contains rudiments of phonology of the language, but this has been repeated and further elaborated in his Bangla grammar later. His *Bengali Self-Taught*, contains an “Outline of Grammar” (pp. 110-144) of course. But the “Outline” is somewhat sketchy, in which the section on syntax occupies about two pages. Bangla vocabulary enjoys the largest share in terms of pages. This was only to be expected, as the book was avowedly meant for a non-Bengali non-specialist audience, and its contents were dictated by the specific needs of that audience. We will not go into the issue whether or how satisfactorily it has been able to fulfill these needs. This sparse outline has also found elaboration later in his *BPBV*. Therefore, we will, focus mostly on his Bangla grammar in order to look for his ideas about how the language is organized, and refer back and forth to his *ODBL* for a comparison. We will see the areas of mismatch between the two and will also look for the factors that lead to this mismatch.

If one goes over the contents of his *BPBV*, one will first of all face the fact that the book does not aim at teaching the spoken language alone. This is somewhat surprising, as the term “Bhasha-Prakash” would have prompted one to believe that the book was meant to bring out the tacit rules that operate in Bangla (by Bangla, we mean the so-called Standard Colloquial Bengali [SCB], in its spoken version). I’m afraid many people still believe that *BPBV* was written as a ‘Khanti Bangla Vyakaran’ (pure Bengali grammar). This phrase refers back to what was repeatedly uttered by the discussants of the issue in a seminar in 1901, held at Bangiya Sahitya Parishad, which debated the necessity or propriety or writing a ‘Khanti Bangla Vyakaran’ (Mishra 1987). Unfortunately, this was not the case. While acknowledging its merits, we will discuss why it was not meant to be one.

From the late years of the nineteenth century, with the advent of the ‘direct method’ of language teaching, the spoken tongue has been foregrounded as a learning target. This was one of the reasons behind the creation of the International Phonetic Alphabet, first promulgated in 1888, which was to provide the correct pronunciation of the sounds of the language to be learned. ‘La methode direct’ was a term created by Paul Passy, one of the leading forces behind the formation of IPA. Suniti Kumar, one of the greatest phoneticians that India has ever produced, was not unaware of this. He himself was

instrumental in providing IPA versions of Bangla texts for the International Phonetic Association. His book on Bangla phonetics, one would notice, incorporates part of its phonology too.

3

When, however, we look at the contents of *BPBV*, we find that the book has been written from a much wider point of view rather than merely presenting a description of the spoken standard. Lessons about the older written dialect of Bangla take up considerable space in this book. Sections 1.2 to 1.44 of Chapter 1 (Praveshaka) deal with subjects like “Bhasha likhan” (writing of the language), “Sahityer Bhasha O Chalita Bhasha” (Literary and the spoken standard “Bangala Sadhu-Bhasha O Chalita Bhasha” (Chaste Bengali and Standard Colloquial Bengali and “Bangala Sadhu, Chalita O Pradeshik Bhashar Nidarshan” (Samples of Bangla Chaste, Standard Colloquial and Regional Dialects).

So, at the very outset, we are made clearly aware that Suniti Kumar does not intend this book to be a ‘descriptive’ grammar of the Standard Colloquial Spoken dialect of Bangla, but plans it, instead, as a school grammar, as dictated by the prescribed syllabus of the University (which no doubt he himself had a hand in formulating). In the background remains the fact that the University of Calcutta was to introduce Bangla medium for the school subjects in 1940, a year later than the book was published; hence the study of Bangla as a subject in the higher classes of secondary schools and early years of colleges, also needed to be reinforced. A comprehensive grammar of the language that would cover both the written and the spoken standard was the cry of the day, and who else but Suniti Kumar had the competence to respond to that call ?

This makes us look back and ruminate on the lively debate that was carried on in the precincts of Vangiya Sahitya Parishad some thirty eight years earlier (Mishra 1987 and Das 2000 (1407 BE): 293-298), which we have mentioned above. The call was for writing what is called a “Khanti Bangla Vyakaran” (Real Bangla Grammar). Not all the participants in this clamorous debate possessed the same idea about what “Khanti Bangla” really meant, or what such a grammar would contain, as descriptive or structural linguistics was still an idea in its embryo, but some, like Rabindranath Tagore (1861-1941), Haraprasad Shastri (1853-1931) and Ramendra Sundar Trivedi (1864-1919) had remarkable insights about what the shape of such a grammar would take. They felt that the threat to a “Khanti” Bangla grammar was the dominance of Sanskrit grammatical notions, the model of which was widely followed, and often those of English too, as Shastri said, on the production of Bengali school grammars. They felt that these ‘foreign’ influences hindered the discovery of the ‘real’ Bangla language, as it has evolved over

the century, moving away from its distant predecessor and in consequence, assuming a distinct identity of its own.

It is rather surprising that although it was Suniti Kumar, who most definitely showed Bangla's deviation from Sanskrit, he did not come forward to write a "Khanti Bangla Vyakaran" or a descriptive grammar of Bangla. This is not to say that he did not know what such a grammar would show. By the time he came to write *BPBV*, the idea of Descriptive Grammar was available, as he himself records in his grammar (p. 11). Due to various constraints, which we will mention presently, he did not confine himself in writing a descriptive grammar of Bangla, but proceeded to write a 'school grammar' instead, that would teach the student various rules of writing the language, the history of these rules, and the dialects he brought under consideration was not the spoken standard alone, but the older written dialect (Sadhu Bhasha or Chaste Bangla), along with the spoken ones. This we mention repeatedly, as *BPBV* is still (wrongly) perceived by many as the first descriptive grammar of standard spoken Bangla. It was not and it was never meant to be one.

4

What were the constraints that hindered his writing such a grammar? The answer to that is, first, his predominantly historical orientation, which prompted him to put a segment of the history of the language in the proposed grammar. That is why, in the Phonology Chapter (Chapter 2), he incorporated diachronic rules like 'svara-bhakti' or 'viprakarsha', 'apinihiti' and 'abhishruti', 'y-shruti' and 'w-shruti' (2.711[1], 2.714 [4], 2.715 [5] and 2.716 [6]) respectively. These are historical rules, not any longer productive or synchronic rules in the SCB dialect of the language, as their outputs have become part of the living vocabulary of the language, and their inputs or sources have been left behind, as things of the past. For example, svara-bhakti gives '*dhOrom*' from '*dhOrmo*' or '*dOrod*' from Pers. '*dard*'. '*dhOrom*' and '*dhOrmo*' now belong to two (historical) dialects of the language, and one cannot replace the other in the same linguistic context. And '*dard*' is not a part of Bangla vocabulary at all. In accepting loanwords from other languages, Bangla speakers often break up the consonant clusters of the words they borrow. This is a feature of the [+native] phonology of SCB. This is how Sanskrit or 'tatsama' loanwords have become 'ardha-tatsama', and I think similar treatment to other foreign words (those from English, Persian etc.) should also be called 'ardha tatsamas'. The rule, however, does not operate at the SCB dialect now, nor do those of apinihiti and abhishruti, which are Suniti Kumar's own nomenclatures. Apinihiti, of course, is still functional in several non-standard dialects of Bangla.

Abhishruti has further problems. It has been shown as a two-step rule (the derivation *rakhiya* > *reikhya* > *rekhe* would give us such an impression), but it is a combination of

several rules, which has not been shown in its full elaboration. Sarkar (2006 : 100-106) has discussed this and shown that compressing of several rules in such a manner lacks explanatory power and does not claim validity any more. *Rakhiya* becomes *raikhya* by *apinihiti* in the first leg of the change. Then *svara-samgati* (the so-called ‘vowel harmony’) makes it *raikhye*. I believe, in most cases, change is initiated from the end of the word, as Bangla words have, as a rule, an initial stress, which makes the rest of the word weaker in comparison. The anaptyctic /i/ was then made a glide, by another gliding rule. Next, a glide deletion, (the first one in such cases), steps in to remove ‘y’ and the form becomes *raykhe*. Now it is the turn of *svara samgati* again that turns it into *reykhe*. Finally, the [i] that was given by ‘*apinihiti*’ and was made a glide [i > y] is deleted, giving the ultimate form *rekhe*. This complex and step-by-step derivation could not be captured by the way Suniti Kumar and others had given them. It of course has to be said in Suniti Kumar’s favour that the notion of feeding chains of rules (i.e., rules operating one after another to produce a final form) has been noted much later, in Chomsky and Halle’s formulation of generative phonology around 1968, than when Suniti Kumar was working, and he had to do with much simpler tools of historical linguistics then available. We may show the above process of change in the following manner:

1. *rakhiya* > *raikhya* by *apinihiti*
2. *raikhya* > *raikhye* by vowel harmony or VHA
3. *raikhye* > *raikhe* by a glide deletion rule
4. *raikhe* > *reikhe* by another VHA
5. *reikhe* > *rekhe* by another glide deletion rule.

I have skipped the steps in which a vowel becomes a glide, in order to be deleted by the glide deletion rule. Still, even when thus simplified, there should be at least five rules to derive *rekhe* from *rakhiya*. So Abhishruti does not indicate the full process in which the changes occurred.

At the end of the Chapter, a section on ‘Chanda’ (metrics) finds a place. Once again, it goes to show that what Suniti Kumar had in mind was to aid the student in his/her study of literature, as poetry had a large share in the syllabus. This removes his grammar further away from the norm of a descriptive grammar of “Khanti Bangla”, as it is perceived by some of us.

5

The Morphology Chapter (Chapter 3) begins with the notion of the word, and does not utilize the idea of ‘morph’ that was prescribed in Leonard Bloomfield’s *Language* (1933). I don’t think that should be held against Suniti Kumar, as the analysis of morphs (the so-called ‘bound morphs’ in particular) is there, and it is the most fully worked out chapter of his grammar. His determination of suffixes is brilliant as an exercise. But

here too, we find that a lot of Sanskrit grammar has found its entry, what Haraprasad Shastri would have called unlawful entry. In his article 'Bangla Vyakaran' (Shastri 1956), he had prescribed that no Sanskrit Sandhi words were needed to be taught to a Bengali student (Sarkar 1992 : 41-42). What was needed instead was to give the student the full word with its contextual meanings. As 'Samasa' words were also mostly Sandhi words, this dictum was applicable to them also by implication. Bangla sandhi, (mostly incidents of assimilation) was treated by him, as by other grammarians following his lead, rather cursorily. Unfortunately, extensive inclusion of Sanskrit Sandhi and Samasa rules in his Phonology and Morphology chapters has created and encouraged a rigid trend, one could say almost a religious one, in the writing of Bangla school grammars, and no body of syllabus-makers can think in terms of doing away with it, heeding to what Shastri said. The practice continues to reign in the grammatical texts, compelling the students to go through rote learning. That theorizing about Samasa in Sanskrit was not free of gross anomalies, as has been shown by Das (Sarkar, ed. 2003), has not yet been properly taken note of by writers of Bangla school grammars or syllabus formulators.

In the same Morphology chapter he once again distinguishes Sadhu and Chalita forms of verbs and pronouns. In doing so, he had the written Sadhu dialect in mind, as he was certain that a lot of Bangla literary text that the learner would read would be in Sadhu Bhasha, and hence the grammar of Sadhu Bhasha would have to be taught to the students, alongside that of Chalita Bhasha. The treatment of 'case' follows the Sanskrit model, but in spite of that, it captures many features of the language. In the discussion of Bangla conjugation again, forms of Sadhu Bhasha are not ignored. I have some problem with the notion of 'Avyaya' (indeclinables), which I have elaborated in Sarkar (2006 : 125-135). I have suggested that 'Avyaya' as a word category, should not be maintained in Bangla grammar. As treated by Suniti Kumar, the category includes disparate classes of items, hence its postulation, following Sanskrit grammar, is not theoretically sound.

The Chapter on syntax is predictably short, as syntax as an area of study was not then focused or emphasized. Suniti Kumar gives a sensible account of how sentences are formed in Bangla. The Appendix contains a section on metrics once again, which accepts the terminology of Amulyadhan Mukhopadhyay (1939). Later metrical researches have shown that Prabodh Chandra Sen (Sen, 1986) had a better insight into the nature of Bangla meters. The Appendix also contains sections on Semantics, (poetic) figures of speech, blemishes that crop up in writing, and comparisons of Bangla grammar with those of Sanskrit, English, Hindi/Urdu, Persian and Arabic ones, which was no doubt meant for scholars, as students would hardly need the knowledge in order to understand Bangla. Here the polyglot Suniti Kumar shows his admirable sweep over a vast number

of languages, but, unfortunately, goes much beyond what a school grammar should usually contain.

6

Why *Bhasha-Prakash* could not become the first descriptive grammar of Bangla? The answer to this question should be clear by now. There were highly promising attempts by none other than Rabindranath Tagore, as his articles in *Bangla Shabdattwa* (1909/1985) has shown, including his book *Bangla Bhasha Parichay* (1938), which was dedicated to Suniti Kumar, and these provided excellent directions. Suniti Kumar was the first linguist to acknowledge Tagore's contribution to the study of Bengali (historical) grammar, in his Preface of *ODBL* (p. xvi). He also disparagingly mentions the previous Bengali school grammars as "elaborate grammars of Sanskrit masquerading as Bengali grammar" (*ibid.* p. xv). Why then didn't he follow these Tagore models and improve upon them? The answer is clear: he worked within the constraints of history and his self-chosen personal role in it. He could break these constraints, but he preferred not to. He had to write a grammar for the new Calcutta University syllabus of Bengali in the Matriculation examination. This Bengali contained of written corpus, far removed from the spoken standard. The syllabus had poetry (in the Bengali poetical dialect), prose mostly in Sadhu Bhasha, some of which were highly Sanskritized, so his grammar had to take notice of the written Bengali then prescribed as a reading material for the Bengali student. Spoken standard was not, in any sense, his frame of reference at that point of time. We are sure that he himself had a commanding role in the formulation of the syllabus, and there was no one beside him who could write a grammar that the new syllabus needed. His scholarly orientation was historical, so the history of the language has encroached into many areas of the grammar, and his attention to literary texts distracted him away from the spoken dialect. As we all know, till then a grammar was written mainly for the study of the literary language, and a language that had no literature was either considered not to have a grammar of its own, or not needing a written grammar. Although Standard Colloquial Bangla was fast emerging as a language of literature by the time Suniti Kumar was writing this grammar, the major and most highly regarded part of the literature was in Sadhu Bhasha and he felt its overarching pressure while writing his school grammar. It must also be noted that most of Suniti Kumar's Bangla writing was in Sadhu Bhasha, his books in the Chalita are conspicuously few. Sadhu Bhasha, for him as for many others, was the academic register and his grammar bears witness to this historical fact, both in form and content.

It may be noted in conclusion that a descriptive grammar of SCB has been published under the editorship of Islam and the present speaker, (Islam and Sarkar 2012) by Bangla Academy, Dhaka. The book is fully descriptive in its objective, and focuses on the

spoken standard Bangla. The first volume deals with the structure of the language, and the second provides various other perspectives to look at it. The editors haven't claimed that this was the ultimate grammar of SCB, but it should hopefully provide a stable ground on which better descriptive grammars of SCB can be built up, following its lead, as well as rejecting all, or part of, its postulations.

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IMPACT OF INDIAN COTTONS ON STARTING COTTON CULTIVATION AND PRODUCTION IN CHINA

PADMINI TOLAT BALARAM

Abstract : In the world of textiles, India was famous for its cottons and China was known for its silks. China was one of the earliest eastern markets for Indian Textiles. High class Chinese usually wore silk while hemp was used for making casual dresses of common classes. In his book *Hanshu* (History of the (Former) Han Dynasty), Ban Gu (CE 32~92) has noted that Emperor Wudi received several Indian goods as present and cloth was one of the items included in his list of presents received. Trade between India and China existed even before the establishment of the famous silk road in 1st century BCE. This paper talks about the starting of cotton trade between India and China before and after establishment of cotton cultivation in China in 12th century CE. It discusses the types of Indian textiles that reached China via different routes, their use, popularity and demand in China and its impact on starting cotton cultivation and production in China. It also mentions the types of cotton textiles which continued to be imported from India even after establishment of cotton industry in China.

Key Words : bilateral, colonies, currency, export, historical, Silk Road, spice-trade, textiles

Introduction

Today 40% of world textiles are made using cotton. Presently China tops the list and India comes second among the cotton producing countries of the world. But till 12th century CE, China hardly cultivated cotton and was importing cotton textiles from India. However, if we club the cotton produced by India and Pakistan together, then they together cultivate and produce the maximum amount of cotton even today. Till 1947 India and Pakistan were parts of United India. Hence the word 'India' in the following article covers regions of both these countries as well as of present Bangladesh.

Cotton in India

"It is said that cotton is the oldest textile woven by humans. The word cotton comes from the Arabic '*Al-Qutn*', which in turn comes from the Sanskrit word '*Karpasi*'" (Balaram et al. 2012:11).

The earliest remains of cotton textiles and a statue of the Prince wearing a cloth are found at Mohenjo-Daro excavations. This proves that cotton textiles were produced and worn in united India as early as 4th century BCE. Renowned scholar Moti Chandra has mentioned in his notes, "(in) the excavations at Mohenjo-daro...an actual piece of cotton



Figure1 : Indus Valley 'Priest King' from Mohenjo-daro, wearing a trefoil design cloth (The Ancient Indus Civilisation. Web. 7 Jan. 2012. <http://www.harappa.com/har/indus-saraswati.html>)

has been discovered which shows that cotton was known to the people of Sindh four thousand five hundred years back” (qtd. in Balaram 2012: 9).

As Prof. Vasant Shinde, Vice-Chancellor of Deccan College, had mentioned, the earliest physical remains of any cloth in India were found at a Chalcolithic period site at Balathal in Marwar regions of (present) Rajasthan State of India (Balaram et al. 2012: 20).

India not only was the first to cultivate and produce the cotton but was also exporting it, from the period of Mohenjo-daro Civilisation. Number of excavations and literary references have proved this fact. To promote the trade and maritime exports, ports were built during Indus Valley Civilisation. “The world’s first tidal dock was built around 2500 BC during the Harappan civilisation at Lothal near the present day Mangrol harbour on the Gujarat coast. Other ports were probably at Balakot and Dwarka. However, it is probable that many small-scale ports, and not massive ports, were used for the Harappan maritime trade. Ships from the harbour at these ancient port cities established trade with Mesopotamia” (Iyer, 2015).

According to the Periplus of the Erythraean Sea-a first century CE Greek account of commerce in the Western Indian Ocean, Greeks imported Indian cotton as luxury fabric (Guy 1998:20). Over the centuries exports and demands of Indian cottons continued. Maurya period in BCE to Gupta period from 11th to 14th centuries as well as after 15th centuries when the Europeans entered the Asian sea for trading, importance of Indian textiles continued. According to Mettabelle Gittinger, a well-known textile historian, Indian textiles had become dominant currency of exchange. Whoever entered this spice trade in sixteenth and seventeenth centuries CE, had to procure these textiles in India as a prerequisite to other trade (Gittinger 1982: 137,138).

Beginning of Indo-China Trade and the Trade Routes

Indian cotton textiles were already exported to Egypt, European counties as well as to Shu (Sichuan region of present China) before the establishment of the famous Silk Road in 2nd Century BCE. Actually, Chinese goods reached Europe via India at that time. Literary references and excavations also prove that the trade between India and China existed centuries before the establishment of the famous Silk Road. In 2nd century BCE, “when Han China had no knowledge of the Western part of present China, India had already established trade routes with Shu (the present Sichuan Prefecture of Western China) and Qiong, presently in Western China (Balaram 2012: 11). In 138 BCE Zhang

Qian, who was sent by Han Emperor Wu to forge an alliance with Yue-zhi nomads in Afghanistan, on his way, saw textiles from Shu traded to Bactria via India. Zhang Qian's report recorded by historian Suna Qien, noted, "When I was in Dasha [The Bactria of Greeks], I saw bamboo canes from Qiong and cloths made in province of Shu. When I asked people how they had received such articles, they replied that their merchants went to buy them in the markets of Shen-du [India]" (qtd. in Vollmer et al.:11). "Zhang Qian also speculated that the safest route to the Central Asian markets might be through India, since the Northern routes were controlled by the Xiong-nu [a federation of tribes which kept attacking China]" (Vollmer et al.:11). This statement confirms a strong possibility of trade conducted from Northeast India to Southwest China via Burma, and Northern Thailand.

According to the well-known historian Prof. R. C. Majumdar, the trade routes from India to the Far East were established centuries earlier than the Christian Era (Majumdar 1944 : 13). As per Moti Chandra, regular contact between India and South China was perhaps established in second century BCE and with Han China it began in 61 AD (CE) when Han-Kui-Chin sent an embassy towards the West, to bring Buddhist Monks from India to China. It strengthened a great deal during the Gupta Period (Chandra 1977 : 176-177).

Indian traders in hope of riches and spices took up long and difficult travels through land as well as sea even before Christian era. Some of them settled in those countries and married local women and established a Hindu colony there. Inhabitants of these colonies continued to practice their own religion and culture. In Southeast Asia, Indian colonies were established in Malay peninsula, Java, Sumatra, Borneo, Bali, Champa (presently in Central Vietnam), Annam, Kambuja (Cambodia), Burma and Siam (Thailand), Fu-nan, Yunnan (presently the part of Southwest China) etc. There are instances when Indian princes have come to Southeast Asia and established Kingdoms. These Indian colonies and Hindu kingdoms influenced the religion, culture and life style of the people in the regions they were established and also became trade link between India and China.

The Land Routes

Many Indian (Hindu, Buddhist and mixed) colonies were established on the land route from India to China, which went through Eastern Bengal, Manipur and Assam to Upper Burma, Northern Thailand, to the South west region of present China, mainly to present Yunnan and to Sichuan prefectures. At that time, Yunnan and Sichuan were not part of Han China and were independent kingdoms. The local tradition regarded that one of the sons of the great Emperor Asoka himself founded a colony at Dali which was known as Kingdom of Nan-chao or Tali (Dali). Yunnan was known by its Indian name Gandhara even as late as 13th century CE (Majumdar, 1927 : xiv). This route is now known as Silk Road of the South and presently efforts are to re-start this trade route.

“Recent archaeological research on mummies found in the Tarim Basin has also uncovered cotton textiles, dating from the first millennium BCE, whose origin may be traced to India” (qtd. in Zurndorfer : 1). Tarim Basin, which falls in the present Uygur Autonomous Region of Xinjiang in western China, had important trading posts on the Famous Silk Road. Thus it proves that Indian cottons were exported via Silk Road leading to China. Major part of Tarim Basin is covered with Takla Makan desert, but the several oases in the Northern part of Tarim Basin flourished as trade centres, providing resting place to the trading caravans. Tarim Basin was an independent Kingdom during the time of the Silk Road.

The Sea Routes

Indian traders usually sailed from Indian ports such as Tamralipti (Tamluk of Midnapur dist. of present W. Bengal), Palura port near Gopalpur (Ganjam in present Orissa), 3 unidentified ports near Masulipatam (Masulipatnam of present Andhra Pradesh) and Broach (Bharuch) in Gujarat. By the 9th century CE, Indian merchants were regularly trading at the South China ports of Guangzhou (Canton) and Quanzhou in coastal Fujian (Guy, 1998: 153, qtd. in Balaram, 2012: 16). Zhao Rukua in his account *Zhifanzhi* dated 1225 A.D. notes that Indian cotton goods from Gujarat, Malwa, Malabar and Coromandel coast were supplied to the ports of South China.

To encourage trade with China, the Chola Dynasty, which had control over the cotton producing centres and ports of the Coromandel Coast of south India sent a series of missions to China starting from 1015 CE till the end of 13th century CE. Thus during this time, trade between Chola Dynasty and China flourished via sea route. Apart from Indian merchants going to China, Chinese merchants also came to India to trade. Wang Dayuan in his work *Daoyizhilue* (Brief account of the ‘Barbarian¹ Isles’) dated 1350 CE, mentions about ‘patterned cloth’ from Nagapattinam, the Chola Dynasty’s principal port and major centre for the export of cotton goods from Southern Coromandel Coast. Chinese merchants also resided there and built their temple, which shows the beginning of an active role of Chinese merchants in procuring the textiles, spices, aromatics at the source in order to meet the local demand in China (qtd. in Balaram 2012: 17, qtd. in Guy 1998: 154-155).

Even today Kolkata has China town. Chinese traders who came and settled in India usually stayed together like Indians did when they went abroad and established their colonies. The areas where Chinese stayed are now known as China town.

Secondary Trading

Earlier the Indian cloth was already employed in a complex system of secondary trading and exchange, which linked Southeast Asia and South China. In case of direct trading Indian goods were taken from India to China by the same trader/merchant. In case of secondary trading it was sold by one merchant to the other, who further traded it to China. Sometimes Indian textiles changed several hands before it reached China. For example, many Indian goods were exchanged between Indian, Chinese and Arab merchants at the trading ports of South and Southeast Asian countries as well as at the ports of Indian Kingdoms and colonies established on the way to China. The Chinese and Arab merchants then carried those Indian cottons to resell them in China. Later, when the Europeans entered the Asian sea, the secondary trading was carried out by them too. Malacca, where ‘the winds changed’ became one of the most important trading ports where such secondary trading was carried out among Indian traders and the traders from the other countries including the Chinese.

Vietnam played an important role in trade with China. Hoi An (formerly Faifo) “emerged in the mid-sixteenth century as a significant entrepot for the China Ryukyu-Japan trade. It attracted foreign merchants in significant numbers and Japanese communities settled there” (qtd. in Guy 1998: 156). “At Hoi An Chinese and Japanese merchants could have purchased Indian cloths traded via Melaka, Ayutthaya and Batavia; the Dutch opened a factory here in 1633, followed by one in Tonkin in 1637, and were eager to trade Indian cloth for ceramics and silks which could be re-sold in Japan.” (qtd. in Balaram 2012: 18, Guy 1998: 156)

Wang Dayuan mentions ‘patterned cloth’ entering China from a number of trading centres in insular Southeast Asia including Sri Vijaya in eastern Sumatra, Palawan and Mindoro in the Philippines and the Sulu and Maluku (Moluccas) regions of eastern Indonesia (qtd. in Guy 1998: 155). There was a belief that the ‘patterned cloth’ of Indian origin were presented to the local rulers, as they were held in high esteem. As the Indian cloth had a higher status than the locally produced cloths in Southeast Asia, it is very likely that these were given as presents (Guy 1998: 155).

I’Tsing who resided for some years in Sri Vijaya Empire, has mentioned that the King possessed numerous ships which sailed regularly between India and Sri Vijaya as also between Sumatra and China. Thus Sri Vijaya kingdom was another place where secondary trading of Indian cottons took place.

Even the documents of *Rekidai Hoan* mention various Indian textiles given as gifts to Ryukyu Kings or as return gifts from the rulers and nobles of Southeast Asian countries, some of which bear the Chinese names of the Indian fabrics (Kobata and Matsuda). Such gifts also “acted as indicators of the tributary state’s international connections and so served to enhance its standing in the eyes of China” (Guy 1998: 155). Huang Xingzeng’s *Xiayangchaogongdianlu* of 1520 CE, catalogues twelve types of textiles brought to China by Thai missions as tribute most of which, from the knowledge of Thai court protocol, were probably Indian (qtd. in Guy 1998: 155).

Trade of Indian Textiles to China

China was one of the earliest eastern markets for Indian textiles. In the world of textiles, India was famous for its cottons and fast, multi-coloured, dyed, painted and printed textiles, while China was known for silks and brocades (Balaram 2007:1, Balaram 2012: 9). Hence, cottons were imported from India while mulberry silks went from China. However, apart from Indian cottons, Indian wild silks were also exported from Bengal to China.

Indian cottons reached China as trade articles as well as gift articles as Indian cotton was valued very highly all over the world due to its softness, fineness, brilliance and fast colours, as well as exotic designs. They were also used as currency in the spice trade as they were considered very valuable. It is well known that Indian textiles such as *patola* were considered as heirloom textiles in Indonesia, which were inherited and preserved.

To establish trading relationships, kings from one country sent missions to other countries, along with gifts. Usually Indian cottons were sent as gifts not only by Indian Kings, but also by Southeast Asian Kings due to their superior quality, as it was a tradition to gift the best.

Based on the writings of the various travellers and official documents many of which are preserved in China, some of the textiles that reached China could be identified.

Use of Indian Cottons as Gift Articles

The use of Indian cotton as a gift article is noted in the 1st century CE by Ban Gu (CE 32~92), who has mentioned that Emperor Wudi received several Indian goods as present and cloth was one of the items included in his list of presents received.

Chinese pilgrim Faxian observed Indian merchants who were conducting trade with his country: “An Indian tribute mission to Emperor Wu in 503 [CE] presented cotton

among its gifts, a rare and highly desirable fabric” (qtd. in Guy 1998: 153, in Balaram 2012 : 16).

Chola Dynasty in South India, whose territories included cotton producing centers of Coromandel coast sent series of missions to China to encourage trade, starting from 1015 till the end of 13th Century CE. Like the Kings of Chola Dynasty, Bengal rulers also sent some tributes from time to time to China, which included a variety of cotton and woollen cloths, which features in lists for the reigns of the Yongle (1402-24 [CE]) and Zhengtong (1435-49 [CE]) (qtd. in Guy 1998: 155).

There are many examples mentioned in Chinese record called *Rekidai Hoan* (Precious Documents of Successive Generations), where various types of Indian cottons which were received as gifts by Emperors and nobles of Chinese, Korean and other eight Southeast Asian kingdoms and further gifted to the envoy of Ryukyu Kingdom (present Okinawa prefecture of Japan), are listed. Documents in *Rekidai Hoan* are from 1414-1867. As the original document is in Chinese, lot of Chinese names for the Indian cottons are found there. For example, Indian chintz are mentioned using Chinese characters 花布 for chintz. Character 花, which is pronounced as *hua* means flower, while character 布, which is pronounced as *pu*, means cloth/fabric/textiles. At times painted and printed cottons are also written with the characters 花棉布. The central character 棉 (*mian*) means cotton. Hence the word *huamianpu* means flowered cotton textiles. Presently, the Google translator translates the chintz with characters 印花棉布 which reads *Yinhuāmiánpù*. The first character 印 (pronounced as *Yin*) is the old character used by the Chinese for India (Balaram 2012:12).

Varieties of Cotton Textiles Traded to China

Two major types of Indian textiles were exported from India. The finest textiles were quite delicate with exquisite craftsmanship. They were of very high standard and were produced for very high end market such as for Emperors, Kings, nobles and rich officials, rich merchants and other rich population. The second type, which were comparatively mass produced, were coarse, very sturdy and long lasting for the use of common people and some selected ones for the rich. The high class Chinese used silk but the common people of China could only use hemp. The coarser cotton from India proved much better than the hemp, hence started replacing the use of hemp for daily wear.

Mulmul was the high-end fabric which was exported to China, as it was delicate, light weight and very soft. Guy in his article ‘The lost temples of Nagapattinam and Quanzhou’ has mentioned, “The fine muslins for which Bengal was famous in the late Roman worldⁱⁱⁱ (evocatively described as ‘woven air’) found their way east to China and emerging

states of Southeast Asia” (Guy 1998: 55). This statement clearly indicates that fine Bengal muslins had first reached Europe and later reached China and even later to the other Southeast Asian countries.

There are several references to Indian *mulmul* (muslin) and chintz being exported to China. “It is interesting to note from a quote of a Chinese writer that high class Chinese ladies of 6th century CE preferred high quality Indian cottons over their own Chinese silk. ‘At a very remote epoch the Indians know how to produce the most varied articles from this [cotton] plant, which they call *tala*’. He [the Chinese writer who flourished in 6th century CE] refers to the exquisite muslins, embroidered with gold and silver, manufactured in the principal cities of India, and his patriotic spirit takes fire at the sight of the noble daughters of the lettered classes preferring for a moment these foreign materials to the queenly and brilliant silken fabrics of his native land” (Dupont- Auberville, qtd. in Balaram 2012 : 16).

As mentioned earlier (Ibid : 6) ‘patterned cloth’ was imported from Nagapattinam, the Chola Dynasty’s principal port and a major centre for the export of cotton goods from the southern Coromandel Coast.

As per Dr. Moti Chandra, Bengal was renowned in the world, for their finely woven goods, especially muslins and other delicate cloths. Before 1500, there are reports that Bengal muslins were exported to China where they were highly prized (qtd. in Parthasarathi 2009 : 21). Moti Chandra has also mentioned that “Bengal and Orissa were famous for fine cotton cloth and elephants” (Chandra 1977: 68).

In spite of its wide spread in China, cotton goods still remained relatively expensive. Ibn Battuta, an Arab traveller, observed in 1344 that a piece of cotton could command a price equivalent to many pieces of silk, in which China was rich.

As China did not cultivate its own cotton till the 12th century CE, and its large scale production in China started only after the 15th century CE, demand for Indian cotton in China was quite high (Balaram 2012: 19). Even after China started producing the cotton, demand for certain types of Indian textiles continued, which are mentioned below.

Cottons exported to China after China started producing cottons

Apart from the high quality Indian textiles, which were suitable as gifting articles, many types of Indian cotton textiles were imported to China to supplement the locally produced cotton. Even after China started producing cotton in large scale, demand for high quality Indian cottons as well as a medium quality cotton fabrics continued. Few of the Indian textiles, which were imported from India to China for supplementing the cotton produced in China, are as mentioned below.

Manzheti, a colored cotton, *shanabafu*, a superior strong cotton, *Xijnbailedali*, a muslin favoured by wealthy Bengalis for using it as turbans; *Chaotaer*, a soft cotton similar to Chinese *sansuo* and a cotton velvet known as *Moheimoluo*, were some of the fine cottons imported from India to China. *Bafta*, known as Chinese *bibu*, a finely woven white fabric was in great demand and most popular among the imported Indian cottons in 14th century China (Guy 1998:155).

The Indian fabrics mentioned in the above paragraph, along with many more, are mentioned in *Rekidai Hoan*, as the textiles presented to the Ryukyu Kings.

Apart from textiles from the Coromandel Coast, textiles from Bengal also reached China. Ma Huan in 1433 refers to ‘five or six varieties of fine stuffs’ made in Bengal which were known to Chinese (qtd. in Guy 1998: 155).

Political influences on the Trade of Indian Cottons

During the period of Song Dynasty (960-1279 CE), Indian textiles fell into the category of unrestricted goods. They were now intended for broader market and were available in growing quantities for the wider use in Chinese society. Thus it no longer remained rare and were reachable by wider range of people.

“The greatest demand for cotton cloth came from the Mongol armies stationed in the northern regions; they needed uniforms made of some kind of warm, light weight and resilient material... Mongols must have perceived the value of cotton textiles: cotton cloth’s strength, durability, and effectiveness as a padded fabric against winter chill, or as a light, absorbent textile against summer heat” (Zurndorfer : 5). Inner linings of Mongol army uniforms, underwear, pants, and inner jackets, excavated at Xinjiang were all cotton (Chao: 19, qtd. in Zurndorfer: 5).

The demand of Indian cottons grew in China to such an extent that Chinese Government placed a cash limit to its trade with South India, which was the major source of Indian textiles. Cotton was also restricted in China many times to safeguard the silk lobby.

Due to the Commutation Act of 1784 [CE], the import of Chinese tea to England increased. To balance the one-sided trade, the Company actively started exporting cottons and opium to China from Bengal and the Coromandel Coast, both of which were targeted at the Chinese mass market. The English East India Company’s trade with China and Southeast Asia got strengthened “through control of the Bay of Bengal, the securing of Penang Island in 1786 [CE], and founding of Singapore in 1819 [CE]” (Guy 1998: 157).

Chinese Cotton

The demand of cotton and the political influences resulted into beginning of cotton cultivation in China. The cotton plant was commercially grown in Heian island from around

the 12th century. Its cultivation quickly spread to the mainland but it was not produced in a large scale until 15th Century, when a rapid increase in urbanization led to an unprecedented demand (Balaram 2012:19). Cotton textile production in China was established after the efforts of Huang Dao Po (c. 1245 – 1330), who learnt the art of spinning and weaving from Li minority of Hainan Island and brought it to her native land of Songjiang. Initiative taken by the Yuan Government to promote the cotton helped its manufacture and spread in China. Due to the limited space, it is not possible to talk about the cotton plant, its cultivation, development and spread of cotton textile production in China. These could be dealt later in the form of another article. However the following paragraph just gives a glimpse of how Chinese textiles were also influenced by Indian textiles.

Influence of Indian Textiles on Chinese Textiles

The Indian painted and printed cottons influenced China and they started ordering designs with Chinese figures for producing it in India. Such Chinese styled textiles came to be known as *Chinnosaries* and became a craze in Europe. Chinese also replicated Indian figurative chintz, i.e. *kalamkaris*, with their own Chinese stories illustrated (Fig. 4) or a Chinese scene painted in the centre instead of the figure of the God placed by Indians in their *kalamkaris*. Indigo dyed cottons become very popular among the Chinese minorities, and replaced the use of hemp as they were stronger, long lasting, smoother and comfortable to wear (Fig. 2, 3).



