

SOCIAL CHANGE AND DEVELOPMENT

A Journal of Omeo Kumar Das Institute of Social Change and Development

July 2006

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\$.50 (Abroad)

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Vol. 4 □ July, 2006

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Good Governance and Third World Development Implications for Coalition Politics in India

Jagdish K. Patnaik

This paper seeks to address some of the issues that are being raised in the discourse on good governance. First, the paper will discuss the conceptual dynamics of governance. Second, this paper will attempt to link up governance with the development syndrome. Third, attempt will be made to examine the concept in the context of Indian political system. Coalition politics may be indicative of the fissures in the post-independent consensus on development. It, however, is in the process of fashioning a new type of political capital. Finally, in the conclusion we will discuss about the need for a paradigm shift in the discourse on good governance that will be relevant to the developing countries in general and India in particular.

Introduction:

Toward the ending of last century there have been attempts by many international agencies in changing the strategy of development concomitant with their perceived objectives and ideologies. There has been a **paradigm** shift in the development process obtaining in the developing societies. Almost all the newly independent countries were struggling for appropriate strategies for the economic growth of their societies immediately after independence. While there were some half-hearted attempts to indigenously develop these societies, external dependence for capital, technology and even technical manpower robbed of these economics indigenous growth. Alongside this, the intellectual resources in these societies were scant too, although there were formidable groups in liberating their respective nations from colonial stranglehold. This, however, did not enable these newly independent societies to evolve their path of development. In most of the newly independent nations development is western though. There is a crisis of governance due to the lack of efforts for adequate institutional and ideological arrangements to pursue development. Currently there is a debate regarding the creation of objective conditions for ensuring good governance in these societies.¹ While the

World Bank and other western countries have initiated steps in the direction, there is a need to develop an indigenous perspective on good governance.

The Indian political system, India being one of the first countries to get decolonized, has the dilemma of choices for venturing at an indigenous path of development. This dilemma is compounded by the issue of governance. The Westminster model that India adopted for itself in running the country has to find its roots entrenched into the body polity. It has to be conducive also to the strategy of development that India adopted for economic growth. The structural and cultural framework to make the Westminster model work found wanting in India. This caused a crisis in governance in a span of three to four decades. So much so that the early nineties of the last century witnessed India in a terrible condition, both economically and politically. India had to mortgage its gold reserves in the Bank of England. One former Prime Minister of the country was assassinated. The Kashmir crisis again became the butt of contention. International terrorism, aided and abetted by a neighboring country was bleeding the country. India was totally in shambles. This acute state of crisis in the Indian Political System was never felt in the post-independence era. Indian economy, polity and society were facing one of the toughest times in its history. The crisis was manifested domestically as well as internationally. The issue was how to run the country to the extent that the deepening economic and social crisis facing the country could be surmounted. In other words, the issue was good governance.

This paper seeks to address some of the issues that are being raised in the discourse on good governance. First, the paper will discuss the conceptual dynamics of governance. Second, this paper will attempt to link up governance with the development syndrome. Third, attempt will be made to examine the concept in the context of the Indian political system. Finally, in the conclusion we will discuss the need for a paradigm shift in the discourse on good governance that will be relevant to the developing countries in general and India in particular.

This paper, will focus on the linkage between Third World development and good governance. The interconnectedness between the growth of civil society in the Third World and governance forms the thrust of the paper, the paper will examine the phenomenon of coalition politics in India as the manifestation of the realignment of diverse forces in search of consensual politics. Coalition politics may be indicative of the fissures in the post-independent consensus on development. It, however, is in the process of fashioning a new type of political capital.²

Governance: the conceptual dynamics.

Governance has traditionally been associated with government; the concept of governance came in vogue recently. Since the days of Plato and Kautilya there have been concerns about the question of governance and government.³ Now, however, the notion of governance has come to the fore to encompassing factors beyond the realm of government. The process and actors that have a bearing on the functioning of the government have come to occupy a pre-eminent place in the study of government. The increasing importance and the growing space of civil society in the social science literature has spawned a plethora of developments; and the issue of good governance has gained ascendancy in almost all aspects of life. Even the concept has spilled into the realms of economics, business and corporate activities as well. The disciplines of Political Science and Public Administration have come to accept the reality of the widening scope of the activities of the state. As one writer argues "governance of and in modern societies is a mix of all kinds of governing effort by all manners of social-political actors, public as well as private; occurring between them at different levels, in different modes and orders."⁴

The earlier notion of the study of government and politics referring to the power and functions of the executive, legislature and judiciary has been upgraded by including non-government organizations, both in the formal and informal sectors.⁵ In fact, the changed context of the burgeoning activities in the social and economic sectors have impacted on the activities of the state and government, thereby calling for attention to the whole range of activities beyond the traditional structures of government. Added to this, following the increasing dynamic process of the civil society there has been the focus on the question of 'good governance.'⁶ As Kjaer writes, "the increasing use of the concept of governance can be seen as a reaction to a change in political practices, together with changing realities involving, among other things, increasing globalization, the rise of networks crossing the state-civil society divide and increasing fragmentation."⁷ Thus the theoretical perspectives on governance have emerged to counter the inadequacy of traditional theories of Political Science and account for the changed context of the state and government.⁸

The issue of governance, in fact, gained prominence in the Third World societies following the publication by the World Bank in one of its reports on the theme in 1989.⁹ The report attributed the economic crisis in these societies to bad governance. Subsequently, the Bank came up with a number of comprehensive reports linking up development and good governance.¹⁰ It emphasized accountability, participation, predictability and transparency as the elements of good governance. The Bank defines gover-

nance as “the manner in which power is exerted in the management of a country’s economic and social resources for development.”¹¹

The main plank of the World Bank is to link up disbursement of loans to Third World with good governance. The underlying philosophy is to facilitate and further the process of liberalization, privatization and globalization (LPG) of the Third World. It is outside the purview of the paper, though, whether LPG will ensure development or underdevelopment.¹² The efforts of the Bank are in the direction of providing a liberal economic framework for sustained development of the new states. The economic and political regimes meant for the World Bank conditionality have to be restructured in these societies. This may call for even compromising the nation’s sovereignty. This, however, does not deter the Third World societies to avail of the loan facilities. The sluggish nature of growth and the grinding poverty have perforce necessitated shifting the development paradigm as well as the notions of the exclusionary nature of sovereignty in these societies. In the context of the global nature of economic development presently there is the need to examine the notion of sovereignty there is an increasing tendency to integrate the national economies with the global economy via the World Bank. It has come to such a pass that good governance is identified with the integration of national economies with the world economy. Arjun Appadorai coined the term “disjunction” to refer to the collapse of the nation states in the context of the globalization syndrome.¹³ The objective conditions necessary for the purpose of integration are obliquely manifested in the elements of good governance. The situation currently prevalent in India as a consequence of the restructuring since the last decade and half may be a case in point.

The agenda of good governance is a consequence of the ongoing process of integration of the national economies of the post-colonial states with the world economy. The necessary institutional and ideological transformations to facilitate integration have been manifestation of good governance.¹⁴ While the Bank framework of governance is good, it is pertinent to examine it in the context of a highly diversified and fragmented political system like that of India. Such a uni-linear path of development of the post-colonial societies in line with Anglo-American liberalism raises questions about the growth of indigenous structures and cultures. While good governance is a hallmark of development it necessarily does not mean that it will throttle indigenous growth and culture. It also does not mean further fragmentation within the domestic societies of the political system. It means harmonious and even growth of all section of the society.

Thus governance should be seen as a dynamic process whereby the whole gamut of the structure and culture of the political system may be fashioned to facilitate equitable power sharing among all sections, and to avert the process of fragmentation of the domestic society by integrating nationally. It follows that alongside the democratiza-

tion process of the domestic societies the redistribution of resources needs to be equitable and just. Such kind of governance will definitely take care of the fissiparous tendencies as well as make the question of sovereignty inclusive.

II

Governance and Third World development

The issue of good governance is akin to the process of development undertaken in the Third World societies.¹⁵ There have been debates about the paths of development. The compromise between state and society for development has often resulted in a crisis of sorts. The crisis is manifested in the growing cleavages and conflicts in these societies. This is generally identified with the crisis in governance. Development and governance have to be in unison without encroaching upon civil society.¹⁶ The phenomenon of development in the developing society has been so complex that the state and civil society have been at loggerheads for want of consensus.¹⁷ The crisis of governance, in other words, owes to, what James Coleman wrote about long ago, the “development syndrome,¹⁸ or what Fred Riggs called ‘development trap.’¹⁹ There have been so many changes, of course, in the Third World societies since Coleman and others wrote about the Development Paradigm. Even Coleman in a subsequent work on social capital titled *Foundation of Social Theory* argued for generating cooperative and collective action to garner human capital that will be complimentary to social capital.²⁰ Competing perspectives have also been evolved to examine the issue of development. As Sarah Joseph suggests, “in the good governance agenda an active civil society is primarily defended as a means by which the state can shed some functions in the interests of efficiency and economy.”²¹ Now the issue of development has been identified with the growth of democratic governance in the Third World.

Governance is linked to the democratization process in the domestic societies of the new states as well.²² Despite the ‘success’ of democracy in countries like India,²³ there has been a weakening of government in the power of countering the fissiparous tendencies that are manifested in various shades. Atul Kohli, in an earlier work (1990), in fact, argued that India’s governing institutions have so declined in authority and effectiveness that there is a ‘crisis of governability.’²⁴ There is no doubt that the transition from tradition to modernity and the transformation in the structure and culture in these societies have given rise to the problem of adaptation and acculturation. The consolidation and deepening of democracy in India seems to undergo slow movement. This is specifically manifested in the lack of polarization and increasing fragmentation in the political formations across the country.²⁵ The era of coalition politics that began in the nineties continues to sustain due to lack of consensus on the part of political parties.

The onset of LPG in the nineties of the last century has further compounded the crisis. There has been tremendous pressure on the political and economic institutions of the country to cope up with the increasing demand of the dynamic flow of an externally induced development process. The social structure also has been undergoing transformation due to the change in the economic scenario of the country. Democracy is gaining ground over the years; however, the stunted nature of growth and development in the economy and society, in fact, raises the question of the efficacy of representative democracy in facilitating equitable development. The institutions and structure to ensure equitable development are to be supplemented with democratic institutions. Democracy and development can go hand in hand. Governance is meant to generate resources for democracy that can ensure equitable development.

The problem in the Third World societies, however, has been that representative democracy has been in place without any adequate mechanism to sustain democratic culture. Robert Putnam argues that associations in civil society provide the opportunity to ventilate opinions by the citizens. It enables governments to muster support and cooperation from the citizens. This, in turn, will generate legitimacy. In other words, associations provide succor to social capital.²⁶ Democracy and social capital sustain each other.²⁷ This ensures even development of the Third World societies. The share and involvement of the community in the decision-making proun have to be realized through generating consensus on issues and ideology. The political formations have to ensure the fuller engagement of the community in the realization of the objectives and ideologies by enlisting the necessary support and generating the resources for the purpose. Civil society can perform its function within the framework of democracy to ensure just and equitable development. Consensus can be generated and competition ensured with the increasingly active role performance of civil society.²⁸ The political actors have to engage with the civil society to maintain representative character of the issues and ideologies. Development has to be linked to the dynamism of the civil society. Democracy, civil society and development have to be in tandem to ensure dynamic growth of indigenous resources. Governance has to ensure such a dynamic process where the three elements- democracy, civil society and development have to figure in the discourse as well as praxis. As Bhiku Parekh writes, "liberalism determines the nature of the state (formal, abstract), its structure (separate from the autonomous civil society, a clear separation between public and private), its rationale (protection of the basic rights of citizens) and its basic units (individuals rather than groups or communities)."²⁹ Indigenous development of the Third World societies can be realized with the strengthening of civil society and deepening of democracy. The linkage has to be enduring. The state structure should be fashioned in such a way that the dynamic process of governance could be sustained. An activist, rather than an interventionist, state can be a facilitator in the strengthening of the civil society. Good governance and development will follow suit in Third World.

III

Governance and Development: Implications of Coalition Politics in India.

The scope of this section is limited to the era of coalition politics that began in the early nineties. The developments that took place since the last decade and half have raised the issue of governance in India. There has been a crisis of sorts both at the centre and the states. The shift in the development strategies globally as well as nationally have really impacted on the governance of the Indian state. There have been cries of governance in the country. Nevertheless, the economic growth during these years has been impressive. The collapse of Rajiv Government in 1989, despite a mammoth majority he got in the elections, heralded the dawn of the era of coalition politics. It also signaled the cleavage in the consensual politics that sustained Indian democracy to survive till then. The failure of the dominant parties at the subsequent elections to get adequate majority and the rise of coalition politics have really brought into focus the issue of governance in India.³⁰

There seems to be a link between the failure of the Indian state towards the ending of eighties to get out of the deepening economic crisis and the decline of dominant parties at that time to generate consensus and muster support. It seems, that was the beginning of the crisis in India. Indian state has faced crises earlier also; but the recent crisis is linked to governance. While the earlier crises had put democracy at the dock, the present one relates to the capacity of the state to sustain development. This is owing to the neo-liberal agenda being pursued globally. The Indian economy and polity had been tailored with a mix of socialist and crudely capitalist persuasions. The compulsions to alter the macro-economic policy in the early nineties under *forced liberalism* have upstaged the socio-economic structure of the Indian state.³¹ The crisis is in the context of the changed role of the state; it is also the crisis of confidence of the political formations to generate support. Coalition politics seemed as an expedient arrangement to face the crisis though; the era of coalition seems to be entrenched since then with little sign of abeyance. The following section will examine the erosion in the ideological as well institutional frameworks in the governance of the Indian state that gave rise to the emergence of the era of coalition.

The hiatus in the consensual politics of sixties and early seventies owing to the crisis in the leadership was short lived though; the structure of Nehruvian state found wanting to cater to the large chunk of the populace. The bureaucracy, business and politician nexus routed the faith of the people in the power of the state to deliver the goods. The grip of ideology in rallying round the support seemed to work at cross-purposes. The middle of seventies saw the Dark Age in Indian politics. The subsequent rise of the Janata conglomerate during the interregnum also did not bring about any ideological

abbeys. The liberal-democratic framework may seem to have been deep-rooted now; however, the ideological superstructure built through Nehruvian socialism teetered due to the lack of direction in guiding a sustained and even economic development.

The rupture in the ideology appeared in the eighties as the western economies were reeling under severe economic recession which had its impact on the global economy. It is partly owing to the external influence though; the collapse in the ideological consensus is mainly an internal development within the state. The excessively interventionist role of the state in the sixties and seventies in the face of the increasing passivity of the citizenship, except during the elections, failed to ensure accountability. The complex bureaucratic apparatus that has been deeply entrenched in the political system failed to deliver the goods under the license-permit system. It is owing to its deviation from the 'Weberian' criteria of rational legal system. As Brass writes, "The mechanisms, ties, and attachments that make the system work are based rather on personal and social obligations to patrons and clients, kin and caste fellows, on informal connections, and on illegal fee-for-service cash payments."³² This is compounded by the rising inequality between the political class and the general populace of the state.

The discontent and disquiet generated due to the failure of the state to address the basic issue of the people found expression in the multi-party democracy.³³ The electoral process that once in a while offered opportunity to the general masses to exercise their political rights seemed to have experienced a massive upheaval. The electoral verdict in almost all elections since the late eighties has been fractured. The number of regional and national parties getting elected to the centre has also increased. The simmering discontent was manifested in the Mandalisation of electoral politics in the late eighties. In fact, the roots of the Mandalisation could be traced to the Janata interregnum during which the Mandal Commission was set up to look into the restructuring of the social process through affirmative action.³⁴ Mandalisation was definitely the tip of the iceberg. There was the failure of the state to protect the rights of individuals whose identities are related to the community based on primordial identities. These communities could hardly find space in the general electoral politics. There was no share in the power structure either. The perpetuation of the old elite structure that inherited the post-colonial state did not afford opportunity to the emerging elite to share power.³⁵ The irony, however, was that the emerging elite was enjoying benefits under the tutelage of the old elite. The clash of the elites was, however, the result of the drift in ideology. The dominant ideology did not pander the large section of the emerging elite.

The ideological drift in development goals had its impact on governance. The early nineties saw the crisis in governance due to misplaced ideological rigor in the Congress Party which shifted from its earlier so called democratic socialist and secular policies to an out and out neo-liberal agenda. The whole series of restructuring of the

ideological and institutional parameters of the Indian Political System may seem to be part of the response to the political instability. It is also consequence of the exigencies of the situation. No single political party has the wherewithal to counter the crisis in the state that was unequivocally manifested in governance. Coalition of political parties in the form of political formations came in handy to attend to the crisis in governance. The immediate casualty was ideology.

The attempts at Mandalisation were intended to promote inclusion of the large section of the alienated backward castes. This, however, misfired in several ways. First, the shift in the strategy of development by adopting the New Economic Policy in 1991 circumvented the prospect of employment in the state sector. Second, alongside this the rise of Right Wing political formations like Bharatiya Janata Party (BJP), which gained a foothold in the 1989 elections weakened the agenda of the so-called secular elements of Indian Politics. The BJP definitely capitalized its rise by following a strategy of exclusion.³⁶ The Mandir-Masjid phenomenon gave a radical twist to Indian politics. Third, this trend gave way to the increasing political violence in the eighties and nineties. This has been the consequence of what Kohli calls "belligerent mass mobilization."³⁷ As the political parties have lost touch with the reality and failed to generate any ideological support from the masses, the exigencies demanded realignment of political forces.

There was total polarization and further fragmentation in the political process. The fire of Mandal in rallying round support from the backward castes ended in a whimper. Ideologically, neither Mandal nor Mandir could generate any substantial impact on the electorate. Both the important strands did not have any ideological rigour. Although the BJP projected itself to be a right-wing political party with Hindu nationalist ideology, it lost its ideological edge owing to its alliance with many regional political parties which professed almost negation of what BJP stood for. The National Democratic Alliance, which was a conglomerate of many regional and national parties, formed the alliance under the BJP with the objective of sharing power without any ideological rancor. The BJP in the Chennai Declaration 1999 accepted that the "onset of the coalition era in Indian politics is a natural phenomenon, fully in consonance with the democratic will of the people and rich diversity of our society."³⁸ This in other words is an expression of the inability of the party to go beyond the Common Minimum Programme of the NDA. Further, the grip of the Sangh Parivar, the parent body of BJP waned when BJP was in power owing to the pursuit of the development policies that its predecessor government did initiate. As one writer suggests, "we can best understand the overall character of the BJP if we view it as combining two very different identities: as militant social movement and moderate political party."³⁹ The economic agenda that the BJP professed as part of its manifesto for indigenous economic development was shelved

after it came to power.⁴⁰ It could hardly deviate from the neo-liberal agenda that was initiated by the previous Congress led government in 1991.

The confusion that arose between the professed ideological stand and the pursuit of a different economic policy for development has been manifested in the institutional domain as well. The structural adjustment programme that is put in place in compliance with the macro-economic policy has been slow. The initial enthusiasm for reforms has not been reflected in the speedy implementations of the policies in bringing about changes in the over-all structure of the economy and polity. There may be some changes in the banking, insurance and financial sectors, the real change is not manifested in terms of attracting large-scale FDI unlike it is in the case of China or other countries initiating reforms. The main bottlenecks for development can be found in the excessive bureaucratic control over production and trade, a large and lousy public sector and ineffective private sector that do contribute little to increase production for export as well as to cater to the domestic market.

The beginning of this century is no better either. The era of coalition politics has not abated. Rather there has been perpetuation of coalition principle among the political parties. The eagerness of the BJP to go to polls earlier than the expiry of the term on the plank of its achievement misfired. The elections in 2004 witnessed again a fractured mandate.⁴¹ Although the Congress Party made substantial gains compared with its rival the BJP, no party had the requisite number of seats to form government. It is, however, true that at the time of going to the polls both the leading political parties had pre-poll alliance, and the polls were contested on the basis of political formations rather than on party line. The diffidence of the main parties in going to polls was visible in the desperation to win the support of regional political parties. The Congress Party with the support of some regional and Left Parties could form the United Progressive Alliance to share power in the government.⁴²

The mandate in the election, however, gives the message that no national party has the ideological objective or development strategy to appeal to the masses. Even the Leftist Parties seem to compromise their ideology on several fronts when they share power with the Congress Party. On the other hand, the Congress Party has also deviated from its stated centrist position in pursuing the neo-liberal agenda in the economic domain. Thus, it is a clear manifestation of the deep-rooted structural deficit in the process of political formation in the polity. It is also part of the failure of politicization of numerous segments of the civil society. The process of civil society is weakening in the electoral politics, let alone in other sectors of the political system. This is obviously the consequence of the lop-sided growth of the economy as well as polity since independence. In other words, governance has not been in consonance with the development

needs of the people. Nor the development objectives have been consistent with governance. Both the process has been misplaced owing to the lack of objective assessment by the political elites. So far the economic developments that are in place have been rather incidental without any direct link with governance. The weakening of the state in generating consensus is manifested in the emergence of the coalition arrangements.