Figure 2: Chinese minority girl wearing indigo dyed cotton attire



Figure 3: Miao man wearing indigo dyed cotton



Figure 4: Quilt cover having Nagasaki Sarasa made by Chinese, which is influenced by Indian chintz. Courtesy, Nagasaki Prefectural Museum

Conclusion

Fine Indian cottons gifted as well as traded to China were of very high quality and were many folds expensive than the Chinese silks. The rough and strong cottons were in great demand for the local markets as well as from the Mongols. The cottons were superior to the hemp used by the common people of China, hence it started replacing hemp. The great demand of Indian cotton and its high price started efforts towards cultivating cotton and producing cotton textiles in China. Efforts of Hauang Dao Po and Yuan Government helped in establishing cotton production in China. China could not produce very fine quality of cotton and the demand of coarse cotton fabric was also greater than what they could produce. Hence the fine high end cottons as well as the mid quality coarse and strong cotton still remained in great demand even after starting of cotton cultivation in China in 12th century CE and its large scale production in 15th century CE.

Notes

¹ China referred to foreigners as Barbarians

² Late Roman World (mid 3rd century CE-4th century CE)

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Fig. 1: The Ancient Indus Civilisation. Web. 7 Jan. 2012. <http://www.harappa.com/har/indus-saraswati.html>

Fig. 2, 3: Photos by Author

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INDO-CHINA IMBROGLIO : LOOKING THROUGH THE PRISM OF BRAHMAPUTRA ISSUE

SATABDI DAS

Abstract : The proposed diversion of the Brahmaputra's water and a series of dam building at the upper reaches of it by China, that significantly alters the river's course and flow and creates water scarcity to downstream nations, have introduced ripples of anxiety in India and Bangladesh. The Brahmaputra water issue has the potential to be a source of an enduring discord between India and China at a time when the latter's intention is to make geopolitical advances in the northern sphere of the country, which has already escalated tension in the whole region. The worst affected downstream Northeastern Indian states like Assam and Arunachal Pradesh have urged the Central Government to take effective diplomatic steps to resolve the crisis. In such a situation the NDA government has taken several diplomatic steps. However, these efforts are not sufficient. Both the stakeholders must go beyond the narrow confines of self interested behaviour as co-operation may yield better results than rivalry in water insecurity related crisis. Regional political turmoil as well as territorial disputes should not impede the efforts to reach a consensual deal for addressing the shared water resources related problems.

Keywords : riparian, Brahmaputra River, Northeast India, NDA government.

Introduction

Rivers, a crucial source of water resources, which connect upstream and downstream users, are sources of political tussle between countries. Basically, the shared nature of rivers is responsible for much of these feuds. Thus water is becoming a key security issue in the Sino-Indian relations too, as much of India's river water originates in China. China being an upper riparian country and having control over the aqua rich Tibetan Plateau- the source of most major rivers of Asia, is in an advantageous position than India, as minimum percentage of its water resources comes from across its border. Quite contrarily according to UN figures, a total of 718 billion cubic metres of surface water flows out of Chinese territory yearly, of which 48.33 per cent runs directly into India

(Chellaney 2013). Therefore, India is in a disadvantageous position compared to China whose policy formulations are guided by her upper riparian status. China is now pursuing major inter-basin and inter-river water transfer projects on the Tibetan Plateau. This threatens to diminish international-river flows into India and other co-riparian states. There is no water treaty between India and China which also provides China with the opportunity to control international-river flows.

Backdrop

Due to over-utilisation of water resources by industries, its huge population and mismanagement of resources, China has embarked upon a series of dam-building and water-diversion projects to re-engineer the southward flow of river waters from the Tibetan Plateau. In fact, China has been damming most international rivers flowing out of Tibet, whose fragile ecosystem is already threatened by global warming. The only rivers on which no hydro-engineering works have been undertaken so far are the Indus, whose basin falls mostly in India and Pakistan, and the Salween, which flows into Burma and Thailand (Chellaney 2009). So China has water disputes with various countries, like in Mekong river Basin with Cambodia, Laos, Vietnam, Thailand and Burma due to damming of the river upstream, in Brahmaputra river basin with India and Bangladesh, in Sutlej river basin with India and Pakistan, and so on (Chellaney 2007 : 59-60). So, there is no doubt that the Chinese hydro projects on the Tibetan Plateau are a major source of concern to China's neighbours including India. The Chinese projects in West-Central Tibet have a serious bearing on water flows in India.

Against this backdrop, the river in question in this study is the Brahmaputra. Among the rivers that cross the Sino-Indian border, the most significant is the Brahmaputra and it is also a source of serious conflict between the two countries that extends beyond the traditional territorial animosity between them. The rerouting of the river Brahmaputra and a series of dam building at the upper reaches of it by China, which significantly alters the river's course and flow and creates water scarcity to downstream nations is an issue of concern in this regard. The Brahmaputra water issue has the potential to be a source of an enduring discord between India and China at a time when the latter's intention is to make geopolitical advances in the northern sphere of the country which has already escalated tension in the whole region. However, China is damming not just the Brahmaputra, on which it has already completed several dams, but "it has also built a dam each on the Indus and the Sutlej and unveiled plans to erect a cascade of large dams on the Arun (Kosi) river, which helps augment downstream Ganges flows and is thus critical to India's ability to meet its treaty obligations vis-à-vis Bangladesh. The flash floods that ravaged Himachal and Arunachal states between 2000 and 2005 were

linked to the unannounced releases from rain-swollen Chinese dams and barrages”(Chellaney 2013). The present study will throw light on the following issues.

- How Brahmaputra remains at the top of India’s bilateral agenda with China recently and how the idea of diversion injects a new unfavourable element to the Sino-Indian relation;
- Why the water rivalry makes the age-old Sino-Indian border dispute less tractable;
- How the new Modi government is responding to the crisis and what are India’s possible diplomatic options to avert the water woes.

The Issues and Challenges Pertaining to the Problem

Both India and China are in want of stable water supply for their economic growth and development. In the face of growing power shortage in China and international pressure to reduce carbon emission, she is now focusing on generating hydro power that requires the building of dams. This is one of the reasons behind running major inter-river water transfer projects on the Tibetan Plateau by China which is a major concern for India. Previously China’s hydropower focus was on Yangtze River (across which the three Gorges Dam was built) and the Yellow River. Three water diversion Channels to the north are planned from Yangtze River to the Yellow river. After completion of them by 2050, a total of 44.8 billion cubic metres of water will be transferred by this manmade river (Dasgupta 2009: 140-141). However, the issue of more serious concern to India is China’s plans of diverting the Yarlung Sangpo or the Brahmaputra River that is originating in Chinese territory.

Geographically the Brahmaputra River flows through China, India and Bangladesh on its journey from the Himalayas to the Bay of Bengal. It originates in south-western Tibet as the Yarlung Tsangpo River. In India, it is called Dihang (in Arunachal Pradesh) and Brahmaputra (in Assam) and in Bangladesh it is called Jamuna. Before entering India Brahmaputra flows eastward in Tibet for 2,200 kilometres at an average height of 4,000 meters, making it the world’s highest river. When two other tributaries merge with it, it becomes as wide as 10 kilometres in India before flowing into Bangladesh (SANDPR 2013). Therefore, this river is significant for India and the rerouting of the river northwards and damming of it by China are viewed with suspicion by her. She fears that such move is the projection of Chinese geo-political will to control water thereby affecting the economic growth and development of the downstream nations. Further, the water issue has exacerbated the political animosity between India and China over unsolved territorial border dispute between the two.

The Zangmu Dam that China is building is just the first of 28 dams that Beijing plans to build on the Yarlung Tsangpo in Tibet, including a hydel power generation plant at Zangmu on the middle reaches of the Brahmaputra, less than 200 kilometres from the

Indian border. China had initially denied that they were constructing a dam on the Brahmaputra river even after the contract was awarded. It was only in April 2010 that Yang Jiechi, the Chinese Foreign Minister, officially revealed that they were constructing the Zangmu Dam (Hussain). In January 2013 China's State Council has approved construction of three more dams on the Brahmaputra in Tibet in addition to the Zangmu that had previously been suspended as a result of environmental concerns and public opposition. According to the approval, a 640 MW dam will be built in Dagu, which lies 18 km upstream of Zangmu. Another 320 MW dam will be built at Jiacha, also on the middle reaches of the Brahmaputra downstream of Zangmu. A third dam will be built at Jiexu, 11 km upstream of Zangmu. The capacity of the Jiexu dam is, as yet, unconfirmed (Krishnan 2013). However, during an informal discussion between Indian and Chinese officials on February 5, 2013, China claimed that these projects would not affect the water flow of downstream areas in India. They assured that these are run of the river projects and would not affect the ecological balance of the region (Dikshit 2014). In spite of these assurances India is not satisfied and it is concerned more with the point of diversion rather than the issue of diversion. Specifically diversion of the Yarlung Tsangpo branch of the Brahmaputra around the famous U-Bend before the river enters India is a matter of concern for the country. It is at this Great Bend where China has plans to build the world's biggest hydropower project of 40 000 MW capacity and also divert water from here to the North China, though China is currently denying any such plans (Singh 2011: 180). The diversion of the River Brahmaputra will affect largely the North-eastern region of India as the amount of water in the Brahmaputra will fall significantly for this, affecting the region.

Northeast India- the hot spot

The Northeast region of India which accounts for a large share of total identified hydro potential of the country is dependent on the Brahmaputra basin. Large parts of the river flows through the Northeastern Indian states of Arunachal Pradesh and Assam. The river enters Arunachal Pradesh near Gelling where it is known as the Siang or Dihang. The total length of Siang River is 294.5 km till its point of confluence with Dibang and Lohit Rivers. The elevation of Siang river catchment area ranges from 90 meter to around 5800 meter. In India the total catchment of Siang river up to its confluence with Dibang is 14965.30 sq km. The Siang River meets two other major tributaries of Brahmaputra, Dibang and Lohit in the west of Sadiya, at a place named Kobo. From this confluence point, the river is known as the Brahmaputra till it enters Bangladesh. The river crosses Assam below Dhubri and enters Bangladesh where the river is known as Jamuna (SANDPR 2013). So in India especially in the state of Arunachal Pradesh, multiple smaller rivers join it to make it into a huge water resource. The water flow

before the river enters Arunachal Pradesh is about 60,000 cubic feet per second. It is fed by mostly fresh glacial water. But as the river crosses through Arunachal Pradesh, it receives additional water from its tributaries and then in Assam from the discharge of other streams. The one million cubic feet per second flow of the Brahmaputra during the rainy season is because of the topography of the land. All the rainfall in the Assam hills is discharged into this river making it at places about ten kilometres wide (Singh 2011: 183-184). Such geographical scenario has made the river so indispensable to both India and China. China is basically viewing it as a source of hydroelectric power generation and also as a source of water for China's parched mainland. But if China continues with its plan to build more dams on the upper reaches of the Brahmaputra, it would surely affect the downstream areas in Northeast India.

The water diversion project by China not only affects the natural landscape but impacts its economic well being also. The Northeastern state like Arunachal Pradesh which is a 'cornucopia' of natural resources is a target of China to fulfil its geo-political interest since long. In fact since 2006 the Chinese practice of describing it as Southern Tibet has provided basis to this suspicion. Water conundrum adds fuel to this problem. In the East Siang District of Arunachal Pradesh, a territory administered by India but claimed by China, people in the town of Pasighat reported that the usually strong river suddenly dwindled to almost nothing in early 2012. The state's Minister of Water Resources demanded an investigation into whether the shortage had been caused by dam building upstream on the Chinese-controlled portion of the river (Christopher 2013: 4). Although it is not clear what caused the sudden but temporary cessation of the Brahmaputra's flow in March of 2012, the political distrust between the two countries has made it clear that future water conflict over shared water resources like the river Brahmaputra is very much likely to take place.

As the Northeastern region is primarily dependent on agriculture, scarcity of water resources due to dam building would have an adverse impact on the economy of the region. Certain political parties and organizations of the region therefore, opposed vehemently to the building of mega dams on the Brahmaputra. The Chief Minister of Arunachal Pradesh, the state closest to China, Nabam Tuki said on February 16, 2013 that "the three dams will affect the interest of people in the downstream areas. We will soon move New Delhi to take up this issue with China in the interest of the people" (The Hindustan Times 2013). Assam Chief Minister Tarun Gogoi also requested the then Prime Minister Manmohan Singh to take up the matter concerning the construction of three dams on the Brahmaputra with China (The Assam Tribune 2013). According to Assamese experts, spearheading an awareness campaign against China's hydro-projects on the Brahmaputra is imperative to counter the proposed 85 percent water flow deficit

from China during the summer months (Hukil 2013 a.). Moreover, the Northeastern region has been identified as India's 'future powerhouse' where about 168 large hydroelectric projects have been proposed. This large number of projects in the region has the potential to majorly alter the rivers' patterns and the landscape along it. Therefore, large dams are emerging as a major issue of conflict in Northeast India. Many dams in the Arunachal Pradesh like Ranganadi Hydro Electric Project built by North Eastern Electric Power Corporation caused heavy floods during 2004, 2008, and 2011 in downstream Assam which resulted in loss of agricultural land thereby leading to displacement of residents. The Lower Subansiri Hydel project, to be constructed in the Subansiri River Basin which in turn is a major part of Brahmaputra River Basin has also provoked controversy (Basumatry 2013). In such a situation the rerouting of Brahmaputra by China at the upper reaches before it enters India has exacerbated these crises.

The Environmental Concerns

Environmental disasters due to the diversion of the river are another matter of concern. The Great Bend is located in an area of high seismic activity close to the fault line where the Indian plate collides against the Eurasian Plate. So the Chinese water diversion plan as part of the Western route of its South to North transfer project, could trigger great earthquake in the region (Chellaney 2011: 149). The negative environmental effects for the alteration of river course in this region are clearly articulated in the following lines:

"The Namchah Barhwa (situated at the Great U-bend of the river) is decreasing by 3/4th of an inch every year. More so, the Yarlung-Tsangpo Suture Zone (YTSZ), a junction point between the Indian subcontinent and the Euro Asian plates is contracting. Since, the thrust of the suture is stronger around the Everest region and anaemic around the Sikkim-Arunachal region, the instability of basaltic salts, arsenic sedimentary deposits exacerbates. It has been verified that the eastern Himalayan mountain range, Sikkim and eastward, is made of loose soil and bears few rocks. Hence, no waterfalls are found in this region, making the entire region unsafe, unsuitable for dam construction and unreliable even for a run-of-the river (ROR) project." (Hukil 2013 b.)

The problem becomes more acute due to climate change induced glacial retreat. There is no doubt that water is a medium through which climate change affects the humanity severely. When shared water resource is the case in point, competition for access to it has exacerbated the situation. Therefore, if China keeps diverting water from its natural course, then Tibet will be a water scarce region in a few decades affecting both India and Bangladesh. Being the lowest riparian state of the Brahmaputra, the threat to Bangladesh is even greater. Bangladesh is very much concerned over water diversion of the Brahmaputra by China as well as about the building of dams by China and India on the Brahmaputra. She is in fear that such upstream activities by these two countries

would drastically reduce the amount of water reaching Bangladesh thereby, creating havoc to agricultural production and would aggravate environmental problems there. India and China have had several rounds of talks on the water issue since 2007. However, both the parties as well as the other stakeholders do not adequately respond to the environmental and political challenges posed by water conflicts. Even again in 2016, China blocked the Xiabuqu river, one of the many tributaries of the Yarlung Zangbo, to build a dam as part of the Lhalo hydroelectric project at Xigase in the Tibet Autonomous Region (Patranobis 2016). China is hardly aware of the environmental hazards that may take place due to water diversion. Specifically, climate change is rarely discussed in these trans-boundary water related talks and agreements. They are mostly unaware of the fact that future water supply and quality may be altered due to changing climate, hampering the reasonable sharing of water among the riparian states. Not only that, the sustainable management of shared water resources in a changing climate is also challenging as multiple political entities and actors involved may differ in their respective views.

Indian Responses to the Crisis under the New NDA Government

Undoubtedly water presents a new dimension to Indo-China relation which is already full of animosity due to territorial disputes, deep rooted mistrust, border tensions and so on. Such difficult political relationship renders the water issue more intractable. India views the reengineering of natural waterscape by China as a hydrological aggression against her which is as significant as the cartographic aggression against her. In Brahma Chellaney's words "China seems intent on aggressively pursuing projects on the Yarlung Zangbo and employing water as a weapon" (Yan 2013). Given the complex interplay between water issues and political relations between India and China, it is quite natural that border disputes between them may overshadow any cooperation on the water front. It is difficult to resolve water dispute without border resolution. However, efforts from both sides have been made time to time. There were several exchanges of state visits over Brahmaputra discourse by China and India during the UPA tenure. Prime Minister Manmohon Singh sought a joint mechanism with China to assess the construction work of dams on the river in a meeting with his Chinese counterpart on the sidelines of the BRICS summit of 2013 that would entail greater transparency, joint study of hydro-technical data, regular dialogue and revisions helping administrate the smooth functioning of the Brahmaputra river course. During the UPA government rule in India, the flood data agreement was also inked in May 2013, wherein China agreed to share hydrological data from June-October. Later in that year this agreement to extend hydraulic data of the Brahmaputra had been revised from the period of 1st June to 15th May till 15th October of each relevant year. This Memorandum of Understanding between the two countries provided an opportunity for both sides to strengthen cooperation on the trans-border

rivers by expert level exchange of hydrological information during the flood season and emergency management. The Manmohon Singh government accepted and appreciated Chinese Premier Li Keqiang's position in this regard (Hukil 2013c.). It had been argued at that juncture that such acceptance would not dilute India's preliminary proposal to institutionalise the set up of a joint bilateral mechanism between the two. From some quarters it was also argued that such Chinese proposition to share hydraulic information during the 'flood season' was a mere pacifier to India's increasing concerns over the dam construction along the Brahmaputra river.

The present NDA government under Narendra Modi has prioritised the improvement of India's ties with her neighbours. As a part of that gesture it has re-initiated talks with their counterparts in China. Brahmaputra issue still remains top of many bilateral agendas. Another MOU on flood data sharing has been signed during Indian Vice President Hamid Ansari's five day visit to Beijing which is based on two Memorandums of Understanding signed between the two countries in May and October, 2013 under the UPA government as mentioned earlier. This MoU on flood data sharing will provide India with 15 days more of hydrological data of river Brahmaputra. The data helps India in flood forecasting. India provides money for maintenance of three hydrological centres on the Chinese side. The data will be provided from May 15 to October 15 each year. This MoU will help the two countries establish a framework for regular interactions between administrative officials to share experiences and learn from each other's best practices (PTI 2014). According to the agreement, India would pay 850,000 yuan or roughly over Rs 82 lakh (one yuan equivalent to Rs 9.70) in US dollars every April to get data from the Nugesha, Yangcun and Nuxia observation stations. India has been getting data from China since 2002. But since 2008, it has been paying Beijing for the same. The money had been utilised by China to maintain the observation stations and pay the allowances of its personnel deployed there (PTI 2014). Despite the existence of such MOUs, the absence of water treaty between the two countries has made New Delhi's task all the more difficult in dealing with the issue. Narendra Modi's recent three day visit to China in May 2015 has generated expectations in India as another opportunity to broach the topic as part of wide ranging bilateral issues.

The most affected part of India due to the alteration of Brahmaputra river course would be the Northeast India. But these states are not satisfied with the pursued way of the central government in dealing with the issue. They think that there has not been enough indication that the concerns of the region that include China building mega dams on the Brahmaputra or even planning to divert the river, or the issue of people from Northeast India, particularly Arunachal Pradesh, being given stapled visas by China - were raised by India or accepted by the Chinese of their own as matters that need

consideration or re-consideration. Northeastern states like Assam have been raising the issue at regular intervals. Even the Chief Minister Tarun Gogoi has urged Prime Minister Modi to take up the issue of big dams coming up on the Brahmaputra with Beijing during his visit to China. But the Chief Minister was disappointed and blamed the Prime Minister for not raising the issue with utmost priority. According to him, “by not raising the serious issue and putting it on the backburner, the Prime Minister has done grave injustice to Assam and its people” (PTI 2015). The Central Government has also been blamed as the Brahmaputra River has not been properly utilized in India. Retired Colonel P. K. Gautam, research fellow at the Institute for Defence Studies and Analyses, adds that “if China builds a dam on the Brahmaputra now, and we complain about lesser water flows later, it could say that India doesn’t have any projects in the northeast.” (Kurup 2010). Arunachal Pradesh which borders China becomes significant in this regard as it has the highest potential for hydro power generation in India. India becomes more sceptical regarding Chinese Hydro engineering because of the slow pace of work on hydro-power projects awarded in Arunachal Pradesh. Her anxiety spurs from the fact that “out of Arunachal Pradesh’s estimated potential of unleashing 50,064 MW of power, less than 1 percent, or 405 MW, has been harnessed so far. This is in spite of the fact that 94 projects with a combined capacity of 41,502.5 MW have been allotted across eight river basins- all in Arunachal Pradesh-of Kameng, Subansiri, Tawang, Siang, Dibang, Lohit, Dikrong and Tirap”(Mukherjee 2013 : 30). So delay in using the full power generation potential of the river Brahmaputra may hamper India’s prior use claim. International Law has endorsed a country’s right over natural resources it shares with other nations if the country uses the resource first.

Concluding Remarks

Thus changes in the ‘physical or political setting’ of international river basins by ‘construction of a dam upstream, diversion for irrigation purposes, or realignment of political frontiers’ are responsible for fostering competition among co-riparians. India and China are not exceptions in this regard. The Brahmaputra dispute has created fissure in their bilateral relation. In order to avoid such water woes, India can pursue a regional tripartite water treaty with China and Bangladesh as without any ‘river-collaborative or transparency mechanism’ pertaining to the sharing and preservation of water resources between them, the problem cannot be resolved; India with other lower riparian like countries in the Mekong river and Sutlej River basins can built a common platform against China as they are also suffering due to the latter’s upstream activities. She can also make the resolution of Brahmaputra problem as a condition for her participation in the BCIM (Bangladesh, China, India, Myanmar Cooperation); India must not limit the

use of Brahmaputra's water for hydro-power generation only but use its water for irrigation purposes as well. The multipurpose dam building for flood control and for irrigation may thus be conducive for the socio economic well being of the Northeastern region of India; and finally any project related to this river in the Northeastern region must not flout the environmental concerns as well because the region is already in the frontline of climate catastrophes. All these efforts can be materialised only if both India and China agree that water disputes could generally be resolved diplomatically, and shared water resources if properly maintained are more a source of cooperation and negotiation than a threat to the security architecture of individual country. From Indian side the implications for setting up an International Brahmaputra River Water Tribunal for arriving at an international water treaty, or constituting a Brahmaputra River Valley Authority to monitor the flow of the river on a regular basis to stop any secret Chinese intrusive activities are significant at this juncture. But these were hardly mentioned during the exchange of premier discourses over water issue in the recent past (Hukil 2013b.). It is now imperative to consider that although water is an issue in their bilateral talks, it needs to be given the same importance as the border issues in Indo-China diplomatic talks. Lack of bilateral strategic trust between the two countries basically has contributed to the deadlock in water cooperation. Countries therefore, must go beyond the narrow confines of self interested behaviour as cooperation may yield better results than rivalry in water insecurity related crisis. Regional political turmoil as well as territorial disputes should not impede the efforts to reach a consensual deal for addressing the shared water resources related problems. The fostering of effective diplomacy between them on sharing of trans-border river waters can only establish a new era of mutual trust and confidence in the region.

So it comes as no surprise that water, more specifically shared river water has become a significant issue of concerns for the co-riparians. The crucial nexus between water and food production as well as water and hydro power generation have turned the shared river basins into a battleground for competing claims over 'reasonable share of water'. Along with this, the initiation of a dam building race by the upstream parties ultimately makes water a significant medium of power projection and fostering competition within and between sovereign states. In this context Ismail Serageldin's much quoted prediction is worth mentioning- "If the wars of this century were fought over oil, the wars of the next century will be fought over water." (Shiva 2002 : IX). Although there is no such instance of overt war fought simply over water but this life sustaining resource has been an underlying factor in several armed conflicts in different regions. Sino-Indian bilateral relation has also been largely affected by such riparian rivalry which requires proper diplomatic interactions between them.

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INDIA'S LEAP FROM 'LOOK EAST' TO 'ACT EAST': A SUBTLE TWIST IN INDIA'S FOREIGN POLICY

ARCHITA GHOSE

Abstract : India's prolong effort towards promoting cordial economic and strategic ties with its Southeast Asian neighbouring countries has recently brought the nation at such a juncture that the nation's foreign policy posture is exposing its shift from Look East to Act East. India's present Prime Minister Narendra Modi, during the ASEAN-India Summit, which was held on 12th November, 2014 in Naypyidaw (Myanmar's capital), and later in his speech which he delivered at the East Asia Summit held on 13th November, 2014, signalled country's departure from the Look East policy to the Act East policy. As the Look East policy has been gradually losing its utility, so to give more impetus to all the projects and proposals which if implemented properly will strengthen bilateral and multilateral ties between India and its Southeast and East Asian neighbouring countries, Mr. Modi has brought the Act East policy in limelight. He is taking sincere initiative to welcome such a change in the nation's foreign policy stance to churn out more positive output out of the growing cordial ties, as well as, to put a check on any sort of inadequate measures which if kept unnoticed, China will surely take the advantage.

Key Words: connectivity, cooperation, economic, strategic, infrastructure, integration, investment, trade

Introduction

Look East¹ (Ram 2012: 65-66) policy of India has been widely recognised as a major corner-stone of the country's entire foreign policy posture. India's growing inclination towards this policy has not only paved the way towards the development of cordial economic and strategic ties with its Southeast and East Asian neighbours, but has also encouraged this Asian power to portray its pivotal role amidst the entire Asia-Pacific region. Although it is true that due to certain bungling diplomatic stance during the Cold War days, the very idea of Eastward engagement had lost its impetus. But since the initiation of the post-Cold war period, the hidden potentials and opportunities of gradual improvement in India's relationship with such neighbours had gradually begun to draw the attention of the policy makers, specially the advantages which the nation could nurture in the arena of economic development. Hence Mr. P.V. Narasimha Rao for the first time had brought in limelight this Look East policy² (Reddy 2005: xii), mainly to promote cordial economic and later on strategic partnership as well, which till date undoubtedly have been nurtured in a very fine way. Both Mr. A.B. Vajpayee and Dr.

Manmohan Singh, just like Mr. Rao had taken sincere initiative to promote further economic, functional, diplomatic and strategic cooperation between India and its Southeast and East Asian neighbouring countries, and even to showcase nation's ability of playing a decisive role in the Asia-Pacific's economic colonnade. But unfortunately, apart from the accomplishment of this policy stance due to which today, India can be easily identified as an active participant of many multilateral forum as well as of those integration programmes which have been arranged for promoting regional cooperation, jointly with ASEAN, the Look East policy has been gradually losing its utility. So, to continue the prolonged venture of promoting cordial economic and strategic ties with its Southeast and East Asian neighbouring countries, and to give more impetus to all the projects and proposals being crafted for strengthening bilateral and multilateral ties, India's foreign policy posture has recently exposed its shift from Look East to Act East under the mentorship of Prime Minister Narendra Modi.

The aim of the article is to highlight the drawbacks of the Look East policy which triggered country's departure from the Look East policy to the Act East policy. The very twist in the country's foreign policy, Mr. Modi's sincere initiative to welcome a change in the nation's foreign policy stance to churn out more positive output, out of the growing cordial ties is being discussed.

Shortcomings of the Look East Policy

This Look East policy apparently has indeed succeeded in developing cordial ties between India and its Southeast and East Asian neighbouring countries and even to uplift a distinct image as a strong Asian power amidst the entire Asia-Pacific region. But in spite of such successful venture, this policy has failed to receive the merit which it actually deserves. Several reasons, thus, can be marked as the drawbacks of this policy. Firstly, though Mr. P.V. Narasimha Rao had propounded this policy of active engagement with Southeast and East Asian nations with the hope to turn India into a major designer of the regional architecture, Mr. A.B. Vajpayee and Dr. Manmohan Singh somehow had failed to expose the true potentials of this Look East policy. This is because, they couldn't take necessary measures which were essential for implementing pacts, agreements especially FTAs and proposals at proper time. Due to this reason India-ASEAN trade suffered badly and as its consequence, economic partnership couldn't expose much impressive output. In the fiscal year of 2013-2014, India-ASEAN trade thus was recorded as US \$74,681.0 million (Annual Report : 2013-14), whereas the record of China-ASEAN trade had reached US \$318.6 billion in 2012, and will very soon reach the level of US \$500 billion.

Secondly, India with the aid of its Look East stance had got engaged with Myanmar to boost up energy cooperation under their stewardship (ONGC Videsh Ltd. & GAIL engaged in oil and gas extraction works in Rakhine state in 2007; India achieved 100%

stake in the exploration of deep sea blocks AD -2, AD -3 & AD -9; won the deal of conducting Tamanthi Hydro-electricity project to link up ports on India's East and Sittwe Port), but major deals were won by China. India had failed to utilise its Look East stance to develop strong connection with Myanmar at the most crucial time when China was applying its diplomatic trick.

Thirdly, the leaders of this country were disinterested towards the development of the Northeastern part of the country in spite of the fact that the success of this policy also depends on close engagement with all the Northeastern state, which together acts as the only corridor connecting India with Southeast Asian region through Myanmar.

Fourthly, India also failed to shape up the design of the region's overall strategic architecture, due to lack of strategic vision of its role in the entire Asia-Pacific region, in spite of securing membership of ARF³ (Sridharan 2001 : 74) and several regional forums. Since the Tenth Anniversary of ASEAN-India Summit level partnership, India has turned into a strategic partner of one of the biggest regional colonnade, but this Look East policy stance failed to chart out the future direction of India's role.

Finally, the reason which can be marked as an important drawback is that, under the mentorship of our previous premiers, though lots of pacts and agreements had been signed, unfortunately none of them have succeeded to implement the output. Most of them remained confined to mere paper work. Hence, all such shortcomings have clearly signalled the very urgency of implementing new measures and proposals to rejuvenate India's Look East policy.

Shift from Look East to Act East

The very journey of rejuvenating this Look East policy can be completed not only by linking up the intertwining economies of the region and by following a common destiny of building "an arc of prosperity" (Chand 2014), but also by "acknowledging the need to 'act' or to 'get one's act together', to move ahead on the implementation of projects and proposals that have been initiated in principle but are lagging in practice" (Sundararaman 2015: 9). So, India's present Prime Minister Narendra Modi, during the 12th India-ASEAN Summit which was held on 12th November, 2014 in Naypyidaw (Myanmar's capital), and later in his speech that he delivered at the ninth East Asia Summit, held on 13th November, 2014 (Speeches & Statements, 2014), clearly signalled the initiation of the Act East policy. Mr. Narendra Modi has realised that to frame up the design of a strong integrated region and to cruise along the highest trajectory of such foreign policy stance, India's foreign policy posture needs to showcase a major shift from Look East to Act East. Thus during the Summit, Mr. Modi not only expressed keen interest "on expediting the economic agenda with Southeast Asian countries, tapping them for greater investment – especially in the infrastructure sector – also driven by connecting trade points in the region" (Jacob 2014), but also in his opening statement,

stated that – “A new era of economic development, industrialisation and trade has begun in India. Externally, India’s ‘Look East Policy’ has become ‘Act East Policy’” (Speeches & Statements, 2014).

Act East Policy

Prime Minister Narendra Modi has put forward sincere initiative to welcome such a change in the nation’s foreign policy stance and has constantly put emphasis on implementing such innovative kind of diplomacy because the very objective of Act East Policy is to promote economic cooperation, cultural ties and to develop strategic relationship with countries in the entire Asia-Pacific region by encouraging continuous engagement at bilateral, regional and multilateral levels. Since the day Mr. Modi came to power, his motto has been - to churn out more positive output out of the growing cordial ties and closer partnership with regional and multilateral organisation such as - ASEAN, ARF, EAS, ACD, MCG, IORA, etc. in order to encourage economic growth and to establish a secure as well as peaceful regional trading system. To strengthen cooperation in the strategic as well as socio-cultural domain, Mr. Modi has announced the initiation of the Act East policy in order to showcase diplomatic stance. The ASEAN-India Plan of Action for the period 2016-20, which has been adopted in August 2015, clearly identified “concrete initiatives and areas of cooperation along the three pillars of political-security, economic and socio-cultural...” (Press Brief, 2015).

Mr. Modi is strongly advocating his new policy stance because this kind of diplomacy will surely encourage cooperation along the above mentioned three domains. Therefore, this article will highlight the twists or the changes which have been brought in these areas. Undoubtedly, economic development ranks top in the list of priority while implementing new policies. For this reason the External Affairs Minister Sushma Swaraj, at the end of 2014 clearly stated in one of her speech in the Parliament that – “Prime Minister has consistently advocated a proactive and innovative approach to foreign policy that is aligned with our Government’s primary goal of accelerating national economic development. India needs access to capital, technology, resources, energy, markets and skills, a secure environment, a peaceful neighbourhood and stable global trading system” (Mohan 2015). Therefore, this article will highlight the economic dimension of this Act East policy.

Economic Dimension of the Act East Policy

Economic growth and development, being the main impetus behind the leap from Look East to Act East, has consistently influenced the India-ASEAN relationship and encouraged both sides to add immense momentum to their partnership. Thus as a consequence, not only “India-ASEAN ties have entered a new high-speed phase” but

“with the institutional framework in place, the two sides are now confident of scaling the India-ASEAN trade to US \$100 billion by 2015 and double the volume by 2022” (Chand 2014).

Undoubtedly, the predecessors of Mr. Narendra Modi had failed to realise the full potential of India's partnership with its neighbouring Southeast and East Asian countries. It is the Modi Government which has succeeded to showcase the agenda of economic development, capacity building and of enhancing people-to-people linkages, mainly before all the ASEAN member countries and even before the East Asian nations as well as the Asia-Pacific countries in a perfect way, through this Act East policy. So, at the inaugural programme of Indian Mission to ASEAN which was arranged on 23rd April, 2015, the External Affairs Minister stated in her speech, that – “ASEAN lies at the core of India's Act East Policy and at the centre of our dream of an Asian century. We cherish the deep and abiding historical and civilisational links that anchor our relationship. At the same time, through our Act East Policy, we are focussing on reorienting our partnership in the 21st century to make it more pragmatic, action driven and result oriented. We are committed to intensifying our cooperation in security, trade, investment, connectivity, capacity-building and strengthening people-to-people linkages” (Speeches & Statements, 2015).

Though ASEAN comprises of “several vibrant export-oriented middle-income economies” (Palit 2014), due to lack of proper initiatives India's trade with this regional conglomeration did not improve much. In spite of several MoUs, pacts and agreements, the share of bilateral trade between India and ASEAN has been found to be very poor, as trade with ASEAN is only 10% of India's total trade, and India holds only 3% share of ASEAN's total trade. According to the statistics provided by the Annual Reports (2012-2013 to 2014-2015 April-October) the facts which have been revealed are as follows.

Table : 1

ASEAN's share in India's total trade

Year	Export	Import	Total trade
2012-2013	US \$33,008.31million (10.99%)	US \$42,866.36 million (8.74%)	US \$75,874.67 million
2013-2014	US \$33,181.55 million (10.61%)	US \$41,499.46 million (9.22%)	US \$74,681.0 million
2014-2015 (April-October)(P)	US \$18,006.26 million (9.68%)	US \$26,530.03 million (9.71%)	US \$44,536.29 million

Source: This table has been prepared on the basis of data collected from Annual Reports (2012-2013 to 2014-2015 April-October) of Ministry of Commerce & Industry, Government of India, New Delhi.

These above given facts indicate that the total amount of India-ASEAN trade is decreasing, and even ASEAN's share in terms of import is slowly increasing, whereas the amount of export is gradually decreasing. Undoubtedly, as such records are not at all very satisfactory because other Asian powers, particularly China holds a much more brilliant record (China-ASEAN trade increased from US \$280.4 billion in 2011 to US \$318.6 billion in 2012, to US \$480.39 billion in 2014 and has reached US \$500 billion by 2015), so to boost up trade as well as investment, the Modi Government has already begun to take special care to bring into force the FTA in Services and Investment from the month of July, 2015.

Although, the former Premiers of the country had signed various agreements, including India-ASEAN FTA in goods, bilateral trade deals with Malaysia, Thailand and Singapore, and tried to showcase them as prominent examples of growing economic engagement between India and ASEAN, the fact is that, all these gradually have turned into examples of inadequate attempt towards engaging India with the region. Trade with the members of this regional conglomeration (ASEAN) couldn't flourish properly because, "India's trade negotiations with Southeast Asia never took into account structural realities. Pushing manufactured exports into ASEAN markets requires Indian producers to be able to import cheap inputs from the region. But protective demands from domestic producers did not let that happen. As a result, exports have hardly flourished through the ASEAN FTA" (Palit 2014). So, the newly formed Modi Government is trying hard to put FTA in Services and Investment into action in order to boost up bilateral trade and investment and the ASEAN-India Trade Negotiating Committee has been given the responsibility of reviewing the ASEAN-India Trade in Goods Agreement.

Besides, Mr. Modi is also taking initiative to make remarkable progress regarding the very issue of RCEP⁴ (Mishra 2014:7) which includes ASEAN and its six dialogue partners, as that will ensure positive outcome of FTAs in Goods and Services. Such efforts and initiatives, thus have been clearly mentioned in the speech delivered by Smt. Sushma Swaraj at the inauguration of Indian Mission to ASEAN, as she stated – "As regards economic cooperation, I am happy to inform that we have just ratified the ASEAN-India trade-in-Services and Investment Agreements, signed last year. Some ASEAN Member states have already ratified the Agreements. I will urge the rest of the Member states also to complete their respective domestic internal processes at the earliest, paving the way for the entry into force of both the Agreements later this year. This will enable us to harness the huge potential for mutual investment as well as to realise accelerated trade growth. We are committed to engaging ourselves in constructive discussions on the Regional Comprehensive Partnership, which involves ASEAN and its six dialogue partners to ensure its early fruition with a balanced outcome in goods and services"(Speeches & Statements 2015).

Moreover, Mr. Narendra Modi has also begun to express his deep interest in enhancing economic cooperation with CLMV, as several sectors of these Southeast Asian countries can act as adequate impetus behind encouraging trade and investment up to an impressive level between India and the entire Southeast Asian region. As Shri Rajiv Kher, Commerce Secretary has rightly observed that ample scope to enhance trade relations is very much present with Myanmar, Cambodia and Laos, because it is only Vietnam that holds the maximum share of the India's trade. So as part of the Act East policy posture it has now become very clear that to boost up economic growth, Indian industry will have to reach out to markets of these countries. Smt. Nirmala Sitharaman, the Minister of State for Commerce & Industry, while delivering her keynote address at the second India-CLMV Business Conclave in New Delhi on 10th December, 2014, said that – “the Government of India has accorded high priority to economic engagements with the four countries, and is working towards establishing physical connectivity with the region”(Press Releases 2014).

Strategic Dimension of the Act East Policy

The strategic dimension of this new policy stance also demands serious attention. Since the last two decades, India has opted for several initiatives to develop cordial strategic ties with its Southeast and East Asian neighbouring countries. As a result, its strategic partnership with ASEAN as a whole, has churned out impressive outcome. But it has failed to spread its impact as a strong strategic power amidst the broader Asia-Pacific region. Unlike other countries like – China, Australia and Japan, India has failed to showcase itself as a major determinant of the entire security dynamics of the region only due to its inadequate initiatives and achievements. So, Mr. Narendra Modi is planning to utilise the Act East policy not only to provide impetus to Eastward engagement of India, or to boost up its defence capabilities and production, but to encourage people-to-people contacts as well as strategic partnership with all the countries of the region, particularly with Vietnam, Indonesia, Singapore and Japan, because this Asian power now aims “to become a benign ‘power of consequence’” (Mishra 2014: 12).

Apart from paying attention to trade and investment, India is trying to strengthen strategic cooperation further, in order to combat piracy and terrorism. As all the Southeast and East Asian nations are very much eager to deal with such transnational issues by joining hands with India, so this Asian power is actively participating in all the East Asia Summit level processes, as well as in the programmes arranged by the ARF. Undoubtedly, challenges like – drug trafficking, money laundering, arms smuggling, extremism and terrorism are continuously increasing, day by day. Thus, to maintain maritime security, to strengthen partnership, to combat terrorism and extremism and to promote connectivity

within the broader Asia-Pacific region, the Modi Government by paving the path of the Act East policy, is trying to motivate all the nations to follow the international laws and norms. This will surely ensure peace and stability even in the South China Sea area and encourage integration in the broader Asia-Pacific region. Hence, at the ninth East Asia Summit, held in Naypyidaw, Myanmar on 13th November, 2014, Prime Minister made the following remarks – “In a world of inter-dependence and globalisation, there is no option but to follow international laws and norms. This also applies to maritime security. challenges of terrorism and extremism have increased. There is close link with drug trafficking, arms smuggling and money laundering. We support the East Asia Summit Declaration on the Islamic State. At the same time, comprehensive response against terrorism requires a genuinely international partnership against all terrorism. Those who believe in humanity must come together. India has great confidence in Asian centrality and leadership in pursuing that goal” (Speeches & Statements 2014). Later at the end of 2015, the Minister of State for the external Affairs Gen. Dr. V. K. Singh (Retd.), in a reply to a question in Lok Sabha put emphasis on Mr. Modi’s stand, and stated – “we have increasing convergence on security interests with key partners both in bilateral and multilateral format. Closer cooperation in combating terrorism, collaborating for peace and stability in the region and promotion of maritime security based on international norms and laws are being pursued” (Press Brief, 2015).

Besides, as the growing strategic cooperation surely turns out as “an anchor for peace, stability and prosperity in the region as also globally”(Chand 2014), so India has even begun to lay emphasis on “the ASEAN Defence Ministers’ Meeting Plus, and the Expanded ASEAN Maritime Forum”⁵ (Chand 2014).

Role of China Factor behind the shift

As Mr. Modi is trying to churn out much more positive output out of the growing cordial ties in coming future, he has brought the Act East policy in limelight even to put a check on any kind of inadequate measures which if kept unnoticed, China will surely take the advantage. Apart from all sorts of economic and strategic incentives, China itself has indeed played the role of a major or rather, decisive kind of incentive behind scaling up Look East policy to Act East policy because India is trying to strengthen its feet of clay in the soil of such a region which is China’s zone of dominance. Though it is true that these two Asian powers have indeed strengthened their partnership, but it has been really difficult for China to accept such gradual enhancement of bilateral and multilateral ties between India and its neighbouring Southeast and East Asian as well as other Asia-Pacific countries. Thus as its consequence, China has not only adopted encirclement strategies to contain India’s advancement, but has recently taken an initiative known as

MSR (Tiezzi 2014), which has appeared as China's strategy to spread its dominance in the Indian Ocean region. China, being the most efficient Asian maritime power is giving offers to friendly countries of this region like – Pakistan, Sri Lanka, Bangladesh and even Maldives to build maritime infrastructure, apparently to promote economic growth and to guarantee food and energy security. But the real intention behind framing up of such an idea i.e., MSR is to strengthen the bases which will help China to conduct its naval operations in this Indian Ocean region in coming future and to encircle India further. Thus, in reply India has not only come up with the Act East policy to strengthen its partnership with all the ASEAN member countries and even the East Asian and the Asia-Pacific countries, or to become one of the major impetus behind regional integration and prosperity, but has also evolved a project known as 'Mausam' to revive the age-old ties which it enjoys with the neighbouring nations located in this Indian Ocean region. Besides, this Asian power has now even begun to think of framing up policies which just like China will help this Asian power to "develop maritime infrastructure, offshore resources and exploit these on a sustainable basis"(Sakhuja 2015: 18) in this part of the continent, as these are "high on the current Government's agenda" (Sakhuja 2015: 18).

Exposition of other components of the Act East Policy

Apart from economic and strategic factors, some other decisive components are present which can easily highlight the subtle twist in the foreign policy stance of India. Development of infrastructure has undoubtedly turned out as one such major component of this policy. So, this very issue surely needs some attention because to unlock economic potentials as well as to promote connectivity and integration, which are the main mantras of this policy, development of infrastructure is very essential. Although several projects have already been planned like – Chennai-Dawei Sea Port Project, India-Myanmar-Thailand Trilateral Highway and Kaladan Multi-Modal Transit Transport Project which will connect Sitwe (a port of Myanmar) to the border of Mizoram, Rhi-Tiddim Road Project, Border Haats, etc. but no such encouraging progress has become visible yet. Hence, the new Government is trying to conduct the projects more efficiently in order to reach the goal set by the Act East policy. Recently, Tamu-Kalewa-Kalemyo sector of the Trilateral Highway project has progressed well and hopefully the entire project will be completed by 2016.

Moreover, India under the stewardship of Mr. Narendra Modi is adopting several other measures which are as follows –

- India is trying to conclude the negotiations for an ASEAN-India Transit Transport Agreement by 2015.
- It is supporting the very ideas of extending the Trilateral Highway to Cambodia, Laos and Vietnam, linking the highway with ports located in the ASEAN member countries and of integrating it with SEZ.

- This South Asian country is even trying to work with the Government of Myanmar on a project to set up a rail link along this highway.
- It is planning to establish much more strong maritime connectivity in Northern Bay of Bengal to develop further shipping service with Myanmar, which started in October, 2014.
- It is holding discussions to create concrete framework for easier movement of goods and people, as that will ensure the protection of national interests.
- What is more, India is trying to encourage cooperation to develop sectors like – education, health centres, media, power, etc. in the axis which lies in the surrounding areas of such projects.

Thus to highlight such component and the importance of all such measures, External Affairs Minister Smt. Sushma Swaraj during the inaugural ceremony of Indian Mission to ASEAN on 23rd April 2015, stated that – “We are simultaneously endeavouring to see how we can transform our corridors of connectivity into corridors of economic cooperation. Fostering people-to-people linkages remains at the heart of India’s engagement with ASEAN” (Speeches & Statements 2015).

Now, as Myanmar has appeared to be an intrinsic part of India’s venture of promoting connectivity and regional integration through several infrastructural development projects as well as programmes, the Modi Government has highlighted the importance of gradual improvement of India’s relationship with Myanmar as another vital component of the Act East policy. India has not only planned to upgrade trade, banking service, training institutes in Yangon; to provide training to officials of Myanmar on issues related to international trade and WTO; and to support the shipping service between the two countries, in order to improve the bilateral trade, but has even agreed to follow the options available for investment in Myanmar which she has planned to showcase during the next Joint Trade and Investment Forum in Chennai (Press Releases 2015). Furthermore, both the countries now have realised that they possess the vigour of transforming the “connectivity corridors into development corridors” (Seshadri 2014), which is one of the major aspects of this Act East policy. So, both the nations have agreed to establish a concrete mechanism in order to reassess the improvement of all the vital connectivity projects, mainly – the Trilateral Highway project, Rhi-Tiddim road project and the Kaladan Multimodal Transit Transport project.

Moreover, the issues related to India’s Northeastern region, together, has also been identified as a vital component of this policy because such issues will have to be dealt with in a proper way in order to prove such stance of India’s foreign policy a fruitful one. It is very unfortunate that no such initiative had ever been taken to improve the

overall condition of the Northeastern states or to connect it with the rest of the country properly through air, road and rail, except Kolkata and Guwahati. But, as Myanmar is the gateway of India to Southeast Asia, and the entire Northeastern region of India is the only corridor connecting it to Myanmar, thus it has now become very important for the Government to take necessary actions which will ensure intra-regional development and connectivity in this part of the country. Because then only India will be able to establish its connectivity with Southeast Asia and to design an institutional framework for encouraging economic partnership between India and Southeast Asia, through Northeastern region (including Arunachal Pradesh) and Myanmar. It is very much evident that this is a major impetus of this Act East policy(Kumar 2015). Hence, a prominent twist in the foreign policy posture has become visible as the Northeastern part of India has now turned out to be a priority of the Act East Policy. Several plans at bilateral and regional levels have been put forth to develop and strengthen connectivity of Northeast with the ASEAN region through people-to-people contacts, trade, culture, as well as physical infrastructure like - road, airport, telecommunication, power, etc.

Enhancement of ties with East Asian countries

Undoubtedly, under the expert guidance of Mr. Narendra Modi, the overall economic condition of the country has improved a lot. India has begun to showcase its economic strength and interest in the region in a much better way through its Act East policy. So, that has led to the deeper enhancement of ties with the East Asian countries, which also marks the prominent change in the foreign policy posture of India, since its leap from Look East to Act East. Though it is true that since the initiation of the Move East phase India's relationship with such neighbouring countries has begun to improve, but under the stewardship of Mr. Modi such relationship has flourished a lot. Japan, China, South Korea and even Australia have begun to invest money for the modernisation of physical infrastructure of India. Japan's Premier Shinzo Abe has already offered Mr. Modi US \$35 billion of aid and investment for the next five years; Xi Jinping, China's President has promised to make an investment of US \$20 billion; both China and Japan are planning to construct trans-border transport corridors to strengthen connectivity between India and East Asia; Beijing is trying to include India in the BCIM⁶ corridor project; and Tokyo is taking initiatives to improve road connection in the Northeastern region of India as well as to develop maritime corridors to connect India with Southeast Asia. Besides, as the Modi Government is paying attention towards the revival of civilisational and cultural bonds, thus both Mr. Modi and Smt. Sushma Swaraj are trying to promote India's soft power in all the Southeast and East Asian nations, including Fiji (Mohan 2015).

Conclusion

India has always tried to portray an image of a responsible and strong power by framing several economic and strategic measures. But it has failed to turn out as a benign power of consequence like the United States, Japan or China, because it couldn't play its cards properly. However, with the help of Make in India crusade and this Act East policy, India will surely succeed to remove all sorts of impediments in its economic and strategic connection which it shares with the region. Today, India will have to implement all kind of proposals and materialise all sort of agenda so that this Act East policy can gain credibility throughout Asia.

Undoubtedly, in the last two years, some remarkable changes have been noticed - as this policy unlike its predecessor i.e., Look East policy, has not only focussed on economic ties, but has put more impetus to India's overall relationship with ASEAN. This has resulted into a strong multi-faceted relationship encompassing economic, political, strategic and security ties. To revive the vitality all the top leaders of the country have paid visit to almost all the member countries of ASEAN. India has succeeded in promoting its ties with countries beyond ASEAN like – Japan, South Korea, Australia, Fiji, Mongolia and other Pacific Island countries. In the coming years, more concrete measures will have to be put into action in order to promote peace and prosperity in the region and the Government will have to give priority to the progress of sectors like – civilian nuclear cooperation, innovation, technology transfer and defence (Sajjanhar 2016). As it has been mentioned in the 'introduction' of this article that the drawbacks of the Look East policy have triggered country's departure from the Look East policy to the Act East policy, so it can be referred that with this twist in the country's foreign policy, Mr. Modi will surely succeed to implement such measures and to churn out more positive output, out of the growing cordial bilateral and multilateral ties in the coming days.

List of abbreviations

- ASEAN – Association of South East Asian Nations
- ARF – ASEAN Regional Forum
- ACD - Asia Cooperation Dialogue
- BCIM - Bangladesh–China–India–Myanmar Forum for Regional Cooperation
- CLMV – Cambodia, Laos, Myanmar and Vietnam
- EAS – East Asia Summit
- FTA – Free Trade Agreement
- IORA – Indian Ocean Rim Association
- MGC – Mekong Ganga Cooperation
- MSR – Maritime Silk Road
- RCEP – Regional Comprehensive Economic Partnership
- SEZ – Special Economic Zone

Notes

- ¹ Mr. Amar Nath Ram (P.V. Narasimha Rao's Principal Secretary) and Mr. J.N. Dixit (Mr. Rao's Foreign Secretary) had crafted this Look East policy, and it was unveiled in the year 1994.
- ² In the year 1994, the then Prime Minister P.V.Narasimha Rao had introduced Look East policy while delivering a lecture in Singapore, by stating that – "I have come to extend my hand of partnership in the venture – a partnership having so much in common, and so close already in multi-faceted cooperation."
- ³ A new vista of the India-ASEAN relationship had come in limelight when India had become a member of ARF, which is ASEAN's security arm, in the year 1996. Since then, the strategic partnership had begun to flourish through dialogue, legal frameworks and practical measures.
- ⁴ The six dialogue partners of RCEP are – India, China, Japan, South Korea, Australia and New Zealand. This RCEP is a device for India to get integrated with the economies of East Asia, as well as to gain access to the vast market of the region.
- ⁵ India had joined the ADMM Plus Forum during the month of December 2010 as a founder member. It includes – ASEAN defence ministers + defence ministers from India, China, South Korea, Japan, Australia, New Zealand, US and Russia.
- ⁶ BCIM or the Bangladesh–China–India–Myanmar Forum for Regional Cooperation is a sub-regional organisation of Asian countries which has been formed to reach at the goal of greater integration of trade and investment between these four countries.

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PERIOD OF CONSTRUCTION : SINO-INDIAN BILATERAL TRADE RELATIONS FROM 1991 TO 1995

ANIRBAN GHOSH

Abstract : Sino-Indian bilateral trade had resumed in 1977 after a gap of almost two decades and it took another ten years to revive the actual potential. Two Governments were sincere to develop a stable trade and economic relations and had adopted various promotional policies. The period has been marked for the signing of annual trade protocols, mutual trade visits, identification of export-import goods, resumption of trade consulates in Shanghai and Bombay, border trade, joint ventures, Memorandum of Understandings, trade agreements development of private ownership etc. From this period onward, trade and economy had become another important pillar of bilateral relations and in 1995 the volume of Sino-Indian bilateral trade had crossed one billion US dollar mark. The present article will explore the successful pattern of Sino-Indian bilateral trade from 1991 to 1995 and the role played by the two Governments for promoting trade and economy as it remains successful even after two decades.

Keywords : government, policy, bilateral, trade protocols, institutional, border trade

Introduction

The volume of Sino-Indian bilateral trade was very low in the beginning of 1990 but both sides adopted various policies which became successful in the next decade. Bilateral relations between India and China faced several ups and downs in the nineteen nineties. Trade and economic relations were stopped between the two countries after 1962 and resumed in 1977. Due to boundary disputes and the differences in political opinion, the volume of Sino-Indian bilateral trade and commercial exchanges were very low till 1990. After 1991, increase in bilateral trade volume has become an important factor and by the end of the last century both nations became each other's principal trade partner. Therefore, the year between 1991 and 1995 has been marked for adoption of several fundamental policies for promoting bilateral trade which actually resulted in increase in volumes, mutual exchanges and people-to-people contacts. In fact, increase in the volume of bilateral trade created expectations among people of the two countries to resolve existing boundary disputes also. During this period, both nations developed high-level mutual visits and ministerial-level dialogues, signed several agreements, Memorandum of Understandings and Protocols, organized seminars, exhibitions, workshops etc. For these

reasons, the period may be regarded as phase of construction through which mutual understandings increased. The entire discussion can be divided in following sections.

- I. Bilateral Trade Policy adopted by the Two Countries
- II. Impact on Bilateral Trade Relations
- III. Sector Specific Areas of Cooperation
- IV. Bilateral Meetings and Visits to Promote Trade
- V. Resumption of Bilateral Border Trade
- VI. Trade Fairs, Exhibitions and Seminars
- VII. Conclusion

I. Bilateral Trade Policy Adopted by the Two Countries

The relations between India and China had started improving slowly after the resumption of bilateral relations in 1976. In the nineteen eighties, some remarkable steps were taken to normalize the bilateral relations. The visits of Indian External Affairs Minister Shri Atal Bihari Vajpayee to China in 1979 (12 – 18 February), Chinese Foreign Minister Huang Hua to India in 1981 (26 – 30 June), signing of trade agreement in 1984 (15 August) and visit of Indian Prime Minister Rajiv Gandhi to China in 1988 (19 – 23 December) helped both sides to create normal atmosphere. During the entire period of 1991 to 1995, fundamental changes had taken place in the bilateral relations which are as follows.

- 1) Increase of regular visits, by high-level leaders and continuance of political-level dialogue for maintaining peace and tranquility in the Sino-Indian boundary
- 2) Beginning of different mechanisms like minister-level, official-level meetings to resolve boundary dispute
- 3) Starting of dialogues on mutual co-operation in different sectors like trade, culture, sports, science and technology, finance, space, defense, education and so on
- 4) Signing of agreements, protocols, Memorandum of Understanding (MoU), etc.
- 5) To promote bilateral trade, several steps were taken like establishing institutional frameworks, co-operation between financial institutions, joint ventures for investment in the two countries, development of a communication network through various mediums, etc.¹

II. Impact on Bilateral Trade Relations

In the 1990s, the volume of bilateral trade was very low in comparison with size and economy of the two countries. Therefore, both sides felt the necessity to diversify the pattern of bilateral trade and identify new products. In the early years, exports and imports based mainly on primary products and manufacturing goods were less. Chinese

exports to India were mainly manufactured goods and Indian exports to China were mostly primary or raw materials. From 1991 to 1995, major export items from India to China included raw silk, beans, coal, chemicals, textile and light industrial products, machinery and electronics, food-stuffs, cooking coal and dyestuffs etc. and major import items from China to India covered iron ore, chemical materials, newsprint, silk yarn, agricultural products, etc.² In 1991, 1992 and 1993, trade balance was in favour of India and India became top trade partner of China in South Asia. But from 1994 onward, China got the advantage of trade balance and this became major issue in the next few years. There were few issues which had created obstruction for expanding export and import for India's trading with China like tariff barriers, administrative controls over imports and exports, information gap, language barrier, infrastructure gap, etc. [See Table One, Sino – Indian Bilateral Trade (1991-1995)]

III. Sector Specific Areas of Cooperation

Audit : In January 1992, Supreme Audit Institutions of India and China signed a Memorandum of Understanding to continue the exchange and cooperation in the field of audit. The principal objective of signing the MOU was exchanging information and literature on audit, organising bilateral seminars on audit theory and methodology in selected areas, participating in training programmes, carrying out mutual visits, study tours, etc.³

Agriculture: In April 1992, India and China signed Memorandum of Understanding (MoU) on agricultural cooperation for the next 5 years. The area of cooperation included exchange of information, scientific materials equipment and germ plasm, experts' visits and rice, soyabean and sugarcane breeding, conducting training programmes etc. Agricultural experts of the two countries also agreed to formulate work plan on bilateral agro-technological cooperative projects in 1992 and 1993.⁴

Avoidance of Double Taxation: In July 1994, an agreement was signed by the two countries regarding avoidance of double taxation and prevention of fiscal evasion with respect to taxes on income in New Delhi. The Agreement provided rates of taxation lower than the domestic rates, in respect of income from transfer of technology and investment. The Agreement also had provisions for assisting the tax payers in resolving tax disputes and exchange of information for preventing tax evasion.⁵

Health: In September 1994, a Memorandum of Understanding (MoU) on co-operation in Health was signed for setting up a working group on co-operation in the respective field. Both sides agreed to cooperate in the field of traditional medicines including yoga and acupuncture, major infectious diseases like parasitology, maternal and child health care and family planning, etc.

Iron and Steel: In July, 1994, Mr. Wu Xichun, Vice Minister, Ministry of Metallurgical Industry of China visited India and held discussions on several issues of the steel sector. Both sides agreed to set up Working Groups to cover the following areas:

- i) Steel Sector
- ii) Iron Ore and Manganese Ore
- iii) Imports and Exports of Steel Products⁶

In 1995, a MoU on iron and steel was signed to facilitate co-operation in mining, transfer of technology and scientific and technological research.

Coal: In December 1994, a Protocol on Co-operation in Coal had been signed between India and China. Both sides agreed to co-operate on long term basis to explore number of new areas covering long wall technology, development of spares, construction of coal washeries, opening cast mines, etc.⁷ On 21st September 1995, a meeting of the Indo-China, Task Force on Coal was held in Beijing. The task force reviewed the progress of the on-going projects undertaken by Coal India Limited (CIL) and Singareni Collieries Company Limited (SCCL) in association with Chinese companies.⁸ In this respect, an agreement has been signed by CME China with Jessop & Company Limited for manufacturing of Longwall Mining Equipment.⁹

Finance: In October 1994, during the visit of Vice President K.R. Narayanan to China, a Memorandum of Understanding (MoU) on Banking was signed between the two countries. In consequence, the State Bank of India (SBI) opened a representative office at Shanghai on 15 August 1997 and became the first Indian Bank to open a Representative Office in China. (See Table - 2, Trade Protocols / Memoranda of Understanding (MOU) signed between India and China.)

Institutional Framework: In the beginning of 1990s, several measures were taken by the two Governments to promote bilateral trade and economic relations in the right directions. Two Governments started mutual exchange programmes through establishment of Joint Economic Group on Economic Relations and Trade, Science and Technology (or JEG) and Joint Business Council (JBC).

The unique among these initiatives was founding of Institutional Framework through the establishment of the India-China Joint Economic Group on Economic Relations and Trade, Science and Technology (or JEG) during the visit of the former Indian Prime Minister Rajiv Gandhi in December 1988. JEG is a ministerial-level dialogue mechanism where usually meetings are chaired by Indian Minister for Commerce and Industry and the Chinese Minister for Foreign Trade and Economic Co-operation. The JEG worked for promoting mutual exchanges on economy, trade, science and technology between India and China. Till 1995, there had been five meetings through which bilateral trade had achieved smaller objectives by signing various trade protocols, mutual assistance programme in different sectors.

(See Table - 3, Schedule of India-China JEG Meetings.)

Another important decision to carry out institutional framework was the establishment of Joint Business Council (JBC) which is a non-governmental association of entrepreneurs of India and China. On February 1992, the First Meeting of the India-China Joint Business Council was held in New Delhi. The meeting highlighted the following issues.

- The need for raising the volume of bilateral trade, which was far below its potential at present.
- Bilateral trade hindered by lack of direct banking relations, poor transportation network and patchy communication facilities.
- CCPIT was willing to join hands with the Federation of Indian Chambers of Commerce and Industry (FICCI) and other agencies to do its utmost in promoting bilateral trade and economic ties.
- JBC could explore the possibility of adding new items in the trade basket.
- Technologies could be exchanged in metallurgy, chemicals, petrochemicals, land farming, high-yielding sugarcane varieties, food processing, sericulture and agricultural machinery.
- Joint ventures in the engineering sector could be explored. India and China could also bid for joint ventures in third countries.¹⁰

Resumption of Consulate Offices: On 7 December 1992, The Chinese Consulate General in Bombay was formally inaugurated by Mr Liao Hansheng. The agreement for reestablishment of Consulates General in Shanghai and Bombay had been signed during the visit of Chinese Premier Li Peng in December 1991 in India.

Trade Protocols: In February 1991, a Trade Protocol between India and China was signed in Beijing for the year 1991-1992. According to the documents both sides agreed to strengthen co-operation in the fields of economy, trade, science and technology.¹¹ In December 1991, another Trade Protocol for the calendar year 1992 was signed for providing for further expansion and diversification of trade between the two countries for the sake of mutual benefit. China agreed to import from India a number of items, including iron ore and chrome ore, tea, tobacco, chemicals, engineering products, jewels and processed diamonds and synthetic fibre and yarn. India also agreed to import newsprint, raw silk and silk yarn, some agricultural products, metals and minerals including cooking coal, chemicals and petroleum products etc. from China.¹²

Joint Venture: Followed by the increase of visits and exchanges of co-operation in different fields, joint ventures had also started in the 1990s. In 1992, an Orissa-based Mideast Steel Company and a Chinese steel manufacturer had entered an agreement to set up a joint venture plant. Slowly, the number of joint ventures had increased within few years in the field of coal, textiles, etc. In 1993, Indian Government had approved

several proposals for setting up Chinese joint ventures in India. By 1996, the number of joint ventures between India and China had reached fifty which included diversified fields like minerals, chemicals, pharmaceuticals, machinery, marine products, etc.¹³

IV. Bilateral Meetings and Visits to Promote Trade

Regular exchange of visits by Prime Ministers, Ministers, officers, traders and business offices helped both sides to develop mutual understanding. Leaders of the two countries felt to continue visits to reduce political tensions and hoped that the increasing dialogues would help the process of resolving existing bilateral issues.

Visit of Indian Delegations to China: Indian Foreign Minister Shri V. C. Shukla paid a visit to China during 1-6 February 1991, met with his Chinese counterpart Qian Qichen and discussed about restoring two Consulate offices respectively in Mumbai and Shanghai. Both sides also agreed to hold the third meeting of the Joint Working Group in June 1991 in Beijing.¹⁴

In February 1991, Indian Commerce Minister Mr. Subrahmanan Swamy had visited China. He had met his Chinese counterpart Mr. Li Lanqing and discussed the possibility of expanding bilateral economic and trade co-operation, etc. He also attended the second session of the Joint Group on Economic Relations & Trade and Science & Technology. During his trip to China, Mr. Swamy also met Chinese Vice Premier Mr. Wu Xueqian and discussed on promoting co-operation in the field of economy, science and technology. Mr. Swamy also met Mr. Song Jian, State Councilor and Minister in Charge of State Science and Technology Commission and exchanged views on scientific and technological co-operation between the two countries.¹⁵

In January 1993, Minister of State for Commerce P.J. Kurien visited China to attend 4th meeting of the Sino-Indian Joint Economic and Trade Group. Both sides discussed about opening another border trade point and increasing the volume of bilateral trade from the present level of US\$ 300 million. Mr. Kurien suggested Chinese companies to invest in the mining industry in India. Mr. Li Lanqing, Chinese Minister of Foreign Economic Relations and Trade urged Indian Minister to grant more favourable treatment to border trade. Chinese Minister also urged companies from both sides to establish commercial offices. It was also informed that more and more Chinese foreign trade companies in the chemicals, metals, machinery and silk sectors are ready to discuss in detail business with their Indian counterparts.¹⁶

In June 1993, Indian Minister of Commerce and Deputy Chairman of Planning Commission Shri Pranab Mukherjee had visited China. During the meeting with his Chinese Counterpart, both sides discussed the need for closer co-operation between the planning commissions. India had agreed to supply iron ore for Shanghai's Steel Industry

as well as consultancy services for the sponge iron and steel sectors in Shanghai. Shri Mukherjee also stressed the possibility of establishing joint development project of iron ore mines in India for supply of raw material to the steel mills in Shanghai.¹⁷

During 28 June–2 July 1993, Shri Balram Singh Yadava, Minister of State in the Ministry of Mines, Government of India paid a visit to China. He met his Chinese counterpart Mr. Zhu Xun, Minister of Geology and Mineral Resources and discussed on the decision to set up joint ventures in both the countries as well as collaborate to set up joint ventures in other countries in the respective field.¹⁸

The visit of Prime Minister, Shri P. V. Narasimha Rao, to China in September 1993 reinforced the positive trend in bilateral relations. A positive development in bilateral trade was the approval given for the setting up of several Chinese joint ventures in India and the agreement on the establishment of the first-ever Indian joint venture in China. However, both sides recognized that the present level of bilateral economic interaction remained inadequate and the two countries agreed that both sides will make special efforts to expand economic co-operation. During the visit, four agreements had been signed on 7 September 1993 in Beijing between India and China which are as follows:

- i) Agreement on the Maintenance of Peace and Tranquility along the Line of Actual Control in the India-China Border Areas
- ii) Agreement on Environmental Co-operation
- iii) Protocol for Extension of Border Trade Across Shipkila Pass
- iv) Agreement on Radio and Television Co-operation¹⁹

In 1994, the Ministers of Agriculture, Human Resource Development and Health & Family Welfare visited China. The Ministers of State for Coal, Petroleum, Labour and the Deputy Minister for Culture also visited China. Indian Vice President Mr. K. R. Narayanan had visited China during 22-28 October of 1994. During his visit he had emphasised the need to further increase co-operation in economic and scientific-technological fields. In 1995, high-level visits from India to China had included Ministers of Home Affairs, Human Resource Development, Environment and Forests, Personnel and Textiles, etc.

Visit of Chinese Delegation to India: On March 1991, Vice Chairman of the Chinese Planning Commission, Mr. Gan Ziyu visited India and had exchanged views on bilateral trade and economic co-operation, particularly the scope for further expansion of mutual ties in various fields including joint ventures. Mr. Ziyu invited Indian enterprises to set up joint ventures in China, and added that India's expertise in the field of engineering consultancy would be of particular interest to China.²⁰

In December 1991, the Chinese Vice Minister for Aerospace Industries, Mr. Lie Juan visited India and had continued wide ranging discussions on mutual co-operation in the

field of communications between the Asian countries. During the talks, the Chinese Minister also expressed the desire to share the Indian experience of rural telecommunications.²¹

The visit of the Chinese Premier Mr Li Peng to India from 11 to 16 December, 1991 was a significant milestone in India-China relations. This was the first visit by a Chinese Premier to India in thirty one years. The visit was in return for the visit of former Prime Minister, Shri Rajiv Gandhi, to China in December 1988. He held wide-ranging talks with the Prime Minister and called on the President and the Vice President. Separate talks were held between the Foreign Ministers and the Commerce Ministers of the two countries. Major achievement of the visit was signing of various agreements like:

- i) Memorandum on the Resumption of bilateral Border Trade
- ii) Agreed Minutes of the Third Session of the India-China Joint Group on Economic Relations and Trade, Science & Technology
- iii) Trade Protocol between India and China for the calendar year 1992
- iv) India-China Consular Convention
- v) The Agreement on the Re-establishment of Consulates General based on the successful completion of discussions between the Ministry of External Affairs of India and the Ministry of Foreign Affairs of China

Both sides had agreed to encourage direct trade between the two countries in relation to the following.

- Co-operation in the field of trade, culture, science and technology, health, education, energy and agriculture
- Promoting the exchange of delegations in specific areas
- Encouraging respective trade organisations and traders to explore possibilities of promoting bilateral trade through various forms of trade and co-operation
- The Consular Convention which codifies the privileges and immunities to be enjoyed by the personnel working in the Consulates in each other's country
- Establishing Consulates in the premier commercial and industrial centres of India and China that will give an impetus to economic and trade relations between the two countries
- Activating the Aviation authorities on both sides to establish direct air links between India and China
- Holding a Festival of India in China and a Festival of China in India

In March 1992, a high level Chinese Delegation headed by Mr. Li Xiaoshi, Vice Minister, State Science and Technology Commission visited India and discussed the scope of co-operation in the field of agriculture and technology with Indian leaders. Both sides had identified scope of co-operation between the two countries in the fields of

mixed farming, organic waste re-cycling, pond microbiology, fish processing, fish genetic and marine fish stock assessment, etc.²²

In September 1992, Minister of State for Science & Technology Mr. MU Bangguo had led a delegation in India and met his Indian counterpart Mr. R. Kumarmangalam to explore co-operation in the field of Science & Technology. The Chinese side showed keen interest to have joint research and development ventures in the software technology and also in biotechnology particularly, bio-pesticides, horticulture, crops, bio-engineering etc.²³

In December 1993, Chinese Vice Premier, Mr Li Lanqing visited India and discussed on future programmes on functional exchanges based on the mutual benefit. In 1994 high-level political, trade and economic exchanges continued through the visit of Chinese Foreign Trade and Supervision Ministers to India. Other important visits to India were of Foreign Trade and Supervision Minister in 1994 and Chinese Labour, Education and Coal Ministers in 1995.

V. Resumption of Bilateral Border Trade

India and Tibet maintained age old cultural and trade relationship since ancient period. There were commercial, religious and cultural interactions among the native people of Himalayan region like Kashmir, Ladakh, Tibet, Nepal, Sikkim, Bhutan, Assam, etc. These exchanges were one of the basic pillars of the economy of the entire region. But the system suffered after 1950 and finally bilateral border trade between India and Tibet was stopped in 1962. Therefore, after the resumption of formal bilateral diplomatic relations in 1976, local people of these areas again demanded resumption of people-to-people contacts. First indication for resuming normal border trade relations was lifting of 16-year old ban on trade with Tibet by the two local Governments respectively, India and China.²⁴ The discussion on the resumption of border trade got momentum during the visit of Chinese Premier Li Peng to India from 11 to 16 December 1991. The visit was marked with the signing of five agreements including resumption of border trade. The memorandum was signed for initially allowing cross border trade across Uttar Pradesh (Pithoragarh) and Tibet (Pulan), across the Lipulekh Pass and the Memorandum would be valid for two years.²⁵

Trade through Lipulekh Pass (Gunji) and Taklakot (Pulan): Lipulekh (17,500 ft.) is a Himalayan Pass which connects the Kumaon region of Uttarakhand State in the Pithoragarh District with the Taklakot in Tibet. Since ancient times, the pass was used by many Hindu pilgrims for going to Kailash Mansarovar to visit Mount Kailash and Lake Mansarovar and later on it became traders' pass for going to Taklakot market in Tibet.

Border trade between India and China was formally resumed from 15 July 1992 through the proposed two land routes. It was decided by the two sides that trade will continue every year between 1 June to 30 September. To continue normal trade practice, Government of India had adopted several measures like establishing Customs Land

Station and Police immigration check post at Gunji, issuance of special travel passes to traders, opening of State Bank of India (SBI) branch in Gunji, etc. Although the volume of trade was low as per the expectation but the reopening of the Lipulekh route had made local people happy. The incident helped local cottage industry of woollen carpets and other wool-based products which were dependent mostly on products from Tibet. Indian traders went to Taklakot market with products like tea, coffee, tobacco, jaggery, cloth, wool, yak hides, tails, etc. The export items from Gunji to Pulan included gur, misri, tobacco, spices, pulse, farfar flour, coffee, vegetable oil/ghee and various miscellaneous consumable items. On the other hand, import items from Pulan to Gunji covered sheep wool, passam, sheep/goats, borax, yak tail, chhirbi (Butter) and raw silk and so on.²⁶

Trade between Namgya and Jiuba through Shipki Pass: The opening of border trade enthused both sides and they decided to open another trade point through Shipkila Pass. The decision was taken in the fifth meeting of the India-China Joint Working Group on the boundary question and Foreign Secretary - Vice Minister level consultations which were held in Beijing during 28 to 29 October 1992. However, the final decision of starting formal trade in July 1994 was taken in the 7th meeting of the India-China Joint Working Group on the Boundary Question and Foreign Secretary-Vice Foreign Minister level consultations which was held in Beijing during 6 to 7 July 1994.²⁷

Shipki La is a mountain pass with India-Tibet border which has been located in the Kinnaur District of the Himachal Pradesh. The resumption of border trade after a gap of 23 years had facilitated exchanges of goods between border inhabitants of the two countries and promoted local commerce and market development. It was decided to continue trade from 1 June to 30 November of every year. The Government of India had taken several measures like arranging traders' pass through the Department of Customs, setting up of a check post by the state police etc.²⁸ In the first year i.e. 1994 around hundred Indian traders were issued traders' pass and later on the annual average dropped to around thirty although no Chinese traders preferred Indian market in the beginning years.