IV

Conclusion

The discussion so far in this paper drives home the following points. First, governance in the Third World is linked to the development dynamics, though it is dependent on the democratization of the political system. Good governance is possible with the increasing share of the people in the power structure. Empowerment of the masses can facilitate development. The ideological vacuum and institutional handicaps of the state can be surmounted by an active citizenry. This is possible with the presence of an effective process of civil society that can only ensure the dynamic political process. In other words, civil society needs to be politicized. The link between the state and civil society should not be mutually exclusive. Instead, an active state can help in politicizing the civil society. The state and civil society are rather mutually inclusive in the Third World societies; and they need to further the link for the sustenance of each other. This will facilitate political capital and ensure dynamism in the political process. Good governance is dependent on the strength of the political capital that is part of the civil society.

Second, this follows that Third World development is possible with an activist state. While an interventionist state is a negation of development, an activist state can bring about a liberalization of the economy. Too much of state control is a feature of the command economy and definitely retrograde to development. The neo-liberal notion of minimal state, however, can be insidious as well in the context of the Third World. There is a whole set of areas in the social and economic sectors where the state can not let them in the hands of the emerging private sector. The private sector in these societies is yet to shoulder the responsibility of looking after the social security net of the society. The situation in these societies warrants urgent attention to look after the social security net. Issues like primary health, education and old age care have to be in the domain of the state. Further, the state has to act as a facilitator for promoting domestic private capital. It can also act as a monitor to enable foreign capital to operate within the framework of the national ideological consensus for development.

Third, the present state of coalition politics is the logical fallout of the shift in the paradigm of development. The emergence of a broad spectrum of political formations is part of the churning that took place following the failure of the Nehruvian ideological superstructure in evolving the political capital for the civil society. The cleavages and conflicts owing to the inability of the institutional framework to empower the masses further weakened the state. Although originally the state with its interventionist role seemed to be strong, it turned out to be weak in the face of the massive upheaval in the electoral democratic process. The politics of inclusiveness pursued by the Congress and subsequently by the Janata Party failed to generate any ideological consensus. The BJP's politics of exclusion by promoting Hindu nationalism also did not generate any national appeal. There is a kind of ideological vacuum now. This kind of trend gave rise to the politics of coalition.

Finally, now the trend is in the direction of evolving a political capital with the state emerging as an active player. The development goals pursued in the context of the New Economic Policy necessitates the presence of an activist state. As long as the political parties adopt ideologies that do not reckon the need of an active state for the development strategies, there would be no clear acceptance by the electorate and the civil society. Political capital and civil society need to play a greater role to avert the era of coalition.

Good governance and development will depend on a viable civil society that can have a sound ideological and institutional basis. Thus, there is a need of paradigm shift in the whole discourse on good governance in the Third World societies that can account for the nuances we encounter consequent upon the introduction of the neo-liberal agenda in the nineties of the last century.

Notes

¹ Etymologically the term 'governance' is traced back to the Greek verb *Kubernn* which means to pilot or steer. Plato had used the term to refer to the design of system of rules.

² For our purpose, political capital means increasing politicization of the civil society that can facilitate the empowerment of the masses. Politicization enables empowerment which will facilitate the increase in entitlements and opportunities. This is, of course, in contrast to what Robert Putman called for the de-politicization of the civil society.

³ For a perspective on Kautilya, see L. N. Sharma and Susmita Sharma, "Kautilyan Indicators of Good Governance," in T. N. Chaturvedi (ed.) *Towards Good Governance* (New Delhi: Indian Institute of Public Administration, 1999) pp. 13-18; also see O.P. Dwivedi, "Common Good and Good Governance," *Ibid.* pp. 1-12.

⁴ Jan Kooiman, *Governing as Governance* (London: SAGE publications, 2000), p. 1

⁵ As Anne Mette Kjaer writes, "... we can say that governance refers to something broader than government, and it is about steering and rules of the game." See her, *Governance* (Cambridge: Polity Press, 2004) p. 7.

⁶ Jan Kooiman, whose definition of Governance is relevant here, writes: "Governing can be considered as the totality of interaction, in which public as well as private actors participate, ... Governance can be seen as the totality of theoretical conceptions on governing." See his, *Governing as Governance*, op. cit. p. 4

⁷ Anne Mette Kjaer, op. cit., p. 6.

⁸ For the European Commission, "Governance concerns the state's ability to serve the citizens. It refers to the rules, processes, and behaviours by which interests are articulated, resources are managed and power is exercised in society. The way public functions are carried out, public resources are managed and public regulatory powers are exercised is the major issue to be addressed in this context. In spite of its open and broad character, governance is a meaningful and practical concept relating to the very basic aspects of the functioning of any society and political and social systems. It can be described as a basic measure of stability and performance of a society. As the concept of human rights, democratization and democracy, the rule of law, civil society, decentralized power sharing, and sound public administration, gain importance and relevance as a society develops into a more sophisticated political system, governance evolves into good governance." Quoted in Bibek Debroy, "Difficult to measure," *The Telegraph* (Calcutta), dt. 19 July 2005.

⁹ World Bank, *Sub-Saharan Africa: from Crisis to Sustainable Growth*, Washington, D.C. 1989; also see World Bank, *Governance and Development*, Washington, DC. 1992.

¹⁰ See especially, World Bank, *Governance: The Bank's Experience*, Washington, DC. 1994; World Bank, *Development and Human Rights: The Role of the World Bank*, Washington, DC. 1998; World Bank, *Attacking Poverty: World Development Report*, Washington DC. 2000

¹¹ <http://www.adb.org./Documents/Policies>, dt. 27/08/2005.

¹² For a perspective on impact of globalization in India see P.C. Mathur, "Globalization and the Emergent Geo-Economic Polarization in federal India (A Prefatory Analysis)" in S. N. Mishra et al, *Public Governance and Decentralisation* (New Delhi: Metal Publications, 2003); also see B.S. Human, "Impact of Globalization, Liberalization and Privatisation Policies on Governance: the Indian Experience," *Ibid.*

¹³ See A. Appadorai, "Disjuncture and differences in the global cultural economy," in M. Featherstone (ed.) *Global Culture, Nationalism, Globalisation and Modernity* (London: Sage, 1990), p.295-311.

¹⁴ Bob Curries writes: "the concept of 'good governance' and its practical application ... remain a particularly difficult variable to operationalise... Governance is not a binary variable and cannot be defined in terms of 'on/off' or 'present/absent' criteria." See his, Governance, democracy and economic adjustment in India: conceptual and empirical problems," *Third World Quarterly*, vol.17, No. 4, p.803

¹⁵ Debroy writes: "...pinning down and quantifying governance is by no means an easy task. And it is understandable, given the focus of different surveys on different aspects of governance that a country might score well in one survey and not on another. ... The correlation between economic development and democracy is often debated and the *Human Development Report, 2002* explored this in detail.

Cross-country econometric estimations fail to establish a clear link. While there are countries that have performed well in the absence of democratic rights, there are also countries that have no democratic rights but have registered appalling growth rates." (sic) See Bibek Debroy, "Goals and barometers: Measuring governance and economic development," *The Telegraph* (Calcutta), 3 August 2005.

¹⁶ Cf. Adrian Leftwich, Governance, democracy and development in the Third World, *Third World Quarterly*, Vol. 14, No. 3, 1993. He writes: "from a developmental point of view, the general but simplistic appeal for better 'governance' as a condition of development is virtuous but naïve." P.619

¹⁷ See Carolyn M. Elliot (ed.), *Civil Society and Democracy: A Reader* (New York: Oxford University Press, 2003).

¹⁸ See James S. Coleman (ed.), *Education and Political Development* (Princeton: Princeton University Press, 1965)

¹⁹ See Fred W. Riggs, "The Theory of Political Development," in James C. Charlesworth (ed.) *Contemporary Political Analysis* (New York: The Free Press, 1967).

²⁰ See J.S. Coleman, *Foundations of Social Theory* (Cambridge, M.A.: Belknap Press, 1994)

²¹ Sarah Joseph, "Society vs State?: Civil Society, Political Society and Non-Party Political Process in India," *Economic and Political Weekly*, January 26, 2002, vol. 37, no.4; p.300.

²² See Goran Hyden, "Governance and the Study of Politics," in Michael Bratton and Goran Hyden (eds.) *Governance and Politics in Africa* (Boulder, Col.: Lynne Rienner, 1992); and Goran Hyden, "Governance and the Reconstruction of Political Order," In Joseph Richard (ed.) *State, Conflict, and Democracy in Africa* (Boulder, Co: Lynne Rienner, 1999).

²³ Kohli writes: The success of democracy in India defies many prevailing theories that stipulate preconditions for democracy... Indian democracy is thus best understood by focusing, not mainly on its socio-economic determinants, but on how power distribution in that society is negotiated or renegotiated. Atul Kohli, *The Success of India's Democracy* (New Delhi, Foundation Books, Pvt. Ltd, 2004), p.1.

²⁴ See Atul Kohli, *Democracy and Discontent: India's Growing Crisis of Governability* (Cambridge: Cambridge University Press, 1990).

²⁵ See E. Sridharan, "The Fragmentation of the Indian Party System, 1952-1999: Seven Competing Explanations," in Zoya Hasan, *Parties and Party Politics in India* (New Delhi: Oxford University Press, 2002), pp.475-503.

²⁶ According to Putnam, "Social capital here refers to features of social organization, such as trust, norms and networks, that can improve the efficiency of society by facilitating coordinated actions." Robert D. Putnam, *Making Democracy Work: Civic Traditions in modern Italy* (Princeton, NJ: Princeton University Press, 1993).P.167

²⁷ John Harris has warned against using the term 'social capital'. He suggests that it is "consistent with the neo-liberal agenda of reducing the role of the state, partly in order to make possible large cuts in public expenditure." See his, *Depoliticizing Development: The World Bank and Social Capital* (London: Anthem Press, 2002), p. 120.

²⁸ Misztal writes, "The recent increase in the visibility of the issue of trust can be attributed to the emergence of a widespread consciousness that existing bases of social cooperation, solidarity and consensus have been eroded." B. Misztal, *Trust in Modern Societies. The Search for the Bases of Social Order* (Cambridge: Polity Press, 1996), p.3

²⁹ B. Parekh, The cultural particularity of liberal democracy. Prospects for Democracy: North, South, East, West, in D.Held, *Models of Democracy* (Cambridge: Polity Press, 1996), p.165.

³⁰ In the nineties there was a succession of minority and coalition governments. In 1989, 1990, 1991, 1996, 1998, and 1999 there were coalition governments. In 1999 the BJP-led coalition government is the eighth one. In 2000 also there was the BJP-led coalition government in power. In 2004 the Congress-led coalition came to power with the support of 15 regional parties and 4 Left parties who remain outside the government. See http://en.wikipedia.org/wiki/United_Progressive_Alliance, dt.15/09/2005

³¹ "In fact, multilateralism under *forced liberalism* confers on the international institutions some degree of legitimate power of coercion for enforcing rules and norms, which was absent under the compromise of embedded liberalism. Although *forced liberalism* is not an exclusive Third World contribution, it is the direct consequence of the increased activism of the developing countries in rule-making and rule-application in the international system; it is an outgrowth of the democratization process in the international system through multilateralism." See my book, *India and the GATT* (New Delhi: A. P. H. Co.Ltd, 1997) p.7

³² Paul R. Brass, *The Politics of India since Independence* (Cambridge: Cambridge University Press, 2004), p. 56-7. Brass further writes, "They are no longer the elite "rulers of India" but the leading elements of a vast dominant class, whose members are the principal beneficiaries of the benefits and resources produced and distributed through the agency of the Indian State." *Ibid.*

³³ Zoya Hasan suggests that "what has emerged is a multi-party system with two alliance structures. See her, "Introduction," *Parties and Party Politics in India*, op. cit. p. 31

³⁴ The Mandal Commission was set up on 1 January 1978 by the Janata Government. The Commission submitted its report in December, 1980. The Congress Party which came to power by then did not present it in the Parliament. A decade later, however, V. P. Singh, the Prime Minister, announced that Mandal Commission Report would be implemented. As a result, 27 per cent of the jobs under the central government would be reserved for backward castes, raising the total of reserved position, including those for Scheduled Castes and Tribes, to close to 50 per cent. See Ghanshyam Saha, "Social Backwardness and Politics of Reservation," *Economic and Political Weekly*, xxvi, nos. 11&12. March 1991.

³⁵ Sanjaya Baru writes: "the failure of national political parties and the national government to address the needs of the emergent regional business groups encouraged the latter to seek political and national support from the state governments and regional political parties." See his, "Economic Policy and Development of Capitalism in India: the role of regional capitalists and political parties," in Francine Frankel and et al.,

Transforming India: Social and Political Dynamics of Democracy (New Delhi: Oxford University Press, 2000), p.226.

³⁶ See Oliver Heath, "Anatomy of BJP's Rise to Power: Social, Regional and Political Expansion in 1990s," *Economic and Political Weekly*, vols XXXIV, nos 34& 35, 28 August- 3 September 1999.

³⁷ Atul Kohli, *Democracy and Discontent*, op. cit. p. 340.

³⁸ See <http://www.media-watch.org/articles/1299/136.html>, dt.15/09/2005.

³⁹ Amrita Basu, "The dialectics of Hindu nationalism," in Atul Kohli, *The Success of India's Democracy*, op. cit. p163.

⁴⁰ The Chennai resolution of December 1999 recoded the shift from the BJP's stance from *swadeshi* to the speeding of reforms in insurance, banking, other areas of the financial sector. Within the Sangh there was Swadeshi Jagaram Manch under the chairmanship of S. Gurumurthy which was insisting on following a nationalist economic agenda. Bhaskar Roy writes: The declaration, ... for all practical purposes, is a cogent argument in favour of obliterating the party's own identity." See <http://www.media-watch.org/articles/1299/136.html>, dt.15/09/2005.

⁴¹ <http://www.indian-elections.com/partyprofiles/nda.html>, dt.15/09/2005 & <http://www.indian-elections.com/partyprofiles/congress.html>. dt.15/09/2005.

⁴² See, http://en.wikipedia.org/wiki/United_Progressive_Alliance, dt.15/09/2005

Studying the Ways of Growing Old: An Evaluation of Sociology of Old Age

Shri Krishan

This article emphasizes the need to have a sociology of old age because since the beginning of the industrial revolution, there has been a drastic change in the demographic profile and occupational structure of the world populations. This entailed a new valuation of the old age among the industrialized economies. The Indian sociology, disregarding the uniqueness and individuality of the socio-economic development of their own underdeveloped country, borrows heavily from the concepts and categories of the western model of development and social change, and therefore, fails to understand the multiplicities of the processes of social aging and its construction in the specific milieu of India. However, it has been further argued in this article that there is no need to idealize and glorify any culture-specific model of dealing with the aged and their treatment but the stress should be placed on multi-faceted aspects of aging and we should be open to view aging in a cross-cultural perspective.

The Need for Sociology of Old Age

The patterns of biological decay and increased dysfunction and senescence have been the concern of human civilization from its infancy. Increase in life-expectancy since the beginning of industrial revolution resulting from the reduction of infection as a cause of death at relatively early ages and better nutrition and public hygiene measures of various sorts have changed the demographic profile of the world population, although medical science had little to do with this until the first quarter of the last century. We may also note here that degenerative diseases of later life and other recent life-threatening factors such as pollution emanating from industrial production, stress related to overwork and urban congestion and crowding etc. continues to be a major hindrance in achieving the maximum life-span potential. With a wide-ranging increase in the division of labour and increasing complexity of human society in the wake of industrialization, modern bureaucratic state also redefined human identities and started classifying and categorizing citizens according to occupation, age, class, gender etc. It was in this period that old age became a social construction, formed out of demographic i.e., economic and productive work processes. From the middle of the eighteenth century, with the beginning of industrial techniques of production, Western Europe witnessed an

unmatched reduction in mortality rates, followed by a period of increasing fertility and then a decline in fertility. This change in the demographic profile of population went simultaneously with a drastic shifting of population firstly from primary sector to secondary sector of industrial-manufacturing activities and commercial ventures and then finally to tertiary or service sector as the pace of industrialization intensified. This was accompanied by growing urbanization. The primary motive of this industrial capitalism was to earn as much profit as possible and no attention was given to the distinctions of age and gender for employment in the factories. If truth were told, early capitalism exploited the labour of children as well as women. However, the application of criteria of productivity and efficiency pushed older people out of more remunerative works and confined them to the fringes of labour markets. There was a devaluation of human in favour of technological contributions and the non-productive elderly were also marginalized. The idea of retirement and pensions emerged in the service sector subsequently with the change in the trajectory of occupational structure. The social scientists of underdeveloped countries, carrying the ideological baggage of western thinking and its peculiar models of development, tend to imagine their own countries in the image of metropolitan countries. The categories of analysis and evaluation and a model of development in which capital is the sole vending machine churning out development and other related themes such as urbanization, industrialization and their social impact on the communities and families in the form of emergence of nuclear families are repeated stereotypically without taking into account the uniqueness, individuality and distinctiveness of their own societies. The underdeveloped countries share a widespread and chronic absolute poverty, high and rising burden of unemployment and underemployment, growing disparities in income distribution, low and stagnant agricultural productivity often linked to unequal entitlement to resources and assets, a sizable gap between urban and rural levels of living forcing people to move out even in the absence of large scale industrialization and opportunities for employment due to a more or less stagnant occupational structure. This resulted in underemployment even in the large urban conglomerates and preponderance of labour in informal sector i.e. people engaged in petty-trading, casual and irregular work, in domestic services and in unorganized petty-production. The sprawling slums in underdeveloped cities are related to this phenomenon. About 60-70% in Kumasi (Ghana), 40-50% in Kolkata (India) and about 43-44% in Sao Paulo (Brazil) are concentrated in the informal sector and constitutes a kind of lumpen-proletariat. The economic behaviour of indigenous elites in the underdeveloped countries is marked by conspicuous consumption, investment in speculative real estate, and extreme aversion to risk and export of their savings to be deposited in foreign banks. These are also rational responses from the standpoint of private gain and advantage and help in constituting a lumpen-bourgeoisie. In India, despite all grand designs and talk of developmental strategies, there has been no basic structural change in the economy. About 70% of our population continues to live at bare subsistence level. About 80 million

agricultural labourers earn about 1/10th of what an organized sector worker earns. In the 1980s, the number of unemployed youths registered in government labour exchanges crossed 34-million or 10% of the total productive population and it was equal to the total number of productive people employed in the urban manufacturing sector.¹ This also necessitates emergence of a historical sociology of old age, which we wish to analyze in this article.