Majority of export items from Shipki to Namgya include pulses, edible oils, cigarettes, cloth, sugar, milk powder, sewing machines, vegetables, agricultural implements, blankets, copper products, textiles, cycles, coffee, tea, barley, rice, flour, dry fruit, dry and fresh vegetables, vegetable oil, gur and misri, tobacco, snuff, cigarettes, canned food, agro-chemical, local herbs, dyes, spices, watches, shoes, kerosene oil, stationery, utensils, wheat, etc. Import items from Namgya to Shipki covered wool, sheep, pashmina, butter, cheese, shoes, crockery, horses, raw silk, goats, china clay, utensils, textiles (mostly readymade garments), etc. Top import commodities from Tibet to India include jackets, shoes, raincoats, umbrellas, thermos flasks and various types of crockery, Tibetan sheep and goat, etc.

India – China border trade through Tibet requires to be developed manifold for several purposes. Border trade can be helpful for reducing border tensions and be a useful tool for maintaining peace and tranquility along border. There is a huge interest in entire Arunachal Pradesh to start border trade including old Stilwell route and few other points. Government of India has started building road networks in entire northern and north-eastern India. There is also demand of easing traders' transit procedures, more banking networks, flexibility in identifying trade items, better custom systems, etc. Therefore, a systematic study is required to assess policy implementations behind the resumption of border trade, export-import items, banking, customs, transport and communication systems and so on. To promote border trade it is also required to organise trade fairs and seminars from time to time and encourage old traditional trade fairs.

VI. Trade Fairs, Exhibitions and Seminars

During this period, two Governments had taken several measures to continue mutual co-operation programmes of common interest like organising seminars, exhibitions, festivals, participation in each other's programmes etc. In June 1992, an exhibition on cottage industry of India, jointly organized by the Indian Government was held in New Delhi. The exhibition was mainly on South Indian handicrafts and other Indian traditional items.²⁹ Among the major policy making decisions taken during the visit of Chinese Premier Li Peng in December 1991 were organising Festival of China in India and Festival of India in China. Festival of China in India was held in India in December 1992 in six cities like New Delhi, Bombay, Calcutta, Madras and some other cities.³⁰ On the other hand, Festival of India had been organized in China during May-June 1994. The Festival covered a Science and Technology Exhibition in Shanghai Exhibition Centre.³¹ In November 1994, a large delegation of 24 companies from Shanghai had participated as exhibitors in the India International Trade Fair (IITF 1994) in New Delhi. The Chinese participation in the exhibition was the result of co-operation agreement signed between India China Chamber of Commerce and Industries (ICCCI) and the Shanghai Sub-Council of the CCPIT.

VII. Conclusion

During this period, several new initiatives were taken by the two sides like beginning of exchanging day-to-day information by industrial bodies, establishment of commercial sections of the Embassy and Consulate offices, publication of industry related literature, providing logistic support, founding business associations, etc. although higher tariff barriers, too much administrative controls by the respective Government offices, information gap due to language barriers became major concern to develop bilateral trade relations. From Indian side, export of primary commodities was more than sending

manufactured goods to China which was also a big problem. These incidents resulted in India's trade deficit over China, allegation of anti-dumping measures on principal export-import items, lack of consistency over understanding rules and regulations by the businessmen. Therefore, the following observations were made which was required to develop bilateral commercial relations in the twenty first century.

- i) A brief survey on the Chinese market is required by the Indian businessmen before reaching out on investments, joint ventures, export-import deals, etc.
- ii) Personal contact between businessmen is important through participation in trade promotion events like seminars, workshops, exhibitions, fairs, exchange of information, awareness on industry specific surveys, etc.
- iii) Opening of business representative offices in India as well as in China. Keeping up relationship between existing representative offices is also important.
- iv) Publication of trade literature in Hindi and other Indian languages besides English and Chinese is required.
- v) Entrepreneurs, traders, working personnel of both the nations require to know major languages like Chinese (Mandarin and Cantonese), Hindi, Bengali, Tamil, Gujarati, Punjabi, etc.
- vi) Organising regular meetings of business forums like the Joint Economic Group, Joint Business Council, etc. is necessary.
- vii) Creating brand awareness of Indian products among Chinese people is necessary.
- viii) Indian traders are also required to study the newsletters, literature and journals provided by the Embassy offices and other business chambers.
- ix) Indian businessmen need to explore new areas of business and increase interaction with Chinese provinces particularly in the south-western region like Yunnan, Sichuan, etc.
- x) Among India's export basket it is required to increase high-value products with reduced production costs.

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Appendix

Table 1 : Sino – Indian Bilateral Trade (1991-1995)

Year	Indian Imports (US\$ Million)	Indian Exports (US\$ Million)	Trade Volume (US\$ Million)	Trade Balance (in favour of India) (US\$ Million)
1991	144.48	120.33	264.81	-24.15
1992	158.44	180.1	338.54	+21.66
Growth	9.6%	49.6%	27.8%	
1993	259.16	416.57	675.73	+157.41
Growth	63.5%	131.3%	99.6%	
1994	573.00	322.00	894.00	-251.00
Growth	121%	-22.75%	32%	
1995	765.00	398.00	1,162.00	-367.00
Growth	34%	24%	29.9%	

Source: China Customs Statistics; Embassy of India in Beijing

Table 2: Trade Protocols / Memoranda of Understanding (MOU) signed between India and China (1991-1995)

February 1991: Signed Trade Protocol for the Calendar Year 1992
December 1991: Consular Convention between India and China
1992: Memorandum of Understanding (MOU) on exchange and cooperation on Audit
1992: Memorandum of Understanding on co-operation in Agriculture
January 1993: Trade protocol signed for the calendar year 1993
January 1993: Memorandum of Understanding (MOU) signed on co-operation in the Field of Geology and Mineral Resources
September 1993: Agreement signed on Radio and Television co-operation
November 1993: Protocol signed on organising “Festival of India in China”

June 1994: Trade Protocol signed for the year 1994-95
July 1994: Agreement signed for the Avoidance of Double Taxation and the Prevention of Fiscal Evasion with respect to Taxes on Income
October 1994: Memorandum of Understanding (MOU) for developing Banking Relations
October 1994: Memorandum of Understanding (MOU) on simplifying the Visa Procedures
1995: Memorandum of Understanding (MOU) on co-operation in Steel and Metallurgical Industry

Table 3: Schedule of India-China JEG Meetings

No.	Venue	Date of Meeting
First	New Delhi	18-20 September 1989
Second	Beijing	6 February 1991
Third	New Delhi	9 December 1991
Fourth	Beijing	4 January 1993
Fifth	New Delhi	13 June 1994

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THEORETICAL APPROACHES TO THE STUDY OF AGING FROM PSYCHOLOGICAL PERSPECTIVE

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Abstract : The aging process is of course a biological reality which has its own dynamic, largely beyond human control. However, it is also subject to the constructions on the basis of which each society makes sense of old age. Old age basically is the closing period of life span. There are many theories through which aging processes can be explained and psychological aspect is one of them. The aim of the present study is to highlight aging from psychological perspective through eastern and western theoretical approaches. In this study both classical and modern approaches are adopted. The viewpoints of two dimensions are also different. Classical theories describe the structural aspects of aging, whereas modern theories emphasize on how aged individuals adapt social and personality changes into their core frame of mental structure. Life is basically another name of struggle. From the moment of conception to the end of life the individual has to overcome different shades of psycho-social conflict and it depends on the way how society and culture influence the personality pattern of the individual and also how the individual perceives the world and how he/she finds the meaning of his/her existence. Level of activity and the nature of engagement are the two main dimensions through which one can enjoy the fragrance of successful aging. In modern scenario psychological modification strategies are also found to be prosperous in achieving the goal of well-being for the aged individuals.

Keywords : psycho-social, conflict, phenomenology, successful, personality, intervention

Introduction

The word 'life' is the mirror of the world in terms of both inner and outer aspects. The changes in the world be it objective or subjective, initiates new ripples in the life. The desire to have a life, the incidence of zygotic conceptions — the birth of a child, introduces so many changes in the ontogenic process for the given child that alterations in inner and outer realities are possible to a great extent in any moment. All these imply that a small word like 'life' is not a simple thing at all; it is pregnant with multidimensional facets to indicate or maintain a continuum of its own. The starting point of it is zygote formation in prenatal state, birth in the postnatal process, having its terminating point at death. Nothing is predictable in 'life', but the average functions present a norm. This norm pinpoints major life phases or periods being ornamented by distinct bio-behavioural growth/ developmental processes. Each major period has a landmark, revealing

psychological implications of various sorts. Hence, each deserves special attention and analysis. The focus of the present era is aging, being the second major developmental phase of life, the reason being available in the techno-medico advancements resulting in stretched longevity span. In the second half of life, how 'we,' the human beings of advanced world, are behaving and causing changes in the outer reality, has become a matter of concern to be analyzed and understood properly. Being accustomed with comparatively more negativities than the first half in terms of declined socio-biological and psychological components, what type of psychological problems are endangering our adjustment pattern, has proved to be an important issue in the specific parlance of 'gerontology'.

The Concept of Aging

The aging process is of course a biological reality which has its own dynamic, largely beyond human control. However, it is also subject to the constructions on the basis of which each society makes sense of old age. The age of 60 or 65, roughly equivalent to retirement ages in most developed countries is said to be the beginning of old age. In many parts of the developing world, chronological time has little or no importance in the meaning of old age. Other socially constructed meanings of age are more significant such as the roles assigned to older people; in some cases, it is the loss of roles accompanying the physical decline which is significant in defining old age. Thus, in contrast to the chronological milestones which mark life stages in the developed world, old age in many developing countries is seen to begin at the point when active contribution is no longer possible (Gorman 1999).

Age classification appeared to vary between countries and over time, reflecting, in many instances, social class differences or functional ability related to workforce; but more often than not, it hinted at a reflection of current political and economic situation. Many times the definition is linked to the retirement age, as has been mentioned before. This change in livelihood became the basis for the definition of old age which occurred between the ages of 45 and 55 years for women and between the ages of 55 and 75 years of men (Thane 1978).

While aging impacts on everyone and (virtually) everything in the society, politics and economy, its impact differs greatly by country and by policy-area. Aging is a pervasive phenomenon in that it affects everyone, not only the older parts of the population, and global in that it affects all regions of the world. As a result, aging has important implications for inter-generational, intra-generational and also international equity. The study of aging involves examining it from three perspectives, namely, individual aging, population aging and qualitative changes in ageing (OECD 1996).

As an individual approaches the life's last stage, the future holds a given outlook for many. They are termed as 'senior citizens' and 'chronologically gifted' and are respected for their values and knowledge. Older adults are an important, growing segment of the population. They are the survivors, at their highest level of maturity and thus they have much to teach us regarding their experiences during their turn in society's roles of power and responsibility of leadership. Their angle of acceptance is obvious in this matured age. They are the first to face a number of problems that may have been unrecognized and become dominant social and economic issues of the next half century. They can be the role models in terms of the values and practiced behaviour patterns.

Old age is synonymous with wisdom, values and a host of positive things that are desirable in a community. Changed norms of society can be appraised by them and people may feel accepted and relaxed.

Aging is not an obsession in India, and death itself not so final an event due to the belief in reincarnation. Death is taken in a more philosophical sense and with greater resignation and acceptance of fading away. We should try to help them to be peaceful in terms of having less pain at the end period of their life.

Age, aging and aged are the three words frequently used in gerontological discussion. Sometimes they are used interchangeably; sometimes they are used to argue for theoretical advances. Basically age, aging and aged are neither interchangeable nor mark of theoretical advancement. As work progresses towards a more sophisticated body of knowledge in gerontology, one must recognize that age, aging and aged are indeed three windows into the phenomena in the present concept highlighted in this paper.

Age: Theories about age are the theories about cultural and social phenomena. It has already been mentioned that the connections between the time and life course are variable on a cross-cultural and perhaps on intra-cultural basis. Generations, age classes, and staged life courses based on chronological norms are at least three ways in which age is understood. Each conceptualization has its causes and consequences for the people who define their lives through respective cultural models. Basically, this approach of psycho-gerontology falls within the psychology of age, which studies the age differences in behaviour by comparing groups of different ages in cross-sectional research. Productive research focuses on identifying the causes and consequences of the processes responsible for age-related differences.

Aging: Theories about aging are theories about living. These theories are organized around a life span perspective and life courses. The psychology of aging studies the behavioural patterns of change with age. This integrates both the psychology of age and the aged in longitudinal research. It also includes questions about aging and changes in

health and functionality, changes in participation in the division of labor, changes in family roles, cultural values etc.

Aged: Theories about age are theories of old age. It focuses on the later life, culminating age and aging. It is the realization that lives, life changes and the consequences of how age is understood are all culturally constructed. Historically, with industrialization and urbanization, old age has been defined as a problematic state. Old age is seen not only as a medical and economic problem but also as a social problem, especially in terms of social support and care-giving.

Theories about the aged become relevant for social policy, legislation and political action. In politics and policy there are winners and losers. Thus, any theory about old age must account for the diversity in the cultural contexts in which older adults who are classified as problematic are actually experiencing their old age. The reasons are straightforward: (1) is what we see as problematic really a problem? (2) Is there any strength in the context that can be improved or supported? (3) Are there any weaknesses that can be reduced? (4) Because old age is the culmination of aging, is there any way for preventing the future old from experiencing what is seen as problematic?

Time is not complex; time is elementary. Age, aging and the aged are a complicated part of the human experience because they are subject to cultural interpretations. Culture is always perplexing. As a design for living, culture is central to the way humans comprehend, negotiate and manipulate their natural and social worlds. Culture is not a property of the universe like space or time. Although theoretical unification and parsimony are scientific goals, culture and what happens in time may not be amenable.

Any theory explaining the age, aging and the aged is likely to be multifaceted and eclectic. At the same time, if one is trying to arrive at scientific explanations of age, aging and the aged, theory is an essential ingredient. Explicit theory is a tool that enables us to separate cultural inventions from more general explanations. Explicit hypotheses relating study variables in a specific way not only clarify our thinking about phenomena but lead to the appropriate methods for evaluation of relationships. The cost of relying on implicit theory is to potentially perpetuate 'home grown' cultural models as scientific generalizations.

In order to understand the manifold implications of such stretched life span in direct reality, we need to go through several dimensional achievements in different theoretical framework. Hence, the following fold delves with a detailed sketch of the theoretical perspectives of ageing from psychological perspectives.

Theories of Aging

Researchers in the field of aging have aimed to analyze adult aging and have formulated several theories which aim to explain the complexities embedded in aging process and its related changes.

It may be relevant here to discuss what a theory is. All scientific theories have their origin in observation and are evaluated ultimately in terms of observation. From causal situations in everyday life, from clinical studies and field survey, and from controlled experiments, there gradually emerges a collection of observations. Associated with these observations, is a group of ideas that attempt to interpret these observations. A scientific theory deals with the objects, events or situations that are found in nature and that, as natural phenomena, belong to a particular class as specifiable characteristics. The scope of theory is directly related to range of phenomena encompassed.

In short it can be said that, the psychology of aging studies the regular changes in behaviour after young adulthood (Birren and Renner 1977). Basically, the psychology of aging is grounded in two-stages-of life perspective, development and aging, which are usually described as the two successive processes of change in time, with the transition point or apex at maturity. It also highlighted on an unresolved issue, that is, what changes are typical or normal psychological processes of change in the individual, and what changes are atypical, abnormal or pathological patterns. The boundaries between these phenomena are often indistinct. Sometimes psychological theories of aging are labeled as 'psycho-social'; at other times they are conceived as bio-behavioural, behavioural genetic or neuropsychological, with the emphasis on biological substrate. In either case aging individual falls into the trap of biological and social reductionism. But also within the field of psycho-gerontology there is a question of reductionism, because of the unidirectional emphasis on cognition and information processing, to the neglect of affective and conative processes of change over the life span (Schroots1996).

The following overview illustrates the different viewpoint of psychological theories of aging from ancient period to modern period.

Classical Theories

This theory first appeared in 1941 in an article by Snygg and later was elaborated by Combs and Snygg (1959) which contained the basic notion that human behaviour is best understood in light of his perceptual world. The basic assumption behind this theory is that to understand human behaviour one must understand the individuals' perceptual world. The major idea is that through life experiences and socialization, individuals develop a perceptual framework through which they selectively perceive and interpret the world. Thus different individuals perceive the same phenomenon differently, and respond differently to experiences of retirement, health changes, or death of a spouse. This perceptual framework is developed through a variety of experiences and also as a result of the socialization process which helps the individual in interpreting the world around him. It perhaps becomes apparent that the phenomenological theory is born from the concept of socialization. However, the theory does not consider age as the single

determinant of behaviour. The phenomenological theorists suggest that in order to explain behaviour, one must make use not of age but of the perceptual framework of the individual in question. The age at which a particular event does take place is not considered of any importance by this group of thinkers. Once again, it must be noted that, it is not the event that is important, but the individual's interpretation of the event is considered of greater importance than anything else.

Phenomenological theory mainly emphasizes on the individual's perceptual framework. By doing so, they feel, predicting and explaining individual behaviour becomes easier than before. In many ways, the phenomenological theory seems to be satisfactorily complete because there are few, if any, exceptions. In other theories, researchers consider the majority of the individuals. Phenomenological theory, on the contrary, claims that if one is able to understand a particular individual's perceptual frame, then one can successfully explain and predict behaviour.

Stage theories

These theories suggest that all human beings, no matter where or when they live, move through an orderly progression of different stages in their development. Piaget's (1965) theory of cognitive development and Freud's (1905) stage theory fall under this group. Erikson (1987) proposed that development proceeds through a series of distinct stages, each defined by a specific crisis. This crisis results from the fact that as individuals grow older, they confront new combinations of biological drives and societal demands. The biological drives reflect individual growth and physical change, while the societal demands reflect the expectations and requirements of society for people at different ages. Erikson's perspective of old age relates to the stage of Integrity versus Despair where integrity results from feeling that life was worth-living as it happened, while old people who are dissatisfied with their lives fear death.

Erikson (1987) termed that late adult development chiefly involves the main psycho-social conflict of 'integrity versus despair' where the adult looks back or adopts a retrospective glance towards life in general and evaluates whether his/ her life was a satisfied one, had meaning and was worth it. If the answer is yes, and they feel they have reached many of their goals, they attain a sense of integrity, otherwise they may experience despair. Successful resolution of this crisis can have positive effects on how the person comes to accept his own mortality, and also his/ her physical and psychological health during the final year of life. According to the developmental process, Gould (1987) has stated the stage of later adulthood (classified by stage VI which is from 45-53 years), where the main developmental tasks are settling down, and accepting one's own life. Stage VII ranges from 53-60 years, where the major developmental task involves increasing tolerance, acceptance of past life and decreased negativism to general mellowing. Levinson

(1978) classified middle adulthood (40-60 years) where 50 to 55 years was considered by him to be transition years, and 55-60 years were stated as culmination of middle adulthood. Late-life transition according to him was 60 to 65 years, and 65 years onwards was regarded to be late adulthood. In Levinson's studies where he focused more on adolescence and early adulthood, he stated four major developmental tasks, namely:

- ❑ finding a mentor,
- ❑ developing a career,
- ❑ establishing intimacy and defining a dream of adult accomplishment

Developmental Task/Activity Theory

In 1948 Havighurst said that a developmental task arises at or about a certain period in the life of the individual, successful achievement of which leads to his happiness and success with later tasks, while failure leads to unhappiness of the individual, disapproval by the society, and difficulty with the later tasks. All of these tasks have biological and cultural bases. Havighurst described six developmental stages or age periods in total, each with its own developmental task.

Psycho-social Theory of Personality Development

The developmental task of each age period is to resolve its conflict, which requires the integration of personal needs with the demands of society. Erikson's psycho-social stages of development are not tied closely to specific age periods. This division reflects the increase in psycho-social variability with age: the developmental tasks of an infant are relatively universal, but the tasks in later life are dependent as much on personal experiences as on general principles.

Counterpart Theory

In 1960 Birren presented a general theory of aging as a counterpart of development. The term 'counterpart' is meant to express the idea that there are latent structures of behaviour (emotions, cognition, and motivations) carried forward from earlier experience that interact with present situations. Counterpart theory advocates indirect selection for positive late-life characteristics that embrace a wide range of complex biological (e.g., potential for a long life) and behavioural (e.g., intelligence) characteristics.

Disengagement/Activity Theory

Cumming and Henry theorized in 1961 that this primary mental process produces: (a) a natural and normal withdrawal from social roles and activities and (b) an increasing preoccupation with self and decreasing emotional involvement with others. Although the disengagement theory professes to explain general psychological and social processes of aging, it offers in fact a one-sided view of the aged, given the significant proportion of

older people who do not lose interest in life and do not withdraw from society. Disengagement theory encouraged the development of an opposing theory of the aged, activity theory, which is based on the concept of developmental tasks.

Personality Theory of Age and Aging

Starting in the 1950s, Neugarten (1968) and associates studied the life cycle with two theoretical emphases. The first emphasis is on the timing of transitional events in the lives and roles of individuals. The second emphasis is on the study of personality type as predictor for successful aging. Aging is viewed as a process of adaptation in which personality is the key element. Eight different patterns of aging have been distinguished. The successfully aging individual not only plays an active role in adapting to the biological and social changes that occur with the passage of time, but also in creating patterns of life that will give him or her greatest ego involvement and life satisfaction. Neugarten and Moore (1968) defined three age groups, namely, young adulthood (20's and 30's), middle adulthood (40's and 50's) and senescence (65 and seventy's). Santrock (1985) used the label of early, middle and late adulthood, where late adulthood extends approximately from 60 to 70 years until death. According to him it is a time for adjusting to decreased health and strength and to retirement. Establishing affiliations with members of one's group and adapting to social role are important during this period.

Cognitive Theory of Personality and Aging

In 1970, Thomae described briefly a cognitive theory of the aging personality, one which is intended to integrate various biological, sociological, and interactionist perspectives while at the same time focusing upon the psychodynamics of aging. Central concepts in his theory are those of perception, perceived situation, and perceived self.

Considering the different viewpoints of classical theories, it can be commented that these dimensions of aging basically highlighted on the structural aspects and the social and personality changes that occur during the processes of aging.

Modern Theories

Life-span Development and Aging (Baltes 1987; Baltes, Reese and Lipsitt 1980; Baltes, Smith, and Staudinger 1992): The central focus of this model is on the management of the dynamics between gains and losses, i.e., a general process of adaptation, consisting of three interacting elements. First, there is the element of selection, which refers to an increasing restriction of one's life to fewer domains of functioning because of an age-related loss in the range of adaptive potential. The second element, optimization, reflects the view that people engage in behaviours to enrich and augment their general reserves and to maximize their chosen life courses (and associated forms of behaviour) with regard to quantity and quality. The third element is compensation which results also (like selection) from restrictions

in the range of adaptive potential. It becomes operative when specific behavioural capacities are lost or are reduced below a standard required for adequate functioning.

Contextual Theories

They focus on the developmental process on the basis of the specific response(s) which the individual gets from his environment, i.e., ideas, views and approach towards that age in that particular society or culture that influence the process of development itself. These theories suggest that as life events and conditions may vary from culture to culture and over time, adult development must be viewed against this backdrop of social and historical factors. Under this group falls Neugarten's (1987) theory of ***social age clocks***, or internalized calendars telling individuals when certain events should occur in one's lives and what one should be doing at certain ages. According to Neugarten, these clocks vary greatly depending on the environment, i.e., our occupation, socio-economic status, or the cultural bindings in that particular society. The ***transactional*** view-point comes under the contextual theories where successful ageing is defined as the point of intersection between the developing person and the changing societal context.

Reduced Processing Resources

It has been generally accepted that there is an average age-related decline in cognitive performance. Researchers have advanced several explanations for this phenomenon of aging, but so far only the resource-reduction view has found wide support. In this view, aging leads to a reduction in the quantity of one or more processing resources, such as attention capacity, working memory capacity or speed of processing. According to Salthouse (1985, 1988, 1991) a typical exponent of this view since the eighties suggests that processing resources are characterized by three properties: (1) they are limited in quantity, with a measurable aspect such as quantity or effectiveness of allocation increasing until maturity and then decreasing across the adult years; (2) they enable or enhance cognitive processing so that performance in many cognitive tasks is improved when greater amount of the resources are available; and (3) they are not local or specific in the sense that they are restricted to a small number of highly similar cognitive tasks, but instead are relevant to a broad range of cognitive processes. Salthouse hypothesizes that processing speed may well provide the cornerstone for integrative theories of cognitive aging. It should be noted, however, that the resource-reduction view leaves unanswered the fundamental questions of why the reduction in resources occurs, and how that reduction results in lower levels of cognitive performance (Birren and Fisher 1995).

Personality and Aging

Studies of personality and aging reflect the concept of personality behind them, here defined as the set of characteristic dispositions that determine emotional, interpersonal,

experiential, attitudinal, and motivational styles. Generally speaking, two theoretical traditions can be distinguished in this field, trait and developmental stage models. In both traditions, the central issue concerns the extent and nature of personality stability and change over the life span; or, to put it differently, the extent to which aging processes per se are responsible for personality change (Erikson 1950; Levinson 1978; Costa and McCrae 1988, 1992).

Personality Theory

This is a theory of psychology, which aims to explain certain contradictions noted in the disengagement theory. It can loosely be termed as the personality or psychological theory of aging. Havighurst (1968), one of the major proponents of this theory, holds that disengagement and activity theories are inadequate to explain the process of aging quite successfully. According to him both the theories have inappropriately focused on the amount of activity as the major variable in determining life satisfaction. In Havighurst's opinion different levels of activity need to be ascribed to different personality types for high life satisfaction. For example, the 'recognizers' try to remain middle aged by finding new roles to replace lost roles. In so doing, they maintain high activity as well as high satisfaction levels. Therefore, it can be said that the recognizers support the activity theory but not the disengagement theory. In contrast, the 'disengaged', according to Havighurst, are those who voluntarily give up most of their activities and roles. The group of people seems to enjoy 'rocking chair' approach to life and have low levels of activity but high levels of life-satisfaction. Thus, the disengaged ones support the disengaged theory and contradict the activity theory.

Behavioural Genetics and Aging

Behavioural geneticists of aging are concerned with the extent to which hereditary factors influence age-related changes over the life span of the individual. Here, heritability is defined as a descriptive statistic referring to the portion of observed, phenotypic variation in the population that can be accounted for by genetic differences among individuals; the rest of the variation, the non-genetic portion, is called environmental. Thus, change in heritability over the life span indicates that the relative roles of genetic and environmental influences can change with age in terms of their effects on biological and behavioural difference among individuals in the population (Plomin and McClearn 1990).

Modern theories of aging emphasize on both structural and the functional changes of aging process and how the aged individual perceives or receives these changes in his/her subjective world of mind. Moving our glance from the western perspective, we can also find the same traditional changes in the eastern perspective also.

Psycho-social theories however, help in identifying the degree and the nature of

psycho-social factors associated with change across the adult life course as well as measure the extent of frustration and contentment of these change agents at various stages of the life cycle of the individual. The Indian version of Disengagement theory is known as the 'Ashrama theory' or the notion of the four-stage ideal life course (Bhatia 1983). This cultural version emphasizes the traditional Hindu view of life and delineates four 'Ashrams' or distinct stages or phases of human life and development. The first stage that every individual goes through is the 'Brahmcharya' stage, which is a stage of learning skills and receiving an education and lasts roughly for the first 25 years of life. This stage is followed by the 'Grihasthashram', roughly coinciding with the domestic phase involving performing the duties of a householder as well as raising and maintaining a family, lasting from age 26 to age 50. 'Vanaprastha' represents a stage of gradual withdrawal, with reducing responsibilities and is roughly between 51 and 75 years. The last stage, 'Sanyasa', is one of total renunciation of all attachments and submission of oneself to the pursuit of spiritual freedom. Essentially this stage represents retirement from the mundane and routine activities of life. The third and fourth stages are often combined to represent the present retirement phase of over 65 years. These stages are not rigid or mandatory or even obligatory on the part of any individual, but they have been suggested as a means of ensuring a smoother transition in life and are well known and accepted by the members of the society. This theory however, views social disengagement with regards to age stratification, age based roles and social sanctions. This theory however has been criticized since the amount of disengagement or involvement is now seen more as a function of past life patterns and socio-economic factors rather than being an inherent process (Palmore 1969).

Traditionally, the informal support systems of family, kinship and community are considered strong sources of providing support to the older adults in the society in India. Older adults typically enjoy an 'ascribed' status providing them with authority, wisdom, maturity, prestige and power in the society. In general, in Asian societies, the elderly remain integrated with the family and the community. The older people in urban areas to a large extent still enjoy a fairly high status in their families and are generally well respected by their children. Desai and Naik (1971) reported that the advice of the elderly is usually taken in all family affairs. In addition, recent studies indicate that the attachment between children and their parents as well as the commitment to care of the elderly is an essential element in Indian culture (Ramamurthi and Jamuna 1993). This includes providing emotional, financial as well as socio-cultural support and assistance in varying degrees.

Healthy Aging, Active Aging, Aging with Confidence, Happy Aging are today's concepts of aging. They are considered as the goal of life by the United Nations and the World Health Organization (Bagchi 2003). It implies that if 90 yrs is regarded as the

approximate target terminal age for older persons, in order to keep a person healthy, in spite of the continuing biological decline, healthy ageing has to be objective or slogan. In ancient Indian society aging was considered as a stage of giving up all the worldly pleasures and preparing themselves for the next world. Those were the days when the individual accepted aging as part of the growth. Today aging is contextual and viewed differently by the society and individuals do not want to give up their 'life' during this stage.

Keeping in mind the structural and functional contributions of several theories from eastern and western perspectives, the most significant implications that illuminates our mind is that in the closing period of life span aged individuals have started to establish their identities in a new way. But, unfortunately only a handful are able to reach their goals through meaningful pathways and enjoy their ages as successful. 'Successful aging' or 'graceful aging' basically depends on the way, how individuals with their subjective frame of reference interpret their closing period of life span. Psychological intervention strategies in today's world become one of the most beneficial strategies for reaching towards the goal of well-being in both subjective and objective directions for the aged persons.

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THE 21ST CENTURY MODERNIZATION OF CHINA'S PLA VIS-à-VIS THE NEIGHBORHOOD AND THE USA

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Abstract : Modernization of the People's Liberation Army (PLA) is a potential signal towards protecting China's national interest at home and abroad. The first fold of the Chinese development is that, within the next decade, the PLA primarily focuses on improving naval, air, missile and space capabilities. PLAN on the other hand would solely concentrate on the expansionist operations in the Pacific and the Indian Ocean. Apart from the PLA's military modernization programs, China, under Xi Jinping is likely to create military strategic guidelines for the PLA. The second fold of the Chinese developments is the robust military modernization of the PLA that represents a contrasting facet to the tall claims made by China in so far as its 'peaceful rise' campaign is concerned. Based on the above mentioned 'modernization' and ensuing analysis, one is confronted with a piercing question—why is China strengthening its military? The primary intension of the PLA is first to take control over the historic claims of the 9 dash lines (as mentioned in the map published by China in 1990) to conquer the Asia-Pacific and the Indian Ocean region. Secondly, to counter balance the West, particularly USA. From this ground reality, this paper aims to draw an analysis of the growth and development of China's PLA and necessarily concentrates on the long-drawn regional security imbalances.

Keywords: China, Indian Ocean, ASEAN, Asia-Pacific, 9 dash lines

Introduction

Since 1990's, the Chinese People's Liberation Army (PLA) (Allen 2002: 24) have been engaged in the development of their military capabilities. Such developments were triggered off due to the repeated victory of the United States in the Operation Desert Storm (Iraq) in 1991, US involvement in the Taiwan Strait Crisis in 1995-1996 and most importantly, the US military intervention in Kosovo in 1999, during which the US accidentally bombed the Chinese Embassy at Belgrade. Preceding such incidents, the Chinese leaders invested heavy resources for the transformation of the PLA into a modern and an operationally capable fighting force. The process of modernization of the Chinese PLA has covered over two decades, but the recent improvements of the PLA indicate that the modernization process has steered up for the political developments at home and abroad. In the recent years, China has made extensive efforts to increase the capable equipment of the PLA such as the modern multi-mission surface ships, advanced

submarines, modern fighter aircrafts, conventional cruise and ballistic missiles, including an Anti-ship ballistic missile (ASBM) to target the US aircraft carriers. Some scholars are of the view that the Chinese efforts are immense in improving the standard of the PLA's command, control, communications, computers, intelligence, surveillance, and reconnaissance (C4ISR) systems and its space and cyber warfare capabilities (Pollpeter 2012 and Tellis 2007). Other researchers have studied the Chinese transition to a more credible nuclear deterrent force. Further, a number of studies have addressed improvements in PLA 'software', such as in the areas of personnel quality, education and training, and joint operation capabilities (Ayuso and Henley 2014). On the flipside, the West is of the belief that the Chinese PLA, although powerful, has their weaknesses. Although the strength of the PLA is quite visible, the war-fighting capabilities of the PLA in reality, are under question (Chase et al. 2015: 1-2). A concrete military body backed by a robust economic platform portrays China's asserted claim of becoming an Asian superpower (Chansoria 2011: 16). China's action in showcasing its military capabilities in the current decade not only harps upon the modernization of the military structure but also raises the question as to why such rapid modernization of the military? The robustness of the PLA immediately contradicts the self-declared 'peaceful rise' claims of China.

This paper aims to focus on the achievements and drawbacks of the PLA and its rapid modernization over the past two decades. 'Informatization' (Chansoria 2011: 49) has been the key to the growth of the modernization of the Chinese PLA. The paper will discuss separately the various wings of the PLA, particularly the PLA's Army, Air force, Navy, along with the Ground Forces. This comprehensive discussion will delve into an understanding as to why this forced robust modernization of the PLA has been undertaken by China by plunging into disputes that continuously tried to enmesh China into the regional security equation.

The following discussion will be carried out in two sections mentioned below.

Section I- which is an exercise in stressing upon the understanding of the People's Liberation Army and their developments.

Section II- will tease out the robust advancements of the PLA affecting regional security.

Section I

Understanding the People's Liberation Army and their developments

The PLA has undergone massive transformation since the 1990's. Interestingly, the PLA, at a certain point of time was referred to as the 'Junkyard army' not only for its outdated equipment but also for its poor personnel quality, training services and other distractions that cropped up, such as massive corruption and engagement in commercial

activities. The weaknesses of the PLA were well realized after the outcome of the First Gulf War. The conflict not only projected the triumph of the US and its impressive capabilities but also highlighted the weakness of the PLA along with the aim to modernize its warfare capabilities. In 1993, China issued a new set of military strategic guidelines to provide guidance and direction for the PLA. Scholars are of the belief that the PLA was unable to effectively execute its newly emerging doctrine for high-tech local wars. After observing the incapability of the PLA, China came to a conclusion that a serious set of modernization of the PLA was perhaps highly required. Subsequently, Washington's involvement in the 1995-1996 Taiwan Strait Crisis highlighted the potential for U.S. military intervention in a regional conflict and the accidental bombing of the Chinese Embassy in Belgrade in May 1999, convinced Beijing that it needed to accelerate its development of asymmetric capabilities to deter or counter the United States (Chase et al. 2015: 14-15).

Till the end of the 1990's serious modernization of the PLA was conceptualized but the accelerated efforts were put in action since the 2000. It was observed that during November 2006, a Chinese submarine entered the vicinity of a US Navy aircraft carrier in the East China Sea. This act of China was perhaps to ensure that the PLA, particularly the naval forces could operate beyond the shores of China at any point of time (Bergsten et al. 2008: 192). The most dramatic advancement of China was during 2007 when Chinese ground based missile destroyed its own space satellite to illustrate the military vulnerabilities (Bergsten et al. 2008: 194) and kept its robust military advancements undercover.

These advancements revealed that the PLA was making substantial moves in order to stand out as a major military power. During the 1970's and the 1980's, China's military modernization was given the least position in Deng Xiaoping's 'Four Modernizations' (Ibid). In the present decade, the official military budget of China in the year 2013 was about \$119.5 billion (Chase et al. 2015: 15). Scholars are of the belief that the actual military spending of China is higher than the announced figures. China's actual military spending in 2013 was more than \$145 billion. With such substantial resources, the PLA is now clearly becoming an increasingly professional and capable fighting force. The PLA has devoted considerable attention to modernizing its ground forces but the most notable improvements have come in China's naval, air, missile, space, and C4ISR capabilities. In recent years, China does not rely on imported surface ships and produced a number of classes of modern surface combatants, including guided missile frigates (FFGs) and guided missile destroyers (DDGs) with greatly improved anti-surface and anti-air warfare capabilities. Along with improvements to its surface fleet, the modernization of China's submarine fleet has focused on qualitative improvements

resulting in a more modern and capable undersea warfare force. In addition, China commissioned its first aircraft carrier in September 2012 (Chase et al. 2015: 15). Moreover, China is also developing fifth-generation fighter capabilities, as reflected by its testing of the J-20 and J-31 stealth fighters. Over the next one decade, the PLAAF will introduce a number of other new capabilities into its inventory, improving its capabilities in such areas as large transport aircraft. The future direction of China's strategic missile force is likely to include improving its long-range conventional strike capabilities with the deployment of such systems as conventional intermediate-range ballistic missiles (IRBMs). PLASAF can also be expected to strengthen its nuclear deterrence posture with the addition of more road-mobile intercontinental ballistic missiles (ICBMs), including new road-mobile ICBMs capable of carrying multiple independently targetable reentry vehicles. China is also likely to emphasize further development of its space and counter-space capabilities. China is expected to continue expanding its space-based capabilities in such areas as ISR, communications, navigation and positioning. In addition, China will continue to develop counter-space capabilities for strategic deterrence and to attempt to ensure its own ability to use space while limiting or denying an adversary's ability to do the same (Kaufman and Mackenzie 2009: 3-4). Moreover, as far as the PLA's strategy is concerned, China has conceptualized the promulgation of its military strategic guidelines and the revision and updating of PLA doctrine under Xi Jinping. The expanding military capabilities of China's armed forces are a major determining factor in changing East Asian military balances; improvements in China's strategic capabilities have ramifications far beyond the Asia Pacific region (Annual Report to Congress 2007: 1).

Wings inside the PLA

Unlike the Hu Jintao leadership, the Xi Jinping leadership has observed a wide range of reforms within the PLA. A huge amount of political capital has been invested largely on the development and improvements of the PLA. Further, efforts have been made by Jinping to improve party-military relations. Initially in the Gutian Conference in November 2014, top 420 officers in the PLA were lectured about the absolute control of the PLA by the Chinese Communist Party. This idea itself left grounds for internal corruption which was realized later and led to another conference of the Central Military Commission Opinion on *Deepening Reform of National Defense and the Armed Forces* held on the 1st January 2016. This conference concentrated largely upon perfecting the party-military relation, particularly emphasizing on the need for more improvement. The analysis of the idea of 'more improvement' clearly harps on the idea of anti-corruption (Mulvenon 2015: 49), which was perhaps not realized by Hu Jintao when he mentioned in 2007, "we

must take both economic and national defense development into consideration and make our country prosperous and our armed forces powerful while building a moderately prosperous society in all respect” (Bergsten et al. 2008: 196). With around 2 million active personnel, PLA is the world’s largest military (Genevaz 2015: 1). The four wings within the body are as follows:

1. The People’s Liberation Army (PLA)
2. The People’s Liberation Army Navy (PLAN)
3. The People’s Liberation Army Air Force (PLAAF)
4. The People’s Liberation Army Rocket Force (PLASAF)
5. The People’s Liberation Army Second Artillery Corps (Kaufman and Mackenzie, 2009 : 3)

The fundamental principles that PLA would adhere to, are as follows-

1. Safeguarding national sovereignty, security and territorial integrity, and supporting the country’s peaceful development.
2. Aiming to win local wars under the conditions of informationization and expanding and intensifying military preparedness.
3. Formulating the concept of comprehensive security and effectively conducting military operations other than war (MOOTW).
4. Deepening security cooperation and fulfilling international obligations.
5. Acting in accordance with laws, policies and disciplines (Cordesman and Yarosh 2012:14).
6. The PLA, in its present phase of modernization has also adopted the ability to coordinate contingency plans and enable planning for a broad range of scenarios.
7. The PLA has also concentrated on the infrastructure building of the C4ISR in this recent modernization phase in order to match up with the US capabilities (Thompson 2009: 50).

Development at a faster pace since 2006

In 2006, China had deployed roughly 900 mobile CSS-6 and CSS-7 short-range ballistic missiles to garrisons opposite Taiwan, expanding at a rate of more than 100 missiles per year. The new version of these missiles has improved range and accuracy.

Naval power

China’s naval forces included 72 principal combatants, some 58 attack submarines, about 50 medium and heavy amphibious lift vessels, and approximately 41 coastal missile patrol craft. China received the second of two Russian-made SOVREMENNYI II guided missile destroyers (DDG) in late 2006. These DDGs are fitted with anti-ship cruise missiles (ASCMs) and wide-area air defense systems that feature qualitative improvements

over the earlier SOVREMENNY-class DDGs China purchased from Russia. China took delivery of two KILO-class submarines from Russia, completing a contract for eight signed in 2002. China operates twelve KILOs, the newest of which are equipped with the supersonic SS-N-27B ASCM, wire-guided and wake-homing torpedoes. The PLA Navy's ship, the LUZHOU-class (Type 051C) DDG is designed for anti-air warfare. It had been equipped with the Russian SA-N-20 SAM system controlled by the TOMBSTONE phased-array radar. The SA-N-20 more than doubles the range of current PLA Navy air defense systems marking a significant improvement in China's ship-borne air defense capability. The LUZHOU-class DDG complements the LUYANG I (Type 052B) and LUYANG II (Type 052C) DDGs. The LUYANG I is fitted with the Russian SA-N-7B GRIZZLY SAM and the YJ-83 ASCM. The LUYANG II is fitted with an air defense system based on the indigenous HHQ-9 SAM. In 2006, China began producing its first guided missile frigate (FFG), the JIANGKAI II (Type 054A). The JIANGKAI II has been fitted with the medium range HHQ-16, a vertically launched naval surface-to-air missile currently in development. At the 2006 Zhuhai Air Show, PRC military and civilian officials asserted China's interest in building an aircraft carrier (Cordesman and Yarosh 2012: 49).

Air force

The PLA Air Force (PLAAF) had been deploying the F-10 multi-role fighter to operational units. Chinese aircraft are armed with an increasingly sophisticated array of air-to-air and air-to-surface weapons, satellite and laser-guided precision munitions, and cruise missiles. The Z-10 fires the Red Arrow 8E anti-tank guided missile, offering combat performance equal to the Eurocopter Tiger, but below that of the AH-64 Apache. Improvements to the FB-7 fighter program has enabled this older aircraft to perform night time maritime strike operations and use improved weapons such as the Kh-31P (AS-17) anti-radiation missile and KAB-500 laser-guided munitions S-300PMU-2 surface-to-air missile systems. With an advertised intercept range of 200 km, the S-300PMU-2 provides increased lethality against tactical ballistic missiles and more effective electronic countermeasures. China is also developing the indigenous HQ-9 air defense missile system, a phased array radar-based SAM with a 150 km range (Cordesman and Yarosh 2012: 49).

Ground Forces

China had about 1.4 million ground forces personnel with approximately 400,000 deployed to the three military regions opposite Taiwan. China has been upgrading these units with tanks, armored personnel carriers, and additional artillery pieces (Cordesman and Yaarosh 2012: 48).

PLA Second Artillery Corps

The PLA Second Artillery Corps is the backbone of China's strategic forces. This involves nuclear counter-attacks, precision strikes with conventional missiles. In order to enhance the capability of this particular wing, China has necessarily enhanced the importance of Research and Development along with informationization of missile systems and supporting equipment for command, communications and reconnaissance. The Second Artillery force is accelerating its growth by building a missile operational system that is suited for informationized warfare. Further, in order to build the missile operational system, this particular wing has created integrated data bases for field support and informationized management platforms for logistic materials and improved support systems for the survival of combatants in operational positions (Chansoria 2011: 49, Stokes et al. 2011:2).

Section II

Advancements of the PLA

There have been primarily two reasons for the Chinese defense improvement.

First, to counter the western forces and trying to shape regional security.

Second, to claim or according to the Chinese, reclaim its territories within the region to eventually shape regional security.

The Chinese government maintains that its maritime rights extend to virtually the entire South China Sea and often portrays this claim using a 'nine-dash line' that covers much of the South China Sea area. At the same time, Beijing is ambiguous about the unambiguous meaning of the nine-dash line; till date, China has not clarified the meaning of the nine-dash line or its legal basis. In November 2012, China also added a map which contained the nine-dash line to all of its new passports. This action of China immediately attracted negative responses from the countries within Asia-Pacific. China's increased reference in official government materials to the nine-dash line is a source of concern to its neighbors and to other nations because, it creates an impression that China is not merely claiming all the land features within the nine-dash line, but it may also be claiming a special sovereign status of all the water and the sea-bed (Cordesman and Yarosh 2012: 40). Further, the Chinese have also used its paramilitary and particularly its Coast Guards to patrol the waters encircling the nine-dash line. China justifies this act, as modernization of the PLAN by creating maritime tensions in the disputed areas (Cordesman et al. 2015:131). In 2012, at the National People's Congress session, Liu Cigui, the Director of the State Oceanic Administration strongly mentioned that law enforcement activities would continue in the South China Sea. He also stated that regular patrol activities would continue covering all the maritime zones under its jurisdiction. Interestingly, patrolling activities around the self-acclaimed area of the nine-dash line

was particularly mentioned by Liu Cigui, which created a serious tension in the regional security (Ibid). Two significant years for China were 2013 and 2014. A 10th line near the Northeastern part of Taiwan was included in the official map of China in 2013 which immediately raised a debate as to how this inclusion would improve China's claims over the South China Sea. It has been perceived that China was perhaps trying to portray mirror image symmetry of its own territorial claims with that of Taiwan, thereby narrowing the cross-strait gap. Further, by including the 10th line near the Northeastern part of Taiwan, China also restrained US and the other powers' ability to enter into military operations over the independence of Taiwan. This particular maritime strategy of China also enabled the country to secure some of its wealthy cities and areas such as Guangdong and Shanghai (Chansoria 2011: 27). In 2014, the official map of China was revised and the nine-dash line was turned into ten-dash lines where the islands of Paracels and Spratly were included (Cordesman et al. 2015 :132).

The second issue that created a havoc in the Asia-Pacific region was the Chinese claim over the Senkaku Islands (what the Chinese refer to as the Diaoyu Islands) in the East China Sea, a territory also claimed by Taiwan and Japan. In addition, in September 2012, China began using improperly drawn straight baseline claims around the Senkaku Islands, adding to its network of maritime claims which was inconsistent with international law. Another attempt that was made by the Chinese was to extend and strengthen its powers beyond the 'second-island chain' which is primarily an arc that includes Japan through Guam, Northern Australia as well as Indonesia (Chansoria 2011: 28). The above idea of the island-chain control was the brainchild of the Chinese Admiral Liu Huaqing, who masterminded China's modern naval strategy in 1982. The strategic plan set by China was to conquer the first stretch of islands ranging from the Aleutians to the Philippines, containing Taiwan and Okinawa by 2010 and the second island stretch by 2020. The US control of La Perouse Strait, Tsugaru Strait and Tsushima Strait enables the US military to react to the Chinese provocations rising out of these islands and also to defend its own air and naval base of Guam. This particular strategy of the US has accelerated China's ability to dominate Indian Ocean and the Western Pacific region by 2040, as perceived by Liu Huaqing in 1982. USA is of the opinion that China's perception to deter US military dominance over Indian Ocean and the Western Pacific would be by using aircraft carriers, which is the strongest component of the Chinese forces. Further, The Department of Defense (DoD) approach to China is part of a broader U.S. strategy for the Asia-Pacific region that primarily aimed at building a stable and diversified security order, an open and transparent economic order, and a liberal political order. U.S. policy towards China is based on the premise that it is in both countries' interests to expand practical cooperation in areas where both countries' interests overlap and to

constructively manage differences. Sustaining the positive momentum in the military-to-military relationship supports U.S. policy objectives to encourage China to uphold international rules and norms to contribute to solve the regional and global problems. DoD seeks to continue building a military-to-military relationship with China that is, sustained and substantive, while encouraging China to contribute constructively to efforts for maintaining peace and stability with the United States, their allies and partners, and the greater international community. As the United States builds a stronger foundation for a military-to-military relationship with China, it must also continue to monitor China's evolving military strategy, doctrine and force development and to encourage China to be more transparent about its military modernization program. China's limited transparency on matters relating to its military makes it more difficult to observe and evaluate factors that contribute to or detract from China's military capability. U.S. officials regularly urge China to be more transparent about its military activities (Rinehart 2016 : 31-32). If the military-to-military relation is nurtured, the United States will continue adapting its forces, posture and operational concepts to maintain a stable and secure Asia-Pacific security environment (Annual Report to Congress 2015: 64).

On the flipside, a change of attitude of China has been observed in the recent years where the country feels that the US military-to-military strategy is a strategy in itself, to curb the developments of the PLA (Gunness and Mastro 2016: 143). Therefore, China is continuing its efforts to conquer both the airspace and territorial waters of most Pacific islands. Apart from the Senkaku/Diaoyu Islands and Philippines' Scarborough Shoal, China has also asserted its claims on Mischief Reef which is internationally recognized as part of Philippines. This has been claimed as violation of International Law, but from the Chinese point of view, this particular illegitimate claim was perhaps easy because of the fact that Philippines lack both air-force and naval capabilities to confront the Chinese forces (Cordesman et al. 2015: 134).

The third territorial dispute which is associated with the East China Sea contains approximately seven trillion cubic feet of natural gas and up to 100 billion barrels of oil (Whiting 1996: 600). Japan maintains that an equidistant line from each country involved should separate the EEZs, while China claims an extended continental shelf beyond the equidistant line to the Okinawa Trench (which almost reaches Japan's shore). In early 2009, Japan accused China of violating a June 2008 agreement providing for joint exploration of oil and natural gas fields and claimed that China unilaterally drilled beneath the demarcation line, extracting reserves from the Japanese side. China, Japan, and Taiwan continue to dispute possession of the nearby Senkaku Islands. On the flipside, in 2011, the Obama Administration initiated its policy of 'strategic rebalancing' to the Asia-Pacific region, partly to reassure allies about strength of the U.S. military presence

in East Asia and to prevent conflict through enhanced deterrence. The State Department and DOD developed frameworks to enhance significantly the security relationships with Australia, Philippines, Japan and South Korea. In addition to bolstering treaty alliances, the United States has enhanced its security cooperation with other countries in the region, notably Malaysia, Singapore and Vietnam, alongside efforts to engage constructively with China. In May 2015, Secretary of Defense Ashton Carter announced the five-year, \$425 million Southeast Asia Maritime Security Initiative, a new capacity-building effort focused on improving maritime law enforcement and information sharing in Southeast Asia. The United States has sold arms and other defense equipment to Taiwan, partly in response to China's improving military capabilities and the cross-strait military balance, according to reports (Rinehart 2016 : 31).

A 2012 DOD strategic guidance document and DOD's report on the 2014 Quadrennial Defense Review (QDR) state that U.S. military strategy will place an increased emphasis on the Asia-Pacific region. This increased emphasis constitutes the military component of the strategic rebalancing to the Asia-Pacific region that also includes economic and political components. In 2012, DOD announced that 60% of U.S. Navy vessels will be based in the Pacific theater by 2020, shifting from the previous 50/50 split between the Pacific and Atlantic theaters. The U.S. military has arranged for additional deployments of U.S. forces on a rotational basis to U.S. allies : Australia, Philippines and South Korea. DOD states that it will deploy its most advanced defense platforms (for example, the F-35 Joint Strike Fighter and the Zumwalt (DDG-1000) class destroyer) to the Asia-Pacific region before other areas (Ibid: 32).

Concluding Analysis

The rise of China's PLA has been debated and questioned by various scholars on the grounds that whether it is actually detrimental or not. It has been observed that the attitude of China had changed over the years on the ground that it has a lot of stakes in the Southeast Asian region. If the attitude of China is not mellow enough then the stakes of the country will get affected. As a result of this, Chinese attitude started melting. For example, the devaluation of the Yuan caused the financial crisis of 1998 in Southeast Asia. It was soon realized by the Southeast Asian nations that China is a major factor as far as the economic front is concerned for the entire Southeast Asia. ASEAN as a regional organization's presence is enough to pacify the attitude of China from a hegemon to a major player. Therefore, the western idea of enmeshing China into the regional political framework from an institutional point of view became the best idea to engage China into the political and most importantly, the economic framework of ASEAN. However, a change of attitude has been observed as far as China is concerned in the present period. China has changed from a mellowed player to a more aggressive hegemon

in the region. From a realist point of view this change of attitude can be associated with China's ambitions to proliferate in the region through its PLA. However, it has to be noted that China's ability to project combat power depends on coordination across all domains—air, land, sea, space, cyber, and electromagnetic—of military power. The PLA recognizes that it must enact organizational and training reforms to achieve the level of joint operational capability to which it aspires. The implications of this are as follows.

- The objective of improving the PLA's ability to conduct integrated joint operations must dominate plans for organizational restructuring and training reforms and a joint operational capability must be realized sooner rather than later, to ensure that the PLA will be able to deter or, if necessary, win future informatized local wars.
- The PLA's ability to realize the objective of being able to conduct truly integrated joint operations depends on a higher level of technically and operationally capable personnel and leadership (Chase et al. 2015: 20-21).

As far as the personnel recruitment is concerned, it falls under serious question and the assumption that can be made out of the problem are discussed in the following points.

1. China's military personnel system will continue to be plagued by undertrained and inexperienced officers and men in the areas of modern combat, which will impede the force's ability to apply modern equipment and concepts effectively in line with China's concepts for force employment in future joint operations.
2. The cycle of retraining will continue following the training and recruitment rotation, which will inhibit the establishment of combat capability.
3. For the short to medium term, the cadre of officers will remain ill-trained and inexperienced to transform combat power as rapidly and decisively as senior leaders wish (Chase et al. 2015: 81).

Although the modernization of the PLA remains a major factor in the realm of international relations, it is also assumed that the realist bent of China at present will not allow it to use nuclear weapons in the warfare. Chinese leaders do see the strategic utility of nuclear weapons as declining; the leaders may choose to emphasize other aspects of strategic deterrence—such as long-range conventional strike, counter space or cyber warfare capabilities—more heavily than nuclear forces (Thompson 2009: 34).

In the final analysis, China's rise, although claimed as detrimental, remains to be under question. The PLA has made impressive progress in a relatively short time. It is clearly becoming a more professional and more capable military. Its capabilities aimed at deterring or, if necessary, countering U.S. military intervention in the Asia-Pacific region, including systems designed to hold U.S. military bases, aircraft carriers, space systems and computer networks at risk. These are becoming an increasingly serious cause for concern among defense analysts in the United States (Chase et al. 2015: 8).

Further, with the advancement of information and technology, the PLA has created an Integrated Network and Electronic Warfare (INEW) doctrine to organize and structure its forces for seizing information supremacy. Almost all of the PLA's 2013 exercises focused on operating in informationized conditions, a concept that can be viewed as the Chinese corollary to U.S. network-centric warfare. In order to enhance the capabilities of this field, China has essentially concentrated upon enhancing the quality of weapons along with information capabilities by linking geographically dispersed forces and harped upon an integrated system which is capable of unified action. More specifically, China has in the recent years adopted the policy of 'information blockade' for national security concerns. In order to enhance this policy, China is constantly developing electronic and information warfare capabilities, including denial and deception, to defeat those of its adversaries. This policy has also enmeshed the areas of cyberspace and outer space to deny information superiority to its adversaries (Cordesman et al. 2015: 120). On the flip-side, the US signed the Presidential Policy Directive 20 in 2012, when the country felt that the country was facing cyberspace threats. US official had said in 2010 that network inspections had 'found software tools left behind that could be used to destroy infrastructure components' following hacks from China and Russia. Chinese state-sponsored hackers attacked one company with remote access to over 60% of gas and oil pipelines in North America. In order to curb the cyber threats, China and US held high-level military talks in 2013. Several cyber theft allegations flowed in from the US and a constant denial of such activities were carried out by China. The Obama administration in 2015 revealed that around 19.7 million Americans suffered from the cyber attacks which were primarily coming in from China (Ibid : 124). From this particular issue of the cyber-warfare therefore, it seems clear that the Chinese warfare modernization since 2013-2015 has become a challenging issue for the US.

List of Abbreviations

1. People's Liberation Army (PLA)
2. People's Liberation Army Navy (PLAN)
3. Anti-ship ballistic missile (ASBM)
4. Command, control, communications, computers, intelligence, surveillance, and reconnaissance (C4ISR)
5. Guided missile frigates (FFGs)
6. Guided missile destroyers (DDGs)
7. Intermediate-range ballistic missiles (IRBMs)
8. Intercontinental ballistic missiles (ICBMs)
9. The People's Liberation Army Air Force (PLAAF)
10. The People's Liberation Army Rocket Force (PLASAF)

11. Military operations other than war (MOOTW)
12. Anti-ship cruise missiles (ASCMs)
13. Exclusive Economic Zone (EEZ)
14. Tactical nuclear weapons (TNWs)
15. Line of Control (LoC)
16. United States of America (USA)

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INDIA'S ACT EAST POLICY: PROSPECTS AND CHALLENGES

DEEPLAKHA SENGUPTA (DASGUPTA)

Abstract : With the growing presence of China in the Indian Ocean, and its thriving relations with India's neighbours onboard, the strategic compulsions of playing a more prominent role in the Asia-Pacific are getting stronger for India. The paper is divided into four main segments. The first section deals with the evolution of India's foreign policy regarding the Asia-Pacific and offers an analytical account of the major shifts in India's Act East Policy under Prime Minister Shri Narendra Modi vis-à-vis its earlier version, i.e., the Look East Policy. The second section delineates the main components of India's Act East Policy and its implications for the states in the region. The third section dwells upon the prospects and challenges of a more assertive role of India in East and South-East Asia and is followed by concluding remarks about the future of this policy.

Keywords : Act East Policy, ASEAN, CEPA, NDA, ARF

Introduction

The term Act East was first popularised by the US Secretary of State Hilary Clinton during her visit to India in July 2011. The Act East Policy at least apparently is not just a rebranding of the earlier version of the Look East Policy launched under Prime Minister Shri Narasimha Rao in the early 1990s. It is not only a revival but also a reinvigoration of its predecessor. The Act East policy as conceived by the Prime Minister Shri Narendra Modi seems to be a more action oriented policy meant to achieve tangible results with a clearly defined time frame. "A new era of economic development, industrialization and trade has begun in India. Externally, India's 'Look East Policy' has become 'Act East Policy'," Modi told the ASEAN-India Summit in Myanmar on November 12.¹ Eyes are on Modi's ambitious Act East venture to figure out whether it is just an extension of the earlier insouciant version of the Look East Policy or a complete break with the past and an enthusiastic attempt at exploring new dimensions of co-operation with India's Eastern neighbourhood.

From Look East to the Act East: The Transition

The concept of Look East is nothing new. The notion can be traced back to the days of British colonialism. As the British were alive to the centrality of India in Asia they preferred to maintain a constant presence at 'east of the Suez' including Southeast Asia. Following the withdrawal of the colonial rule, India's predilection for reasserting itself in eastern neighbourhood grew more prominent. Eastward orientation of India found an

articulate manifestation in the Asian Relations Conference called by Nehru in March 1947. Nehru emphasized the role played by the factors like India's geographical proximity, identical historical experiences, cultural identity, economic interests and common strategic concerns, in shaping India's inclinations to engage with its eastern neighbourhood. What is officially labelled as India's Look East Policy since the early 1990s is actually an (re)engagement of India with its eastern neighbours. Under the rubric of Look East Policy India has not only sought to strengthen its economic and cultural ties with the countries of ASEAN and East Asia but also expressed its willingness to play a prominent role in the emerging strategic dynamics of the Asia-Pacific region.

The Look East Policy of India has undergone visible transformation since its launch in the early '90s. The first phase of Look East Policy mainly focused on forging economic ties with the members of the ASEAN and ASEAN as a whole for facilitating economic exchange. The emergence of the Asian Tigers and the ASEAN as the leading economies in the region propelled India to look for opportunities to bolster economic relations with its eastern neighbours. Meanwhile, in India while the license raj had paralysed the economy to a great extent, the oil crisis of the 1970's and 1980's had caused a conspicuous fall in the import cover of the state, underlining the need for redefining its priorities in order to give a boost to the staggering economy. India could no longer afford isolation from the global economy.

The Look East Policy was an outcome of India's liberalizing economic endeavours to integrate with the global economy and a growing assertion of China in the Asia-Pacific region. Moreover, the collapse of the Soviet Union and the end of bipolarity allowed India to look for revitalization of its ancient ties with the eastern neighbourhood. It was officially launched in the year 1991 during the tenure of Prime Minister Shri Narasimha Rao. However, the term Look East Policy was mentioned for the first time in the Annual Report of the Ministry of External Affairs in 1996. ASEAN has been the central pillar of India's Look East Policy. India's engagement with ASEAN has had some remarkable achievements like Sectoral Dialogue Partnership, Full Dialogue Partnership and ASEAN Regional Forum embracing both Security and Economic issues. Moreover, the strategic partnership of India with ASEAN since 2012, booming trade figures of USD 65.04 billion in 2015-16, the culmination of the India's evolving integration process with ASEAN in the establishment of the ASEAN-India Free Trade Area in July, 2015 are latest accretions to the India-ASEAN ties.²

Although in the initial years, the focus of the putative policy was strictly constrained to the ASEAN countries, it eventually embraced extended area spanning from Australia to East Asia. The second phase of the Look East Policy marked a promising shift in many respects ranging from states covered by the cooperative endeavours pursued by India vis-à-vis the eastern neighbours, to the areas of cooperation. While the new phase of the Look East Policy catered to the extended eastern neighbourhood of India that had remained

neglected so far, it moved beyond its earlier fixation for economy with growing emphasis on other crucial areas like maritime issues, security and terrorism that have been plaguing the region for a long time.³

The cooperative endeavours have become more diverse including multidirectional defence diplomacy pursued by India through both bilateral and multilateral frame works. Since the 9/11, its unwavering enthusiasm for building transport corridors across East and South-East Asia e.g. Trilateral Highway Project involving Myanmar and Thailand and the proposed Rail Link between New Delhi and Hanoi and other expanded areas of cooperation like Trans-Regional Infrastructure, Transportation, Communication, Human Resource Development, Science and Technology, have reiterated the departure from the earlier monolithic and rather casual version of the Look East Policy.⁴ In short, the second phase of the Look East Policy was more focused and consistent in its approach. Shri Yashwant Sinha, the then India's Minister of External Affairs distinguished between the two phases of the Look East Policy in 2003: "The first phase of India's Look East Policy was ASEAN-centred and focused primarily on trade and investment linkages. The new phase of this policy is characterised by an expanded definition of 'East', extending from Australia to East Asia, with ASEAN at its core. The new phase also marks shift from trade to wider economic and security issues, including joint efforts to protect the sea-lanes and coordinate counter-terrorism activities."⁵

India's engagement with the ASEAN region has become more organised and institutional since the second phase of the policy set in. India's trade and economic encounters with this region seemed to yield optimistic outcomes during the new phase of Look East Policy with the trade figures between India and the putative region growing by leaps and bounds. Between 2002 and 2007, the percentage share of India's trade with the ASEAN region kept on increasing and shot up to 19.9% from 14.7% of its total in 2008 and import from 11.4% to an astounding 18.7%.⁶ The investment by Indian companies in various ASEAN economies like Thailand, Vietnam and Indonesia in information technology and computer software portended a new era of comprehensive cooperation in economy, trade and investment between India and the members of the ASEAN on a bilateral level and ASEAN as a whole. India's trade with North and South-East Asia amounts to a quarter of its total trade far exceeding the trade figures with the US and the European Union.⁷

The Act East Policy and Its Implications for the States in the Region

Prime Minister Shri Narendra Modi's resonating emphasis on the importance of the 10-Nation ASEAN bloc in the much avowed transformation of India's Look East Policy to an upgraded Act East Policy, has underlined the unwavering zeal of India to tighten the loose ends in this particular region of the world.⁸ His opening statement at the 12th ASEAN Summit clearly indicated India's intent to expunge the earlier shortcomings of the Look East Policy and to supplement the thriving bilateral relationship with each member

of the ASEAN with an unswerving regional endeavour in trade, industrialization and economic development.⁹ The growing presence of China in the Asia-Pacific and its ceaseless fixation with the South China Seas have made a proactive foreign policy an imperative for India. The rising compulsions of offsetting China in the Asia-Pacific have prompted India to contemplate an assertive role in the putative region and mull over effective strategies to strengthen its ties with each country in East and South-East Asia. Rising instances of Chinese incursions since 2011 and the engulfing fear of the Strategic Community in India with regard to 'Strategic Encirclement' pursued by China for a long time, now has been one of the main driving forces behind India's unassailable penchant for a speedy progress of economic and security relations with its eastern and south-eastern neighbours.¹⁰ "Earlier, it was 'Look East Policy.' We have had enough of looking east. We now have 'Act East Policy'- a key component of my government's foreign policy," Modi told the Indian diaspora during a community reception at the Kyung Hee University in the South Korean capital.¹¹ Unlike the Look East Policy, the newer version would also seek to explore the opportunities of convergence between India and Australia in sectors like trade, civil nuclear cooperation and so on. The visit of Australian Prime Minister Tony Abott following the commencement of the term of the new government in India, signing of a civil nuclear cooperation agreement with Australia has been indicative of good prospects for India-Australia relations.¹² Vietnam is also regarded by the new government a very crucial partner in its Act East venture. Modi Government's enthusiastic overtures towards Vietnam are aimed at enhancing political, defence and security engagement and extending cooperation to other more fecund areas of cooperation like science, culture and technology. The commitment of the new government to the Act East policy was demonstrated through the recent meeting of the External Affairs Minister, Ms. Sushma Swaraj with the Indian Heads of Missions in South-East Asian and East Asian countries. India has started prioritizing the Asia-Pacific spanning across some of the busiest sea-lanes and strategically important choke points in its foreign policy agenda in the context of the growing importance of maritime boundaries and the intractable maritime disputes and a rising demand for maritime resources both living and non-living.¹³

India's accomplishments in reaching out to the extended eastern neighbourhood exceeding the ASEAN region were discernible in Japan's growing interest in investing in crucial infrastructure projects in India— Western Dedicated Freight Corridor, Delhi Mumbai Industrial Corridor, Chennai Bengaluru Industrial Corridor and Metro Projects in several cities. Japan's pledge to ensure an increased flow of Foreign Direct Investment is an example of Shri Modi's Act East Policy bearing tangible fruits.¹⁴ The partnership between the two countries will be premised on the two countries' convergent global interests, critical maritime interconnection and growing international responsibilities and Japan's place "at the heart of India's Look East Policy".¹⁵ South Korea comes to acquire an equally important position in India's Act East Policy. The itinerary of the Prime Minister during

his trip to South Korea featured meeting plans with business tycoons from South Korea's largest conglomerates, including Hyundai, Samsung and LG. The Prime Minister seeks to generate ample incentive for bigger investments through his Make in India initiative.¹⁶ The main areas to be addressed for a concrete cooperative relation with South Korea include Strategic Partnership, Investment, CEPA, Civil Nuclear Agreement etc. The spectrum of cooperation projected by the Modi Government is more diverse and comprehensive compared to the earlier version of the Look East Policy. The approach this time is more proactive compared to the earlier one. Myanmar with a whopping growth rate of 8% is one of the most important States to come under the Act East Policy of the new government. India seeks to expedite the construction of the connectivity projects meant to beef up the infrastructure of the region facilitating more trade and new business opportunities.¹⁷ An expeditious implementation of the key connectivity projects like the India-Myanmar- Thailand trilateral highway linking Imphal to Mandalay and to Thailand, Rhi-Tiddim road that can connect Aizawl to Mandalay etc., can bring promising results for the North-East India. An improved physical connectivity can fetch big investments and contribute to the development of the North-Eastern part of India.

Challenges Likely to be Faced by India's Act East Policy

The Act East Venture launched by the New NDA regime under the leadership of Prime Minister Shri Narendra Modi, despite its promising start is likely to confront certain difficulties.

First, while India seems to be more than willing to indulge in a proactive engagement with its Act East gestures in full swing, it needs to be scrupulous in the steps it takes. Asia-Pacific, being a crucial strategic area for India and China, the two Asian Giants, the power politics between the two needs to be handled cautiously. There is no gainsaying the fact that India's growing penchant for a prominent role in the Asia Pacific region is a well calibrated strategy to balance the overwhelming Chinese presence in the Indian-Ocean region, its thriving bonhomie with countries like Pakistan and Sri Lanka and its alleged encirclement strategy to protect its legitimate interest in the region (bulk of its oil and trade pass through the region).

But India's engagement in the region should not evoke serious repercussions across China. India would have to make sure that its engagement with eastern and south-eastern neighbours does not antagonise China. The main challenge of India's Act East Policy is to avoid pursuing an explicit anti-China policy while actively engaging the members of the region through myriad cooperative arrangements, both bilateral and multilateral, ranging from strategic to economic to carve a niche for itself. China's much debated 'One Belt One Road' (a modern day silk road that aims to connect Asia, Africa, Europe and their contiguous seas) initiative, the prospective lynchpin of China's engagement with the world, can be a major impediment to India's engagement with its extended eastern neighbourhood. China's political expansionism and economic ambitions in the form of OBOR, an infrastructure

based security initiative, may well be used by China as a useful device to counter India's emergence as a prominent player in the Asia-Pacific region. The ordeal for India is to take a firm stand on China's expansionist gestures on the one hand while making use of the economic opportunities (that OBOR offers) to its fullest possible extent, on the other.

The other major challenge that may retrograde or diminish the prospects of India's Act East Policy is the Sino-US relations in the Asia-Pacific region. India needs to handle the trilateral power equations between the three major powers in the region that is, India, US and China with prudence. While the Indo-China relations shuttle between strategic ambivalence and economic cooperation, Indo-US joint hedging aimed at countering Chinese predominance is likely to continue. India can hardly avoid this tightrope walking between the two major powers that shape the strategic dynamics of the region. While India continued its strategic partnership with the US through high level bilateral visits, it kept on deepening its relations with China as it does not favour a unipolar regional order or a bipolar order with US and China.¹⁸

Third, India's preoccupation with the serious issues like terrorism related to its immediate neighbourhood especially Pakistan may hinder the progress of India's engagement with the extended neighbourhood of eastern and south-eastern States rendering India to be perceived as a South Asian Power rather than an active and willing power intent to assert its dominance in the Asia-Pacific. Moreover, the instabilities likely to unravel following the US withdrawal from Afghanistan may also distract India's Act East promises.¹⁹

Finally, India needs to work on its credibility to be accepted as a crucial power in the Asia Pacific region. It needs to come to terms with its domestic economic hurdles to measure up to the promises it has made to the eastern neighbours. A consistent and robust economic growth is essential to play a prominent role at the regional and the global level. Economic underperformances may restrain its capabilities to deliver on the ambitious projects it has promised its eastern neighbours.

Prospects of the Act East Policy

A dispassionate analysis of the initial months of the new regime indicates its sincere and ardent moves towards achieving a concrete framework of cooperation with the extended neighbourhood of East and South East Asia, be it the economic assistance to Mongolia, or the announcement of several significant infrastructural projects across the region meant to facilitate trade and economic development. The new NDA Government's pledge to enhance physical connectivity across the Asia Pacific and its intent to create 'special purpose vehicle' for expeditious implementation of the connectivity projects are likely to elicit a positive response from the countries in the region as they demonstrate determined Indian manoeuvre to boost up the pace of trade, economic development and industrialization across the region. The commitments of Mr. Modi to clinch the pending free trade agreements and easing up the prospects for doing business in the country through his much avowed 'Make in India' policy, incorporation of a concrete proposal to set up manufacturing hubs

in mainly four ASEAN countries – Cambodia, Laos, Myanmar and Vietnam in the India's 2015-16 budget etc. are likely to convince the countries in the region in favour of Modi's Act East initiatives.²⁰ Her intention to pursue serious engagement with Asia-Pacific and prioritising high level interactions with China, ASEAN, Singapore, Vietnam, Japan and Australia are likely to generate positive responses from the countries of the region as the latter may look up to India as a balancing actor vis-à-vis China's unabated dominance in the region and thereby increasing the potentials of success of India's Act East Policy.

Conclusion

India has to inculcate its image as an important strategic player in the Asia-Pacific to evoke positive and enthusiastic response from the states in the region. It needs to act as a stabilizing force in the region by mitigating Chinese predominance on the one hand, and taking a pragmatic stand on China's sensitivities with regard to India's unwanted incursions into China's strategic space on the other. The states of this region may encourage an active role by India in the maritime security initiatives both bilateral and multilateral as a strategic ploy to counter China; but an overt and direct involvement of India in the maritime disputes in the region may prove to be counterproductive. The new NDA regime must come up with a concrete and credible agenda for cooperation and focus on an expedited implementation of the promised projects in various sectors in order to emerge as a reliable partner. Ambitious promises without tangible outcomes would only leave the members of the region disappointed. The cooperative endeavours must be organized, institutionalized and feature an achievable target within a reasonable time. If the Modi government can work towards achieving clarity of vision and contemplate practicable actions for living up to its promises, its Act East venture is likely to herald a completely new era in the relations between India and its extended eastern neighbourhood.