The Western Experience and Lessons for Indian Sociologists

The epistemic pre-suppositions of such sociology are based on the general assumption that due to lower expectancy of life in pre-industrial agrarian societies, old age had a rarity value, which created an institutionalized deference of the old. The shift from simpler agrarian societies to industrial society, while resulting in rising living standards and widening of social cleavages, also paved the way for the segregation and marginalization of the older and retired people due to a variety of factors especially such as breakup of the extended family, the cultural change in the normative order and consequent loss of veneration and respect for the older people, and the imposition of retirement due to demographic and economic pressures of modern economic organization. As a result of this gerontological studies and literature either mirror these assumptions or are limited to production of descriptive statistics.² The arguments of American functionalist sociology of 1950's and 1960's and modernization theory, which laid emphasis on changes in family structure with the arrival of new technology, urbanization and age of educational expansion for undermining older skills and the role of elders as educators and transmitters of culture, are frequently repeated in the Indian sociological research on the elderly people. This concern for the plight of the elderly is also of recent origin. The proportion of people over 60 in 1961 was only 5.63 and it has increased to 6.58 in the population of India. It was expected to reach the figure of 7.08 by 2001 and 9.87% by the year 2021.³ There were also general apprehensions regarding breakdown of traditional support systems as a result of rapid urbanization and age selective rural-urban migrations and the changing values of younger generations.⁴ Not only this but the burden of accommodating the strains of social change which modernization entailed was much higher because of demographic and underdeveloped features of economy of the India.⁵ In India, there exists absolute poverty and enormous inequalities in income distribution. For example, Chaturbhuj Sahu (1998), in his study of elderly Santhals of Giridih district, relate the change in the status of aged people to the forces of modernization, technological change, mobility and the explosion in the lateral transmission of knowledge, migration of tribal educated people from rural areas, employment of women outside home and breakdown of the joint family system.⁶ Furthermore, he argues that folklores and tales ascribe a high status and prestigious position to the aged and the traditional social structure especially the joint family, religion, caste and community provided economic, social and emotional security to

the aged but the breakdown of the traditional social structure unleashed by urbanization, industrialization and westernization is also changing attitudes towards the aged and their care.⁷ However, all this analysis is based on certain *a priori* assumptions and he does not offer any quantitative evidence of demographic factors such as the proportion of Santhal people migrating to urban centers or employed in industrial and tertiary sectors or factors that cracked 'the monolithic domination of the aged in the joint family'. The history of family as an institution has been more or less an unknown territory in India and historical demography has not yet developed as a distinct discipline, although the microcosm of social organization is the family. It is within the structure of family that human beings love, mate and reproduce themselves. It is the source of emotional sustenance. But despite the biological and psychological foundation of family life, the institution is enmeshed in a number of social ties. Family transmits material and symbolic resources from one generation to the next, thus reproducing social structures. Each society, depending on its demographic structure, economic organization and cultural religious beliefs, stamp its own features on the family. A considerable work has been done on the social history of family in Europe.⁸ It becomes imperative to focus on the history of social institutions and their long history rather than episodic history to understand slow and imperceptible changes.⁹ In the absence of actual empirical work, some Indian sociologists simply affirm their own prejudices when they analyze the lives of the aged people. According to Hussain (1997), the disappearance of traditional family support system due to technological advance and developmental opportunities linked to urbanization results in the social and emotional deprivation of the aged and aging is not such a problem in rural India. To quote him, "The life of the aged in the rural areas is tranquil and simple one. They continue to undertake light work and their recreational demands are small. They have different sorts of relationships with their families and are better adjusted to the community."¹⁰ Thus, while examining social, psychological and economic lives of rural people, he claims that they are 'economically better adjusted, more satisfied and emotionally stable' and this is attributed to 'rural values, traditions and ways of life'¹¹. Kumudini Dandekar (1996) also depicts a relatively happy old age in the pre-industrial rural population and even the existence of absolute poverty is simply seen as the continuation of earlier penury whereas the urban areas witness growth of individualism and intergenerational clashes. It is claimed that psychological and emotional needs are better satisfied in India than in most part of the world because the nursing homes of the West are waiting rooms for the dead before they are buried. The lack of basic medical facilities and social security for the majority of rural aged (as evidenced in relatively less medicated survival) is depicted as fearlessness of rural people in facing death.¹² We simply wish to suggest discarding such presuppositions - there is a serious need to view aging universal and multi-faceted but not as a uniform process. The aged are a varied, heterogeneous body. The increasing life span has also made it a bit longer thanks to the expansion of medical facilities even in the underdeveloped and developing world, however skewed their

accessibility along the axis of class, caste and gender may be. The aged include a wide array of cultural, linguistic, occupational, educational and other diversities, each with its own history and class-specific life experiences.¹³ For instance, psychological literature on old age has centred on the operationalization of balance and adjustment and this concern is similar to the anxiety of American social science in 1950s and 1960s. In identifying adjustment as the key theme anchoring the life-worlds of the old people, this psychology of aging has reified a set of class-specific concerns as universal processes demanding critical attention.¹⁴

Age as a principle of social organization has not received much anthropological attention. Is age a salient feature of social classification and if so in what contexts, and how are the age differences perceived? How do people distinguish age boundaries and their markers, or how they vary according to the gender, age or status of the subject? It is also doubtful whether a kind of gerontocracy or a system of social hierarchy marked by the dominance of the old ever existed anywhere although in some societies elders enjoyed greater control over material assets such as land and property and symbolic resources such as rituals and religious practices. In some lineage-based societies, the power and privilege of lineage elders is considerable. However, there is a need to refigure many stereotypes of old age and introduce a more nuanced perspective, although it is hard to defy the representational force of categories that becomes entrenched in human consciousness and social practice. The romanticized and simplistic representation and the traditional rhetoric of social ranking in the pre-industrial times according to age, which paint a picture of self-satisfied old man and the image of devalued old age bereft of all hope in the modern industrial cities are opposite extremes.¹⁵ The social rank of the old is determined by the balance between the cost of maintaining them and the contributions they are perceived as making in the broader sense, not merely in any narrow economic sense. The family and kinship networks play an important role in protecting the old in all societies. Care and love lavished on children and grand children, which is the basis of the biological foundation of families in whatever forms, are always repaid, if not out of affection, then out of a sense of duty and social obligation. The concrete historical circumstances, cultural backgrounds, biographical experiences and state policies all play significant role in the construction of old age. In the words of Gubrium and Holstein (2003): "In the context of history, for example, old age is not simply a conglomeration of common experiences and characteristics that contrast with those of the younger years. Rather old age takes on particular meaning in relation to the specific historical era in which one comes of age, or becomes old... Cultural and biographical experiences are the context that operate similarly."¹⁶ Although aging is a process that has been genetically ingrained in human species and our biological life span far exceeds our reproductive span, there are cross-cultural variations in construction of aging and in ways in which we handle it. The biologically prolonged dependence of human infants results everywhere in the young developing an intense identi-

cation with those who nurture, protect and teach them. These attachments tend to persist throughout life and account for the generally higher status of old women even though they are accorded low position during productive and reproductive stages of life due to the devaluation of their work in the patriarchal social structures. The need for physical and emotional security, respect from other members of the community and an assurance that they are playing a useful part in the life of the family and society are universally accepted needs of the aged but there are class and gender-specific differentials and the developmental stage of the economy and the resultant social change also affect the treatment meted out to the aged.¹⁷

The Cross-Cultural Perspectives

Despite the picture of breakdown of families and norms for privileging of the old in the western world, institutionalized care accounts for only 3-6 % of the aged people and contrary to the generally prevalent view of predominance of extended family forms in the pre-industrial age, about 44% of the elderly people lived alone. The notion of security for children and older people in the extended family also does not make any sense as death stalked pre-industrial rural habitation sites and the support to the aged was always contingent upon the plentiful supply of food, adequate housing and conditions of secure employment and work. In the case of crisis either due to famine, war or mass unemployment, the older people always felt pressures and strains created by the scarcity of resources. The extent of witchcraft accusations against older women in medieval Europe testifies this.¹⁸ With the rise of modern industrial capitalism, the productive work of the older people began to be devalued more and more and old age became a social construction formed out of economic and work processes. Older people were increasingly marginalized in an age marked by faster and faster pace of social change. In the pre-industrial societies that moved slowly, an old person encapsulated the community's cultural heritage and the aged were valued as they were a repository of collective memories and custodians of morals, customs and imparted the techniques of survival. In such societies, the fundamental rules that governed community life, nature of work and production and leisure time, the treatment of diseases, social relations and attitudes to the after-life hardly changed. The aged played a crucial role in the transmission of skills involved from one generation to the next. The rapid technological progress that accompanied industrial production especially in the field of production of instruments that enhanced man's power over nature, also instrumental in mastery of the white European males over the colonized subjects, meant a faster pace of cultural aging. More and more elder people lived in a cultural universe of their own estranged from the times in which they historically lived and simultaneously the number of older people and the number of years they lived both went on increasing.¹⁹ The idea of older workers being surplus to labour requirements was crucial to the development of pension schemes especially the Pension legislation of 1925 in Britain and the Social Secu-

rity Act of 1935 in U.S.A. Similarly, the bureaucratic fixing of age of retirement and mass scale retirement from the middle of the twentieth century was a functional necessity of the political economies of countries where work was in short or fluctuating supply. Inadequate pensions forced many older people to continue in the low-paid work on the fringes of labour markets. This is how the global capitalism responded to the questions of maintaining the efficiency and productivity of labour and capital and regulated the relationships of labour and capital. It was in this context that functionalist 'Role Theory' emerged in the American sociology, which sought to evaluate the impact of social roles in determining individual behaviour. The loss of productive working role was linked to a new crisis of identity at the age of retirement. T. Parsons wrote in the *American Sociological Review* in 1942: "In view of the very great significance of occupational status and its psychological correlates, retirement leaves the older man in a peculiarly functionless situation, cut off from participation in the most important interests and activities of the society... Retirement not only cuts the ties of the job itself but also greatly loosens those of the community of residence. It may be surmised that this structural isolation from kinship, occupational and community ties is the fundamental basis of the recent political agitation for help to the old."²⁰

The 'Disengagement Theory' of 1950's also highlighted similar concerns and perceived aging as an inevitable mutual withdrawal or disengagement resulting in decreased interaction between the aging person and others in the social system he belongs to. This leads to increased preoccupation with self. Such construction of social identities stresses discontinuities or disruption in the life-experience and the biographical approach criticized the disengagement theory for this disregard of continuities. According to David R. Unruh, while in the conventional forms of integration of individuals including the aged involved certain degrees of cognitive identification in matters of spatial contiguity, formal membership and rational-bureaucratic rules, the social worlds of the aged are enmeshed in a number of activities and processes that are not performed publicly and in this trajectory of their earlier lives, social roles and values are of crucial importance. Despite their superficial segregation, the aged are linked through invisible ties and integrating activities whose dimensions include diverse forms of consumption, collection, creation, performances, organization and evaluation and representations of all kinds.²¹ Sylvia Vatuk (1980) tried to test the 'disengagement' hypothesis that maintained withdrawal as a normal aspect of aging through which an individual and community prepare for the ultimate disengagement or death by studying elderly people of village Rayapur in Delhi. If the informants withdrew from worldly activities and affairs then it would be congruent with the broad outline of disengagement theory. However, he found that old age was seen as a period of rightful dependency with security contingent upon the support of an extended family especially an adult son. The aged father turns over the resources to the son and similarly mother-in-law also hands over the keys of the storehouse to the daughter-in-law but there is a kind of ambivalence in this

shift of power. The aged did not drop out from all societal roles as hermits but disengagement in some fields led to increase in the activity level in certain other areas and there is no complete cessation of societal activity. The elderly people simply give up the 'burden' of administration and management of resources and become more concerned about the spiritual affairs and realm.²² It has to be kept in mind that aging is a social process and is conditioned by the political economy and macro-level indicators such as occupational structure, age-structure, availability of resources with a social group and the state policies regarding the old people. The cultural realm also influences social aging and this includes notions of ideal life course, structure of family, gender relations within the family and in the Indian context the institution of caste. In addition to this, the social networks beyond the family, health, power, level of education etc. are other variable that define the parameters of social aging. In the words of John van Willigen and Narender K. Chadha (1999), "Political economy, the realm and sources of power, is essential to understand social aging."²³ But despite these words of caution, sociologists of old age in India reproduce well-entrenched stereotypes of elderly people as lonely, marginalized people who are victims of intergenerational conflicts. But it is also maintained that Western Psychology should utilize the notions of Indian developmental stages or *ashrams* because institutionalized care is formal, rigid and commercialized and a product of the western notion of individuality.²⁴ For a predisposed and biased belief, there can be nothing better than these words of R. Shankar: "In India greater number of people live in village. The position and condition of the elderly is better than the metropolitan because they enjoy property and dominating power."²⁵ What clearly emerges is that social gerontological research in India deals in the social dimensions of aging such as high dependency ratio, low per capita income, lack of resources for allocation for the security of the socially disadvantaged social groups and little research on the situation of aging women and poor workers working in the vast unorganized and informal sector has been done. Whatever work is available confines itself with the limited locales and limited range of people. The unambiguous gender inequity is completely sidetracked although gender and caste are nodal point distributing power in India. In households women generally have less control over assets and decision making powers and authority in the patriarchal family set up rest with the male members of the households and this structural arrangement constrains women's abilities. Contrary to this, a common image of older women in India is that of powerful matriarchs, i.e., as elderly mothers, mother in laws and grandmothers. However as Sarah Lamb puts it, "Their own voices speak not of power and reverence but of losses and waning powers, of being forgotten by sons and their lives, of having poured out love, breast milk and effort to raise their children and serve their families all their lives"²⁶ According to her, while this is now generally recognized that due to women's association with domesticity or 'nature', they are subordinated and devalued in all societies yet there is an invisibility of lives of women over sixty or reproductive age in Women Studies and older women in South Asian Studies are depicted as villain in the

form of a domineering mother in law who is a repository and enforcer of patrilineal kinship ideologies, dominant social norms and traditions.²⁷ Traditionally women in India as well as elsewhere have been associated with care-giving functions. This is because of the belief that women have a biological disposition towards nurturing, and socialization of women is based on this assumption. Motherhood is a paradigm for caring and this labour of love must extend to the elderly in the family. This compulsory altruism is imposed on the women by the patriarchal ideology, which reinforces sexual division of labour and make women's labour vital but unpaid. With modernization women enter the labour market but they are also supposed to cater to the demands of home maintenance and sustenance of family. The care of the elderly often involves substantial 'invisible' labour and the women generally perform unpaid and fragmented labour without fixed hours. Thus, according to Arun P. Bali, they bear triple burden of demographic type, i.e., child bearing, gastronomic (due to constraints of poverty and style of cooking in the underdeveloped countries) and gerontological or the additional burden of the aged.²⁸ Since the early 1980's, there has been a large amount of literature on aging in India, which focus on the theme of increasing number of the aged and a diminishing social desire to take care of them and the forces of modernization and urbanization are often depicted as the prime accused in these narratives. Westernization, it is claimed, has eroded the basis of the great Indian joint family, a multi-generational household in which elders used to make up an central part as a inimitable feature of Indian culture and traditions. On the contrary, the west is associated with negative images of old age homes, institutionalization of aging, individualism and breakdown of societal and family norms. In fact, the first old age homes in India were a product of colonial penetration and were constructed by Christian missionaries such as the Little Sisters of the Poor in the late nineteenth century and inhabited exclusively by Anglo-Indians. According to Ashis Nandy, "British colonial rule also played a decisive role in delegitimizing old age in India by importing Europe 'modern' ideology, which casts the adult males as the prefect, socially productive, physically fit human being and elderly (as well as effeminate) as relatively of little social consequence"²⁹

The establishment of old age homes in India such as one established in South Calcutta in 1978 by the name of Navanir to house educated childless widows and never married women should not be viewed simply as the vestiges of the colonial era. Of course, a chain of such institutions has started emerging and they reflect the complexity of the issue of old age. A cross-cultural perspective in this regard might be more fruitful. The experience of the social security network developed by the advanced capitalist countries is quite valuable although even the less advanced tribal communities with their lower life expectancy can also provide certain models of old age care and ways to cope with the age. The western countries came up with a number of social policies to maintain the dignity and economic status of the aged even though denying a productive social role to them except as consumers. If subsidies to certain industries can be seen as

a form of social investment then the old people and their consumption to maintain a healthy quality of life need not be perceived as a burden on scarce resources of the society. Among the Chipewyan of sub arctic Canada, old age is primarily defined in terms of withdrawal from subsistence activity of hunting and they are given low status after withdrawal but there is often very precarious existence and, therefore, they might even abandon them to die if the burden of supporting them endangers the survival of the band. Contrary to this, among the Kung San of Kalahari desert, the aged control valuable resources like property, power and knowledge especially ritual and religious knowledge or in other words the aged continue to play a significant role in the cultural production even when they stop active participation in hunting and food gathering activities. They find more time to practice healing and learn and practice the symbols and meaning of their cultural system, thus making new social contributions.³⁰ Similarly as Srinivas Tilak (1990) has shown that parenthood and gainful work, the two major adulthood responsibilities stretched over the life span, whatever its duration, during the early *Vedic* period in Indian history and the aged were integrated in the domestic economy. There was certain adulation and fondness for old age but life span itself was very short. By the end of *Brahmana* period and certainly by 600 B.C. the questions about ways of aging were raised as well as attempts to eliminate or overcome suffering and anxiety associated with the processes of aging. Therefore, we find the notions of *nirjara* (free from old age) and *moksha* (escape from another life cycle full of dust and din). Buddhism made aging and its inevitable consequences disease and death the cornerstone of its doctrinal edifice.³¹ Many cultures have seen old age as the age of spiritual exploration and Indian created the ideal of four-fold division of life span into distinct developmental stages and the stage of *vanprastha* was supposed to be a stage of forest-dwelling stage away from worldly attachments and a kind of gradual weaning away from the affairs of this world and first step towards transcendence. But as the institutionalization is not a norm in the western world, this ideal normative order is seldom followed or has ever been adopted. There is heterogeneity and openness in the life experiences of the aged that is related to the class, gender, race and social and historical circumstances.

Notes

- ¹ For a detailed analysis of debacle of Indian economic development see Priyatosh Maitra, The Globalization of Capitalism in the Third-World Countries, Praeger Publishers, Westport, 1996.
- ² Some of such studies, which reproduce descriptive statistics, are Shakeen Ara, Old Age Among Slum Dwellers, South Asian Publishers, New Delhi, 1994 and Maninder Singh Randhawa, The Rural and Urban Aged, National Book Organization, New Delhi, 1997. The former is the study of slum dwellers of Hubli in Karnataka and the latter is a study of Patiala city and some villages of Patiala district ³ See S. Irudaya Rajan U.S. Mishra and P. Sankar Sarma, India's Elderly: Burden or Challenge, sage publishers, New Delhi, pp. 23-24.
- ⁴ *ibid.* pp. 19-20.
- ⁵ Arun P. Bali, Care of Elderly in India: Changing Configurations, Shimla, p.14.
- ⁶ Chaturbhuj Sahu, Problems of Aging among the Indian Tribes, Sarup & sons, New Delhi, 1998, p.21.
- ⁷ *ibid.*, p.73
- ⁸ See for example, Lawrence Stone (1977 &1982), Shorter (1975), Thompson and Goody (1976), MacFarlane (1978) and Taylor (1996).
- ⁹ M. F. Nimkoff, "The Myth of Indian Joint Family: Empirical Analysis" in Tulsi Patel ed. Family In India: Structure and Practice, Themes in Indian Sociology, Vol.6, Sage Publications Pvt. India Ltd., New Delhi, 2005 highlights this.
- ¹⁰ M.G. Hussain, ed., Changing Indian Society and the Status of the Aged, Manak Publications, New Delhi, 1997, p.17.
- ¹¹ *ibid.*, p.34-44.
- ¹² See Kumudini Dandekar, The Elderly in India, Sage Publications Pvt. India Ltd., New Delhi, 1996, pp. 13-15.
- ¹³ See Arun P. Bali, Care of Elderly In India: Changing Configurations, IAS, Shimla, 2001, p.39 for such a delicate and refined approach.
- ¹⁴ This is how Lawrence Cohen demonstrate that gerontological needs and agendas were generally based on the needs of urban elites such as that of loneliness and how concern over blood- pressure and hypertension was more prevalent in upper and middle

classes elderly and not among the aged of the slums. He also shows that even among these middle classes it was the male elderly who suffered from high B.P. and women generally tended to have low blood pressure problems. The low blood pressure of middle class women was related to the inability to adjust to solitude while male high blood pressure was a function of power and wealth or an outcome of possession. See Lawrence Cohen, No Aging in India, Alzheimer's, The Bad Family, and Other Modern Things, University of California Press, Berkeley and Los Angeles, 1998, pp.194-206

¹⁵ The distinction common in sociology between nuclear and extended family forms and the supposed breakdown of extended family ties with industrialization is based on crude dichotomization of family forms and there is a need to reformulate this debate in terms of a more careful study of continuity and transformation in family forms and functions in the context of industrialization and social change. See S.I. Yanigasako, "Family and Household", Annual Review of Anthropology, 1979 for this viewpoint.

¹⁶ Jabber F. Gubrium and James A. Holstein, eds. Ways of Aging, Blackwell Publishing, Oxford, 2003, p.7

¹⁷ Pamela T. Amoss and S. Harrell, ed., Other Ways of Growing Old, Stanford, 1981, pp.5-6.

¹⁸ See Graham Fennell, Chris Phillipson and Helen Evers, The Sociology of Old Age, Philadelphia, 1988, pp. 30-35

¹⁹ Norberto Boblio, Old Age and Other Essays, Polity Press, Cambridge, 2001, pp. 5-8.

²⁰ T. Parsons, "Age and Sex in the Social Structure of the United States", American Sociological Review, Vol.7, 1942, p.616.

²¹ David R. Unruh, Invisible Lives: Social Worlds of the Aged, Sage Publications, Beverly Hills and London, 1983.

²² See Sylvia Vatuk, "Withdrawal or Disengagement as a Cultural Response to Aging in India" in Christine L. Fry, ed., Aging in Culture and Society, Praeger, New York, 1980, pp.126-148.

²³ John van Willigen and Narender K. Chadha, Social Aging in a Delhi Neighbourhood, ergin and Garvey, Westport, Connecticut and London, 1999, p.7.

²⁴ C. R. W. David, "Is Old Age A calamity" in L. Thara Bhai, ed., Aging: Indian perspective, Decent Books, New Delhi, 2002, p. 144 and Thara Bhai, "Intergenerational Problems of the Aged", pp.85-90.

- ²⁵ R.Shankar "Elderly Life span: Enigma and Viewpoint" in L.Thara Bhai, ed., Aging: Indian Perspective, p.133.
- ²⁶ Sarah lamb, White Saris and Sweet Mangoes: Aging, Gender and Body in North India, University of California Press, Berkeley, 2000, pp.1-2.
- ²⁷ ibid, pp.7-9.
- ²⁸ See, Arun P. Bali, Care of the Elderly in India: Changing Configurations, Shimla, 2001, pp. 102-113.
- ²⁹ Ashis Nandy, The Intimate Enemy: Loss and Recovery of Self Under Colonialism, Oxford University Press, Delhi, 1988, pp.16-17.
- ³⁰ Pamela T. Amoss and S. Harrell, Other ways of Growing Old, pp.8-20.
- ³¹ See Srinivas Tilak, Religion and Aging in Indian Tradition, Manohar Publishers, New Delhi, 1990, pp.20-27.

Perspectives on Socio-political Issues in Water Use: A review of Studies in the Indian Context

Manoj T Thomas

Traditionally considered a domain of engineering, water use is highly influenced by the socio-political environment. Due to multiplicity of users and scarce availability, water is becoming a sought after commodity. The power of different stakeholders owing to resource access as well as traditional power linkages influence the implementation of norms and rights, and also distort the allocation process. While most of the water related projects often have stated economic goals like efficiency of use and productivity, it is more often the political aspects that are most influential. This paper analyses literature on the interactions of the socio-political environment with water use. The predominant issues comprising the socio-political environment of water use include efficiency of water use, environmental impact, equity of distribution, rights regimes, power of stakeholders, regional dynamics and the political process of resolution of conflicts.

Introduction

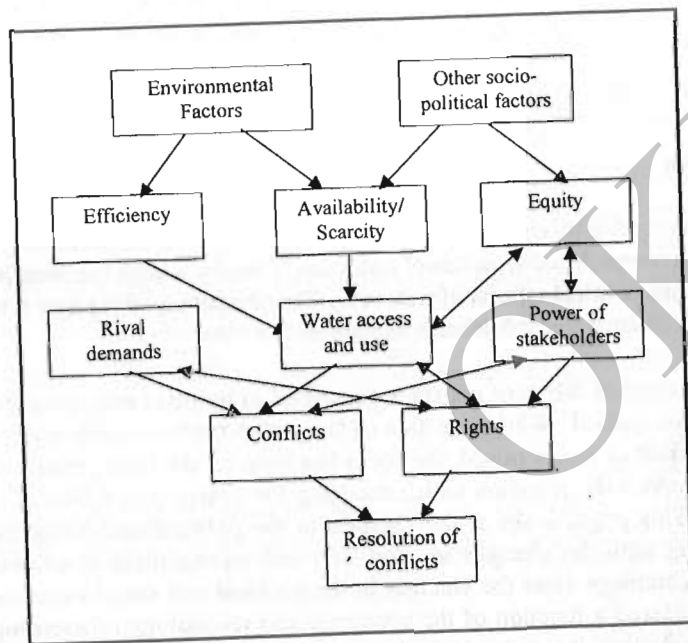
It has been argued in recent years that the concept of water as an economic good does not provide a comprehensive picture of water use. Thereby, a large literature has sprung up on the socio-political aspects of water use. The objective of this paper is to analyse the nature of discussions and debates that are taking place.

The issues raised in different papers are grouped in terms of commonality and the broader issues studied. While selection of the groups has been made trying to cover the entire gamut of issues raised, the focus has been on the issues concerning rural water use, especially irrigation which accounts for a large proportion of the water consumed. This paper looks at the changes in the political and social aspects of society along with the changes in economic and management practices and the changing technology. Here the changes in the political and social structure are not merely considered a function of the economic and technology relationships of the means of production. It is rather looked as a two-way interaction wherein the political and social network exerts an equally important influence on the management

and use of technology and natural resources. The issues that are analysed are presented below:

- o Efficiency of water use
- o Environmental impact/ scarcity
- o Allocation/distribution/equity
- o Rights
- o Power of stakeholders
- o Water politics and regional dynamics
- o Conflicts and resolution of problems

The relationship between these issues is pictorially represented in the Fig. 1. However the interlinking arrows are tentative indicators because all the issues are in some ways interrelated. Water being a scarce resource requires to be used efficiently. The multiplicity of users and often commonality of resources makes the issue of allocation and distribution significant. Inequality in allocation of water resources leads to conflicts. Stakeholders, on the basis of the rights they possess and the power they wield, are able to influence the political process, which decides the outcome or resolution of the problem.



Socio-political history of water use in India

The history of modern irrigation in India is the history of domination. Expansion of irrigation in British India expressed the ethos of the domination of nature as well as the legitimisation of the British as a ruling authority in India. Unlike the technological drive that seeks to involve the agriculturists in a venture to improve productivity, the colonial mindset defined the local communities as parts of the natural environment to be modelled and controlled (Gilmartin, 1995). However, the British were not the first to link investment in irrigation with the structuring of political power, because the earlier rulers and states had also used localized inundation canal construction to expand state revenue and control elites by tying them to the land.

The use of water as a resource has been undertaken, at least since the time agriculture has been in existence. The ancient aqueducts and remnants of canal systems stand testimony to the efforts by man to gain control over the sources of irrigation, and supplement the seasonally available rainwater. The primitive systems have now given way to huge dams and canal infrastructure. However, water management is more than mere creation of infrastructure. The process of bringing together resources to develop sources of water supply, and the intricate arrangements for supply are ample testimony to the creative effort that has gone into the process. The importance of water in the agricultural production process makes its study as an economic good easy to comprehend. Most official documents neglect the human aspects of organization of irrigation systems- the management of those who manage the water, the procedure for irrigation control, the process of allocation of water to groups of individuals and the distribution of water within groups (Chambers, 1980). However the study of water as an economic good doesn't capture all the facets of problems that crop up in the management process. Technology, institutions, social context, political structure, environmental/ resource endowments/depletion, economic value, rights/legal structure/ policy, and the interests of different stakeholders influence the use of water. Yet, traditionally, design of water projects has focused primarily on the technological and economic aspects only.

The ecological infrastructure which consists of the natural resource base and the technical resource base is amenable to be used as per the network of social relationships. Considerations of efficiency and equity are key to understanding issues of water supply, and these are in turn influenced by the political processes at the local level and the institutions that evolve in the society, along with the external influences that shape them.

However, studies in countries like Japan have found that the irrigation problems can be traced not to any particular form of political economy, but to a fundamental upstream –

down stream opposition that expresses itself at all levels of such networks (Kelly, 1982). An extreme view of the political aspect of water use is also emphasised in Wittfogel's concept of hydraulic civilizations- those which depended on large scale waterworks for irrigation and flood control- developed governments which monopolized political power and dominated the economy (Wittfogel, 1957). Among these hydraulic civilizations, Wittfogel listed ancient Egypt, Mesopotamia, India, China and pre-Columbian Mexico and Peru. In the present context, the increased use of water as an economic good and its scarcity have also increased the socio-political dimensions of water use.

Efficiency and other objectives of water projects

The water projects are required to be efficient, due to the scarcity of resources. However, the larger water supply projects that were initially public utilities have been accused of being inefficient. Privatisation is seen as a method for introducing the discipline of the market into the complex are of rural water provision, but it is important to design measures for accountability of the private service bodies to the general public who are the users (Dennis, 1998).

The way in which the water is used varies according to the context and the location and is hard to arrive at any standardised technical solution. Yet, as the field of study is very old, it is often assumed that the perfect solutions have been obtained. For instance, the literature on markets for groundwater has not, so far, done justice to the complexity of how groundwater markets in Gujarat are shaped and how they function (Dubash, 2000). That the markets are 'informal' should not be equated with an assumption that they are unregulated, because the groundwater markets are fairly complex.

The limitations of water market mechanisms are more serious when it comes to more complicated problems such as multiple water uses, environmental protection and conflict resolution (Bauer, 1995). The problems are both theoretically and practically too difficult for free market solutions: they can rarely be solved by a simple exchange of rights and when private bargaining breaks down, the conflicts highlight the importance of wider legal and political institutions.

Some water projects have stated goals other than irrigation and water supply. However, it is not very clear whether there has been any success in achieving these objectives. While flood control has been one of the stated goals of the large projects, even after adding several thousand kilometres of new embankments and spending millions of rupees on flood detention reservoirs, the area liable to floods in India has registered an increase over the period 1953 to 1993 (D'Souza, 1998).

Even though large projects claim advantage in economies of scale and other economic

mies, their results have not been as positive. A large part of the investment in the past has gone towards large projects, which, however, contribute to only a small proportion of the total area irrigated, for instance in Maharashtra, below 5 percent of the area had the benefit of surface irrigation in 1995 (Desarda, 1995). Improper pricing etc reduce the incentive to use resources effectively. For instance, in the Cauvery case where scarcity is causing a conflict, the scarcity situation has not encouraged users to use water more efficiently as of all the water available for canal irrigation in the Cauvery system, only about half is properly utilised (Folke, 1998).

Ecology and Environment

Water is a significant part of the natural environment. Use of water affects the environment, and at the same time, the changes in the environment influence the conditions of water availability and scarcity. Most developed countries have instituted a rule for conducting an environmental impact assessment for every major federal action significantly affecting the human environment (Solanes and Gonzales-Villarreal, 1999). However, several of the less developed countries may not be in a position to enforce these standards. Political considerations may be used to override environmental standards, because if environmental and social standards set by different agencies (the World Bank for instance) were to be followed, the projects may turn out to be too expensive to continue (McSweeney, 1998). Ecological principles ensure equity since limiting water use to protective irrigation makes it possible to distribute water equally to all (Shiva, 1998). However, this requires an enforcing mechanism by which the access to some can be limited.

Equity

Equity in water use has several dimensions. It is linked also to the rights over other resources like land and capital. The poor are disadvantaged not only in terms of access to the sources of water, but also as a consequence, biased against in terms of the crops they can cultivate - which promotes social inequity as well as wasteful use of the resource.

There exists considerable inequality in the distribution of irrigated areas across farm size holdings over time and the levels of inequality vary widely across different states (Selvarajan et al, 2001). The skewness in the ownership of private tube wells may cause the appropriation of the groundwater by the elite. Also, the current regulations appear to be biased in favour of the existing owners with a tendency of increasing their monopoly power (Shah, 1993). Gains from lift irrigation are likely to accrue to the less poor mainly on account of the skewed ownership of private lift irrigation systems, bias of state owned tube wells towards the less poor, external diseconomies and hence re-

duced access due to lowering water tables, and the pro-affluent laws that have helped the affluent farmers to pre-empt ground water resources and exclude others (Chambers et al, 1989). The laws to limit ground water extraction have been in fact more of a restriction on the poor than on the rich. Equity is a central issue in areas where ground water is difficult to control, as current limitation on credit availability in grey and dark blocks disproportionately affect resource poor groups (Moench, 1992).

The issue of equity is between crops, regions and states. The problem of equity can be seen in the difference in consumption between different crops, as in Maharashtra, sugarcane which covers just 3 percent of the total cropped area accounts for over three fourth of the irrigation water (Desarda, 1995). This implies that a small proportion of the farmers are reaping the benefits of the large investments in the water sector. This brings into focus, the larger issues of inter-regional equity. There needs to be consistency in equity considerations for instance, if equity demands that a greater share of Narmada waters be given to drought prone areas of Gujarat, equity also demands that this water be then shared equitably among all the people in the drought prone areas (Ghosh, 1996). The end use indicates to a large extent the equity in water usage.

Gender aspect

Linked to the issue of equity is the aspect of gender. Women have been shown to be more than equal stakeholders not only at the household but also at the farm level. Studies have shown that the meaningful involvement of women depends on the willingness to recognize women as farmers, who are potentially as interested and capable of participating in irrigation activities as men are. (Jordans and Zwarteveen, 1997). Also, as women are as interested in obtaining the highest possible return, it is likely that a mainstreaming strategy offers far greater chances of real success in terms of productivity and empowerment than a WID strategy consisting of separate income generating activities for women based on specific women's spheres of domains. While women are affected by decisions involving water, they themselves may not be in a position to influence the decisions. Involvement of women in decision-making cannot be expected to happen automatically because of several gender specific constraints. Women are disadvantaged as they lack in water rights, in formal access to water user associations and networking relationships with the traditional irrigation networks of villager leaders and government officials (Zwarteveen, 1997)

Implicit in the belief that local communities are better irrigation managers than government agencies is the assumption that local communities are more equitable - however, in relation to gender equity of rights and access to water, this may not be true (Zwarteveen, 1997). Trusting the local communities to come up with the most efficient and generally acceptable solution may result in solutions that do not take the women's views into consideration.

The strategy of demonstrating that women's needs are basically different from men's has served the purposes of advocacy, but it has strengthened the prevailing belief that women as a group do not have to be treated as serious actors in the irrigation context and as serious competitors for irrigation land and irrigation water (Zwarteveen, 1997). Hence the need is not necessarily to provide special treatment to women. Rather, the emphasis needs to be on removing the constraints that hinder the participation of women.

Water Rights

Rights on use of water are linked to rights of ownership of land. These generally get transferred along with the rights of land. There are no separate rights to ground water in India: in practice, those who own land also own the water lying underneath (Mudrakartha, 1999). However, water occurs in aquifers and the aquifers are not bound by the boundaries of land. As per existing laws, there is no restriction on the sale of groundwater by anyone. Water extracted can be sold in situ or transported to any distance as a commercial venture. This has a potential impact on equity, both due to the costs of extraction, which stop the poor from being involved, and the exclusion of the landless as the water rights are linked to land.

Rights to water are not considered by some to be the equivalent of fundamental rights (Mudrakartha, 1999). However, others have construed Article 21 of the constitution to mean not only a right to life, but also an implied right to clean environment and hence to clean water (Singh, 1991). Rights on water are of different types. Users may have customary rights on the use of water issuing from wells, springs, spout or flowing water in government or public places. Riparian owners also have the right to use the water of the stream which flows past their land equally with other riparian owners and to have the water come to them undiminished in flow, quantity or quality and to go beyond their land without obstruction (Singh, 1991). Early inclusion of resource poor women and men in the local forums in the project and the community is essential for their improved access to water. The first step to become a rights holder is to be a member of the forum, which negotiates rights (Van Koppen, 2000)

Stability of water rights is an important principle in water law, which some authorities have traced back to Roman law. The impossibility to grant stable water rights negatively affects development. A system of stable water rights is an incentive to invest in the development and conservation of water resources. (Solanes and Gonzales-Villarreal, 1999). Rights on water use influence power relationships and economic benefits derived from water. Hence there is a need to look at existing laws in terms of their effect on the poor and women, and the laws needs to be changed accordingly.

Power of stakeholders

The interaction between the different stakeholders decides the outcome and the commonly agreed decisions. While some of them have an incentive to change the existing order, the others have a stake in maintaining the status quo. The stakeholders who are likely to resist change in the present system include the politicians, the technocracy and the government (Bandhopadyay, 1987). The politicians perceive the electoral gains by bringing water to a region (through sanctioning a canal etc), while the technocracy would not agree to any system where their grip on the distribution of water is reduced. Also, governments may not like to diminish the importance of 'relief'.

Strength or power in the context of natural resource conflicts comprises locational, numeric, physical, social, economic and political dimensions, and strength is relevant as in conflicts, it is the strong who will prevail (Folke, 1998). In surface water sources, it is generally those with direct access, or first access (implying those at the head) who enjoy locational power. Those with numerical or physical power can seek to change the laws and relationships in their favour. Social superiors in terms of caste and class can try to prevent access to the less privileged. Caste is still of crucial importance as the dominant power can use its power to obtain access to resources and the *dalits* end up as underdogs, economic power is still the most important dimension of power, constituting also the foundation of social and political power. (Folke, 1998). Lobbies can affect design considerations even if they are stated to be technical and unbiased as can be seen in Maharashtra where the introduction of sugarcane blocks affected the method of design of storages and distribution channels (Desarda, 1995).

Groups or organisations that acquire power such as the National Confederation of Irrigator Associations and Farmer Representation NCIA (which has emerged as a powerful organization representing farm interests in the Philippines) may be co-opted by the bureaucracy into the governance process (Rap et al, 2002). Larger interest groups and organisations may try to influence the policy making process. Water policies are highly contested because they provide ways and means for local actors to improve their control of water at the expense of others (Oorthuizen, 2002).

However, the political process is also important at the time of implementation of policy. Policies give options for different interpretations at various levels and the person implementing the policies and laws can influence the final outcome. For instance, the implementation of policy in a village is influenced by political processes including informal relationships, coercive power, building relationships and key positions like mayor, gatekeeper etc, which need to be coerced or controlled (Oorthuizen, 2002). The politics is different in different circumstances among different stakeholders like the tail-enders and those at the head.

National level policies can be nullified or derailed if they run counter to the interests of the major stakeholders. Programs of irrigation management transfer undertaken by several governments have either the consent of the bureaucracy, or have been changed by the bureaucracy as per their interests (Rap et al, 2002). Irrigation bureaucracies face a threat from the reform process. The bureaucracy may respond by being defensive, or by incorporating new concerns and partly reinventing the agency. Funds have been mostly controlled by a single discipline of professionals- civil engineers who have tried to maintain their status and pre-eminence in irrigation. These also suffer from extreme gender bias.

The bureaucracies have in the past been aided by substantial funding from multilateral funding agencies. The same funding agencies are trying to enforce bureaucratic reforms. However, several of these funding agencies still suffer from the 'construction bias' with their staff having bureaucratic or construction backgrounds.

Regional conflicts and mass movements

As the decisions regarding large water projects affect entire regions and communities living in a particular region, water projects may lead to political formulations on a regional basis. This can be seen in the example of the Kalabagh dam in Pakistan, which has pitted the Federal government and the Punjab government against the other three provinces of Pakistan- Sindh, NWFP and Balochistan (Ercelawn et al, 1998). Politics in irrigation is understood as negotiation, struggle and contest at one level; the effect on meaning, perception and behaviour at the second level; and thirdly through the role, played by politicians.

Mass movements take place if the governments are insensitive to people's demands as in the case of Maharashtra's Takari peasants struggle (Omvedt and Patankar, 1991). With the increasing number of "neutral" stakeholders like the external funding agencies, mass movements have also the potential of influencing the project outcomes through these stakeholders. In a multiparty democracy, movements on issues related to water can be used to align public opinion along party lines. Perceptions either real or imagined exist that regional biases and politics conspire to influence decisions involving irrigation projects, as is felt regarding the hold of the Coastal Andhra politicians and engineering bureaucrats on the irrigation decisions regarding Telengana (Simhadri, 1997). Mass movements and negotiations with the government have helped to bring out the arbitrary nature of the governments system of water distribution. (Omvedt and Patankar, 1991). Demand for water may also coincide with demand of territorial sovereignty/autonomy as in the case of Telengana. With regional conflicts within the same state, the mainstream political parties may find it expedient to align with the dominant group in the state, as

in the case of the Congress, Telegu Desam Party and the BJP in Telengana (Simhadri, 1997).