Notes

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LANGUAGE SCENARIO OF MIZORAM

MAUSUMI MAJUMDAR

Abstract : This paper deals with the language situation of Mizoram which has been studied by observing the seven major languages of Mizoram separately under the domains of education, literature, mass media, religious activities, administration and others. The languages studied are Mizo, Mara, Lai, Paite, Hmar, Riang and Chakma which generally cover the linguistic communities of that state.

As Mizo (Lushei) is the most dominant language of Mizoram, identity crisis of other linguistic communities in Mizoram comes into play. In fact, the expansion of the Lushei dialect appears to be a bar for the development of the dialects of the other linguistic communities in Mizoram. Hence, in this paper, language attitudinal study also plays a major role in describing the linguistic scenario of Mizoram.

Key Words: attitude, community, contact, development, identity

The language scenario of Mizoram is very interesting. There are several languages like Mizo, Mara, Lai, Paite, Hmar, Riang, Chakma and others which generally cover the major part of the linguistic communities of the state. Out of seven major languages mentioned above, six languages except Chakma, belong to the Sino-Tibetan language family. It is to be noted that in Mizoram, Mizo is the most dominant language which is all pervasive whereas the languages of the other tribes of Mizoram are very much localized.

The area of Mizoram is 21087 sq. km with a population strength of 8,88,573. About 73% of the total population of Mizoram speaks in Lushei or Mizo language. Speakers of other major languages i.e. Mara(3.91%), Lai(2.8%), Paite(1.62%), Hmar(1.6%), Riang(1.9%) and Chakma(7.55%) are much lesser compared to the Mizo speakers.

Mizo and other languages like Mara, Lai, Paite, Hmar and Riang are considered as belonging to the Kuki-Chin group under the Assam-Burmese Branch of the Tibeto-Burman sub-family of languages. Among them, Mizo (Lushei) came in contact with the missionaries first. All the above-mentioned communities except Chakmas, accepted Roman script for writing their languages, which the missionaries introduced for them.

On account of the missionaries' work particularly in the field of education, the development of Mizo over-shadowed the other communities and also their population was much higher than the other communities. Thus, Mizo achieved the dominant role among all other speech communities and plays the leading role in the language scenario of Mizoram. In fact, it is a common link language among all the tribal and non-tribal

people. Mizo language is used for most of the official purposes of Government of Mizoram within the state. Mizo language is used in every field viz. official, educational, social and commercial activities. This shows that Mizo language is the most dominant language in Mizoram. One may consider that the supremacy of Mizo language sometimes appears as a burden for the development of the other languages. As a result, a question of endangerment of the linguistic identity of the other tribal people of Mizoram comes into play. The identity crisis of the other linguistic communities, other than Mizo, shows that they are struggling for their own existence. A clear picture of the language situation of Mizoram has been studied by observing the usages of the seven major languages separately under the domains of education, literature, mass media, religious activity, administration and others.

Mizo

In Mizoram, as per data supplied by the School Education Department, more than 50% of primary schools use Mizo language as the medium of instruction. Almost all the primary schools are located in the six districts of Mizoram (Aizawl, Kolasib, Mamit, Champhai, Serchhip and Lunglei). In the other two districts viz. Lawntlai and Saiha, the medium of instruction at the primary level are Lai and Mara respectively. However, only four primary schools with Mizo medium lie under Chakma Autonomous District Council (hereafter referred to as CADC) in the district of Lawntlai.

In Mizoram, English is the medium of instruction from High School up to the University level. But students can take Mizo as a subject up to Higher Secondary courses in school education. Mizo is taught as a subject in the under-graduate and post-graduate levels. Students can even do their Ph.D. in Mizo language.

The literacy rate of Mizoram is 88.8% which is the second highest in the country and the highest in the North-East States. The Adult Education System plays a major role in eradicating illiteracy in Mizoram. The language of Adult Education in Mizoram is mainly Mizo. But under CADC, the language of Adult Education is Chakma. The other languages in Adult Education Programme are yet to be introduced, although they have a provision of primary education in their own mother tongue. All text books of Adult Education Programme are in Mizo language except the Chakma text books for Adult Education Programme under CADC.

The published literatures of Mizoram are mostly done in the Mizo language. The literary works published in Mizo language are narrative, lyrics, plays, songs, hymnal or sacred songs, short stories, novels, non-narrative prose, pre- and elementary school manuals and work books, non-narrative writings like devotional, political and social writings. There are also refined non-narrative prose like secondary school manuals and work books, political, social and scientific books of secondary level. The learned non-narrative

prose at the university levels are the university manuals and text books on Physics, Chemistry, Biology etc. and other non-narrative prose. Different types of monolingual and bilingual dictionaries and even trilingual dictionaries are also available for Mizo speakers.

In Mizoram, there are two Radio Stations located at Aizawl and Lunglei. In all Radio Stations, Mizo language is used for all sorts of announcements. More than 70-80% programmes are conducted in 'Mizo'. There is only one TV station in Mizoram. Doordarsan Kendra, Aizawl transmits its programme from 17:30 to 20:00 from Monday to Friday and from 15:00 to 20:00 on Saturday and Sunday. Except Hindi lesson, Hindi songs, Western Music and News in English all the programmes are conducted in Mizo.

A very good number of newspapers, periodicals, bulletins, magazines and journals are published from Mizoram in the Mizo language. All the literary activities in Mizo language are basically performed centering Aizawl city.

In Mizoram, 98% of the total population practice Christianity. There are a large number of churches in Mizoram. Majority of the churches conduct their services in Mizo language except those churches which are particularly meant for the other tribes of Mizoram who are speaking in their own particular language. The Mizo churches conduct preaching, rituals and teachings in the Mizo language. They use Mizo hymns and songs for their prayer. Both Old Testament and New Testament are available in the language. Mizo language and literature were enriched and developed by the contributions of the missionaries and the churches.

Mizo language along with English is used for all official correspondence within the state government. But, for correspondence with the Central Government or other State or Union Territory Government and with the Autonomous District Councils of Mizoram, English is used. In internal written directions and regulations, Mizo language is also used along with English. In some cases, Hindi is also used.

In the State Assembly, both Mizo and English are used for debate and written proceedings. A member from other linguistic community who does not know Mizo or English may speak in his own language in the Assembly provided that he should submit his speech in writing to the speaker in Mizo or in English in advance.

In the district level Courts of justice, both Mizo and English are used almost in every aspect of court works like evidences, pleading, declarations and correspondences. The written proceedings of judgment is made in English only. In case of giving verbal evidences, other languages are permitted, depending upon the language of the clients. In case of High Court, all correspondences are done in English.

Both Mizo and English are used in every sphere of written works like publicity, labelling products, instructions on use of product, notices, bulletins, letters for

correspondence, messages etc. All verbal communication except some fisheries production under Autonomous District Councils is done in Mizo.

Mara

As per 2001 census, total population of Maras is 34,731 i.e. 3.91% of the total population of Mizoram. In Mizoram, Maras are mostly living in Siaha district in Mizoram having their own Mara Autonomous District Council (MADC) where the most of the official activities are conducted in Mara only. They maintain their boundary, mentioning their area as Mara land. But, when the question of communication arises between the Maras and the others, then mostly, Mizo is the language for their communication. However, among the educated Maras, English also plays an important role for their inter-group communication. In fact, Maras have introduced their text books in the Mara language for Primary and Middle school. Previously Mizo was their medium of instruction in school which has been switched over to English as per the recent decision of the Government of Mizoram. In schools under MADC, Mizo is also taught as an optional paper. Even students can take Alternative English instead of Mizo, which the Mara students mostly prefer. Mara is used for all purposes of the day to day life of the common people.

Many literary works are also found in the Mara language in Saiha district of Mizoram. Bible in Mara is their most sacred holy book.

In the churches of Mara land, all the church services are done in Mara language except some Evangelical Churches of Mara land.

If the bilingualism pattern is to be considered as an indicator of the status of their language, then it is invariably, the Mizo in most of the cases, which is unidirectional from Mara to Mizo. The educated Maras also speak English and Hindi (limited). The majority of the Maras are bilingual in Mizo, whereas the Mizos are much less bilingual in the other languages of Mizoram. English is the most preferred second language for the country and Mizoram is no exception. The Maras also use English for their inter-group communication.

In case of communication with the other groups of Mizoram like Hmar, Paite, Mara, Lai, Chakma, Riang etc., Mizo is the common link language even if they understand a little bit of each other's language. But in case of educated groups, English is preferred as their language of communication.

Although there is a community radio station in Saiha, all programmes are run in Mizo in spite of the fact that Mara is the main language of communication in Saiha. Doordarshan Kendra, Aizawl does not transmit any Mara programme. AIR, Aizawl broadcasts Mara programme once in a week for about 40 minutes.

In District Council Courts, all the oral judgments, evidences and pleadings are done in the Mara language. But all the written judgments are in English.

With Central Government, the communication made by MADC is in English only. But they use both English and Mizo for the communication with the Government of Mizoram. With governmental bodies and other different institutions, the communication made by the MADC is in English only.

In District Council, all the communications like written agenda and resolutions are done in Mara only. If it is necessary, then only in some cases, they are translated into English. In case of non-Mara member in Saiha Mizo or English (if known) is used as a common language.

Lai

As per 2001 census, total number of Lai speakers in Mizoram is 24,900 i.e. 2.80% of the total state population. Lais are concentrated in the district of Lawngtlai in Mizoram having their own Lai Autonomous District Council (LADC), where some of the official activities are conducted in Lai. But when the question of communication between the Lais and the others come, then mostly, Mizo is the language which is used. However, among the educated Lais, English also plays an important role for their inter-group communication. A significant feature of Lai language is that, many of the Lai people do not know Lai language.

If the bilingualism pattern is to be considered as an indicator of the status of their language, then it is invariably, the Mizo in most of the cases, which is unidirectional from Lai to Mizo. The majority of the Lais are bilingual in Mizo, whereas the Mizos are much less bilingual in the other languages of Mizoram. Mizo and English are the most preferred languages for their inter-group communication. Educated Lais prefer English as their language of communication.

Lai language is taught as a subject in the primary school and the middle school level i.e., from class I to VII in the school under Lai Autonomous District Council (LADC). But most of the people do not know Lai, not even the younger generation. They can only speak in Mizo. Previously the medium of instruction was Mizo, but recently it has switched over to English.

Lai language is only used officially in the Lai Autonomous District Council (LADC) at Lawngtlai. But this official use of Lai language is mainly restricted to oral form only. The written file work is done in either Mizo or in English mostly. Only the Department of Land & Revenue of LADC maintains all its official documents in the Lai language. Previously, the proceedings of the meetings were available in Lai along with Mizo and English, which is not available today for the lack of Lai knowing people.

The literature in Lai language is very limited in Mizoram. Only a few books are written in Lai by the native speakers. Lai hymns and songs and also the Lai folk tales are available in Lai dominated areas of Mizoram. They have a strong cultural heritage.

It is said that the Bamboo Dance of the Mizos and the proverbs of the Mizos, actually belong to the Lai community.

No newspaper in Lai is published from Mizoram. Lai periodicals or magazines are very rare in Mizoram.

The Lai people embraced Christianity. The Lai churches under the LairamIsua Krista Baptist Kohhran conduct the church services in the Lai language. Recently, Bible has been translated in Lai. In some churches in the Lai dominated areas, Mizo language is used while conducting the church services. But in some churches of Lai community, they use both Lai and Mizo languages. One of the Lai Churches in Aizawl is Kalvary Church, where all the church services are done in Lai.

Doordarshan Kendra, Aizawl does not transmit any such Lai programme. AIR, Aizawl broadcasts Lai songs once in a week for about 40 minutes.

Hmar

As per 2001 census, total number of Hmar speakers is 14,240 i.e., 1.6% of the total state population of Mizoram.

In Mizoram, most of the Hmar speakers speak Lushei or Mizo language. A large number of Hmar people speak Hmar language along with Mizo. They use Hmar in their day to day life. Although, Hmar literature, Hmar Grammar, Hmar Bible and Hmar Dictionary are available in Mizoram, these literary works are very rarely published from Mizoram. In the churches of Hmar people in Mizoram, preaching, songs and hymns are done in the Hmar language.

In meetings and sessions of the Sinlung Hill Development Council (SHDC), the Chairman and the members speak in Hmar. Written documents are done mainly in Mizo. Sometimes, in English also, but in their concerned part, documents are given in Hmar language officially. On 18.11.2009, in the session of SHDC, it was decided that all the correspondences within SHDC area be made in Hmar language and the members of SHDC should use Hmar at the time of meeting.

Hmar is neither taught as a subject at any level of education in Mizoram, nor used as a medium of instruction in the schools of Hmar dominated areas.

Doordarshan Kendra, Aizawl does not transmit any Hmar programme. Hmar songs are broadcast in AIR, Aizawl once in a week for about 40 minutes.

The Hmar community in Mizoram is mostly Christian and each Hmar village has its own church, where the church services are done in the Hmar language along with Mizo.

For Hmars in Mizoram, Mizo is their common link language. However, for educated Hmars, English also plays an important role for their inter-group communication.

Considering bilingualism, it can be said that the Hmars are much more bilingual than the Mizos. Almost all Hmars know Mizo. English is mostly preferred by the educated Hmars as a second language.

Paite

As per 2001 census, total number of Paite speakers is 14,356 i.e., 1.62% of the total state population of Mizoram. Paites are mainly concentrated in Champai district of Mizoram.

Most of the Paite speakers in Mizoram do not use Paite language even at home. Their common language is Mizo. Most of the Paite people know very little of Paite language. Even the younger generation do not know Paite, but they know Mizo. Paite language is not taught at any level in Mizoram. In the schools of Paite villages near the border of Manipur and Myanmar, the teachers generally explain the subjects in Paite, although, Paite language is not considered as medium of instruction in Mizoram. But in the Paite villages some people speak in the Paite language.

No literary works are published from Mizoram in Paite language except some periodicals. Even the Paite Bible which is available in Mizoram, was actually translated in Manipur.

There are Paite Churches where all the church services are done in Paite, at the same time, Mizo hymns and songs are sung. Evangelical Baptist Convention Church is purely a Paite Church, where all the church services are done in the Paite language.

Doordarshan Kendra, Aizawl does not transmit any Paite programme. AIR, Aizawl broadcasts Paite songs once in a week for about 40 minutes.

Chakma

The Chakmas speak their mother tongue in their daily life. In Mizoram, Chakmas are mostly living in the Lawngtlai, Lunglei and Mamit districts along the border of Bangladesh. As per 2001 census, total population of Chakma are 67,057 i.e., 7.55% of the total population of Mizoram. They have their own Chakma Autonomous District Council (CADC) in the Lawntlai district of Mizoram, with the head quarter at Chawngte or Kamalnagar (as called by the native speakers). The schools under CADC teach Chakma as a subject in the primary school and the middle school level i.e., from class I to VII. Previously they used Bengali as a subject in place of Chakma. Recently the medium of instruction in the schools under CADC has been changed from Chakma to English as per Government policy.

There is no publication of newspaper or magazine in Chakma language in Mizoram. No literary books are available in Mizoram except the text books published by CADC up to class VII.

In District Council Courts under CADC, all the oral judgments, evidences and pleadings are done in the Chakma language. But all the written judgments are in English and sometimes in Bengali also.

In CADC, they use their own language for verbal communication, but written recordings are done in English and Mizo. In the recent years, they have introduced Chakma language in all their activities in CADC.

The Chakmas are the followers of the Hinayana sect of Buddhism. Chakma language is used in religious-preaching and the chanting is done in Pali. Chakma language has its own script.

English is their most preferred second language for communication. Chakmas are more bilingual than the Mizos, as the situation demands in Mizoram.

Riang

Riangs fall under Bodo group of Tibeto-Burman sub-family. As per 2001 census, the population of the Riangs is 16,909 in Mizoram. The majority of the Riangs are in Tripura.

Riang language is not promoted in Mizoram. They have no text books in Riang. Riang language is only spoken. There is no written use of the language. According to our field survey, no literary works in the Riang language is available in Mizoram except Bible. Bible in the Riang language is their only literature available in Mizoram. No publication, no newspapers and no magazines in Riang are available in Mizoram. Riang language is not taught anywhere at any level of education in Mizoram.

For the religious purpose, many of them follow a particular form of Hinduism; some are animists and many are Christians. It has been reported that they use their own language for prayer services.

Neither Doordarshan Kendra nor AIR, Aizawl broadcast any programme in Riang.

Attitudinal Study

The objective of the attitudinal study was formulated on the basis of the close observation of the communities with their language use, attitude and identity. It was noticed that other than Mizo, almost all the languages are spoken mostly at home or in close interaction networks. Lai, Mara and Chakma are partly used in education, literature and for communications in formal settings. Natural language acquisition is the result of their competence in mother tongue. But their competence in English depends on their formal education. However, competence in Mizo depends either on simultaneous acquisition of Mizo as second language or through interaction as a link language or as the degree of formal education. The smaller linguistic communities like Lai, Mara, Hmar, Paite, Chakma and Riang feel the pressure of the major dominant language Mizo due to the socio-economic functions of the Mizo language in their life. Thus, these smaller linguistic communities present interesting cases of the use of their mother tongues, Mizo and English. They possess different attitudes towards their language-use.

We prepared a questionnaire (a schedule) for the collection of data about language attitudes. The schedule consisted of attitudinal questions, each of which was to be responded. But since our data was limited we have not taken the venture of statistical

analysis of the data. Therefore, summary of the findings of this exercise has been presented.

The use of their mother tongues, Mizo, English and Hindi raises interesting issues of language competence and language acquisition, which need further investigation, considering the categories of age, sex and occupation as variables in characterizing the differences among the respondents.

Attitude towards language use in family

The role and relationship include interaction with wife, children, relatives, friends and other speakers. Here, it is described as the patterns of attitudes towards language use in the above said relationships among the seven linguistic communities.

It has been observed that the respondents strongly favour the use of mother tongue in all relationships mostly, barring a few exceptions. Sometimes, the attitude towards the use of mother tongue is not favourable in case of Hmar, Paite and Lai in urban set up. They often use Mizo in their family. It may be mentioned that Mizo as an umbrella language would displace their use of mother tongue in close relationship after a certain period of time. It is true that these languages have existed for a long time but pressure of Mizo has been felt more strongly during the last 50 years than before due to social and political reasons.

As regards attitude towards the use of English, it is quite clear that the educated respondents highly favour English as a complementary use.

All categories of respondents have highly favourable attitudes towards their mother tongue. Although, highly favourable attitudes towards Mizo do not imply any displacement of mother tongue, but, in case of actual use of these languages, entirely opposite picture is seen. Mizo wins over the majority in actual use of the language.

However, it is to be mentioned that the Maras are more assertive in using their mother tongue in most of the domains. As a result, the Mara language is more maintained compared to the other linguistic communities. Lai comes next to Mara in having a positive attitude towards maintaining their mother tongue. But in actuality the Lai language is not maintained by all the sections of the community. In case of Hmar and Paite, they are not very assertive in using their mother tongues in Mizoram as they have strong reference groups in Manipur.

In case of Chakma, they strongly favour their mother tongue for all purposes. Although, most of them know Mizo, they want to introduce their own language in every field and in all domains, including their own Burmese based script.

The attitudinal survey of Riang was not successfully possible as they were very much dispersed being busy fighting for their language identity. Only some of the individuals were interviewed but not the community as a whole. The main concentration of Riang lies in Tripura.

Attitude towards language use in education

The question of language-use in education has acquired a significant role in the last two or three decades because of its far-reaching implications in the educational performance and mental growth of the children. The development of language structure and its extensions in the context of language planning and again social identity in the context of language maintenance and shift are equally significant in the field of education.

A distinction has to be made between the use of a language as a medium for teaching all the subjects and its teaching as a subject in school. In this regard, it is to be mentioned that although the minor linguistic communities in Mizoram favour their mother tongue, except Mara, the others have not shown their effort to develop their own variety of language in every aspect of education. Neither the Government of Mizoram nor the smaller linguistic communities have made much effort in this direction. Thus, the positive attitude regarding the maintenance and development of their languages are not reflected.

Although, they prefer mother tongues as their medium of instructions and also as subjects to be taught in school, for the higher education they prefer English rather than their mother tongues to be the medium of instructions in schools, so that they can compete with the world in the field of education.

Other than Mizo, the Maras are very much conscious of their own linguistic identity. They have developed some of the registral variety of their language for different purposes of language-use in the field of education, religion, etc.

Attitude towards language-use in mass media

AIR, Aizawl broadcasts most of the programmes in the Mizo language. But the programmes of other languages like Lai, Mara, Paite, Hmar, Chakma etc. are conducted by AIR, Aizawl once in a week for about 40 minutes, which are mostly songs. Doordarshan Kendra, Aizawl shows all the programmes in Mizo only. Some English programmes are also shown. But the programmes of other languages are not shown at all.

In Mizo, there is much progress in the field of periodicals, magazines, newspapers and all other publications. But no such progress is made in other six languages. Among the six, only the Maras have a better progress in the field of publications, newspapers, magazines or periodicals. In this regard, Lai comes next to Mara. The others could not make any progress in this regard. English is the most preferred second language for all the linguistic communities. Hindi comes in some specific cases.

The smaller linguistic communities have a very strong opinion regarding their language-use in different mass media like AIR, Doordarshan, etc. They also strongly feel that literary works, magazines, periodicals, news sheets etc. should be published in their own respective mother tongue, although they do not have any negative attitude towards the existing practices of using Mizo, English and Hindi languages in different mass-media.

Attitude towards language development and language use in literature and communication

All the minor linguistic communities want to develop their own mother tongue but in actuality, they prefer Mizo to be their link language in case of inter-group communication. The educated people prefer English as their second language. It is remarkable to note that all the linguistic communities accept Mizo as their common link language.

Again all the linguistic communities strongly favour creative writings in their mother tongue. But in actual use, their languages have not reached that level. Even the text books of different levels are not available in their languages. In fact, the process of standardization of these languages is also in rudimentary stage and the languages are mostly used for oral communication.

Identity status and instrumental function

Mother tongue speakers of all the linguistic communities consider their own language to be their symbol of identity. But simultaneously, they accept the supremacy of Mizo as their common language.

The function of mother tongue as a token for identity at the regional level is not very sharply defined, though its significance cannot be ignored. Increasing use of Mizo in most of the domains is considered as a threat to the distinctiveness of a community as a whole. Almost all the linguistic communities of Mizoram feel so, according to our field survey.

Majority of the six linguistic communities consider their mother tongue to be an obstacle for the future academic situation. They think that if they assert their linguistic identity then it would not be appreciated by the Mizo community.

Many of them know very little of their language. They do not know how rich their language is and hence they are not in a position to develop their languages. They admit to the Mizos easily.

The Mizos consider the other linguistic communities belonging to the Kuki-Chin group like Lai, Mara, Paite and Hmar to be Mizos only. They claim that others do not have their own separate identity but they fall under the Mizo umbrella.

The smaller linguistic communities like Chakma and Lai live like a good neighbour in the same district Lawngtlai. They have indifferent attitude towards each other's language.

The Maras and Lais are the distant neighbours having neutral attitude towards each other's language. Similarly, Paite and Hmar linguistic communities remained neutral towards each other's language.

Although the Chakmas speak the Indo-Aryan speech they accepted the supremacy of Mizo due to socio-economic and political reasons. Since the Riangs do not get any favour from the Mizos for the development of their language, they have unfavourable attitude towards the Mizo linguistic community.

But all of these linguistic communities want their mother tongues to flourish, which is a positive attitude towards their own language.

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THE SACRED SCROLL PAINTINGS OF THE TIBETANS: THANGKA PAINTING

SALINA THAPA

Abstract : Thangka, the painted pictorial scrolls in cotton fabric or silk, carry a strong religious character. They are crucial to the religious life of the Tibetans which acts as a medium to evoke the high ideals of Buddhism. This traditional art of the Tibetans being inspired by religion mostly depicts the life and teaching of Buddha, Bodhisattvas, spiritual symbol in Buddhism or Jataka tales. 'All the components of a Thangka (silk border and central painted component) have iconographical significance' (Huntington 1970). It is the support of Dharma practice and the tool of Dharma propagation. It represents and preserves the essence of the Dharma. Thangkas are undoubtedly a support of spiritual realization and it is used as didactic aid to illustrate their teaching and as an aid to meditative visualization. Thangka is consecrated after its completion by a Lama and often a mantra is written on the reverse. This consecration ceremony is of utmost importance as it elevates the status of a Thangka from a piece of art to sacred spiritual one, thereby giving its liturgical value. If the Thangka is painted in a genuine way following prescribed canonical authority and artistic tradition then it is very different from an ordinary work of modern art and is inherently highly sacred. An attempt is made in this paper to present the spiritual significance of the Thangka and as a support of religious expression.

Key words : Thangka, Scroll painting, Buddhist, iconography, Jataka, Spiritual, Realization, Expression

“The highest art is always the most religious and the greatest artist is always a devout person.” If one follows this statement by Abraham Lincoln it becomes easier to understand the scroll paintings of the Tibetans as the history of the Tibetan painting is inextricably woven with the history of religious developments. There are astonishing fine artistic works in Tibet but it is on the whole only the sacred paintings, the Thangkas, which have caught the major attention of the world not merely because of their spiritual significance but also for their aesthetic value.¹ Thangkas are highly admired and generally considered as artworks in the commercial market but the Tibetans and the Buddhists revere this artwork for its religious values than its aesthetic sense. Thangkas with its magnificent colour combination and intriguing subject matter may seem fascinating to some or it may appear chaotic and inexhaustible with varied array of iconography. In order to understand and interpret a Thangka as a sacred object or an artwork it is essential to have a sound

knowledge on Buddhism or Tibetan Buddhism since its iconography is Buddhist centric, orderly and above all hierarchic. Thangkas have been a crucial component of Tibetan culture and religious life since remote past. Hence the etymology of the term Thangka, after Chogyam Trungpa Rimpoche, comes from the Tibetan word *Thang-yig* which means 'annal' or 'written record'. The literal translation of the Tibetan word Thangka means recorded message. Another meaning of the word Thangka is 'something that can be rolled up'. Thangkas are mainly sacred religious scroll paintings painted in opaque water colour on cotton fabric or silk illuminating a deity or events usually of a religious nature. The most common shape of the Thangka is an upright rectangle, mounted in elaborate silk brocades. The painting is generally covered with gossamer thin red or yellow silk veils to protect the painted surface from dust and in early days from smoke.

If one has to look into the origin or source of the Thangka painting, it is based upon the Indian religious art of *pata*, illustrative paintings of the deities and *mandala*, the mystic geometric or pictorial diagrams of complex prescribed patterns of circles and squares each having specific significance. This art form filtered to Nepal in the form of Newari Paubha and eventually to Tibet. In Nepal these Paubhas remained practically the same as those in India. Even in Tibet the Indian tradition of producing sacred pictures having a single deity remained the same with certain transformation in artwork. It was in the 7th century when Tibetan art forms made considerable advances. One reason for this progress was the marriage of Songsten Gampo to Nepalese and Chinese princess; the cultural heritage of their respective countries had a far reaching influence on the development of the Tibetan art. Another reason was the spread of Buddhism which assimilated with the old Bonpo religion of the land which injected a new vigour into the cultural life of the Tibetans. For several centuries the Nepalese influence upon Tibetan painting was dominant and remained uninterrupted for a long time. Chinese influence, on the other hand, fluctuated along with its changing political relations but one cannot deny its contribution in the development of Tibetan art. In fact, the development of Tibetan painting consists in a mutual approach and blending of the Chinese and Nepalese manners.² The interaction of Tibet with its neighbouring countries also had profound influence on the culture and artistry of Tibet. These external influences which provided guidelines and rules at the initial stage to the Tibetan painting slowly began to give way to a more distinctly Tibetan style of painting. Instead of simply imitating and absorbing the style of neighbouring countries the Tibetans started interpreting and expressing in their own distinct style. Even the mandalas or the sacred paintings underwent some transformations and was further improved upon with new

designs and different compositions. Thus, the Thangka painting developed in distinct and fullest form in Tibet with some regional variation.

Based on the technique employed and materials used, Thangkas can be primarily divided into two categories: *Bris-than*, painted scrolls and *Gothang* or *Gochen* or *Gos-than* woven or embroidered silk pictorial scrolls. Again there are several varieties under these two heads, to name a few: *Dras-drub-ma* -Thangkas done using appliqué technique; *Ihan-drub-ma* -Thangkas made by pasting coloured silk pieces of different shades on the canvas; *Tshem-drub-ma* - hand embroidered Thangkas with silk thread; *d'Par-ma* - Thangkas printed with the help of wooden or copper blocks. Further, *Bris-than*, depending on the different colours used in the background of the painted Thangkas can be divided into following categories : *Tson thang* is a Thangka having different colours for the background; *Ser thang*, in which the paintings have gold background with figures and designs drawn with ink or vermilion. *Nag thang*, the paintings have entirely black background and the rest of the work is done entirely in gold or sometimes with vermilion with some shading of other colours. These paintings often depict wrathful deities. *Mar thang*, in which the paintings have red background and they often depict peaceful deities. *Kyli khor* or Mandala is the floor plan of the deity. Each deity has a different form of Mandala in which the architectural details and colours symbolize different esoteric wisdoms. Mandalas are mostly circular in form with several divisions and sub divisions.

The theme of the painting may vary according to the occasion and the guidance of the lama for which the patron wishes to use it. Nevertheless, the dominant theme of almost all these scroll paintings remains sacred or religious in nature. The portrayal of Buddha Sakyamuni and his legendary life is an inexhaustible source in terms of themes. The paintings may portray peaceful and contemplative deities like Amoghasiddhi, who is associated with worthy accomplishment and infallible success, Manjusri for wisdom, Bhaisajyaguru or Medicine Buddha, also called Healing Buddha, said to dispense good health when worshipped properly. The depiction of wrathful deities in these paintings is considered as powerful tools in taming strong negative forces and generating positive energies; it also helps in destroying major obstacles to enlightenment like anger, greed and ignorance. For example, Vajrakilaya or Vajrakila is a winged dark blue wrathful deity or *heruka* whose characteristic implement is the *phurba* and who subdues opposing and chaotic forces. Mahakala, Yamantaka, Yama are few to name. Meditational deities or yidams, also called tutelary deities, is another theme for Thangka painting. These paintings are used for contemplative experience and to focus the mind during meditation.

It also serves as bestower of blessings or grace and as guide and protector. Tara, who assimilates the various characteristics and qualities of several goddesses form another theme. The depiction of Tara in green colour is believed to overcome fear and anxiety, she can also grant wishes, eliminates sufferings of all kinds and brings happiness; White Tara embodies motivation and compassion; Black Tara subdues evil spirits and cures any illness caused by them; Red Tara subjugates and removes obstacles. Ushnishavijaya, a female deity may be commissioned in the Thangka as a bestower of longevity of life of the patron. The Mandala or sphere of divine residence is another important theme of the Thangkas. Sometimes eight auspicious symbols or *tashi targye*, seven precious jewels or *nor-bu-chbdun* are also depicted in the Thangka paintings. Scholars and saints and depictions of events from their *samsara* or new iconographic form inspired by the visionary experience of great Buddhist teachers also acted as theme for these paintings. Another theme of the Thangka involves a central figure with a retinue of minor deities that traces the lineage of a particular teaching. The most common are the 'Refuge Tree' and 'Assembly Fields'.³ The 'Refuge Tree' depicts deities or sacred objects or principles in which sanctuary is sought. The 'Assembly Fields' Thangka is an aid in visualizing the totality of the guru's lineage. In this sacred painting a group of exalted beings, who were worshipped and to whom offerings were made is depicted. There are innumerable sacred subjects and reasons for painting a Thangka but commissioning and donation of Thangkas is always perceived as a meritorious act both for the patron and the artist.

According to Tibetan iconological theories recorded in treatise on sacred art, art works were traditionally classified into three main types each corresponding to an aspect of Buddhahood: enlightened body, speech or mind.⁴ Thus the Buddhist religious art forms which are generally regarded as *rten* or support can be classed in the following ascending order:

1. *Sku rten* (Bodily support)
2. *Gsung rten* (Verbal support)
3. *Thugs rten* (Mental support)

Thangkas which depict the physical form of the deities can be considered as *sku rten* or body support. There are also *rten* paintings which depict inanimate sacred objects, such as stupas, monasteries, because they represent support of enlightened mind. Some sacred paintings portray the events of the life of enlightened saint; these paintings are called narrative or biographical paintings. Some sacred paintings that taught or illustrated the Buddha doctrine only and did not portray the form of the Buddha or other deities

have been described as ‘didactic’. Dictatic Thangkas have illustrations of religious objects, religious artefacts or symbols, religious themes or motifs. Dictatic Thangkas are also regarded as *rtan* since they too express the aspects of Buddhist doctrine. What may be the art form, theme or classification of the painting, the main purpose of commissioning a Thangka was to evoke the high ideals of Buddhism, since these sacred paintings are considered as highly developed and important means of religious expression. It personifies the scriptures and mostly depicts the life and teaching of Buddha, Bodhisattvas, and spiritual symbols in Buddhism or Jataka tales. There is no denying of the fact that Buddhism is the central theme of these art works. Almost all Tibetan art takes its origin from the Buddhist teachings. It is the support of Dharma practice and the tool of Dharma propagation. It represents and preserves the essence of the Dharma.⁵ In earlier times in Tibet for the propagation of Buddhism monks and lamas used these paintings as a medium through which the Buddhist philosophy could be explained. Thangkas also suited the nomadic life of the Tibetans and the religious propagators who travelled to distant places since it could be easily rolled and transported. The Thangkas were used as didactic aid to illustrate their teaching and as an aid to meditative visualization.

Thangkas are undoubtedly a support of spiritual realization. Right from the beginning till the completion of the painting, religion and religious guidelines play a vital role. Unlike other art works Thangkas are not merely painted on the imagination of the artist; rather it is the joint work of religious preceptor, religious practitioner and the painter. There can be many reasons for commissioning a Thangka, the most common being to create an object of worship for ‘merit making’. In Buddhism ‘merit making’ means to earn credits for future benefits or happiness. It is not merely for material benefits or for the immediate life situation but to earn credits to reduce the effect of bad karma, and thus could earn them also Nirvana.⁶ Besides, Thangkas are commissioned to remove physical and mental obstacles; to ward off unwonted evils, to aid the recovery of sick person, to protect a person from negative forces. Sometimes they are commissioned at the commencement of new project, to bring about good health, patron’s longevity and prosperity or for the welfare of a newly born infant. For example, as mentioned in the above paragraph *Sgrol-dkar* or White Tara who is usually portrayed seated, dressed and crowned like Bodhisattvas, white in colour and in peaceful manifestation is commissioned as the ‘main figure’ in the painting to overcome obstacles. Similarly, *Sgrol-lijang*, Tara in green form or ‘Green Tara’ is iconographically depicted in the posture of ease and readiness for action. She is usually seen seated with her right leg outstretched and her

left leg folded in contemplative position, her both hands hold dark blue closed lotuses which symbolizes purity and power. Green Tara is intensely compassionate and acts quickly to help those who call upon her. She is usually painted in the Thangkas to overcome dangers, fears and anxieties. Blue Tara or *Ugra Tara* who is ferocious and terrifying in manifestation is usually invoked to destroy enemies; Red Tara or *Kurukulla* seen in red colour, in a dancing form and in terrifying manifestation is painted and worshipped as the goddess of love. To cite few more examples, 'Vajrapani' or *Chhyagna Dorje* is usually painted in dark blue colour, with a crown of skulls and holding a vajra. Vajrapani when represented in the painting either stands or sits carrying a lotus; sometimes he holds the vajra against the chest. He is looked upon as the rain god so he is depicted in the Thangkas when rain is needed or is too abundant. Manjushri or *Jyambheyang*, known as 'God of Divine wisdom' is shown in yellow, white, red and black forms, with the sword of knowledge in his right hand and the book of transcendent wisdom in his left hand. It is believed that his worship confers Mastery of the Dharma, retentive memory, mental perfection and eloquence. For example, Medicine Buddha or *Men- Lha* or also known as Healing Buddha as the name suggests, is said to dispense spiritual medicine when properly worshipped. It is even believed that merely touching the image can also be effective. He is depicted in the painting wearing a monastic robe, seated with the legs crossed. His right hand either holds a branch with fruit or the fruit alone of medicinal plant. His left hand in meditation posture usually holds a bowl. In the same way numerous other deities are commissioned as the main figure in the painting since it expresses aesthetic focus and spiritual gravity.