Water conflicts at the macro level have similarities with those at the micro level. Conflicts occur between farmers, villagers and tail enders, when each individual farmer wants to maximise his own output and in order to do so he will do whatever he can to get the required water (Folke, 1998). However, just because there has been large scale violence or agitation it doesn't indicate that any movement has a mass base. Several of the mass agitations are more of politically managed shows than mass movements- for instance, the Karnataka riots on the Cauvery water were due to the active involvement of the poor land less Kannadigas who did not have anything to gain or lose from the Cauvery water (Sebastian, 1992).

The politics of water has been accentuated in recent years and has manifested in the form of conflicts at the national, state and regional levels. Scarcity is an essential requirement of conflicts. The three principal forces that create scarcity of water are the depletion or degradation of the resource, the population growth and the unequal distribution or access (Postel, 1996). Of the above, unequal distribution has often the most important role. Scarcity of electricity may also lead to conflicts especially between different sectors or between different regions. Electricity is an important element at least in groundwater extraction and the demand supply gap in agriculture has been growing steadily, especially as the competing demands on electricity from the domestic and the industrial sectors have also been growing rapidly (Folke, 1998). Hence there is likely to be a political influence from the other sectors to reduce the electricity allocation to irrigation, or at least to hold it down at the present level.

Resolution of conflicts

Formal or informal mechanisms of conflict management are essential for the effective functioning of any irrigation community (Maloney and Raju, 1994). The nature of potential conflict also decides the type of organizational structure and the conflict resolution mechanism that is adopted. Most disputes about water are not resolved by courts or by technocrats: they are worked out by the parties involved- sometimes with the help of outsiders (Bruns and Meinzen-Dick, 2000). Conflicts at the national and state levels have been resolved through negotiations and the discussions have often been carried forward on the basis of successive treaties. For instance, conflict-resolution in south Asia in the area of water resources is structured around three Treaties: The Indus Treaty 1960 (India-Pakistan), The Mahakali Treaty of February 1996 (India-Nepal), The Ganges Treaty of December 12, 1996 (India-Bangladesh) (Iyer, 1999). However, third party negotiations may not be able to resolve the disputes if the powerful stakeholders unilaterally decline such an initiative. Else, the findings of such a body can be outright

neglected – as the ministry of water resources, government of India rejected the report of the World Commission on Dams (Iyer, 2001).

Political concepts related to water use, like tube well capitalism has to be understood in a specific context, which is also susceptible to influences by the natural characteristics of the locality, production relations at the village level, local institution forms, along with the external factors like availability of formal credit and electricity (Dubash, 2002). The historical context has played a major role in the development of irrigation systems in Mexico, Philippines, Pakistan and Zimbabwe (Mollinga & Bolding, 2004). This makes it apparent that it will be very difficult to implant, transfer or enforce approaches developed in one place to another. New ideas that are implemented have to be in accordance with the domestic agendas and developments. The solution could be the adoption of a learning process approach, which is however not easy to practise. This could result in a variety of institutions to deal with the problems at different levels and regions. Water technologies in south Asia could benefit from such a constructively engaged pluralism of institutions rather than the uncontested terrain that often prevails. (Gyavali, 2001).

As scientific management approach questions are unlikely to be adequately resolved over the short run, a policy framework that allows experimentation and the gradual evolution of appropriate management structures appears necessary (Moench, 1992). Most of the management structures and existing institutions have evolved over a long period of time, and any change has to be gradual, incorporating the emerging contextual information and knowledge.

Conclusions

Most of the literature discussed above is based on the functionalist approach in sociology. Functionalism asserts that it is necessary to study a society or a culture as a whole if we are to understand its major institutions and explain why its members behave as they do. Functionalism views society as a system, that is, as a set of interconnected parts together forming a whole (Haralambos, 1985). To study the function of a social practice of an institution is to analyse the contribution which that practice or institution makes to the continuation of society as a whole. Merton distinguishes between the manifest and the latent functions of a social practice, either of which could provide the main utility to the society. Functionalists are committed both to the notion that a common value system is a necessary condition for the existence of a social system, and to the structural differentiation which creates pluralistic value systems. The crucial characteristic of a structural-functional theory is the use of a concept system without a complete knowledge of the laws which determine processes within the system. Functionalism has been

criticized on the grounds that it ascribes "needs" and "purposes" to society, even though these concepts make sense only when applied to individual human beings. At times, as it has focused on the question of how social systems are maintained, functionalism tends to stress unduly on factors leading to social cohesion.

However, functionalism does not give a total perspective of the total issue. Critics of functionalism have often argued that it pictures the individual as having little or no control over his own actions. Many have questioned the logic of treating society as if it were something separate from its members. Without a Marxist or Weberian perspective, it may not be easy to understand the perspectives of the complex societies plagued by divisions, tensions and conflicts and especially the latent deep divisions of interest, which are likely to break out into active conflicts. It is only in the analysis of gender roles that some facets of Marxist analysis have been used. Many of the papers would also suffer from the drawback of "anthropocentricity" as argued by Catton and Dunlap, due to which, the pattern of resource use, which makes modern societies unsustainable, is not clearly understood.

The general literature also doesn't do much to identify the power centers in terms of influencing the use of water. While there is a rich literature on elites in rural India, the concept of elites has not been used with respect to the use of water. The concept of elite on the other hand is used to explain the process of change. The elite are groups, which can influence the change process, which also keeps changing to include within itself the dynamic upcoming elements (Sharma, 1980). How certain groups manage to sustain their dominance in resource access and use is also not well understood. The concept of power dynamics can be understood in terms of the concepts of elites and hegemony. Hegemony, generally used in context to the state power, is built when the dominated consent to the terms of the domination (Bocock, 1986).

There appears to be scope for studying the issue of water management in society from different perspectives. At the macro level, sociological enquiry addresses broad social issues of law, religion, war, political organization, education, family, psychological tendencies and transmitted norms for individual behaviour, besides attitudes and behaviours regarding specific resources such as water (Maloney and Raju, 1994). At the community level, the emphasis is on understanding the dynamics such as initiative, social groups, stratification, demographic profile etc. The use of water can also be understood at the level of village level group, organizations and institutions and also at the level of smaller groups like families and kinship groups.

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Human Rights Movement in India: State, Civil Society and Beyond

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Though human rights movement (HRM) in India has always made significant interventions in the shaping of the democratic politics, since its origin, there has been rather surprisingly no serious reflection on the various shifts and the emerging trends and discourses within it. In fact, it is very pertinent to ask if at all there is a single HRM in India today. It is equally pertinent to ask if there has been a gradual growth or decline in terms of its over all impact. This paper is an attempt to trace the dominant currents, and locate the historical context for their emergence and decline. Further, it is also an attempt to reflect on the dilemmas contemporary HRM is facing and the possibilities of their resolution.

The Three Phases of the Human Rights Movement

After the first initiative taken by Jawaharlal Nehru to form civil liberties organization in 1936, by founding the 'Indian Civil Liberties Union' (ICLU) with Rabindranath Tagore as its president, the history of the HRM in India could be traced back to the early 1970s. With Mrs. Gandhi coming to power, the shift from the Nehruvian Era was becoming gradually evident, along with the possibilities of the emergence of an authoritarian state inherent, perhaps, to the statist experiments by Nehru. More than opposition to the state and the constitutional principles, it was the everyday misuse of institutions that formed the context for the origin of post-independence HRM in India.

Jayprakash Narayan advocated in a meeting of the Sarvodaya workers held in Bangalore in July 1972 that a broad-based organization should be formed for the preservation and strengthening of democracy in India and that the organization should consist of all those who cherished democratic values but were not interested in power politics'. In an all India conference convened in Delhi on April 13-14, 1974 a non party organization called Citizens For Democracy (CFD) was formed with the objective of ensuring the

independence and democratic and constitutional functioning of various institutions such as the Judiciary, press, radio, television, bureaucracy, the office of the President, election commission, planning commission, etc. This experiment to build a pressure group for more effective and responsive functioning of state institutions was abruptly cut-short with the imposition of emergency in the country on June 25, 1975 under Article 352 of the Constitution on the ground that the security and integrity of India was in grave peril due to internal disturbance². Jayaprakash Narayan and many of his followers were placed under preventive detention. After his release, the need to expand the scope of CFD was felt in order to protect the civil liberties or fundamental rights of the citizens. 'In a well attended conference held in New Delhi in October, 1976, J.B.Kriplani in the absence of Jayaprakash Narayan inaugurated the Peoples Union for Civil Liberties (PUCL)³.

The focus of PUCL, given the immediate context and the larger legacy of the Nehruvian era was limited to, (a) restoration of rights curtailed or eliminated during the emergency (undoing preventive detention law, curtailment of the jurisdiction of the courts, censorship on the press, etc); (b) punishment of those responsible for excesses through available legal recourse; (c) safeguards against arbitrary recourse to emergency provisions out of mere subjective considerations⁴.

Political figures and sections close to the Janata party constituted the PUCL, apart from the Radical Humanist Association (RHA) and professional bodies of lawyers, academics and few independent Gandhians. More than activism and mass mobilization, the thrust really was to draw eminent personalities who could exert pressure, moral or otherwise, on individuals in positions of power. The issue of civil rights, though had political connotations, was considered essentially as legal and therefore often legal action was considered to be the most effective method to make institutions responsive and to protect the rights of the common people. State institutions, like judiciary, were considered to be as effective representatives of the civil societal concerns, as they were of public policy.

On March 23 1977, the Janata party came to power and immediately lifted the emergency. After this, the HRM lost its direction, as most of the office bearers of PUCL's state and central coordination committees were members of the Janata party. As there existed no clear and effective distinction between the state and the civil society, and institutional reforms alone was the focus, the need for independent human rights orga-

nization was not felt. In fact, 'at a national convention held in August 1977, top Janata leaders, like Krishna Kant, declared that there was hardly any need for civil liberties movement as democrats had come to power'⁵. After a gap of a few years and the return of Mrs. Gandhi, the PUCL was revived in November 1980. A national convention of civil rights workers converted the PUCL into a membership organization. V.M.Tarkunde took over as the president, while Arun Shourie became its general secretary and Prof. Rajini Kothari was elected as the president of the Delhi unit. Their immediate concern was, following the earlier focus on institutions, to draft a new Prison Act and Jail Manual.

This in many ways was the first phase of the HRM - 'The Civil Liberties Phase' - working within the framework of a *responsive state*. This Framework dominated the post-independence HRM largely due to the fact that 'Colonial rulers had left behind a powerful and autonomous state standing above and insulated against society'. Nehru offered a statist model of social transformation and thereby, as Bikhu Parekh observes, "the state was the only conduit through which various parts of the society related to one another and was a party to all disputes and conflicts. It therefore became the sole centre of all political ambitions and energies and an arena of powerful ideological passions"⁶.

The nature of the state, however, underwent radical transformation. The flip side of the statist model of Nehru became pronounced, under Mrs.Gandhi. She initiated a process of 'deinstitutionalisation' by undermining intra-party elections, offering dubious concepts such as 'committed bureaucracy' and 'committed judiciary', encouraging top-down approach to have hand-picked chief ministers in various states, misuse of Art 356(and of course Art 352), and not to mention the gradually collapsing 'Congress system'. More importantly, Mrs. Gandhi was using the image of a welfarist and *responsive state* to further authoritarian and centralizing tendencies. It was evident from the fact that a welfarist '20 point programme' was announced during the emergency. Welfarism was highly reduced to a mere symbolic value. 'This was the period when there was a fall in industrial growth. There were incidences of severe drought and as high as a 40 percent rise in food prices'. The social base of the state shifted to a newly emerging neo-rich or lumpen class, born largely out of the leakages of the first phase of development. This class included the contractors, real estate dealers, liquor traders, rentiers, gamblers, speculators, cinema producers and actors⁷. Further, rise of a coercive state was evident in the rampant manipulation of legal procedures. For instance, 'those set free from preventive detention were brought back to prison- often arrested outside the court premises or at the door-step of the prisons, on specific charges. A favourite device of some of the state governments was the implication of individuals in a number of inter-locking cases. There was horizontal as well as vertical inter-locking'⁸.

This was broadly the social and political context for the rise of the second phase- 'The Democratic Rights Phase'- of the HRM, during the 1980s, now functioning largely within a *state versus civil society* framework. The split in the PUCL and formation of the Peoples Union for Democratic Rights (PUDR) in Delhi marked the beginning of this phase. "A section of activists felt that the usage of the terms 'civil liberties' by the PUCL leaders restricted itself to (these) codified safeguards. The category 'democratic rights' was used by the more radical activists as a critique to the term 'civil liberties'. It implied the freedom to claim even non-codified rights, or, in other words, rights which citizens were not endowed with under the existent legal system"⁹. This was the phase for the revival of the Association for Protection of Democratic Rights (APDR) in west Bengal, which later split with the formation of the Association for the Establishment of Democratic Rights (AEDR), on the issue that there are no democratic rights to 'protect' in India. This radical perspective also marked the revival of OPDR & AFDR in Punjab, CPDR in Bombay and formation of the Manab Adhikar Sangharsh Samiti (MASS) in Assam. One of the most significant contributions to this phase of the HRM, however, came from Andhra Pradesh. The HRM in Andhra Pradesh originated working very closely with the Naxalite movement and shared its social and political concerns. The Andhra Pradesh Civil and Democratic Rights Association (APCDR) was the first organisation that came into existence and later split into the Andhra Pradesh Civil Liberties Committee (APCLC) and the OPDR, broadly representing two different factions of the CPI (ML).

The APCLC initially was restricted, in its struggle for democratic rights, to organising fact finding committees on 'encounter deaths' and lock up deaths, providing legal assistance to the arrested ML activists, and protesting for the right to organize public meetings, processions and *dharnas* by the various mass organizations of the Naxalite groups. In its second state level convention, held in Warangal on 4th May 1980, it adopted its manifesto and declared its central concerns to be the protection of people's 'right to struggle and protest', opposing the atrocities of feudal landlords, capitalists and the state machinery, condemning police excesses and also fighting for the abolition of capital punishment¹⁰. This was the more activist phase of the HRM, which went beyond looking for mere legal remedies. Its activists included leading lawyers, academics, artists, poets, journalists and students. Paradoxically, in spite of the shift to an activist phase, human rights organisations were not willing to visualize themselves as an independent movement, instead projected as a 'platform' or 'forum' to 'shield' radical political movements and convince, on their behalf, various sections of the society of their 'right to protest' and that the legal and constitutional safeguards have to be extended to the activists and leaders of these movements. The HRM also took upon itself the onus of convincing the common people that 'transformative violence' is different and it is a legitimate 'counter-violence' against the 'state violence', which was unjust and against the weaker and underprivileged sections of the society.

However, as 1980s was also a phase of emergence of various social movements- women's dalit, regional, minority, environmental, etc-in India, human rights organisations began to gradually extend their scope to protect the rights of the activists of these movements and their political concerns as well. Various types of discriminations came to articulate themselves in the democratic rights language. PUDR in 1984 investigated and published a booklet by the title 'Who Are The Guilty', on the anti-Sikh riots in Delhi. It directly named some of the culprits belonging to the ruling Congress party. Some felt 'with its publication groups fighting for civil liberties and democratic rights acquired a national legitimacy'. It was a fact that no other organisation dared to so openly reveal the names of some of the most notorious history-sheeters. In Andhra Pradesh, the turning point came about with the gruesome *Karamchedu* massacre against the dalits in July 1985. The APCLC investigated and again revealed the names of some of the uppercaste-landlords involved, and kept the issue politically alive, working in tandem with the dalit organisations, till some of the culprits were physically eliminated by the armed squads of the Peoples War Group. Thereafter, the APCLC began to enlarge its work and investigate atrocities against women such as the dowry deaths and domestic violence; famine and hunger deaths in various districts, and issues related to environmental pollution.

However, what is pertinent to note in this expansion of the HRM into various social and political issues, was the fact that it understood and related to all these issues strictly through the *state versus civil society* prism. For instance, it was the role of the ruling Congress party that was stressed by the PUDR in its report on 'Who Are the Guilty', completely undermining any dialogue on the growing communalism in civil society; it was again the caste (in this case *Kamma*) alliance in various state institutions (assembly, judiciary, police, etc) that was the focus of APCLC's investigation. Not that these issues or for that matter the perspective is unimportant but the HRM failed to locate and highlight the existence and replication of power-relations and forms of discrimination at the societal level. The fact that all forms of violations of human rights need not necessarily flow directly from the state. More importantly, these independent institutions of violations could very well be, at times, the social movements whose cause the HRM was actively espousing.

This issue of violation of human rights at a societal level became starkly and rather poignantly evident with the killing of innocents or common people, accidentally, in course of military operations by the naxalites against the police (and sometimes due to the cunning use of the common people as shields deliberately by the police). Human rights organisations took recourse to the argument in reply to such incidents that 'a civil rights organization should be concerned only with the state violence and concern for 'private violence' does not fall under its purview'- a stand initially taken in the open letter written by the leaders of the APCLC to the Chief Minister, in July 1985 and

repeated thereafter whenever questioned about their concern to the victims of 'private violence'. In spite of a growing criticism from various quarters of the civil society and deliberate manipulative use of this apparent hiatus by the state, democratic rights organizations refused to reflect on their rigid *state versus civil society* framework.

This reluctance can be understood in the immediate context of a repressive state, which by now to counter the growth and expansion of the HRM was arresting and physically attacking and kidnapping leading civil rights activists in Andhra Pradesh and else where. In Assam, Parag Das (Who had proximity with the politics of ULFA) was with MASS and a popular editor of a leading Assamese daily was shot dead by SULFA (surrendered ULFA) with the active connivance of the state police. In Andhra Pradesh, Rajanna, Narra Prabhakar Reddy and recently Purshottam (all office bearers of the APCLC) were brutally killed by the police; Dr. K. Balagopal was attacked (beaten up with knuckle-dusters) and kidnapped, and it became a routine affair for others like K.G. Kannabhiran (long-standing president of the APCLC) to receive threat calls. Such growing physical attacks only reinforced the human rights organization's understanding of the state being the primary violator and thereby it vindicated their *state versus civil society* framework. These attacks coupled with the sacrifice and preparedness of the activists gave them a ready moral reasoning of the correctness of their politics. Thus, the HRM was not prepared to reflect on the 'conceits of the civil society', letting go which only meant weakening of the movement and strengthening the state. The lurking fear was the possibility of equating the various types of violations and thereby letting the state off-the-hook.

However, the rigid *state versus civil society* framework became increasingly untenable with the beginning of the decade of 1990's. The context this time around was provided by the simultaneous unfolding of multiple contradictions manifested in the growing conflicts *within* and *between* various social movements, constituting the civil society. The HRM was, in a sense, caught unaware and the radical articulations by the dalit, women's and regional movements, not only against the state but also *vis-à-vis* each other, escaped its rigid binaries and neat totalities. An important starting point for this could be traced to the *Koyyur* kidnap on January 30, 1993, when a tribal MLA was kidnapped from Vishakapatnam district by the PWG. Various dalit organisations raised serious objections to dalit leaders who are (in any case far & few) weak and vulnerable being picked up as 'soft' targets for fulfilling demands with which they have nothing to do. They (including the Dalit Maha Sabha) raised pertinent ideological and political questions on what they referred to as the 'caste-blind politics' of the far-left groups¹¹. The state too took its time to react, allowing the new growing conflicts to brew. Further, the fact that the tribal leader belonged to the ruling party and the kidnap was meant to be an anti-state activity, became politically an irrelevant factor.

The APCLC intervened to resolve the 'crisis', demanding the release of the kidnapped. In refutation of their earlier position, given the exigencies of the situation, the then president of APCLC wrote, "the practice of taking as hostages persons unconnected with the specific issue between the government and the PWG is a practice we in APCLC never approved of. We have been as human rights activists against this type of political practice. Whether the police hold people in illegal custody or the Naxalites kidnap and take as hostages persons unconnected with the specific issues involved our stand has been the same"¹². It also provided the context to move beyond adhocism and look more substantively at the very character of the HRM. "For human rights activists Koyyuru (and earlier Gurthedu) raises issues regarding the concepts of human rights itself, the advisability of expanding the concept and thereby enlarging the field of operation of human rights work. What should be its relations with radical and democratic movements? Has it any transforming role while operating the institutions available within a democratic set up? Should it merely confirm itself to maintaining a crime audit of the state? All such and related questions need to be debated"¹³.

This willingness to open up manifested in the growing discontent of some of the members over the silence of APCLC on various issues. During the Kurnool convention in 1993, they began to raise sensitive issues, by pointing out that a large number of those killed by the Naxalites as 'informers' are from the SC, ST & OBC communities, who, due to the absence of any type of social networking fail to crawl back into the so-called 'mainstream' life and often succumb to the pressure by the police and pass on information after they surrender. Similarly, it was argued that there is silent discrimination and violence against women by male members active in various social movements, which cannot be ignored as either 'personal' or 'private' matter. Discussion papers with the old, and the new perspective i.e. those demanding a more critical approach to the civil societal violations were printed and circulated among the members and the debate continued in all district level meetings for well over a year. A national convention on 'Democratic Movements and Human Rights Perspectives' was organized in Hyderabad to both go public with the debate as well as gather the views of other national level democratic rights organizations. Later, during the Guntur convention of the APCLC towards the end of 1997, they went for voting and the APCLC was split.

This marked the beginning of the third phase of the HRM – 'The Human Rights Phase' – now working with a new (for want of a better phrase) *civil society versus civil society* framework. It began with the formation of the Human Rights Forum (HRF) and also the Committee of Concerned Citizens (CCC).

The HRF, after its split from the APCLC, in more reflective and conceptual terms in one of its early pamphlets argued that, "we believe that unjust and unfair use of violence even by a popular movement must be openly condemned, not because it is vio-

lence but because it is unjust"¹⁴. It also argued that the HRM needs to recognise at par forms of discrimination that do not flow directly from the state. "The political structure of the state and the social-economic structures of caste, class and gender have received some recognition as oppressive structures, but are yet to assume *equal importance*, in the eyes of the rights movement. The state-class framework continues to dominate for no cogent reason. But both caste and gender are major sources of not only violent suppression but also routine and insidious denial of rights. There is no scale on which their effect can be adjudged less severe than that of state and /or class"¹⁵.

Almost at the same time an independent organisation by the name Committee of Concerned Citizens (CCC) came into existence. Its vision constituted a 'search for a democratic space', essentially between the state and the radical political movements, but also between the various conflicting interests within the civil society. Interestingly it drew its members mostly from the various civil rights organisations in Andhra Pradesh, who felt handicapped at the kind of stalemate the situation has reached between a repressive state and the civil rights organizations working within a rigid *state vs civil society* framework. In the foreword to the report the committee published, it made it a point to proclaim that, "the group which came to be known as the Committee of Concerned Citizens (*Puara Spandana Vedika*) was not formed at the instance of any authority or organization. It emerged on its own, open to reflect the voice of large democratic sections of the society which is tired at being reduced to a mute spectator in the game with peoples lives played by the state and the revolutionary parties"¹⁶. CCC, in a sense, enlarging the scope of the *civil society vs civil society* framework argued with the PWG that given the nature of conflicting interests within the civil society it was important to recognize 'people' and the naxalite groups as separate entities and they cannot claim justification for all their acts by claiming to represent the 'society' at large; it was also important to recognize the opportunities provided by the new institutions after the 73rd amendment for dalits and women and therefore the need for periodic elections without violence; and finally condemned the brutality of the naxalite groups in dealing with people as no less abominable than the third degree methods used in police camps¹⁷. The growing significance of the shift in the HRM could be felt in the response of the PWG to these observations of CCC- The PWG believed that "though there are some short comings in the report of the concerned citizens, we feel that the committee of concerned citizens has exhibited an essentially *democratic approach*"¹⁸ [emphasis- my addition]. There is no denying however, of the fact that the CCC could make very little impact on the response of the State towards the prevailing situation.

The HRM today is at crossroads. On the one hand it seems to be expanding in conceptualizing not only the state-civil society relation but also in fact, the process of social transformation itself in more complex and humane terms, on the other hand, however,

it feels marginalized as there are very few sections in civil society willing to respond to it. This thereby makes the HRM an even easier target of the state (The president of the APCLC Mr.Laxman, was recently (November 2003) kidnapped by surrendered naxalites with active involvement of the state police but there was very little response from independent political groups in the civil society). Such a nebulous situation pleads for greater clarity about both the present framework and the future direction of the movement. What are the possible challenges and dilemmas it is likely to face? And does it have at least the signposts for resolving them?

The Three Dilemmas of the Human Rights Movement

One of the crucial dilemmas that seem to be emerging from the contemporary phase of the HRM, in course of making sense of the terrible fragmentation of the process of social transformation and the need to identify an independent agenda, is the '*ethical-political dilemma*'. Activist-intellectuals in the Human Rights Forum reflecting after a couple of years of its inception and work have come to the conclusion that, "primarily rights are ethical norms and any attempt to treat them as primarily or explicitly political can only lead to sectarian divisions and stagnation in the human rights movement"¹⁹. They also, therefore, believe that the HRM itself is not a political movement instead 'political movement and human rights movement as such exist in two planes the planes of interests and values'. Why is such a resolution being sought to the problems emerging in the contemporary phase? And how much does counter-posing ethics and politics solve the problem of 'stagnation' of the HRM?

The more existentialist of reasons could be traced to the fact that socially (caste, class & gender wise) most of the activists who gravitate towards such arguments for bifurcation belong to the more privileged upper echelons. They often face a serious sense of isolation, as political and social movements around them are demanding more organic linkages to be part of or lead them, and in some cases even talk and write on their behalf. Historically or politically, however, the reasons could be traced to the relation the HRM has had with the radical left movement in Andhra Pradesh and else where. Naxalite movement has always projected and argued (and many in the HRM share this view) that the human rights organisations are 'secondary' level mass organizations. Interestingly, in the proceedings of the APDR upon self-introspection they wrote, "civil liberties organization is mainly characterised by acting as a *shield* of the democratic struggles carried on by the common people. In a sense, this role though *limited* is very important"²⁰. In other words, the HRM never considered itself a political movement to have a distinct 'political' perspective. It also felt marginalized in terms of the capacity to mobilize people (numerically) as 'the movement is limited to few individuals and limited sections of people'. More importantly, the nature of the social base of the HRM was always suspect. Radical left movement characterizes it as 'petty bourgeoisie' in a

derogatory sense and often mockingly refers to it as the 'middle class wing of revolution'. Many in the HRM also believe this, as U.Baxi's anecdote sharply puts forth the ambiguity. "At a discussion in Delhi (under the auspices of the PUCL) the problem of 'legitimacy' of human rights activism, astonishingly surfaced and there was even some talk of the need for human rights communities to 'woo the middle classes' back to the value /mission ... Not long ago many leading human rights communities critiqued, rightly (*prescinding the question of moral opportunism in practice of politics*) the middle class support to the anti-mandal agitation"²¹. In another context G. Haragopal (long term vice-president of the APCLC and now member of the CCC) argues, "in fact, the middle class become spineless and loses the nerve against a repressive state. Some liberal activists shift their stand very fast. They not only compromise but also gradually degenerate into a self seeking and self aggrandizing class of individuals"²². This perceived immoralism never allowed the HRM to articulate itself as an independent and credible political movement. It therefore now feels the need to pose issues in explicit moral/ethical terms to overcome this perceived handicap. It undermines 'politics' and looks for other means to make meaningful contribution. This compulsive tension within the HRM would persist as long as they are not prepared to do a more positive reading of the middle class and its contribution to various 'mass' movements. Raymond Williams in response to the Socialist movement's critique of the 'new social movements' argues that, "the significance of predominant middle class leadership or membership of the new movements and campaigns is not to be found in some reductive analysis of the determined agencies of change. It is, first in the fact that of some available social distance, an area for affordable dissent. It is, second, in the fact that many of the most important elements of the new movements and campaigns are radically dependent on access to independent information, typically though not exclusively through higher education and that some of the most decisive facts cannot be generated from immediate experience but only from conscious analysis"²³. And definitely human rights is one such movement.

Further, moral/ethical resolution to avoid 'stagnation' in the HRM is sought due to moral adhocism within both the Marxist theory as well as radical left movements and their refusal to develop consistent political principles around the means-ends issue. Steven Lukes in his interesting study on 'Marxism and Morality' argues that 'on the one hand Marxism has treated morality as ideological, historically relative, shaped by social and class determinants and so on, purporting itself to reject any moral or moralizing discourse... on the other hand Marx's and Marxist writings abound in moral judgments, implicit and explicit'²⁴. This unexplored continuum between ethics and politics re-emerges as moral adhocism mostly on the basis of 'consequentialist reasoning'. Herbert Marcuse argues for limitations on revolutionary violence by establishing 'general norms' or E.P.Thompson recommends humanist attitudes 'whenever and to the degree that contingencies allow', so that they do not negate the very end for which

the revolution is a means²⁵. Beyond such contingent moral advocacy Marxist theoreticians were hesitant of going into the specificities of the issue at hand. Radical left movements also do not conceptualise what exactly constitutes 'revolutionary violence'. Some attempts on the part of the HRM to engage on issues of what are the permissible or impermissible 'strategies' and 'tactics' or factionalism and violence between the various revolutionary groups, remained aborted. It is this loss of such historical moments in concretizing values that re-emerges as the eternal wait for the moment of pure morality (very much like the 'last instance' in Althusser)

The obvious dangers of slipping into abstract moralism through such bifurcations are ample. Ironically, radical left movement (against which the HRM complaints of absence of explicit recognition of morality) was accused of 'moralism' by the feminist writers during the Telangana armed struggle. They argued that the Communist party could not evolve a policy on problems of childbirth, unmarried women, sexuality, etc. Women comrades were forced to give away children after they were born and single women were considered a problem. Most issues were settled as and when they arose but were "diluted into a moral problem, a guilt at having violated family happiness. Once again there is no analysis on it as a political issue that had to be addressed if the movement was serious about women"²⁶. As absence of morality is a problem now, presence of morality was a problem then.

Thus the HRM needs to seriously rethink its new 'strategy' of articulating itself on a purely moral plane, and whether it will indeed be able to solve the problem of sectarianism on the one hand and emerge as an independent movement on the other. More so, when far right Hindu organizations seem to be indulging in moralism and arguing for faith to be placed above all politics and law.

The second important dilemma, which has persisted for some time but now seems to be getting acute, is the *empowerment-disempowerment dilemma*. "In order to combat regressive forces (gender-based discrimination, child labour, etc) one needs to enhance the powers of an interventionist state. But to empower the state by activist praxis, even in pursuit of rights is deeply disturbing; surely it cannot be the project of human rights activism to empower a leviathan... (Thus) encounters between human rights activism and the Indian state presents a series of manipulation of contingencies"²⁷. Contemporary HRM seems to have overcome this initial dilemma in the HRF recognizing the positive role of the state institutions and overcoming the 'formative anxiety in nascent human rights organizations/consciousness that reformation of state may pose a setback to their growth and development'. The HRF did reaffirm moving away from the initial position of the HRM in arguing that, "the state-class framework that unconsciously guides our thinking of rights has come from militant- leftist movements and the problems of suppression they have faced from the state and the exploiting classes.

But if we are ready to learn equally from the dalit movement and the women's movement and the politics of various minorities, religious, ethnic or linguistic groups (then these movements have mostly sought to empower themselves by making use of and enlarging the democratic political space and the political and civil rights available in the present state and the political system"²⁸. However, this only seems to have displaced, rather than resolve the dilemma. The problem of empowerment or legitimacy of the state that eats into other 'free spaces' on the basis of some positive action remains (as in Rajasthan, by passing the 'Right to Information Act' that government ate into the political space so laboriously constructed by the MKSS led by Aruna Roy and others). De Tocquville reminds us that modern states pose a greater threat to human freedom as they use the legitimacy of functioning on the basis of free elections to increasingly centralize their actions and determine the terms of discourse. Also as Habermas points out with 'welfare states', which become increasingly interventionist in trying to shift the contradictions from economy by 'colonizing the life world'.

The HRM is thus, confronted by a Janus-faced state, unless of course it is ready to go along with arguments that deny such complex interlinkages and argue that the present "political-administrative system has been so highly differentiated and complex that there is simply no single centre of state power which could be occupied and used to radically transform the system"²⁹. This, of course, leaves very little scope or purpose to build an independent HRM.

The Third dilemma that seems to be emerging, with the changing nature of social movements, is the *tradition-modernity dilemma*. Jawaharlal Nehru, around eurocentric models, wanted to 'invent' a modern India that established a discontinuity with its traditional institutions. Principles such as secularism, scientific temper, etc, were highlighted with an emphasis on elite administrative service, central planning, heavy industrialization, and centralized institutions of higher learning like the IITS and parliamentary institutions. He also "loathed the castes and held them responsible for India's degeneration. And as for the village communities, they had bred the 'spirit of localism' and were in any case doomed to extinction"³⁰. Thus, unlike Europe where with the rise of market forces and consumerism certain homogeneity and continuity (of whatever kind) was established between the private and the public, India was confronted with a modern artificial 'public sphere' against a traditional life, which it could neither overcome nor integrate. It instead led to cultural ambiguity and vacuum, which eventually proved to be a breeding ground for the neo-liberal and far-right Hindu politics. Part of the rise of Hindutva politics could be traced to the new continuities they began to draw between these two artificially disconnected spheres. For instance, organisations such as the Durga Vahini, politicize the traditional roles of women, by drawing parallels between the modern/political women and the traditional symbols like Sita and at times Durga. In fact, even at the other end of the spectrum, dalit movement has shifted its

focus from 'annihilating caste' to consolidating caste identities and stressing on intra-caste solidarity. In other words, institution of caste is no longer understood in modernist terms as just a violator of human rights, neither can its invoking of religious (lower caste Gods and Goddesses) and caste based symbols as anachronistic, in evolving a modernist- human rights culture. The HRM in negotiating with other civil societal forces will have to look for new avenues of drawing continuity between the traditional and the modern spheres. Their experiments will have to go beyond both the 'modernity of tradition' kind and also that of the most critical Gandhian project, which as some would argue was an attempt at "treading and cultivating the border zone between some aspects of the Indian cultural tradition and the 'bright side' of post-enlightenment modernity"³¹.

The contemporary phase and the future of the HRM would depend on how it confronts these dilemmas and thereby both democratize the state and also expand the contours of civil society, with its multifold conflicts.

(I wish to thank Sanghamitra Misra and John Game for their comments and encouragement. Also the first year students at the National Law School for many insightful and lively discussions)

Notes

¹ V.M. Tarkunde, 'In Defence of Freedom' in A.R. Desai (ed) *Expanding Governmental Lawlessness and*

Organised Struggles, Popular Prakashan, Bombay, 1991, p.303.

² Bipin Chandra in his new book 'In The Name of Democracy', completely ignores the role of JP in building the Civil Liberties movement and therefore reaches a one-sided conclusion that 'Total Revolution' had fascist tendencies.

³ V.M. Tarkunde, *op.cit*, 1991, p.305,

⁴ Mohan Ram, 'Civil Rights Situation in India' in A.R. Desai (ed) *Violation of Democratic Rights in India*, Vol3, Sangam Books, Bombay, 1986, p 91.

⁵ CPDR, 'The Civil Liberties Movement: A Perspective' in A.R. Desai, *op.cit*, 1991, p.284

⁶ Bikhu Parekh, 'Jawaharlal Nehru and the Crisis of Modernisation' in U. Baxi and B. Parekh (ed), *Crisis and Change in Contemporary India*, sage, New Delhi, 1995, p.44.

7. J.D.Sethi, 'India in Crisis' Vikas, Delhi, 1975,p.25

⁸ Mohan Ram, op cit, 1986, p.93.

⁹ Nilanjan Dutta 'From Subject to Citizens: Towards a History of the Indian Civil Rights Movement' in M.R. Anderson & Sumit Guha (ed) Changing Concept of Rights and Justice in South Asia, OUP, Delhi, 1998,p.283.

¹⁰ APCLC, 'Paura Hakkula Avagahana Charcha Patralu (Telugu) Hyderabad (undated) p.23

¹¹ Refer for a detailed account of the emerging dialogue between the social movements, Ajay Gudavarthy, Towards Solidarity: Naxalite, Dalit and Women's Movements in Andhra Pradesh (forthcoming).

¹² K.Kannabhiran, 'Koyyuru: Reflections on a Kidnap', EPW, March 20-27 1993, p.495.

¹³ Ibid, p.498

¹⁴ Human Rights Forum, Untitled Pamphlet, Hyderabad, Feb 2000. P.4

¹⁵ Ibid, p.1.

¹⁶ Committee of Concerned Citizens, In search of Democratic Space, CCC, Hyderabad, August 1998, p 1

¹⁷ Ibid; (refer to the Committee's first and second reports)

¹⁸ Ibid, p.18

¹⁹ K.Balagopal, 'Human Rights Movement in Andhra Pradesh: A Theoretical Reflection, in Ajay Gudavarthy & G.Vijay (ed) Understanding Contemporary Andhra Pradesh, (forth coming).

²⁰ APDR, Two Decades of APDR & Human Rights, APDR, Calcutta, 1991 p.6.

²¹ Upendra Baxi. 'The State and Human Rights Movements in India', in M.Mohanty et.al (ed) People's Rights, Sage, New Delhi, 1998, p.349.

²² G.Haragopal & K.Balagopal, 'Civil Liberties Movement and the State in India' in M.Moranty, op cit, 1998,p.367.

²³ Raymond Williams, Towards 2000, Hogerth Press, London, 1983, p.252

²⁴ Steven Lukes, Marxism and Morality, OUP, oxford, 1985,p.4

²⁵ Norman Geras, Discourses of Extremity, Verso, London ,1990 pp 29 & 34

²⁶ Stree Shakti Sangathana, We were Making History: Life Stories of Women in Telangana People's Struggle, Kali for Women, New Delhi, 1989, p. 27

²⁷ Upendra Baxi, op cit, 1998, p.349.

²⁸ Human Rights Forum,op cit,2000, p.2

²⁹ Claus Offe, Contradictions of the Welfare State, Hutchinson, London 1984,p.31.

³⁰ Bikhu Parekh, op cit, 1995, p. 35

³¹ Thomas Pantham, 'Gandhi, Nehru and Modernity,' in B.Parekh, et al (ed), op cit, 1995, p.100.

Development, Resource Use and People's Movement : Making Sense of the Environmental Movements in India

Siba Prasad Panda

This paper is an attempt at making sense of the environmental movements in India, which are seen in the larger context of the New Social Movements and the growing civil society in India, challenging the dominant model of development that the State has adopted since independence. It shows that the environmental movements in India are basically different from their Northern counterparts in terms of the issues that they raise and the actors that they represent. It explores the alternatives provided by these movements to the model of development adopted by the 'developmental State' in India. It also provides an account of the nature, types, ideologies, components and major strands of the environmental movements in India with the aim of showing its distinctive character.

Mobilization by marginalized groups to protect their livelihood resources against commercial use is not new in India. During the colonial regime, there were tribal and peasants uprisings against state intervention in customary practices of the people. The replacement of customary management of common property resources by state management led to conflicts of interests, which manifested in people asserting their claim, right and control over their subsistence resources. After independence, the then current development ideal prompted the state to pursue economic growth through industrialization. Commodity production became the core of the Indian economy, and industry, mining and giant irrigation projects took shape in quick succession to change the economic and social landscape. The development path of the Indian democratic state was ideally designed to benefit the disadvantaged and promote equity and social justice. Ironically, India's democratic development agenda was subverted by dominant forces that appropriated the benefits of development to the disadvantage of the marginalized, who had suffered social and economic vulnerability in the past and who the development projects were designed to benefit. Not only did the developmental projects not benefit them, they added new dimensions to their already disadvantaged position. As technocratic economic growth took off and huge irrigation and hydel projects and heavy industries took shape, thousands of people were displaced from their original habitat.