Thangkas are also spectacular paintings which make a strange use of the spectrum. In the array of colours there is something of the prismatic in their concentration around the 'main figure', for example, Buddha, Tara, Kalachara, etc. and the other figures radiate from the central form or motif. Each of the different figures and colours of those representations in the Thangkas has a special meaning and significance for visual meditation. Buddhism placed much emphasis on the spiritual significance of few principal colours like white, black, red, green and yellow, which naturally influenced the development and practice of Buddhist aesthetics. The enumeration of the colours may change but the number remains five. For example, in the Kalachakra Tantra the four elements-air, fire, water and earth are identified with four different colours-black (blue), red, white and yellow respectively. The following quotation from the Chandamaharosana Tantra also attests to the fact these colours were canonized as rich in symbolism: Black

symbolizes hate and anger; White denotes rest and thinking; Yellow stands for restraining and nourishing; Red for subjugation and Green for exorcism. If one has to look into the colour scheme in Buddhist art or Thangkas, such a short paragraph cannot cover everything rather it will act only as a tip of an iceberg. Nonetheless one cannot deny the fact that each colour is endowed with symbolic significance and its use in the painting in calculated quantities is to produce powerful visual and emotive effects.

In traditional Tibet, the painting of Thangkas occupied a revered place and it had to be done with utmost care and diligence for the benefit of the patron and the artist. Often before the creation of the Thangka a lama is consulted to get an advice on which the deity should be depicted in the painting. Very often a lama prepares a sketch showing the manner and relative positions of each figure in the painting. The painting may have one main central figure or many figures. A deity becomes a 'main figure' or 'minor figure' in a given painting according to the immediate spiritual wishes or priorities of the devotee or patron commissioning the work.⁷ Besides, Thangkas are also painted by artistically inclined gurus or lamas to glorify their lineages or convey the richness or inspiration of their tradition. Thangkas being explicitly religious in nature it is believed that if the work is not properly executed its devout intention will be lost. Thangkas are created in a careful and systematic way in accordance with guidelines laid out in Buddhist scriptures. Even the artists are generally expected to have proper training and religious understanding to create appropriate Thangka. The artists generally follow fixed patterns set by Buddhist iconography, canonical authority and artistic tradition regarding proportions, shape, colour, stance, hand positions and attributes in order to personify the Buddha or deities.⁸ The layout and composition of the Thangkas are primarily geometric arrangements of motifs, figures and images. The main figure is always positioned in the centre; the exact centre of the canvas is determined by diagonals which establish the vertical and horizontal axes. In relation to main figure are then placed all the other minor figures. From the religious point of view the correct establishment of the vertical and horizontal axes is important. The physical forms of deities to be painted have to be perfectly oriented in relation to the central axis. This is apparently crucial since a mistake here could affect the accuracy and hence the religious value of the Thangka.⁹ A painting of this tradition has its rule which allow one to interpret its arrangements systematically.

All the components of a Thangka (silk border and central painted) have iconographical significance.¹⁰ After the completion of the painting as a sacred object it has to be consecrated no matter what theme or what reason the Thangka has been commissioned

for. In consecrations, the physical aspects of the painting are dissolved and transformed into embodiments of Enlightenment.¹¹ The ceremony of consecration primarily performed by the highly regarded lama is of utmost importance since it elevates the status of a Thangka from a piece of art to sacred spiritual one, thereby giving its liturgical value. During the consecration ceremony on the reverse of the painting a particular mantra associated with the painted deity is inscribed. Without consecration no Buddhist would think of keeping these paintings in their religious altar. Once the Thangka is completed and consecrated regardless of what the painting has been commissioned for, it is hung in the place of honour with the belief that it has the power to transmit religious sentiments and induce religious inspiration and devotion. Thangkas are made for a variety of purposes and not solely for use in meditation.¹² It is used in marriage ceremony, any form of religious procession and even during funeral procession.

Traditions and culture change and evolve through time. This is true in case of traditional Thangka paintings too. In recent years many changes have taken place in the process of creation of Thangkas. For instance, it is no more confined within the boundaries of Tibet. As a result of commercial and cultural interaction with the outside world and exile of the Tibetans from Tibet to far and distant lands, the art has also travelled far and wide. The tradition of Thangka painting started in Tibet but it is no more confined to Tibet or Tibetans, rather it is popular among other communities who adopted Tibetan Buddhism like Tamangs, Sherpas, Yolmos, Newars and even in south east Asian countries. Earlier commissioning of Thangkas were primarily and exclusively a sacred affair but with the growth of international market for these paintings there is a shift towards commercialization, too. No longer are Thangkas solely painted for religious accumulation of merit. Under commercial pressure in the late twentieth century many of the values are also no longer religiously practiced.¹³ In the present day co-existing with the traditional monastically trained lamas who paint in traditional manner only for monasteries and religious purposes, there are Thangka painters who learn this art from different tribal and professional backgrounds and paint for the commercial market. Tibetan Buddhism might bemoan the inevitable shifts that occur through the migration and assimilation of western cultural and commercial values, but these changes cannot be halted.¹⁴

The patronage of the non Tibetan Buddhists all over the world has greatly helped in the revival of this art and its growth in the market. Tibetan Thangkas are gaining popularity among the Buddhist groups in various parts of Asia mainly for its style. The theme and the subject may not be alien to these buyers but the style, technique and method applied

in making these paintings is very distinct. Besides, the development of interest in the Tibetan form of Buddhism is also instrumental in the growth of market for Thangka paintings. The non-Tibetan Buddhists, who adopted Buddhism and different components of Tibetan culture, form another major group of Thangka buyers. Many of them visit Tibet, Nepal and India, where they receive teaching and initiation from the lamas, go on pilgrimage and procure religious objects including Thangkas.¹⁵ Due to its aesthetic beauty these paintings are also fast gaining ground as a valued piece of art in the international market. The powerful symbols with its symmetrical designs and the detailing of the figures make it aesthetically attractive. The array of bright vibrant colours used in the painting undoubtedly gives a strong visual impact. At times they are framed in a glass like western paintings. Along with other arts, Thangkas are also appreciated as hand made products. If the Thangka is painted in a genuine way following prescribed canonical authority and artistic tradition then it is very different from an ordinary work of modern art and is inherently highly sacred. As in sacred art of other cultures, Thangka paintings do not express the genius of the artist but it is an expression of the tradition. Thangkas testify the richness of the Tibetan culture and the continuity of this traditional cultural expression through monasteries and centres of Buddhist studies in several countries has also been supported by the spiritual guru of the Tibetans, His Holiness the Dalai lama.

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THE CHANGING ASPECTS OF MIZO WOMEN SINCE 1987

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Abstract : There was an assumption based on the Mizoram Accord 1986, 'The rights and privileges of the minorities in Mizoram as envisaged in the constitution shall continue to be preserved and protected, and their social and economic advancement shall be ensured'. The present paper will focus on the changing roles of Mizo women, especially how women's roles have changed in the areas of economy, politics, religion and law since the declaration of statehood in 1987. The observation reflects the signing of the "Mizoram Accord" or "Memorandum of Settlement" between the Mizo National Front (MNF) and the Government of India on 30th June 1986, which was supposed to have triggered the socio-economic and political development for all the people of Mizoram including women. The Indian constitution guaranteed equal rights and equal opportunities to women. On the contrary, the nature of society or state has a decisive impact on the position of women. Obviously, the notions of society and the state are often not gender neutral constructs; rather it is the result of both historical factors and experiences. While the Indian democratic state is committed to the protection of individual rights within the context of citizenship, it is important to note that there are historical, social and cultural factors that have limited women's capacity and chances to exercise their freedom. This paper will try to investigate how far Mizo women are benefited from the promises of the statehood.

Key Words: society, patriarchy, feminist, tribe

I. Introduction

As the 23rd state of the Indian Union, Mizoram is bordered by Tripura and Bangladesh in the west, Myanmar on the east and south and Manipur as well as Assam in the north. According to 2011 census, Mizoram has the population of 1,097,206 of which 541,867 are female. Mizoram was the second least populous state but the second most literate state in the country. In 2011, the female literacy rate in Mizoram was 89.40% against the male literate of 93.71% (2011 census). In 2001 census, Mizo women had won national attention for securing the highest female worker participation in the country. In terms of politics, since Mizoram statehood in 1987, there has been only one female minister in the history of Mizoram Legislative Assembly.

The word 'Mizo' simply means a hill-man and Mizoram is the land of the Mizos. There are a number of ethnic tribes in Mizoram that are linked culturally and linguistically. The word 'Mizo' is a generic term applied to a conglomeration of Chin-Lushai tribes and sub-tribes spread over Mizoram, Tripura, Manipur and the sovereign states of Bangladesh

and Myanmar. The population of Mizoram is dominated by various tribes such as Lushai, Hmar, Mara and Lai. Among the various tribes in Mizoram, the Lushai language speaking 'Mizos' are termed as Lushais or Mizos (Nunthara 1996). 'Lushai' is a name given by the British to the hill people. From the earliest written record of 'The Lushai Kuki clan,' the British official J. Shakespeare in 1850 wrote that the British undertook a number of military raids into the Lushai Hills beginning in 1844 and later Mizoram came to be administered by the British Government. On 6th September 1895, Mizoram was divided into north Mizoram under the Government of Assam and south Mizoram under the Bengal Government. In 1898, these regions were amalgamated as the 'Lushai Hills District' under the administration of Assam. In 1915 the Lushai Hills and other hill districts of Assam were declared as a 'Backward Tract' under the Government of India Act. Following the declaration of Lushai Hills as an 'Excluded area' under the Government of India Act of 1935, the area became more isolated. This was the beginning of a political awakening among the Mizo people. After India gained independence from the British Empire in 1947, the Constituent Assembly appointed a committee under the chairmanship of Assamese political leader Gopinath Bordoloi (Barborah 2006). The committee that included two representatives from Mizoram submitted its recommendation to the government which stated that the tribal people should be free from exploitation and domination and should have full freedom in respect to their tradition, customs, social organization, inheritance and village administration (Pudaite 2010). This safeguard was adopted in the form of Sixth Schedule of the Indian Constitution. The work of the Bordoloi Committee resulted in the setting up of Lushai Hills District Council in 1952 followed by the upgradation of the status of Union Territory since 1972. The outbreak of 'Bamboo Famine' in 1966 becomes a landmark in the history of Mizoram politics. Because of the failure of the Indian Government to provide famine relief, Mizos felt betrayed (Lalthakima 2008). This resulted in twenty years of insurgency that eventually gave rise to the formation of the State of Mizoram in 1987.

A number of studies suggest that the transition brought about a decline in the status of women. In the context of Mizoram, there are evidences where women's status deteriorated particularly in the field of female participation in formal sectors after the attainment of statehood. These studies assume that in pre-state societies there is little difference between the status of men and the status of women. Before the colonial intervention during the chieftain period, all the villagers irrespective of gender participated in a traditional agriculture and there were number of women who succeeded their deceased husband as chieftains. With the emergence of the state it has been theorised that women's work becomes private and family-centred rather than social and kin-centred. After the Lushai hills obtained the status of a district council under the State of Assam in 1952, the implementation of Government sectors largely marginalised women in the formal sectors and they were relegated to a subordinate position in the areas of economy,

politics, religion and law. At the same time, some scholars hypothesized that in hunter-gatherer societies men have sole responsibility for hunting and fighting, while women are involved in child-rearing, cooking and gathering. In these situations, men control the means of violence against outside enemies and can use this control to dominate the women (Martin 1990). Marxist feminists accept that both the subordination of women and the division of classes developed historically with the development of private property (Ray 2011). With the emergence of private property, women's house hold work sank into insignificance in comparison with men's productive labour (Engels 1948).

The paper focuses on women's rights in Mizoram which mainly depends upon secondary sources of information. Keeping in view the oral tradition and the works of literature concerning Mizo women, the study will attempt to highlight the impact of colonialism and Christianity in the changing roles and responsibilities of Mizo women. The Indian Census and statistical data recorded by the Mizoram Economic and Statistics Department were utilized to examine the existing gender gap in the areas of worker participation rate. The record of the Mizoram Presbyterian church has served to identify the subordinate position of women in the church despite their significant contribution.

II. Women and Work

Work participation has been proclaimed as an important indicator to understand the socio-economic development of every society (Md 2011). There is an assumption that women's economic participation is fundamental to strengthening women's rights and enabling women to have control over and exert their influence in their societies. As Leavitt (1971) says, the most important clue to women's status depends upon her degree of participation in economic life and her control over property and the product she produces. The transformation of agriculture based societies to non-agriculture one along with the change from rural to urban societies gave birth to the formation of work and non-work in the society (Kirby and Kidd 2000). In the contemporary Mizo society the component of work is mostly concerned with work outside the home for financial benefit apart from the domestic responsibilities of household work.

The attainment of Statehood in Mizoram witnessed considerable improvement in the field of education, growth of service industry and increased demand for handicrafts. This resulted in increasing the number of women working outside their home. This is evident from the comparison of the participation of female workforce which was 37.72 % before Mizoram obtained Statehood in 1981 and 43.52% after the attainment of Statehood in 1991. If we examine the rate of women's work participation in Mizoram, we find Mizoram has high participation rate of the female workers which is 47.54% against the participation of the male worker which is 57.2% according to 2001 census (Singhal 2003). When we examine these figures more closely, the female employment rate in the government sector is found to be only 23.6% in 2005 census (Lalneihszovi 2009). Moreover, 60% of the total workers in Mizoram are engaged in agriculture and allied sectors which means women are

engaged in low-earning jobs. Another survey report conducted in 2006 recorded that the female labour force in Mizoram was 43.9% against the male which was 53.8%. While the female worker participation rate in urban areas reached 45.8%, the rural areas have much less female worker participation rate which is only 39.3%. The survey revealed that among the total number of female workers, only 29.2% are engaged in the organised sector and 70.7% are engaged in the unorganised sector (Lalhriatpuii 2010).

To understand where and why women are employed, one has to study the growth pattern of the economy that has prevented women from employment in the mainstream economic channels (Roy 2012). There are observation regarding the existence of great transformation of the traditional economy based on a community of persons known to one another and engaged in mutual support, into a modern economy based on business where people competed with one another (Phelps 2006). For every nation, industrialization has been considered as one of the most important devices to develop the country economically. Prior to statehood in 1987, Mizoram inherited a very weak industrial base and the whole area was notified as 'No industrial Area' because there was no scope for both large and small industry (Laskar 2010). Among the existing small scale and cottage industries, the handloom and handicraft are dominant.

There are many factors which contributed to the industrial backwardness of Mizoram. Firstly, the hilly and rugged topography did not allow construction of good roads that resulted in poor communication network facilities. Secondly, there has been a certain issue regarding setting up of industry by the outsider due to inappropriate restriction to safeguard the social, cultural and ethnic identity. However, investment from outside was allowed in medium and large scale industries in joint and assisted sectors only (Mizoram Bamboo Development Agency 2010). While liberalization of industry played a significant role in women's economic advancement, poor infrastructure and no availability of good yarn in Mizoram is an obstacle to the success of implementation (Goswami 2009). Moreover, there are restrictions on labour movement due to inner line regulations (Sachdeva 2008). There is no investment climate due to law and order situation and attitude towards outsiders. This resulted in 80% of farmer still dependent on jhum cultivation which has resulted in the continuation of Mizo women to remain concentrated in poorly paid jobs. Increase in urban population led many to women to give up jhum cultivation (Prasad & Rinawma 2014) and concentrate themselves in a low paid job as there are no industries and other economic activities to generate employment opportunities. A considerable increase in urban population has been mentioned by highlighting the percentage of urban population of 1981 as 24.6% while 1991 census witnessed the percentage of urban population as 46.2 % (Laskar 2010). Planning Commission Report (2012) revealed that during 2009-2010 the percentage of people below poverty line (BPL) in Mizoram increased by 21.1 % from what was 15.4% during 2004-2005. It was estimated that around 2.1 lakh people in Mizoram are estimated to be below poverty line.

Here, it is important to identify if labour market gives women a chance to exploit their potential (Tito, Daniela & Christopher 2005). It can be argued that the impact of modern economy on Mizo women has resulted in the exclusion of an increasing number of women from active participation in the productive process (Towards Equality Report 1974). Thus, we can see that the increase in work participation of women in Mizoram has been in the service sector. While women dominate in shops, markets, and other service-related jobs, the number of women remained very low in the Government service (DNA News 2010). Women are moulded into women workers by patriarchal forces which control, regulate, and direct how, where, and how much a woman should work. This means, even if women are working, the conditions of their work remain in the hands of the patriarchal authorities (Banerjee 2011). We can recognise that patriarchal control sets women aside from the official mainstream and confines them mainly in low-paid jobs. In this context, some feminist scholars have raised some important issues, like, at what point in human history the sexual division of labour emerged, how unequal relation between men and women have been historically generated ? It has been documented that at some points most of the time in history, both men and women themselves treated the work done by women are less important than the work done by male. At some point the nature of work was basically categorised on the basis of sex which had different implications in the social, cultural and historical context of the society.

However, studies reveal that the impact of British colonial administrators among the tribal people resulted in strengthening male dominance. The administration taught men advanced agricultural techniques whereas women were farmers (Hartmann 1976), thereby limiting women's access to new skill, technology, etc. This resulted in a considerable number of women to continue their participation for no return and no recognition. Ultimately the emergence of public and private spheres placed women in private and men in public, of which private is more devalued than public.

III. Women and Church

Before the arrival of Welsh missionaries into the Lushai hills in 1894, the British colonial officials discovered the Mizo tribe for their savagery and head-hunting raid (Bonk 2010). The first entry of British into the Mizo hill was recorded in 27 January 1871 when the tribal raider killed a tea garden manager, Dr. James and abducted his five-year-old daughter Mary Winchester (Mizo name Zoluti). Following this incidence, the British Government sent its troops to rescue Zoluti; as a result the British colonial administration was introduced into the Mizo hill. This incidence paved way for the introduction of Christian missionaries at the beginning of 1894. This led Mizoram to have the most solidly Christian population in the country (Zari 1994). The popularity of the Christian religion in Mizoram can be best understood from the statistical records that revealed 83.81 % Christian population in Mizoram since 1981 census.

If we examine the nature of missionary education to early Mizo women, it can be argued that the Welsh missionary activities introduced education among the Mizos in 1895. The focus was on the education of the men and women were groomed to be the wives of the educated husbands. Female education was mostly concentrated towards their nurturing roles like sewing, knitting, cooking, spinning and child care so as to perform more efficiently their domestic role (Patnaik and Lalthakima 2008). Female admission in theological education was restricted till 1977 while the first male pastor Mr. Vanchhunga got ordination much earlier in the year 1911. Moreover, the employment of Bible women was opened only during 1915-1966 and the church authority ended the employment of Bible women without considering their remarkable efforts to undergo difficulties and hardship in achieving their goal of missionary work in the earlier times.

The reason advanced for this was the nature of missionary education for girls which typically involved a combination of domestic skills and religious instructions (Scheyvens 2003), while several men in the early missionary period received formal education to become preachers or pastors. It is obvious that the emerging qualified male pastors and evangelists convinced the church authority about the need to replace Bible women with qualified pastors and evangelists in the new church. So it can be said that the missionaries tried to reproduce European style within the Mizo society thus creating sex segregation in the society by largely limiting Bible women's access to mobility as preachers and evangelists. They were left to perform their customary practice as well as assisting their husbands in the new church.

However, before the "European patriarchal" changed Mizo society, it is important to note that Mizo society has always been a patriarchal society where most of the important positions were being occupied by the men. Dr. HL Malsawma, a retired Director in the Mizoram Education Department states that, there is hardly any society in which women had lower status than Mizo society. The 'traditional' Mizo society did not consider women as important as men which is evident from a popular saying, "Hmeichhia leh chakai in sakhua an nei lo" or "Hmeichhe thu thu ni suh, chakai sa sa ni suh" which means "Women and crabs have no religion", or "flesh of the crab is no meat; words of women are no words". These lines indicate how the women are subjugated in Mizo society. Among the Lushai tribes of Mizoram, there are sayings, "A woman, a dog and a walnut tree, the more you beat them, the better they may be"; "Unthreatened wife and unthreatened grass of the fields are both unbearable" (Tribal Research Institute 1991). This probably indicates that among the Lushai clans violent dominance are prevalent where the husband is given complete authority to beat his wife whenever he finds fault, or just to exercise his supremacy over his wife. (Malsawma 2002 and Tribal Research Institute 1991).

While religion has been regarded as deeply reforming the socio-cultural practice (Sudhir & Lalrinkimi 2001), this is not happening with the Mizos as it encourages the

superiority of men over the women. Ultimately low wage kept women dependent on men. Researches revealed that the decline in the status of women and at the same time patriarchy was perceived by many writers as defining women as a part of nature which has to be controlled and dominated by men (Mies 1986). Christianity came to the Mizo people along with British colonialism. This resulted in neglecting and disregarding the role of women in traditional culture and religious life (Ralte 1993). What Christianity seems to have maintained among the Mizos were structures similar to and supportive of oppressive patriarchal European structures that were used as a tool for dominating women. So, it can be observed that under the church supremacy men secured consent of the very women they oppress and the patriarchal institution in the church itself justifies women's subordination which convinces women with a sense of inferiority to men. These assumptions reflect the present situation of women in the church. Let me highlight the actual conditions of Mizo women in the Presbyterian Church since the introduction of a 'handful of rice' project in 1913 (Mission Veng Souvenir 1998), Presbyterian Church Women Fellowship contribution to the church reached Rs 86,837,566/- during 2010-2011 (Mizoram Synod Report 2012). Apart from this, it is worth noticing that among the total numbers of 990 sponsored missionaries in 2012, the number of female missionaries contributed to 472 among the 518 male missionaries, who were working in different fields (Chuaungo 2012). It is also noted that while there are 450 male ordained Pastors and 4,633 ordained elders, no single woman is a Pastor or church elder among the hundred of qualified female theologians, while Mizo women are almost all Christians and regular church goers. Women are being excluded and are denied from ordination as Pastors and Elders by the church authority. Even after one hundred years – celebrated as the Gospel Centenary – there has been no improvement in women's position in the church.

IV. Women and Customary Law

There has been an increasing concern in the studies of tribal women which has long been portrayed as enjoying a better status than their counterpart in the mainland India due to the absence of dowry (Xaxa 2004 & Lalsiemsang 2013). But one needs to think about the social organizations and institutions that are still discriminatory particularly with regard to the customary laws (Roy Burman 2012). In the context of Mizoram, British official NE Parry (1924-1928) created 'A Monograph on Lushai Customs and Ceremonies' which was published in the year 1927. This is now accepted as Mizo Customary Law. This book which is called "Mizo dan (Mizo customary rules)" shaped an uniform system of regulation governing customary rules and bride price in 1927 (Nunthara 2004). However, these customary rules are not applicable to the other tribes living in Mizoram. The original customary rules compiled by NE Parry were carried out till 1960. Later the Mizoram Government published Mizoram Gazette, Extra Ordinary, Vol-XXXIV in 2005 which was more or less the same as the original. Although the Indian independence in 1947 and the implementation of Lushai Hills District council in

1952 brought about the abolition of chief in 1953, these new rules largely altered the local administration (Nunthara 1996). The authority of the village chiefs and their power relations were subsumed and the patterns of bride price were also manipulated with the introduction of money. We might say that the implementation of common bride price as Rs 420 breaks the barrier of clan division, as it is a landmark for the departure of clan variation in the society but it failed to modify the old existing practice of bride price that remained Rs 420 for more than three decades. Lalnithanga (2005) confirmed that the practice of bride price devalued women's position and status in the society as it presupposes that she can be sold and purchased like worthless assets. There are differences of opinion and parallel views, one which see bride-price as a sign of recognition of women's value and their labour power while others see it as commoditization of women. For instance, Eva Margaret admitted the fact that paying a bride price in order to marry signifies that women were seen as assets and not as liabilities in tribal societies. In spite of the efforts made by the Mizo Women Organisation on the issues of reviewing the existing systems of bride price, nothing can be done due to divergent views on the societies even among the women saying, 'who would like to buy me, if the existing bride price increases to larger amount and bride price should rather be counted as a token of culture and tradition, not in the amount'. At the same time, some were critical of the rate of bride price and they blame the price of brides which makes the marriage ties broken up easily leading to a high number of broken families in the society (Chhakchhuak 2009).

If we study the involvement of customary law in the changing process, it can be seen that the lives of the Mizo women were badly deteriorated because of the fact that customary law operated particularly in the questions of 'bride price' and 'inheritance rights'. There is no denying the fact that there are number of articles in Indian constitution reserving women's legal right and political right. However, the 53rd amendment of 1986 recognized Mizoram through Article 371G, which means '*No act of the Union Parliament concerning the religious or social practices, procedures, administration of justice involving their customary law applies to them unless the state legislative assemblies agree to it*'. Such a decision resulted in strengthening customary law as the most distinctive feature of Mizo society thereby giving Mizo men a free hand for exploitation (Fernandez and Bharali 2008). As the 'Indian Christian Marriage Act' is not applicable in the state, the customary law reduces Mizo women to a purchasable commodity with the bride price of Rs 420. Under Mizo Customary Law Section 135 & 136, no serious punishment is imposed upon rape criminals which means that the hundreds of women raped every year do not receive justice. The victims could seek justice through the Indian Penal Code but few rape victims are aware that they could do this (Liana 2005). Regarding domestic violence against women, no specific punishment has been imposed on perpetrators and as a result, a number of women suffer up to the point of death every year. Many researchers believed that the society refrains from interfering when it comes to family

matters (Patnaik and Lalthakima 2008). To understand this, one must have some idea of whether interference of society is an option. But we might say that cultural and social factors are interlinked with the development and propagation of violent behaviour. For this some researchers believe that men are taught stereotypical gender roles involving domination and control detail while women are taught to be submissive, dependent, and to respect authority (Saravanan 2000).

We might say that changes brought by the Mizoram statehood are more likely a change for convenience rather than the progress of women's status. For instance, the law of inheritance which can be considered to be reflective of modern democracy in the new-found economic independence of women does not have a positive impact on women (Chakraborty 2008). Since the implementation of customary law, there is no scope for women's property rights. Furthermore, married women have a degrading status in her new family as the laws states that '*If a man has no sons, his property is inherited by the next kin on the male side*'. So it is obvious that theoretically a wife is purchased without having any rights in the family of her in-laws.

The Mizo Women's Organisation (*Mizo Hmeichhe Insuihkhawm Pawl*) which was constituted in 1974 declared 'Women's Year' during 1997-2001. During this period, the movement organised seminars, workshops and created awareness in the entire region with the major issues of the need to review the customary law for the development of the status of Mizo women. Since then the movement came up with the ideas of improving women's status and subsequently made a recommendation to the Government highlighting the need to reconsider the unbearable condition of Mizo women who were threatened with death by the laws imposed upon them. In spite of their considerable efforts, there has been no positive movement for the emancipation of Mizo women till date. But there has been an increasing concern among a number of researchers that pointed out the need to modify the existing customary law to improve women's position (Roy Burman 2012) and securing women's equal rights has been recognised in national and international law. On the other hand there has been a serious problem among the communities and families that gave importance to customary law (Nadia 2003). Greater efforts need to be taken in order to inculcate in women awareness of their rights and how they can fight against traditional laws and practice.

V. Women and Politics

The first Mizoram State Legislative Assembly election was held in 1987. Since then Mrs. Lalhlipuii from MNF Party became the only minister elected among the Mizo women till today. There was an assumption that the consequence of emergent women leadership at the political level will bring about social change (Mishra 2006). But in the context of Mizoram no political party entertained women candidate; as a result no women candidate won the general election so far. Some of the researchers observed that the result of insurgency and counter-insurgency strategies (Ray 1982; Barborah 2006) were

the gross violation of human rights of ordinary citizen especially women which badly retarded political participation of Mizo women (Chakraborty 2008). Other studies also indicated that MNF movement (1966-1986) in the Mizo hills was not only a masculine construction that ignored women's agency in history, but also one that brought about the downfall of women's participation in the present politics (Sangkima 1992). If we study closely the impact of insurgency, there is no doubt that the '*Declaration of Armed Forces Special Power Act 1958*' in the area brought devastation to the people. In the situation of armed conflict women witnessed a high degree of exploitation and their hardship multiplied a hundredfold for survival against the insurgency. There is no doubt that the generation that lived through 1957-1986 experienced all kinds of torture and hardship, due to different tactics adopted by the centre to fight against the MNF movement. Many villages were burnt down and they are forced to localise in a particular village so as to make it easier for the army to combat the movement. In Mizoram, the grouping of villages resulted in moving 80% of rural population and 60% of the total population. 109 villages were grouped in 18 group centres in Vairengte, Aizawl and Lunglei (Lalthakima 2008). The properties which could not be carried at the time of moving were burnt down by the security forces. In such state of forced regrouping and displacement, women's life encountered different issues like loss of family property, houses, domesticated animals, precious woven clothes, local environment (Gill 2005). Some researchers identified a double burden for nurturing and bread earning in women. The situation set off the undesirable structural transformation in the society (Machanda 2004). All these were instrumental for women's sense of inferiority.

Much emphasis was given with respect to lack of participation of women in politics. The question of why women with the second highest literacy rate and the highest work participation rate are not involved in politics has been raised (Aleaz 2005). Mizo women enjoyed voting right since the implementation of Autonomous District Council in 1952. The last election for the Mizoram State Legislative Assembly in 2013 recorded registered voters where female outnumbered the male voters. However, only three women have been elected to the state Assembly in the 42 years and only one woman holds the ministerial position since Mizoram became a Union territory in 1972 and then a state in 1987. On the other hand, it has to be noted that the effectiveness of women's participation depends upon the actual pattern of power and cultural norms of the environment. Moreover, the prevailing traditional proverb that said 'The wisdom of women does not reach beyond the bank of the river' set the term of division between public and private that signifies women's inferior status. At the same time, restriction on the mobility of women towards the public life enhances the gender division, as public for man's world and private for women's world. So it is apparent that Mizo women's participation in the political process is largely hampered by the oppressive patriarchal cultural, and historical factors thereby resulting in their minimal participation (Baseline Report 2004) in such a way that the

under-representation of women reinforces their exploitation (Subramanian 2011). The nature of Mizo women's political participation, challenges the conventional gender roles and relations, where women are voters and men are leaders. While liberal feminist theory declared education and voting rights will bring women in politics, it has not happened in Mizoram. The only state in the country where women outnumbered male voters and had attained the highest literacy rate cannot break the tentacles of traditional patriarchy to enter the decision making channel (Aleaz 2005).

There was an assumption that the women's political participation is important to strengthen democratic traditions and struggle against oppression (Baseline Report 2004). But one needs to consider the nature of the society or the state that has a decisive impact on the effectiveness of women's political participation (Subramanian 2011). One cannot blame the history of insurgency alone for lack of political participation by the women. Most importantly Mizo women need to be more conscious about the promises of the constitution and the statehood. However, there is still a large gap between the constitutional guarantees and the actual representation of Mizo women in politics.

VI. Conclusion

From the above observations, we can see that the increasing participation of women in the workforce does not include government job in the service sector. This signifies that majority of working women remain concentrated in low paid jobs. Moreover, they have a subordinate role in the church. Many women suffered from lack of awareness of their rights. Thus, the general observation is that Mizo women lag behind men in access to resources and power. They are benefited less from the promises of the Indian constitution and from Mizoram statehood. The reasons usually advanced for these differences are tradition, colonialism, the role of the Christian church, and the extent to which women have been socialized to accept their position. Radical feminist theorists stated that modern society and its constructs (law, religion, politics etc.) are the products of male dominating society and therefore, have a patriarchal character (Millett 1968). Therefore, it can be said that the economic and political empowerment of women with a view to impart knowledge and awareness of their rights is an urgent need for the overall development of Mizo women. Most importantly, to understand the present position of Mizo women in different areas one needs to study the roots of the oppression in the society. There is a great need to impart knowledge to both men and women who are in need of liberation from patriarchy and the cultural, legal and political practices that flow from patriarchy to subjugate the women of the society (Buker 2008).

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WATER RESOURCES IN INDIA'S NORTH EAST: SHARING OF BRAHMAPUTRA BETWEEN ARUNACHAL PRADESH AND ASSAM

MIHIR BHONSALE

Abstract : The Brahmaputra river which traverses a vast area of India's Eastern and North Eastern region, and flows through the states of Arunachal Pradesh, Assam, Meghalaya and West Bengal is a mammoth water resource for North-East India. The river has a great potential for development of agriculture, fisheries, transport and generation of electricity. This paper focuses on two riparian states of the Brahmaputra basin, Arunachal Pradesh and Assam where the underutilization of Brahmaputra's water resource is most prominent. While, Assam faces huge losses due to floods every year, Arunachal Pradesh, an upper riparian state in India allows its water to flow downstream without any intervention. Lack of cooperation between the two states is hindering the development of this huge water resource in the two states.

The paper argues that for sustainable development of the Brahmaputra river, the governments of Arunachal Pradesh and Assam need to cooperate on the principle of Integrated Water Management. At present, the Brahmaputra Board is the only institution dedicated to the riparian states of the Brahmaputra basin. The Centre has proposed a Brahmaputra River Commission involving all Seven Sister States and West Bengal as members of the Commission. However, for any solution to the problem of water sharing, Arunachal Pradesh and Assam need to be considered as the key stakeholders in the institutional mechanism where equitable use of Brahmaputra waters is ensured.

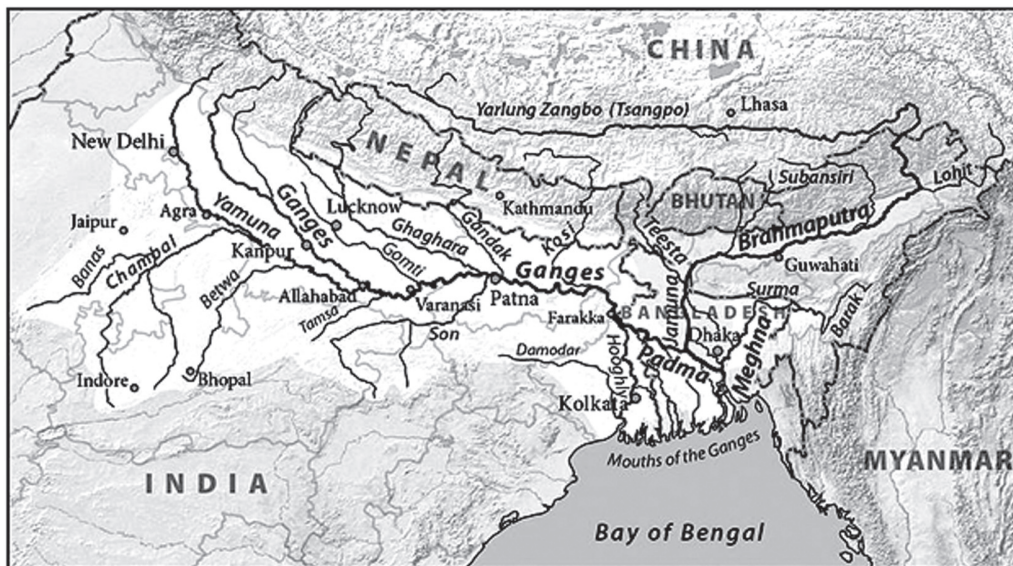
Key words : Brahmaputra, Hydropower, National River Linking Project, Integrated Water Resources Management

Introduction

The North-East Indian states of Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Tripura and Sikkim are endowed with vast natural resources. The region spans an area of 2,62,179 square kilometres which comprises of 7.97 percent of the country's total geographical area. Unique geo-physical, socio-cultural and environmental traits separate this region from the rest of the country. The region, owing to its peculiar history of ethnic diversity, has charted a distinct socio-political development. The region shares more than 4,500 kilometres of international border (about 90 per cent of its entire border area) with China (southern Tibet) in the north, Myanmar in the east, Bangladesh in the southwest, and Bhutan in the northwest.

The North-Eastern region has huge water resources, it accounts for 34 percent of the country's surface water resources potential (Sharma et al. 2010). It has the highest per capita availability of water. Rivers in the region stretch across 17,323 kilometers and a total water area of 1817.5 square kilometres. Some of the world's largest rivers like the Brahmaputra flow from the North Eastern states comprising of over 90 percent share of the total surface water of the region¹. The North-East Region is endowed with huge hydropower-potential. According to estimates, 44 percent of the total hydropower potential of India is in the North Eastern region². It is likened to as the 'Power House' and 'Water Tower' of the country. India's North-East though endowed with huge natural resources, remains economically backward, presenting a developmental paradox³.

The largest surface water resource of India's North-East is the river Brahmaputra. The Brahmaputra has an average water resource potential of 537.2 billion cubic meters. The Brahmaputra river which drains across 5,80,000 square kilometers is the fourth largest river in the world in terms of water discharge and sediment yield⁴. The river originates in Manasarovar in South Tibet at an elevation of 5300 meters, flows eastward for 1625 kilometers over the Tibetan plateau before continuing Southwards on the East-West trending ranges of the Himalayas and debouching onto Assam plain of Pasighat. Dibang and Lohit join the upper course of the Brahmaputra (known as Dihang or Siang), south of Pasighat and together the combined flow, hereafter called Brahmaputra, flows westward through Assam for a distance of about 640 km, until near Dhubri it turns South and enters Bangladesh. Basin-wise, 50 percent of Brahmaputra lies in China, about 34 percent in India, 9 percent in Bangladesh and 7 percent in Bhutan⁵.



Source : Wikipedia – Fig. 1.1 Map of the combined drainage basins of the Brahmaputra, Ganges, and Meghna.

The Brahmaputra traverses some of the North East Indian states like Arunachal Pradesh (42), Assam (26), Meghalaya (6), Nagaland (6), Sikkim (4) and West Bengal (5) per cent out of the total length that the river flows in India⁶. The figures make it clear that amongst the Indian States, Arunachal Pradesh and Assam share the maximum stretch of the Brahmaputra river. The total water potential of the Brahmaputra basin in the North Eastern Region is 573 billion cubic meters i.e. 87.8 percent of the total water potential of the North-East Region⁷. Among the North Eastern states, Arunachal Pradesh has the highest average annual run-off of 350 billion cubic meters i.e. 53.6 percent of the region, followed by Assam with a run-off potential of 211 billion cubic meters (32.3 percent of the region) and Mizoram with a run-off potential of 31 billion cubic meters (4.7 percent of the region)⁸.

Brahmaputra flows through diverse environments, cold dry plateau in Tibet, the steep rain-drenched slopes of the Himalayas, the land-locked alluvial plains in Assam and the vast deltaic region in Bangladesh. Dominant monsoon interacting with an unique physiographic setting, fragile geological base and active seismo-tectonic instability coupled with anthropogenic factors have moulded Brahmaputra into the most dynamic and complex fluvial system in the world.

India has more than 17 percent of the world's population but less than 4 percent of world's replenishable water resources with 2.6 percent of world's land area. However, the availability of water in the country varies from region-to-region; while some regions face floods, others are drought prone. The national water policy 2012⁹ rightly recognizes that due to burgeoning population of the country, increasing needs of a developing nation and climate change, there is a possibility of the deepening of water conflicts over different user groups. The North-East is different from other parts of the country due to abundance of natural resources. However, though abundant in water resources, the region is hardly able to use it. Less than 5 percent of the total water potential is tapped for use in the region¹⁰. As against the total irrigation potential of about 4.26 million hectares, only 0.85 million hectares is under irrigation. The region has the availability of ground water at relatively shallow depth (within 20 m) but only 4.3 percent of the total potential is used¹¹.

Understanding water sharing between Arunachal Pradesh and Assam, co-riparian states in the Brahmaputra sub-basin has a three-fold significance- harnessing the huge hydropower potential of Arunachal Pradesh, inter-basin transfer of water resources proposed under the National River Inter Linking Project and meeting the deficit in agricultural production of the region. Reductionist engineering, in practice in India since colonial times and shoddy functioning of existing institutions for water resources and allied sectors have hampered water resource development in the region. There is also a need for building institutions at different administrative levels within the country and at

an international level that would cater to the need of the whole basin. This necessitates a paradigm shift replacing reductionist engineering by a trans-disciplinary Integrated Water Resource Management, as a scientific framework for managing water resources.

Brahmaputra's Hydropower potential

Tapping the hydropower potential of rivers in North-East has become an important component of India's energy strategy since the beginning of the 21st century. In 2001, the Central Electricity Authority did a preliminary ranking study of the hydropower potential of the river basins in the country. The Brahmaputra basin was awarded the highest marks and 168 projects with a total capacity of 63,328 megawatt were identified (Vagholikar et al. 2011). Hydropower development in North-East again found thrust in 2002 when the Government of India announced a 50,000 megawatt initiative to bridge the gap between supply and growing demand for power (Vagholikar et al. 2011). Meeting power gap coupled with motivations derived from interests in powering industrial growth and problems with coal-block development have led to the current wave of dam investment in India (Alley et al. 2014).

The North-Eastern region has only 10 stations installed having a generation capacity of more than 25 megawatt out of the 189 total hydro-electric stations in the country (Government of India, 2015). The installed generational capacity of the region is only 1,242 megawatt (Government of India, 2015). However, vis-à-vis the installed capacity, the identified capacity of hydropower development in the Brahmaputra basin remains as high as 65400 megawatt, with 57544 megawatt yet to be developed. Only 5736 megawatt capacity of the Brahmaputra basin is said to be under construction.

The North-Eastern state of Arunachal Pradesh has the highest hydropower potential amongst all states of India with an identified hydropower potential of 50064 MW (above 25 megawatt) out of which 46805 megawatt capacity is yet to be developed (Government of India, 2015). It could outpace Himachal Pradesh and Uttarakhand which are the leading states for installed hydropower generation but have less identified capacity than Arunachal Pradesh (Alley et al. 2014). Arunachal Pradesh has allotted some 159 hydropower projects in the state with a total capacity of over 57,000 MW (Rahman 2014). A series of dams are allotted along the main tributaries of Brahmaputra like Siang, Subansiri, Lohit and Dibang and tributaries of the Manas river like Tawang and Nyamjang Chhu (Alley et al. 2014). Especially, high on hydropower potential is the Siang river right up from Singong on the Sino-Indian border upto Pasighat which has developed a gorge like section with very high relief (5000 meters) on both sides and a V-shaped valley all along. The forceful cutting down of the crystalline and hard metamorphic rocks of the Higher and Middle courses by the river are a hydropower potential zone for India. The present estimated potential of the Siang basin is 18293 MW¹². Apart from the

projects on the main river, 44 hydropower projects are planned on all major tributaries and sub-tributaries with installed capacity ranging from 4 MW to 6000 MW¹³.

The Government of Arunachal Pradesh has a stated objective of tapping the huge hydropower potential of Arunachal Pradesh for lifting the economic standard of the communities in the state but at the same time not sacrificing excellent eco-diversity and heritage of the state. Hydropower development in Arunachal Pradesh is also likened as India's 'New Forward Policy' to legitimise its sovereignty over Arunachal Pradesh (Rahman 2014). Successive governments in the state since 2005 have pursued a pro-dam policy and momentum is said to have picked during the chief ministerial tenure of Dorji Khandu (2007-2011) (Rahman 2014). The projects once completed are said to be a boon for the North Eastern region. The generation of hydroelectricity would help bridge the energy deficit in the North-Eastern states and parts of Northern and Eastern India and also becomes a source of revenue for Arunachal Government. Arunachal Pradesh has gone on record saying that hydropower projects in Arunachal can halve the power-deficit of the country¹⁴. Minister of State for Home Affairs, Shri Kiren Rijju has also claimed that the hydropower generated in the North-Eastern states could help power South Asia.

Upper riparian China has started hydropower projects to build dams on the Yarlung Tsangpo in the Tibet plateau. A lot of literature has been dedicated to China's damming of the Brahmaputra and its impacts on middle and lower riparian's states in the Ganga-Brahmaputra-Meghna Basin. China's South-North Water Diversion project that has three geographic parts, the Eastern, Middle and Western routes and Greater Western route, might extract waters from as far south as the Tibetan Plateau, in middle riparian and lower riparian states of India and Bangladesh¹⁵. China's diversion of waters has led to much speculation among policy-makers of Arunachal Pradesh and at the Centre claiming first-user riparian rights over waters flowing from the Tibet Autonomous Region of China has featured as India's objective. However, hydrologists consider that China's damming of the Brahmaputra (Tsangpo) would in little ways augment the flow of Brahmaputra in India. Scholars draw attention to the importance of studying the impact of a series of dams built on the Siang/Dihang in Arunachal Pradesh well within Indian territory (Ray 2014).

Juggernaut of Hydro-power

Out of the over 150 odd power plants allotted to the state only a handful are expected to see the light of the day. The projects like Lower Subansiri Hydroelectric Power Project that was started in January 2010, has been stalled due to the opposition from NGOs¹⁶. The Subansiri project being built at Gerukamukh along the Arunachal Pradesh-Assam border has completed 50 percent of its total construction work at the time it was stalled in December 2011. Public hearings for the Lower Dibang Multipurpose Hydroelectric

Project were cancelled over 10 times due to protests, before the dam was finally completed in March 2013 (Rahman 2014). Same is the fate of the Lower Siang Hydroelectric Project that involves building of 3 mega dams over the main channel of the river. Proposed dams in Tawang district of Arunachal Pradesh have found opposition by monks who feel hydroelectric projects might threaten heritage sites.

Concerns over the dam's height and the inadequate safety measures and flood cushioning have remained the major arguments of citizen's groups opposing the Lower Subansiri project. Citizen's groups have also highlighted the shoddy nature of the conduct of Environmental Impact Assessments (EIA's). According to them, EIAs for hydropower projects must calculate safe levels of ecological and hydrological changes through the guarantee of minimum flows, the protection for bio-diversity and eco-fragile/sensitive regions, and the support for cultural practices vital to local and national economies (Alley et al. 2014). The Wildlife Institute of India offered a critical review of developments and requirements for river flows, countering previous reports issued by university and government departments. An inter-ministerial committee was appointed by the Prime Minister to examine the report of the Wildlife Institute of India and others and provide recommendations. This committee came out with recommendations on minimum environmental requirement or river flows that advocated a minimum of 30 percent to 50 percent of the lean season flows (Alley et al. 2014).

Proponents of dams in Arunachal Pradesh blame the application of general thematic frames of ecological-environmental flow by environmental clearance authorities as fetters to hydropower development in the Arunachal Pradesh. As an institutional response to the concern of delays in projects owing to environmental clearances, a parliamentary working committee was set up under the chairmanship of T.S.R. Subramaniam to look into six major environmental laws and suggest ways to improve the regulatory framework. The committee was tasked to align six environmental statutes namely, Environment (Protection) Act 1986, Forest (Conservation) Act 1980, Wildlife (Protection) Act 1972, Water (Prevention and Control of Pollution) Act 1974, Air (Prevention and Control of Pollution) Act 1981, and The Indian Forests Act 1927, with ground realities and provide suggestions for the necessary improvements or amendments to the existing laws.

The Committee noted that the laws under review had failed the litmus test due to tardy implementation and recommended a new project clearance mechanism, based on the 'single window' concept, with an integrated process, one that would also significantly reduce the processing time¹⁷. The Committee had also suggested that Parliament could enact a law titled Environment Laws (Management) Act (ELMA) for constituting a 'National Environment Management Authority' (NEMA) at the Centre and 'State Environment Management Authority' (SEMA) in States, both comprising experts in

different fields, which will deal with applications for clearances and permissions under environment related laws at the Central and State level respectively, thus making it a single window. While the report also provided for the composition, functions and responsibilities of these proposed bodies, it also suggested the abatement of Central and State Pollution Control Boards¹⁸. But the high-power standing committee thrashed the recommendations in July 2015, reverting back to the 2009 procedure where obtaining environmental, forest and wildlife clearances separately is mandatory¹⁹.

However, former Secretary, Water Resources, Government of India, Ramaswamy R. Iyer has cautioned against the potential of the high-powered committee formed to look into environmental laws for impacting environmental governance in the country²⁰. He argues the necessity to examine the operation of the clearance procedure before considering any review of the laws²¹. He also points out the misplaced focus on speed of clearance and its wrong attribution of delays to the environmental laws²². In another article²³, Iyer outlines the possibility of manifold reasons for the delay in project clearances. Plain inefficiency in the functioning of the clearance agency, poor project formulation necessitating a demand to reformulate the project, inadequate information necessitating a number of queries and demands for clarifications and additional material, a prolonged debate between the project proponents and the examining agency in those cases where a negative decision seems likely, are some of the reasons, he highlights for the delay in environmental clearances²⁴. The former Secretary says that projects must be examined for their environmental, social and human impacts and no more than necessary time should be taken, but equally not less than the necessary time must be taken²⁵.

Downstream impacts of hydropower projects again remain an ignored aspect of hydropower discourse in India. People affected by the downstream impacts, yet remain to be officially acknowledged as project affected people (Vagholikar et al. 2011). Downstream impacts raised in India's North-East include loss of fisheries, change in wetland ecology in the flood plains, impacts on agriculture in the chapories (riverine islands and tracts), impacts on livelihood due to blockage of river by dams (drift collections, sand and gravel mining), increased flood vulnerability due to massive boulder extraction from river beds for dam construction and sudden water releases from reservoirs in monsoon and associated risks in the geologically fragile and seismically active region (Vagholikar et al. 2011). The repeated incidents of dam induced floods in Assam from upstream projects like the 405 megawatt Ranganadi hydropower project in Arunachal Pradesh have triggered debates on downstream impacts of dams (Vagholikar et al. 2011).

A key issue identified in the downstream impacts of dams has been the drastic variation in river flows in winter season. The average flow in winter (lean season) in the Subansiri river in a natural state is approximately 500 cubic metres per second. The

ecology of the downstream areas and people's use of the riverine tracts are adapted to this lean but relatively uniform flow of water, even though there is gradual variation during the lean flow season. After the Subansiri project is commissioned, river flows in the lean season would fluctuate from 6 cubic meters per second for around 20 hours (when water is being stored in the dam) to 2560 cubic meters per second when the water is released for power generation at the time of peak power demand in the evening hours (Vagholikar et al. 2011). Thus, the river will be starved for 20 hours and then flooded for 4 hours with river flows fluctuating from 2 percent to 600 percent of normal flows on a daily basis (Vagholikar et al. 2011). The flow during peak load water releases in the Subansiri river in winter will be equivalent to average monsoon flows and will cause a winter flood drowning on a daily basis the drier riverine tracts used by people and wildlife throughout the winter season (Vagholikar et al. 2011).

Downstream livelihood and activities to be impacted by the unnatural flow and fluctuation in the Himalayan rivers, will include: fishing, flood-recession agriculture, river transportation and livestock farming in the grasslands (Vagholikar et al. 2011). Flow fluctuations in the Lohit, Dibang, Siang and Subansiri rivers will also impact the breeding grounds of critically endangered birds such as Bengal Florican, foraging areas of the endangered wild water buffalo, habitat of the endangered Ganges river dolphin and important National Parks like Dibru-Saikhowa and Kaziranga (Vagholikar et al. 2011).

Inter-Basin Transfer

Inter-basin transfer of water resources has assumed significance in the context of the Government of India's National River Linking Project. The project was proposed by the National Water Development Agency (NWDA), formed in 1982 to evaluate the scheme proposals and to conduct feasibility studies on the inter-linking of rivers. The project was oriented towards transferring water from water resource rich Northern, Eastern and North-Eastern region through which rivers like Ganga and Brahmaputra flow, to the water scarce Southern and Western parts of the country. The NWDA undertook the task in two components, peninsular and Himalayan rivers. The reason for this compartmentalisation was the relative complexity in interlinking of the peninsular and Himalayan rivers (Prasad 2004). The Ministry has identified 14 links under Himalayan Rivers component and 16 links under Peninsular Rivers component for inter basin transfer of water based on field surveys and investigation and detailed studies. The Himalayan component under which falls the North-East's major water resource, the Brahmaputra which is the focus of this paper envisages construction of storage reservoirs on the Ganga and Brahmaputra rivers and their tributaries in order to conserve monsoon flows for irrigation and hydropower generation besides flood control.

The Himalayan component envisages, linking Brahmaputra to Ganga in order to augment dry weather flow of the Ganga; Drought prone states Haryana, Gujarat and

Rajasthan are said to benefit due to the transfer of surplus flows of the Ganga which is to be linked to Yamuna. Construction of storages on the main channel of the Ganga and Brahmaputra rivers as well as their tributaries to conserve monsoon flows, hydropower generation and flood control have been envisioned. An interlinking canal system will facilitate transfer of the surplus flows of the Kosi, Gandak and Ghagra to the western end of the Ganga and Yamuna, to the Sutlej and the Beas. Part supplies of the Beas and the Ravi would be available for transfer to the south in the drought prone areas of Haryana, Rajasthan and Gujarat.

On the Supreme Court of India's directive in 2012, a special committee on inter-linking of rivers was set up under the aegis of the Union Minister of Water Resources, River Development and Ganga Rejuvenation, Smt. Uma Bharati. Four sub-committees have been set up viz. on evaluation of various studies, alternative plans for various links, consensus building among states and strengthening of the National Water Development Authority²⁶. A task force has been set up under the chairmanship of Shri B.N. Navaliwala to suggest ways to fast-track projects, coming up with plan Bs and means to convince states that are still not on the board²⁷. On September 22, 2015 the State Wildlife Board of Madhya Pradesh gave a go ahead to the Ken-Betwa river link touted to be a 'model project', the first among the National River Interlinking Project. Water Resource Minister, Smt. Uma Bharati has taken the onus on herself in expediting environmental clearance for the Ken-Betwa river link project.

However, the river interlinking project has come under criticism from the International Water Management Institute. In 2005, the International Water Management Institute and the Challenge Program on Water and Food started a three year research project titled, 'Strategic Analysis of India's River Linking Project'. The project aimed at providing public and policy planners with a balanced analysis of the social benefits and costs of the National River Linking Project. The project was divided into three phases. While the Phase-I of the project analysed India's future water scenarios to 2025/2050 and related issues, Phase-II was dedicated to analysing how effective a response the National River Linking Project is for securing India's water future and its social costs and benefits and Phase-III contributed to an alternative water sector perspective plan for India as a fallback strategy to National River linking project²⁸.

Surface irrigation (for which Rs. 1,000 billion have been spent after 1990) has hardly produced any additional increase in irrigated area (Joshi 2013). Economic Performance of the surface irrigation system is declining. In the last couple of decades, use of groundwater has increased manifold (today, two-thirds of the farms in the country are irrigated by ground water) and is projected to grow and reach an unsustainable level in the years to come. Hence, it would be necessary to recharge ground water aquifers by

rainwater harvesting and to prepare for supply augmentation and demand management. Ground water is the source of irrigation in 90 percent of the command areas of the proposed Godavari-Krishna Link and hence economic benefits from additional per cubic meter of proposed water transfer would be low (Joshi 2013). The Sardar Sarovar Project in India's south, was estimated to cost Rs 68,400 million in 1986/87 but Rs 2,00,000 million have been spend producing 0.1 million hectares of irrigated land out of the 1.8 million hectares targeted, generating 200 megawatt of electricity out of the targeted 1,460 megawatt and arranging for water supplies for 170 towns and cities (Joshi 2013). The project needs more Rs. 2,00,000 million and another 10 years for completion (Joshi 2013).

The International Water Management Institute study has found the National River Interlinking Project to be inadequate, lacking detailed planning of the proposed links and because of conflict of interests amongst the stakeholders (Joshi 2013). It highlighted the fact that any water surplus availability forecast must include detailed requirements in the basin including downstream riverine requirement and monthly water availability needs. The study also mentioned the necessity of strong basin organisations, prompting conflict of interests among stakeholders. Properly designed, disseminated and implemented rehabilitation and relief packages for the project affected people are also a necessity. Moreover, the study recommends that land acquisition needs to be handled carefully.

Flood and erosion affected agriculture

Agricultural production in the North-Eastern region has seen deficit in production of pulses, oilseeds, meat, milk and eggs. According to the 2050 Vision Document of the Indian Council of Agricultural Research, the total food-grains demand would go up to 13.28 million tonnes, widening the demand-supply gap²⁹. Therefore the production should increase almost two-fold from the same or less land resources. Also, important factor is the impact of climate change on the region, adversely affecting environmental security and sustainability of the region. Droughts and floods have been major calamities that the North-Eastern states have had to bear. Especially, the years of drought in 2005, 2006 and 2009 have been unprecedented in the history of the region (Das et al. 2009).

In water resource rich Arunachal Pradesh there is under-utilization of ground water. The ground-water utilisation in the state is under 1 percent of the total potential. The potential for irrigation in the state is 65,836 ha whereas the area under irrigation is about 28,000 ha, that is, less than half the capacity is exhausted (Government of Arunachal Pradesh, 2014). *Jhum* is practised in the state over the stiff hill slopes. It can be pointed out that the Government of Arunachal Pradesh is trying to transform the culture of *Jhum* into sedentary terrace farming. Orchards, particularly for peach, Kiwi, oranges and various other varieties of citrus fruits are planned and success is expected of such transformation within the next three decades.

Arunachal Pradesh is ecologically diversified for its crops and horticultural products and has mixed cropping pattern. About, 60 to 70 percent are cereals and about 1,13,000 ha of area is under fruit cultivation. Fruits are also grown in the state and 70 percent of the fruits are of the citrus variety. Just to cite an instance, Arunachal Pradesh is the largest grower of Kiwi fruit in India³⁰. Old *Jhum* slopes have been used for growing fruits in many parts of the state. According to a study completed by the Government of Arunachal Pradesh, 151.79 thousand hectares of land are identified as good sites for settled cultivation in aspects of groundwater and surface water in the state (Government of Arunachal Pradesh, 2014). The Government of Arunachal Pradesh has identified 52,993 locations as potential irrigation sites. The districts of Lohit, Changlang, Papumpare and East Siang of Arunachal Pradesh have very good irrigation potential. For meeting the needs of irrigation in Arunachal Pradesh, large storage dams need to be built.

Agriculture and allied activities have overriding importance as a source of livelihood to the people of Assam. It still contributes more than one-third (35.1 per cent in 1995-96) of Assam's Net State Domestic Product and supports about 70 per cent of its population. But the average operational holding size is small at 1.31 hectare as compared to 1.57 hectare for all-India. On top of it, 92.6 per cent of the cultivated land is flood prone³¹. In Assam, agriculture is carried out over an area of cultivable land approximately 3.5 million hectare out of which 3.15 million hectare is said to be flood-prone (Kakati 2014). The government claims that 50 percent of it is protected from normal floods. Assam in turn needs to mitigate floods to reduce poverty in the region. According to the Planning Commission, 1.01 crore people of Assam are poverty stricken.

In recent years erratic floods both in magnitude and occurrence have taken place. A massive earthquake occurred in the 1950s in Assam, which resulted in flood, erosion and degradation of land. This was when a National Policy on flood management was adopted in 1954. The Brahmaputra river has been surveyed thrice, in 1928, in the 1960s and in 2006 by North Eastern Space Application Centre. In 2004, a task force was established for mitigating floods and by 2012, Rs. 68,000 crores have been spent on flood management and control measures.

Throughout Assam, the Brahmaputra is truly an aggrading system depositing huge loads of sediments within its channel as well as over the flood plains. Very high rate of aggradation is carried out over the plain section of Assam and Bangladesh by the Brahmaputra. The Brahmaputra in Assam deposits 700 million tonnes of sediment per year. The main causes for much of sedimentation is due to steep channel gradient of the Yarlung Zangbo and the Siang, very high average discharge, rock erodibility, new tectonic movements associated with earthquake activities and upliftment of fragile flood plain terraces. Out of these sediments 21% is deposited within the channel in the forms of shoal, islands and point bar deposits which are so frequent over the main channel. This

induces frequent shifting of the channel. Bank erosion, loss of navigable thalweg course and channel widening.

The governments of both the states have plans in place for proper utilisation of water resources. The Government of Assam has also enacted measures for flood mitigation. Since, the great flood of 1954, the National Flood Commission has undertaken several short term and long term measures for flood and erosion management (Government of India, 2013). Building of dams and reservoirs has been identified as a long term measure. Arunachal Pradesh cannot develop its agriculture and allied sectors because of under-utilization of water resources and soil erosion. Assam has to protect more than 50 percent of its cultivable land from floods. Arunachal Pradesh will need to put its water resources to best possible use in order to feed its populace in the future as well as to harness its rich hydropower potential.

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Integrated Water Resources Management

Water management as a field, includes conflict management; according to Subramaniam (Subramanian et al. 2014) it is based on reconciling co-existing and emerging interests. The conflicting interests within a nation might include irrigation, industrial users, hydropower plants, human settlements, ecosystems dependent on water – any two of which may be competing with each other (Subramanian et al. 2014). In the Johannesburg World Summit on Sustainable Development (WSSD) in 2002, The Technical Advisory Committee of the Global Water Partnership defined Integrated Water Resources Management (IWRM) “as a process, which promotes the coordinated development and management of water, land and related resources in order to maximize the resultant economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems,” and emphasized that water should be managed in a basin-wide context, under the principles of good governance and public participation.

Integrated Water Resources Management, calls for water to be viewed as an integral part of the global hydrological cycle and not as a stock of material resource to be used for the satisfaction of human requirements. Clear and strict prioritization of various types of needs and demands for water is needed, including those of the ecosystems. There is a need for comprehensive assessment of the water development projects keeping the integrity of the full hydrological cycle. Droughts and floods are to be visualized in the wider context of the ecological processes associated with them.

A transparent and interdisciplinary knowledge base for the understanding of the social, ecological and economic roles played by water resources is required. Increase in the supply side cannot be the solution and at time the demand side also needs to be cut down. Appropriate new social and economic instruments for promoting careful and efficient uses of water resources or for the reduction of damage to their quality from pollution should be developed.

Through the initiation of civil society groups a workshop was held in 2013 where hydrologists from both the North-Eastern states of Arunachal Pradesh and Assam voiced their support for the adoption of the integrated river basin management and plan, and management of water resources between the two states for mitigation of recurring floods and soil erosion in the context of climate change³². Installing flood forecasting and flood warning systems along with relief and rehabilitation package to mitigate flood problems in the region have been discussed as solutions³³. It is necessary to evaluate basin-wise water resources for all utility sectors. Utilisable resources must form the basis for arriving at equitable distribution formulae keeping in mind multiple needs and prospects.

Sharing of hydrological and climatic data of the basin by riparians in the Brahmaputra Sub-basin is an important step ahead in facilitating dialogue. The agreements need to be reached by the riparians related to exchange of data, nature and scope of existing and proposed interventions on the river. It can also be said that there need to be positive initiative and reciprocity from riparian's adopting best practices. The paradigm shift to integrated basin water management for recognizing the best practices and using them to find on the ground solutions has to take place.

The gigantic and unconventional theme of the inter-basin transfer of water proposed under the National River Interlinking Project needs to be theoretically and conceptually examined, argue scholars (Prasad 2004). The river interlinking proposed in India is against the natural geo-morphological process because such links in distinction to intra-basin transfer of water and transfer of water to adjacent basins propose interlinking of rivers from completely different basins (Prasad 2004). Also, the notion of water surplus basins does not take into consideration the requirements downstream. Examining river link projects on a case-by-case basis for economic analysis is also important, feel critics.

Need for strong River Basin Organisation(s)

River waters internationally are a difficult, complex and challenging topic. Water sharing agreements of the complex river basins of Nile, Jordan or Mekong have shown ways in which breakthroughs can be achieved in equitable sharing of river waters. In South Asia the water sharing jinx has also been created due to long prevailing rivalries between the countries of South Asia, mostly political by nature. In such a scenario, water conflicts can be resolved through dialogue.

The Integrated River Basin Management of the Brahmaputra Sub-basin calls for India to form a river water commission with the consensus reached within all Indian states falling in the sub-basin. In 1980, the Government of India instituted a Brahmaputra Board comprising of all North-Eastern states and parts of West Bengal falling in the Brahmaputra Sub-basin. The Brahmaputra Board on its formation started work of preparation of Master Plan of various rivers and tributaries of Brahmaputra and Barak river-systems and rivers of Tripura. The Master Plan Part – I (for the main stem of Brahmaputra) and Part II (for Barak river and 8 of its tributaries) has already been approved by the Ministry of Water Resources, Government of India in July 1997. The formulation of draft Master Plan Part –III comprising 38 tributaries of the river Brahmaputra and 8 rivers of Tripura was completed in March 1993 (Government of India 2013).

The Brahmaputra Board continues to be the only river basin institution for the river Brahmaputra. However, it is often alleged that the Brahmaputra Board has failed to mitigate floods in the region³⁴. The floods in Assam and Meghalaya which have caused losses to life and property have put the Board under suspect. The new government at the centre is keen on revamping the Brahmaputra Board. There were also talks of creating a Brahmaputra River Valley Authority³⁵, but there is little consensus on it from stakeholders. Since, water is a state subject in India, the North-Eastern states have been resistant to any imposition from the centre on river waters. The state of Arunachal Pradesh would not compromise on its sovereignty to develop water resources in the region, especially its thrust on hydropower development. The Arunachal Pradesh Water Resources Management Act, 2006 was passed in the state to prevent an overarching water authority hoisted by the Centre³⁶. The State Government hoped that the act will regulate the state's water resources and encourage development.

In the Brahmaputra basin, in the Indian context Arunachal Pradesh is the upper riparian state, while Assam is the lower riparian. Confirming with many precedents, Arunachal Pradesh is resistant or insulated against any agreement or treaty on water sharing. Here, political will becomes crucial and hydro-diplomacy becomes necessary. Civil society initiatives in the recent past have been successful in bringing together hydrologists from Arunachal Pradesh and Assam and have mulled the approach of Integrated Basin Management for the Brahmaputra basin. But, such initiatives have been isolated and with much less impact. State governments have not incorporated the Integrated Water Resources Management in their plans. This failure of recognition of the paradigm shift world-wide requires policy alternatives being prepared for interventions in the basin. For the policy interventions, the governments have to share hydro-climatological data in a transparent way. Joint-planning of development of water projects like dams needs to be done. However, they cannot come at the cost of environment.

Assam is pushing for the Centre's proposal for a Brahmaputra River Valley Authority (BRVA)³⁷ and with the Centre keen on going with the Authority. Chief Minister of Assam, Shri Tarun Gogoi in a letter to Prime Minister Shri Narendra Modi held that setting up of BRVA was essential for controlling floods in Assam. Since, both Assam and Arunachal Pradesh have different plans for water resources in their respective states any joint management of water resources is an impossibility in the near future.

Any integrated water management in the Brahmaputra basin must have co-riparians like Nepal, China, Bhutan and Bangladesh as the key stakeholders. Bhutan, which is an upper riparian state with respect to India and where most of the rivers of the Barak system originate, is important for flood management in Assam. Bangladesh which is a lower riparian country in the Brahmaputra Sub-basin and last in the Brahmaputra chain also needs to be brought on board for integrated water resources management in the basin. In the situation where the efficacy of the Brahmaputra Board has been challenged³⁸ there is a need for rethinking on the lines of two apex commissions- one international and the other intra-national (Ray 2014). All stakeholders on a national and sub-national level need to be incorporated into the integrated basin water management bodies. The regional organizations like SAARC can be used as platforms for cooperation on integrated basin water management of the Brahmaputra basin. India could play an important role, being a middle riparian country and set to be affected by China's river diversion plans.

Conclusion

Water resources in North-East are abundant but poor utilisation has created problems for both Arunachal Pradesh and Assam that share the mighty trans-boundary river Brahmaputra. Nationally when there is acute water stress and states like Tamil Nadu and Karnataka are at loggerheads over Kaveri river water sharing, Assam and Arunachal Pradesh present a very different yet an important case. While there is no paucity of water in Brahmaputra with both states recording very high run-off during monsoon months, geo-morphological characteristics through the region that the river traverses coupled with climatological conditions make the river a complex issue and contribute to floods in Assam and soil erosion in Arunachal Pradesh.

Both states being economically poor, the governments of both the states have to incur heavy losses costing the governments a lion share of the revenue. Both, the states in order to be self-reliant in food production need to utilise the water resources properly. Since, Arunachal and Assam have majority of its population involved in the primary sector (agriculture), proper irrigation facilities are crucial for sustaining livelihoods of millions of farmers in the state. Allied sectors like fisheries also have the potential for employment and revenue in the two states. About 50,000 MW hydropower potential of Arunachal Pradesh has remained untapped though over 150 plans were drawn for

construction of projects. Assam has played a role of ginger group, citing fears of the lack of flood-control measures incorporated in the projects.

The populist notion of the river linking project is the transfer of water from water surplus rivers to water deficit-rivers or basins. The conceptual, technological and economic aspects of interlinking are complex and complicated and need comprehensive examination and review (Prasad 2004). Taking a simplistic and superficial view of the technology involved in pursuing a pious and ideal objective will be woefully inappropriate (Prasad 2004).

River water being a state subject in India we see very little cooperation between states on sharing of water, unless under compulsions of the Supreme Court or an Act by Parliament. In case of Brahmaputra, there exists a Brahmaputra Board which was formed by an Act of Parliament in 1980. The board, though a basin-wide institution, has failed to mitigate floods or stop soil erosion recurring in the North-Eastern states. The Centre's plans of revamping the board have received mixed responses from the North Eastern states. The Brahmaputra Board nevertheless has prepared Master Plans for Brahmaputra-Barak system and such plans have been approved by the Centre and are budgeted for. For any revamp of the Brahmaputra Board or formation of a Brahmaputra River Basin Authority by the Parliament, consensus over the revamp of the board is necessary, which is absent. Hence, there is a need for thinking of revamping the Board, giving it more teeth to mitigate floods and help in the management of water resources.

Integrated Basin Water Management (IBWM) could help Assam and Arunachal Pradesh share water resources equitably. Integrated Basin Water Management is a concept internationally acclaimed. But, India has been insulated from the shift in paradigm that has not yet been adopted for policies on water. Civil society could play an important role in suggesting policy alternatives to governmental stakeholders embedded in the framework of IBWM. Also in the Brahmaputra-Barak river system, India being a middle riparian country, China and Bhutan being upper riparian and Bangladesh a lower riparian nation, India needs to engage with these countries for basin-wide management of water resources.

Notes

¹ file:///C:/Users/abc/Downloads/583-2376-1-PB%20(2).pdf (retrieved on 4 December, 2014).

² http://siteresources.worldbank.org/INTSAREGTOPWATRES/Resources/Background_Paper_2.pdf (retrieved on 31 December 2014).

³ http://siteresources.worldbank.org/INTSAREGTOPWATRES/FeatureStories/21702969/NortheastStrategyReport_20-3-08.pdf (accessed on 22 February 2016)

⁴ file:///C:/Users/abc/Downloads/583-2376-1-PB%20(2).pdf (accessed on 4 December, 2014)

⁵ http://siteresources.worldbank.org/INTSAREGTOPWATRES/Resources/Background_Paper_2.pdf (retrieved on 31 December 2014)

⁶ *ibid*

⁷ *ibid*

⁸ *ibid*

- ⁹ <http://wrmin.nic.in/writereaddata/NationalWaterPolicy/NWP2012Eng6495132651.pdf> (accessed on 6 December 2014)
- ¹⁰ [file:///C:/Users/abc/Downloads/583-2376-1-PB%20\(2\).pdf](file:///C:/Users/abc/Downloads/583-2376-1-PB%20(2).pdf) (accessed on 4 December, 2014)
- ¹¹ *ibid*
- ¹² <http://www.cwc.nic.in/main/downloads/Volume-I.pdf>, (accessed on 2 December 2014)
- ¹³ *ibid*
- ¹⁴ http://articles.economictimes.indiatimes.com/2014-12-07/news/56802797_1_border-areas-border-infrastructure-thingbu, (accessed on 4 December 2014)
- ¹⁵ <https://www.internationalrivers.org/campaigns/brahmaputra-yarlung-tsangpo> (Retrieved January 22, 2016)
- ¹⁶ http://sandrp.in/DRP_Jul_Sep2014.pdf (accessed on 15 February 2016)
- ¹⁷ <http://www.thehindu.com/opinion/columns/just-suggestions-junked/article7536205.ece> (accessed on 13 February 2016)
- ¹⁸ *Ibid*
- ¹⁹ <http://timesofindia.indiatimes.com/india/MoEF-buries-single-window-project-clearance/articleshow/46951896.cms> (Accessed on 15 February 2016)
- ²⁰ <http://www.thehindu.com/opinion/op-ed/a-hasty-halfbaked-report-on-environment/article6887747.ece> (Accessed on 16 February 2016)
- ²¹ *ibid*
- ²² *ibid*
- ²³ <http://www.thehindu.com/opinion/op-ed/against-developmental-fundamentalism/article6062596.ece> (accessed on 16 February 2016)
- ²⁴ *ibid*
- ²⁵ *ibid*
- ²⁶ <http://www.thehindubusinessline.com/specials/india-file/can-interlinking-rivers-make-this-history/article7806425.ece> (retrieved on 22 February 2016)
- ²⁷ *ibid*
- ²⁸ http://www.iwmi.cgiar.org/iwmi-tata/PDFs/2012_Highlight-16.pdf (accessed on 22 February 2016)
- ²⁹ http://www.kiran.nic.in/pdf/reports/vision_2050.pdf (accessed on 22 February 2016)
- ³⁰ <http://arunachalpradesh.gov.in/experts-holistic-river-basin-mgmt.html> (accessed on 3 December 2014)
- ³¹ http://planningcommission.nic.in/plans/stateplan/sdr_assam/sp_sdrassam.htm, (accessed on 8 December 2014)
- ³² <http://arunachalpradesh.gov.in/experts-holistic-river-basin-mgmt.html> (accessed on 3 December 2014)
- ³³ *ibid*
- ³⁴ *Ibid*
- ³⁵ http://www.business-standard.com/article/news-ians/create-brahmaputra-river-valley-authority-gogoi-to-modi-114062900564_1.html (accessed on December 2014)
- ³⁶ <http://www.downtoearth.org.in/news/people-sceptical-of-arunachal-pradesh-water-resources-management-authority-bill-8817> (accessed on 1 December 2014)
- ³⁷ <http://www.assamtribune.com/scripts/mdetails.asp?id=sep2414/at055> (accessed on 7 December 2014)
- ³⁸ <http://arunachalpradesh.gov.in/experts-holistic-river-basin-mgmt.html> (accessed on 3 December 2014)

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