Without any comprehensive resettlement and rehabilitation policy, displacement became the inevitable fallout of development. As the natural resources were put to commercial use, a large number of people directly dependent on nature for their subsistence, lost their access to and control over these resources. It is no surprise, then, that they resisted the policies formulated to bring them benefit through the environmental and people's movements. While resistance to the colonial state was prompted by an understanding that it was alien and oppressive, post-colonial assertions are against the Indian state, whose development logic is legitimized in the name of the people.¹

Contemporary assertions by the marginalized to gain control over their resources reveal, on the one hand, the tenuous relationship between the neglected citizenry and the state and, on the other, the potential of these people to redefine and refashion this relationship. As Melucci puts it: 'The public spaces which are beginning to develop in complex societies are points of connection between political institutions and collective demands, between the function of government and the representatives of conflict'. Conflicts over natural resources are not new, but contemporary movements have added a new dimension to the struggle by articulating the issues in terms of survival of the majority, as well as by focusing on the related issues of dominance, unequal distribution of developmental benefits, sustainable development and people's involvement in decision-making.²

Environmental consciousness and its social expression through various protests, form part of what has come to be known as 'new social movements.'³ One of the significant factors that distinguishes the newly emerging environmental groups and their activities from the older movements relates to the growth of development orientated action groups, popularly known as non-governmental organizations (NGOs). Most environmental movements in the country are now spearheaded by these groups and thus constitute the 'actors' of these movements. The nature of these groups is varied and disparate with numerous ideological shades. Yet they share one common platform, the non-party political platform. Politically conscious of their movements, these groups operate outside the sphere of party politics. However, of all the 'new' social movement, which emerged in the 1960s and 70's, it is these environmental movements which have had the most enduring influence on politics.⁴

The Swedish sociologist Andrew Jamason has written on the New Social Movements that they are primarily the work of "young people impatient with the political methods of their elders", they represented, in effect, a 'revolt of the young'. In this sense the environmental movements are also driven by the energy and idealism of men and women in their twenties and thirties, thereby qualifying to be called as new social movements.⁵

The environmental movements are both 'new' and different in terms of their participants, methods of intervention, issues raised by them, their impacts in terms of redressal, policy shifts and consciousness and the discourse they provide which make them significant social mobilizations in the present times.⁶ While the agitations are carried out primarily by those directly affected by the shifts in the environment which include the rural peasant, the forest tribals, their women folk, the fisher folk, it also includes an allied hearing space where voluntary organizations, the media, professionals, civil and human rights groups and even sympathetic policymakers and bureaucrats who have created a "public-space" that supports the movements have a functional role even though removed from the locate sites of the movement. What is new about them is the articulation of their demands in the framework of the conflict over resources.⁷

Environmental movements in India attain significance not only as new social movements which focus on ecology but also as the active battlefield where a lot of motivated people, backed by supportive allies from different walks of life are rejecting the dominant official paradigm of development. Their cause is genuine and crucial for the future of not just those who are active in the struggle but of those as well who live in the protected walls of fancy homes and find themselves far removed from the marginalized, tribals, peasants and fisher-folk. It is the expansive horizon of the movements which make them interesting subjects for analysis and understanding. The environmental movements reflect the agony of the third world countries, which have to fight the domination of the West which take the shape of unsuitable policies at home.

Environmental Protests and Civil Society

Environmental protests in India now pose a challenge to the dominant ideology of the meaning and patterns of development. While doing so, they are not being guided by any particular philosophy. These movements represent a wide spectrum of groups and activities that cut across specific regions and issues. They mobilize large masses of people, organize popular resistance that transcends political and social barriers, and create new socio-political actors. The movements represent a wide range of social groups that, up to now, have had very limited access to formal or even informal political processes in India.

The beginning of the 1990s witnessed the emergence of many NGOs that have been working with environmental issues. Community organizations have emerged through local initiatives that, in some areas, extend social traditions of protecting local rights and environment.⁸ NGO's, on the other hand, are local or external intervenors that create and support such community groups in their efforts. At present, more than 950 Indian NGOs are exclusively devoted to environmental issues.⁹ There has also been a resurgence of social action groups that are now mobilizing the weaker sections of society

to fight in order to protect their environment. The newly formed National Alliance of People's Movements (NAPMs) has brought together most of these organizations. Their common rallying slogan is *Vinash Nahin, Vikas Chahiye* – (Development not destruction).¹⁰ With the new slogan, they have formed a popular network that defies regional boundaries and unifies the people from various streams. This effort is representative of the recent trends of non-party political activism in India. Today environmental organizations are fighting the battle at the social level rather than on political ground. They have contributed to the new developments that are attracting India's conventionally apolitical populace into expressing and fighting for their basic rights to participate in the decision-making process of the country in order to protect their interests.¹¹

The 'civil society' function of environmental organizations includes both a "supply side" approach, concentrating on the delivery of development projects, and a "demand side" approach, helping people to articulate their concerns and participate in the development process. This participatory process restrains the power of the state and also helps to bring that power under social control. Like its many counterparts in India's civil society, environmental organizations are working as a unifying force even as they scrutinize the government for potential abuses and violations of the law.

The positive feature of the environmental movements from a "civil society" functions point of view is that they make visible the hidden externalities of development based on a particular economic ideology and reveal its inherent injustice and non-sustainability. The recognition of these inadequacies and the imperatives arising from the right to survival creates another ground and another direction for development, which ensures justice with sustainability, equity with ecological stability.¹²

Environmental Movements in the North and South

There is a great deal of consensus regarding the view that the environmental collective actions emerging in the third world is qualitatively different from the causes and concerns expressed in the First World movements. The third world or Southern Environmental Movements have been labeled as '*environmentalism of the poor*' to distinguish them from the First World or Northern Environmental Movements. In the North, the growth of environmental movements has been related to the emergence of Post-Materialist or Post-industrial Society.¹³ The core members in such mobilization belong mostly to the middle class living in material conditions that facilitate their relative neglect of material, economic and redistribute demands. As against this environmental movement in the Third World has been viewed as essentially actions by the marginalized poor to protect their environmental means of livelihood and sustenance. Environmental resources such as land, water and forests constitute the material basis of the production and reproduction

of the economic poor. Actions in defence of such resources amid growing encroachment and degradation by the richer and better off sections of the society are what distinguish Third World environmentalism from that in the First World.¹⁴

The differences in the movements across North and South have been highlighted by a number of scholars. According to Radcliff,¹⁵

The two principal components of environmental movements in the South are of marginal importance to most movements in the developed countries. They are that those who constitute the movement are engaged in a livelihood struggle and secondly that they recognise that this livelihood struggle can be successful only if the environment is managed in a sustainable way.

Unlike the North, the conflicts are not so much over how the environment should be used but over who should use and benefit from it.¹⁶ In the Southern environmental movements the epithet 'environmental' is relevant 'in so far as they express objectives in terms of ecological requirements for life'. Thus one can argue that it is not as much 'life-styles' as 'life chances' that constitute the battleground of environmental politics of the South.¹⁷

Environmental movements in India, therefore, are not necessarily for the 'green' or 'clean' earth or for saving mankind's heritage and endangered species as in the west, but for the very survival of the local poor.¹⁸ Thus despite the rise in the number of movements and conflicts over environmental issues, concern for 'environment' has remained peripheral for most of the contemporary movements. Rather all of these movements have focused on the "issues of livelihood".

The rise and growth of environmental movements in the South is because of the predatory exploitation of natural resources that feeds the process of development in post-colonial societies, the non-local production relations governing natural resource use and transformation and the inequality in resources distribution. For Vandana Shiva the environmental movements for the most part are between those who have been benefited from economic development and those who bear its costs. Shiva locates the Indian environmental movements as a response to the resource and energy-intensive 'development project' of the country's economic elite.¹⁹

The environmental movements of 'South' in general and India in particular possess the following features as against their Northern counterparts.²⁰ First they aim to mobilize local people in defence of the local environment against outside interests usually the state or big business. Second, the environmental action groups engaged in these move

ments are usually rural based. Third, women often form the core of their membership. Fourth, they work with foreign allies, such as Greenpeace International, although this does not ensure success. Finally, these environmental groups often do not win their struggles; failures outweigh successes.

Two Standpoints on Environmental Movements in India

Two standpoints have been identified keeping in view the differences in environmental movements in the west and India. The first one is the conventional or mainstream standpoint on Development and Environment. The second one is the livelihood standpoint on Development and Environment.²¹

The conventional standpoint equates development with increase in production of goods and services at the national level. The central objective of development in this standpoint is macro-economic growth. From this standpoint, nature remains a source of raw material and energy mainly for industries and a sink for dumping industrial and urban waste. After decades of struggle by environmentalists and people from communities affected by development projects and especially after acceptance of the 'environmental' cause by the mainstream institutions in the West, the protagonists of conventional standpoint in India started accepting that there exists something called 'environment' out there. The understanding of 'environmental' or 'ecological' issues from the conventional Development Standpoint has remained, because of the Western Origin of the Standpoint, primarily Western and largely in terms of 'economic externalities'.

As against the conventional standpoint on Development and Environment, the fundamental objective of livelihood standpoint on development is 'guarantee of dignified, secured livelihoods to all'. This standpoint emphasizes that development should be environmentally enriching, socially just, and politically empowering. Livelihood standpoint is not anti-growth *per se*, neither is it anti-prosperity. What it does is to link growth, equity and nature together.

India: The Developmental State

Development was an integral and even non-negotiable part of the modernizing agenda of the Indian state at independence, which was called as a 'developmental state'.²² It was comprehensively defined to encompass not only an industrial economy, but also simultaneously a programme of social transformation and political democratization. Underlying this aspiration was a belief that progress, as represented by the historical trajectory of development in the West, could at once be telescoped and replicated. At its core lay an unreflective faithfulness to the development dogma, interpreting it purely

in terms of qualifiable measures of economic growth. In the course of the last two decades, the opposition to this process has unambiguously placed the development debate on the public agenda, and become a potent symbol of its interrogation and critique.

Development is not universally benign. Development for some means underdevelopment and dispossession of the many. Development interventions aimed at commercialization of natural resources involve a major shift in the manner in which rights to resources are perceived and exercised. It transforms commons into commodities, and deprives the politically weak communities of access to resources, and robs resources from nature, to generate growth on the market for more privileged groups in society. This transformation in Third World countries like India is often state-mediated. The ecology movements are based on the need to protect nature and the need to strengthen people's collective rights to common resources. The emergence of social movements around ecological issues related to forests and water systems indicates that it is the marginal communities for whom the protection of nature is essential for survival.

These movements are making visible many invisible externalities and pressing for their internationalization in the economic evaluation of the elite-oriented development process. In the context of a limited resource base and unlimited development aspirations, these movements have initiated a new political struggle for safeguarding the interest and survival of the poor, the marginalized including women, tribals and peasants.

Only the market driven economies are in conflict with people's survival and nature's regeneration. Nature and people are, however, never taken into account in development plans which emerge from the North. The ecology movements which resist the destruction caused by state managed market development are challenging the concepts of politics and economies as defined within the narrow confines of the market. They reveal that there is a notion of democracy, which is wider and deeper than market democracy. This is the ecological concept of democracy of all life based on the recognition of the right to life of non-human nature and all segments of human society, including those large numbers which do not, and cannot, produce and consume within the market, and who are treated as dispensable in the logic of the market. They also show that there is a wider concept of economy, which is based on the maintenance of life and livelihood, not merely on the accumulation of profits. In the era of rising 'green capitalism' where justice has become obsolete and has been separated from issues of sustainability, people's ecology movements highlight the way in which issues of ecology and equity, sustainability and justice are intimately linked to one another. They provide an alternative perception of ecology as the politics of survival.²³

Classifying the Environmental Movement in India

The environmental movement in India has essentially emerged as a response to a wide spectrum of struggles and conflicts over the use of natural resources and social justice issues or human rights. At one end of the spectrum, the movement is around a specific issue, such as deforestation or construction of a dam. At the other end, the focus is on an alternative development paradigm. The variations in the nature of these movements, their diverse methodologies and different ideological orientations render the task of constructing an adequate typology of these movements difficult.

One of the earliest attempts to understand the nature of the environmental movement in India has been to analyze them in terms of their material, political and ideological contexts.²⁴ According to this approach, the material basis of the environmental movements lies in conflicts over natural resources. The political context of the movement relates to the involvement of action groups in the collective mobilization of people affected by environmental degradation. The ideological expressions of the movement are analyzed by describing different ideological strands of Indian environmentalism.

There are some other attempts that try to understand the nature and type of the environmental movement in India on the basis of the classification of struggles over the use and control of natural resources. In this approach, the environmental movement in India is contextualised by three types of struggles over natural resources. The first type of struggle is related to the entitlement of different social groups to environmental resources. Second, environmental action is directed towards seeking a change in the official policy related to the pattern of environmental resource use and, the third type of struggle raises ecological issues of development, particularly the dimension of human-nature relationship and presents a critique of dominant development paradigm. All these struggles are clustered around various natural resources that include land, water, forest and air.²⁵

The typology of the environmental movement, based on natural resource-based struggles, leaves out a number of activity-groups of the environmental movement in India. For example, there are a host of individual campaigns and advocacy groups engaged in lobbying for policy change, conducting research and training on environmental issues which are very much a part of the environmental movement.²⁶

Nature and Types of Environmental Movements in India²⁷

The forest and land-based struggles have resulted from the large-scale commercial use of forest materials and clearing of forests by the state and the unequal social change and development

access to land resources. Observing that the forest-based movements had their greatest spread, involvement and impact on Indian Environmentalism, Sethi points out that these struggles also led to a paradigmatic shift in the discourse on the commodification of natural resources.²⁸ The Chipko movement in the Himalayas and the Appico movement in the Western Ghats are the classic examples of the forest-based movement. The agitation against the replacement of Sal trees by teak species in the Jharkhand-Bastar belt is another example of forest-based movement.

The land-based struggles consist largely of localised agitation against land degradation due to the indiscriminate use of organic chemicals, mining and constructions (in urban areas). The Mannu Rakshana Koota (save the Soil) movement in Karnataka is a specific case of land based movement launched against the waste-land Development policy that empowers the state to convert common village land into wasteland for social forestry purposes – particularly for eucalyptus plantations. In Gujarat during the early 80's similar protest groups existed, which extensively debated the state social forestry programme.

The movement against the over exploitation of marine resources generally refers to the traditional fisher folks movement against trawling in shallow waters, resulting in the decimation of young fish and breeding and also depletion of marine resources on which the fisher folk depend on for their livelihood.

The agitation against industrial pollution has also been sporadic and localized. The anti-industrial pollution movement is largely concentrated in urban areas. Examples of such movements include the Vidushak Karkhana group in Shahdol in Madhya Pradesh and innumerable agitation against industrial pollution.

Environmental activism around development projects is yet another example of a broad-based environmental movement with larger coverage and impact. The specific development projects against which sustained movements have been launched by the environmentalists include dams, power projects, industrial plants, railway projects and mining. The dam-related agitation of local groups covers the entire geographical area of the country. The silent valley movement in Kerala has been the harbinger in the environmental uprisings against the large dams in the country. Movements against the multi-crore Narmada valley project covering central and Western parts of India and against the Tehri dam in the North are the well-known and relatively recent example of anti-dam movements. The movements against the dams and power projects are mostly localized agitation. The agitations, however, would also qualify for a movement as most of these issues are taken up by well-organized groups.

Regarding mining and quarrying, the long battle between the mine owners and the local

people over limestone extractions in Doon Valley was fought in the Supreme Court of India. The Bharatiya Aluminum Company (BALCO) Resistance committee and Gandhamardhan Protection Youth Council (GPYC) in Orissa are fighting against the BALCO's bauxite mine project.

On the issue of military expansion and its consequences on the environment, the movement against missile Test Range in Balipal and the base at Netrahat area are known movements. The Konkan Railway Realignment Action Committee and its protest organization agitating against the justification related to realignments of the Konkan Railway Project also generated considerable debates.

In the area of aquaculture, the Chilika Bachao Andolan in Orissa and other groups in Andhra Pradesh and Tamil Nadu are fighting against the growing commercialization of shrimp and prawn cultivation. The movement demands the restoration of the traditional methods of shrimp and prawn culture.

The movement on wild life issues has not yet gathered any significant momentum in the Indian Context. Ekjoot, an organization in Bhimashankar region in Maharashtra, has taken up the issue of displacement due to declaration of certain areas as national parks or as world life sanctuaries. Similarly, the issue of tourism and its environmental consequences is also a relatively new issue of the environmental movement in the country. The Himachal Bachao Andolan is an example of recent environmental movement related to tourism in India.

The Advocacy and Appropriate Technology Categories play a dual role in Indian environmentalism. At one level, they provide intellectual, theoretical and demonstrative stimuli to environmental movement through their contributions to the discourse on development and ecology and by demonstrating small eco-friendly models of development in specific areas. At another level, they actively participate in lobbying and judicial litigation on issues of concern.

The typological profile of the various parts of the environmental movement in India discussed above indicate that these movements are largely localized and issue-specific and restricted to relatively small areas. The range of issues raised and acted upon in the environmental movements in India varies from cost-benefit analysis of environmental impact to a discourse on alternative development based on distributive justice and human rights. The different ideological orientations, methodologies and a wide variety of actors involved in the environmental movement indicate the amorphous nature of the movement.

The Three Components of Indian Environmental Movements

Gadgil and Guha divide the Indian society into three sections, the *ecosystem people*, primarily dependent on a natural resource survival base; the *omnivores*, with privileged access to resources and *ecological refugees*, who have been rendered destitute through deprivation of traditional access to natural resources. They regard the Indian Environmental movements as a response by these three components to various concerns relating to environmental degradation.²⁹

In its biomass society, the bulk of the poor, and not the well off, scratch the earth and depend on rain for growing their own food, gather wood or dung for cooking purpose. They build their own huts with bamboo or sticks and draw their sustenance from nature; such people depend on natural environment of their own habitat to meet their material needs. Raymond Desmann calls them *ecosystem people*. About four-fifth of India's rural-people, that is, over half of the total populations are ecosystem people. Under the pressures of modernization, technological use and material growth the natural world is receding. This shrinks the capacities of local systems to sustain and support these people. For example, industries, dams, and mining have physically displaced millions of forest dwellers, tribals and peasants in India during the last 55 years. So also because of scarcity of water and depletion of natural resources and recurrent droughts people have to leave their habitat like forests. These people are called *ecological refugees or eco-refugees*. As many as one-third of the Indian population is considered as eco-refugees. They live today such a life as displaced, unable to freely pick up from nature.

The remaining one-sixth of the population of India is a real beneficiary of economic-development, which takes place at the cost of nature. Godgil and Guha call them *omnivores* as they devour every thing produced all over the earth. They exercise tremendous power to influence state policy. They exercise high degree of control over their own lives. It is the ecosystem people and eco-refugees who are in the forefront of the environmental movements, and they enter a sort of social conflict directly or indirectly, against the omnivores or the government and the industries who are the protagonists of the dominant model of development.

The Major Strands

Viewed in this light, India has a wide diversity of environmental movements – involving members of one or more of the three categories of Omnivores, ecosystem people and ecological refugees. In this multiplicity of movements, one may discern several major strands. However, the dominant strands in the Indian environmental movements are those that focus on the *questions of equity*. These have largely arisen out of conflict

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between omnivores, who have gained disproportionately from economic development, and ecosystem people whose livelihoods have been seriously undermined through a combination of resource fluxes biased against them and a growing degradation of the environment. Such movements, most often, tend to involve a small group of socially conscious omnivores working with larger number of ecosystem people or ecological refugees. These movements can be called as the “environmentalism of the poor”³⁰ to distinguish them from the environmentalism born out of *affluence* – that is one which has a visible presence in the advanced capitalist societies of the West.³¹

Two Kinds of Environmental Concern: The Debate

The state represents the quest for equity and the market as a force promotes growth at the cost of equity. The environmental debate by raising issues of sustainability, points to the problems of both the role of the market and the kind of state apparatus that has existed in the country.³²

By the time India became independent, the Gandhian notions of an alternative kind of development had moved to the background. Their significance has, of late, come to be of wider interest but in the main a programme of state-assisted industrialization was carried through. It is the social and ecological impact of such growth that lies at the roots of much of the grassroots protest in contemporary India.³³

The growth of environmental consciousness has largely to do with the failure of development to address such issues. The popular movements often involve those who have been losers in the development process. Their initiatives sit uneasily side by side with the other; narrower, but highly influential notions of conservation that now have a mostly urban, middle class constituency. As against this the former kind of environmentalism started from a different set of concerns and among a different social group. At the popular level, the denial of access and control to the rural poor over large tracts of forestland has been a form of appropriation. It has served the purposes of accumulation and industrial growth but often been ecologically destructive. The issue of environment emerged within the context of production and livelihood, a source rather different from the concerns of the middle class or landed gentry. It is such concerns that inform “environmentalism from below”.³⁴

The movement ‘from below’ and ‘from above’ have different visions about nature and there is also variations in the social composition of the two. While the tribals and dalits who have been the major actors in the former the later has been dominated by urban, middle class, upper caste. But this is not a universal pattern.³⁵

However there are two key unifying issues. There is accord on the failure of the exist

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ing model in both its statist and market-oriented incarnations. Second, there is a search for an alternative system that would redress both social and ecological concerns. Ecology and equity are seen as inseparable, though there are differences on the precise, mix of strategies to achieve such a goal.³⁶

Ideologies of the Environmental Movements in India

While there is widespread agreement within the environmental movement as regards the failure of the present development model suggested by both the state and the market, there is little consensus on plausible alternatives. It is however, possible to identify three distinct ideological perspectives within the movement.³⁷ These are the Crusading Gandhians, Appropriate Technology and Ecological Marxists.

Crusading Gandhians while rejecting the modern way of life, uphold the traditional village communities as protector of environmental and social harmony. The Appropriate Technology is influenced by strives to combine agriculture and industry, large and small units of production and modern and traditional technology. And the Ecological Marxists have arrived at environmentalism after their protracted engagement with Marxism.

Peritore in his study finds three types of environmental opinion among Indians: Greens, Eco-developers and Managers. Greens by rejecting the western developmental model favour the empowerment of the people: Eco-developers advocate changing India's developmental model to small-scale, environmentally friendly, intensive development; and for the Manager, national management of economic growth is desirable if it incorporates environmental concerns.³⁸ Broadly speaking, the concern is deeply humanitarian and places man at the centre of the development process.³⁹ This ideological plurality in Indian Environmentalism has helped to widen the sphere of the protests movement and sharpen the terms of the debate.

Thus, the contemporary period is characterized by the emergence of environmental movements or peoples' movement, which are attempting to redesign the pattern of development and the extent of natural resource utilization to ensure social equality and ecological sustainability.

Table : 1 Categories of the Environmental Movement by Issues and Example.

Sr. No.	Categories	Issues	Some Example
1.	Forests and Land-based	Right of access to forest the resources. Non commercial use of resources. Prevention of land degradation. Social justice/human rights	Chipko, Appico, Tribal Movements all over country. (for example Jharkhand, Bastar Belt).
2.	Marine resources and fisheries, aquaculture	Ban on trawling, preventing commercialization of shrimp and prawn culture. Protection of marine resources. Implementation of coastal zone regulations.	National Fishermen's Forum working for traditional fisherfolk in Kerala : Chilika Bachao Andolan, Orissa.
3.	Industrial pollution	Stricter pollution control measures, compensation. Prevention of reckless expansion of industries without considering design, locational factors and livelihood issues	Zahirli Gas Morcha in Bhopal; Ganga Mukti Andolan in Bihar; Movement against Harihar Polyfibre factory in Karnataka; Movement against pollution of Sone river by the Vidushak Karkhana Group in Shahdol district, MP; Movement against poisoning of Cheliyar river in Kerala by Kerala Shashtra Sahitya Parishad (KSSP).

(Contd.)

(Contd.)

Sr. No.	Categories	Issues	Some Example
4.	Development Project a. Dams and Irrigation projects	Protection of tropical forests. Ecological balance. Destructive development. Rehabilitation and resettlement of the displaced.	Silent Valley Movement by KSSP, Narmada Bachao Andolan : Movements against the Tehri Bandh Virodhi Samiti; The Koshi Gandhak Bodhigat and Bedthi, Bhopalpatnam and Ichampali in the West; The Tungbhadra, Malaprabha and Ghatpragha Schemes in the South; Koyna Project affected Committee.
	b. Power Projects	Ecological balance Rehabilitation and resettlement high costs.	Jan Andolan in Dabhol against Encon; Koel-Karo Jan Sanghatana in Bihar
	c. Mining	Depletion of natural resources, Land degradation, Ecological imbalance.	Anti-mine project in Doon Valley, Anti-Baousite mine movement (Balco project in Orissa.
	d. Industrial plants / Railway projects / Airport projects	Realignment, Rehabilitation and resettlement of the displaced. Ecological balance.	Protests and demands of Konkan Railway Realignment Action Committee. Citizen's groups against Dupont Nylon 6.6 Goa./Amravati Bachao Abhiyan against a large chemical complex.

(Contd.)

	e. Military bases	Ecological balance Rehabilitation and Resettlement, and safety.	Anit-missile test range in Balliapal and at Netrahat Bihar.
5.	Wild-life sanctuaries National Parks	Displacement, Rehabilitation and Resettlement, loss of livelihood.	Ekjoot in Bhimachankar region of Maharashtra. Sharmalk Mukti Andolan in Sanjay Gandhi National Park, Bombay.
6.	Tourism	Displacement, cultural changes, social ills.	Himachal Bachao Andolan, Bailancho Saad, Goa
7.	Advocacy groups / individual campaigns, citizen's Action Groups.	Policy inputs, Stricter measures for protected areas. Clear policy on national park and wild-life sanctuaries, lobbying, research, training and documentation on wild life, conservation education, community-based environmental management. Publications on environmental problems. Intellectual support to grassroots, movements on environmental issues.	Society for Clean Andolan, Baillachao Saad, Goa. Society for Clean Cities. Bombay Natural History Society (BNHS). Centre for Science and Environment (CSE), Delhi. Research training and documentation organizations, such as Bombay Environmental Action Group, Save Bombay Committee, Save Pune Citizen's Committee etc.

(Contd.)

(Contd.)

8.	Appropriate technology / organic farming	International debates, Sustainable development, friendly models of development. Low cost environmental friendly housing and technology.	Ralegaon Sidhi (Ann Hazare's village). SOPOECOMM. Laurie Baker's Housing experiments. People's Science Institute, Dehradun.
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Source: Janki Andharia and Chandan Sengupta, "The Environmental Movement: Global Issues and the Indian Reality". *The Indian Journal of Social Work*, TISS, vol. no. 59, Issue 1, January 1998, pp. 429-431

(This paper is a part of my unpublished M. Phil. Thesis, "New Social Movements and Democracy: A Study of Environmental Movements in Orissa", submitted to Jawaharlal Nehru University, New Delhi. I am very much grateful to my supervisor Prof. Valerian Rodrigues for his valuable guidance and critical comments at the various stages of this work. A word of thanks also goes to Prof. Sudha Pai, chairperson, Centre for Political Studies, School of Social Sciences, Jawaharlal Nehru University for her kind suggestions in the initial stages of this work.)

Notes

- 1 There is a growing body of literature available on people's resistance to environmental consequences and loss of subsistence natural resources in different region of India – see Anil Agarwal and others (1987); Anil Agarwal and Sunita Narain (1989); Madhav Gadgil and Ramachandra Guha (1992), (1995); Manoranjan Mohanty (1998); Gail Omvedt (1993); Niraja Gopal Jayal (2001) and Jayant Lele and Fahimul Quadir (2002)
- 2 The idea is not to discuss whether these contemporary movements can be called as new social movement or not. But it can be argued that since these movements are different from the earlier class-based movements that mobilized people along party lines, they reflect a distinct approach towards people's issues and herald the emergence of a new phase of collective action.
- 3 Janki Andharia and Chandan Sengupta, "The Environmental Movement: Global Issues and the Indian Reality", *The Indian Journal of Social Work*, TISS, vol. 59, issue, 1, January 1998, p. 439.
- 4 Christopher Rootes, "Environmental Movements: From the Local to the Global" in self (ed.), *Environmental Movements: Local, National and Global*, Frank Cass, London, 1999, pp. 1-11.
- 5 Ramachandra Guha, *Environmentalism: A Global History*, Oxford University Press, New Delhi, 2000, p. 80.
- 6 See Harsh Sethi, "Survival and Democracy: Ecological Struggles in India", in Poona Wignarja (ed.), *New Social Movements in the South: Empowering the People*, Vistar, New Delhi, 1993, pp. 122-147.
- 7 See Darryl D'Monte, "Green at the Grassroots" (Special issue on New Social Movements), *Seminar* 355, March 1989, pp. 16-21.
- 8 Ashok Swain "Democratic Consolidation? Environmental Movements in India", *Asian Survey*, Vol. XXXVII, no. 9, September 1997, p. 829.

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- 18 V. Ratna Reddy, "Environmental Movements in India: Some Reflections", *Journal of Indian School of Political Economy*, vol. x, October-December 1998, pp. 685-695.
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- 21 Subodh Wagle, "Environmental Movements in India: A Critique and A Note", *Journal of Indian School of Political Economy*, vol. XI, no. 1, January-March 1999, p. 111-12.
- 22 For more on the term 'Developmental State' see Nirja Gopal Jayal, *Democracy and the State: Welfare, Secularism and Development in Contemporary India*, Oxford University Press, New Delhi, 1999, p. 151.
- 23 Op. Cit., (Vandana Shiva), p. 17.

- 24 Madhav Gadgil and Ramachandra Guha "Ecological Conflict and Environmental Movements in India", *Development and Change*, vol. 25, no. 1, 1994, pp. 101-136.
- 25 Op. Cit., (Harsh Sethi), p. 132.
- 26 Op. Cit., (Janki Andharia and Chandan Sengupta), p. 427.
- 27 Table-1 shows eight broad types of Environmental Movements by issues and examples. For more details See, Madhav Gadgil and Ramachandra Guha, "Ecological Conflict and Environmental Movement in India" *Development and Change*, vol. 25, no.1, pp.101-136, 1994. Harsha Sethi, "Survival and Democracy: Ecological Struggle in India", in P. Wingaraja (ed.), *New Social Movement in the South: Empowering the people*, New Delhi: Visthar Publication, Janaki Andharia and Chandan Sengupta, "The Environmental Movement: Global issues and the Indian Reality", *The Indian Journal of Social Work*, TISC, vol. 59, issues, 1, January 1998, pp. 422-449.
- 28 Op Cit., (Harsh Sethi,), p. 129.
- 29 Op. Cit., (Madhav Gadgil and Ramchandra Guha), 1995, p. 150.
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- 31 Madav Gadgil and Ramchandra Guha, "Towards a Perspective on Environmental Movements in India", *The Indian Journal of Social Work*, TISS, vol. 59, Issue 1, January 1998, p. 455.
- 32 Mahesh Rangarajan, *Beyond State and Market: The Indian Environmental Debate*, Centre for Contemporary Studies, Nehru Memorial Museum and Library, Teen Murti House, New Delhi, p.3.
- 33 Madhav Gadgil and Ramachandra Guha, *This Fissured Land: An ecological history of India*, Oxford University Press, Delhi, 1992, p. 12.
- 34 Op Cit. (Mahesh Rangarajan), pp. 6-17.
- 35 Ibid. pp. 17-18.
- 36 Ibid., p. 19.
- 37 See Ramchandra Guha, "Ideological Trends in Indian Environmentalism", *Economic and Political Weekly*, 23: 49 (December 3, 1988), pp. 2578-81, Madhav Gadgil and Ramchandra Guha "Ecological Conflicts and the Environmental Move-

ments in India" *Development and Change*. Institute of Social Studies, Blackwell Publishers, vol. 25, 1994, pp. 101-136.

38 Op. Cit., (N. Patrick Peritore), pp. 804-18.

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Deregulations, Output Growth and Structural Change: A Comparative Study of West Bengal and Gujarat.

Panchanan Das

The object of this paper is to explore the impact of deregulations on output growth and structural change in West Bengal and Gujarat. A sharp contrast is clear in the growth and structural change between the states. There has been a strong mismatch between income share and employment share in agriculture, particularly in Gujarat. In terms of NSDP growth rate Gujarat is claimed as a high growing state, but its pace of growth is more volatile compared to West Bengal. This study observed that Gujarat had performed better than West Bengal in the period of the so called license raj. The damaging impact of the licensing policy of the Government of India on West Bengal manufacturing is clear in our findings. The growth experiences of the states during the period 1970-71 to 2000-01 do not reveal the well founded success of the reform measures. As observed in this study, the liberalisation of the nineteen nineties had hardly any significant perceptible impact on the growth performance of the primary sector in either state. The shape of reform measures in India since 1991 has been marked by a significant neglect of the agricultural sector. While West Bengal shows acceleration in the agricultural growth, that appears decelerating in Gujarat particularly in the second half of the 1990s

I. Introduction

The object of this paper is to explore the pace of growth and structural change in West Bengal and Gujarat in the IMF regime. We have concentrated on West Bengal and Gujarat because economic policies carried out by the distinct political parties in power at the states are dissimilar. The Left Front government in West Bengal had in fact opposed neo-liberal reforms of the kind introduced in the nineteen nineties and chose to adopt pro-labour measures. The government of Gujarat, on the other hand, had responded fast in implementing neo-liberal reforms in the line of the central government following the path of capitalist growth.

We make a comparative study of growth performance of the manufacturing sector in relation to the other sectors of these two states over the period 1970-71 to 2000-01. In comparing the growth performance prior to and following the economic reform, we consider the post-reform period to start in 1991-92. We divide the pre-reform period in two parts: the 'licence permit raj' ending in 1984-85 and the transitional phase starting thereafter – the phase of deregulation. Thus the analysis is carried out for three different policy regimes – the period of licensing (1970-71 to 1984-85), the period of deregulation (1985-86 to 1990-91) and the period of liberalisation (1991-92 to 2000-01).

A large number of studies have documented the growth pattern in both the pre- and post-reform periods at the national level or by taking all major states into account. Ahluwalia (2000) and Shetty (2003), for example, observed that a few number of states performed better in the post-reform period. Sanyal et al (1998) concentrated on the growth of agricultural output of West Bengal. Banerjee (1998) and Dasgupta (1998) addressed some of the issues of industrial development in West Bengal in the post-independence period. Hirway (1995) observed regional disparities in Gujarat and claimed that the nature of development in the state is biased in favour of developed regions and relatively better off sections of the population. Later on, Hirway and Terhal (2002) found several contradictions in the growth process of the state of Gujarat.

This paper is restricted to address the growth performance of the Net State Domestic Product (NSDP) along with its sectoral components and the structural change in output. Section II presents some methodological issues in measuring growth of real incomes originating from different sectors and the data used in this study. Section III analyses the results of our estimates of trends in NSDP and its per capita value for West Bengal and Gujarat for the period 1970-71 to 2000-01 and sub-periods specified above. Some contrasts in the structural change of output in these two states are shown in section IV.

II

Measuring growth and structural change

2.1 Trend estimation

We estimate trend growth of NSDP and its sectoral components by applying deterministic and stochastic trend models by using panel data framework. In estimating trend the most commonly used statistical procedure has been to postulate a hypothetical function which would adequately describe the series of output over time. The conventional procedure is to choose the function on *a priori* grounds, such as a theory or a hypothesis underlying the set of observations.

Let y_{it} be the natural logarithm of real value of a macroeconomic variable in cross section unit i at time period t , $t = 1970, 1971, \dots, 2000$ and $i = 1$ for West Bengal, $i = 2$ for Gujarat.

The popularly used regression model in measuring growth is of the form

$$Y_{it} = a_i + b_i t + u_{it} \quad (1)$$

Here, u_{it} is a stationary series with mean zero and variance $s_{u_{it}}^2$.

We have used the panel regression model applying generalised least squares (GLS), partly because such data provide rich environment for estimation techniques and better estimated values (Maddala, 1993, and Baltagi, 1995). In the fixed effect model, a_i to be state specific constant term. The component $b_i t$ is referred to as a deterministic trend and the GLS estimator of the coefficient b_i measures trend growth rate¹.

2.2 Structural Break

In this study 1985 and 1991 be the time of switching policy regime and, by conventional choice, they may be the possible break points. But in this study we allow break points to be unknown. Thus the conventional Chow test is not a right step. We use CUSUM² and CUSUM of squares tests on the residuals for testing structural break in mean and volatility of growth rates respectively although the power of the test is rather limited compared to the Chow test.

2.3 The Data

The principal source of data on State Domestic Product (SDP) is the State Economic Review for different years published by the state governments. But we face serious problems in analysing the growth pattern at the state level using the data from the State Statistical Departments mainly owing to some inconsistencies between such data sources for different states. The Central Statistical Organisation (CSO) makes an attempt to restructure the data in a standardised framework, which are comparable among different states. In this study we use SDP data provided by CSO and published by EPW Research Foundation in 2003. Although we have used SDP data compiled by CSO, the compilation is based on the primary data of production and prices collected by the concerned state statistical department. In some states, the quality of primary data is supposed to be very weak, partly because of poor statistical network and partly because of biases in data collection and dissemination. Such limitations have to be born in mind while measuring growth at the state level with SDP data.

There are four series of data on SDP for the base periods 1960-61, 1970-71, 1980-81

and latest 1993-94. Furthermore, the new series (1993-94) of SDP data are based on the system of national account (SNA) suggested by the United Nations in 1993. In this series not only the base year in terms of price is changed to 1993-94, but the product composition is revised as well in a number of sectors like real estate and finance. These series based on different base years are not comparable and therefore we face difficulties in measuring growth of output over a period of time covering more than one base year. A simple chain linking of the series may not give the correct picture of the economy measured for the past years. We make a consistent chain linked time series of SDP by extending the 1993-94 series backwards, i.e., by converting the old series to the series based on the new base year (1993-94) following the splicing method recommended by the CSO (CSO 2001). In the process of base shifting we change the reference period for the individual price and volume indices used from being equal to the old base year to being equal to the new base year. But the change of base year has an impact on the growth rates of SDP and, when constant price estimates are rebased, the growth rates observed for major aggregates will change from those, which were based on, earlier base year and previously published and that can be problematic. We have to put up with this problem in measuring growth by using the combined series.

III. Growth and structural break in real NSDP

Table 1 presents the trend growth rates of real output and per capita output of West Bengal and Gujarat over the decades and periods specified above. In West Bengal total output and its per capita value grow at the rate of 4.5 percent and 2.5 percent respectively over the period 1970-71 to 2000-01. Gujarat displays a slightly better picture registering the corresponding rates at 5.3 percent and 3.3 percent over the same period. On the basis of output growth rate Gujarat is claimed as a dynamic advanced state in India. But this may not be true in terms of the pace of growth over different regimes as well as over different sectors. We shall take care of this in the next section.

Curiously enough, in the period of the so called 'license raj', Gujarat performed better than West Bengal. The Left Front government in West Bengal in fact opposed neo-liberal reforms of the kind introduced in the nineteen nineties. But perhaps the removal of industrial licensing created a more liberal playing field for the states, so that West Bengal's industrial growth was considerably better in the 1990s than in the 1980s.

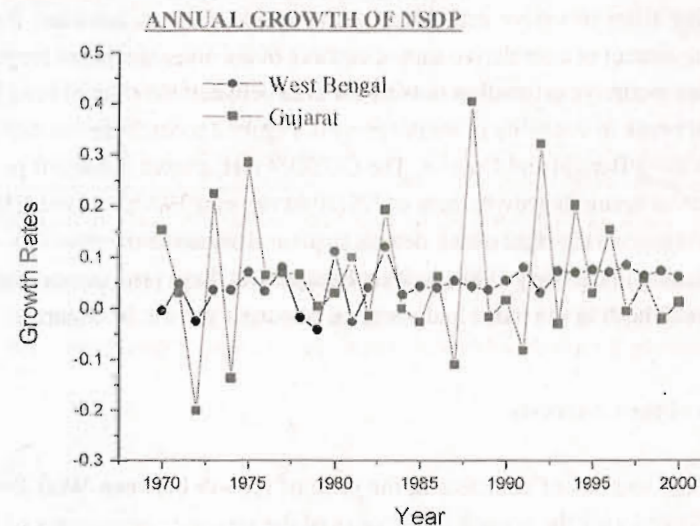
Table 1 Growth Rates of NSDP and Per Capita NSDP at Constant (1993- 94) Prices in West Bengal and Gujarat, 1970-71 to 2000-01³.

Period	NSDP		Per Capita NSDP	
	West Bengal	Gujarat	West Bengal	Gujarat
1970-71 to 1979-80	3.0	4.6	1.0**	2.1***
1980-81 to 1989-90	4.5	4.7	2.3	2.7
1970-71 to 1984-85	3.1	5.0	1.0	2.6
1985-86 to 1990-91	4.4	6.7*	2.0	4.9
1991-92 to 2000-01	6.7	6.6	5.1	4.9
1970-71 to 2000-01	4.5	5.3	2.5	3.3

Source: Domestic Product of States of India: 1960-61 to 2000-01, EPW Research Foundation, 2003, Mumbai.

Note: * Significant at 5% level, ** Significant at 10% level, *** Insignificant, The rest are significant at 1% level.

Figure 1 Volatility in output growth: West Bengal and Gujarat.



The fluctuations in NSDP in West Bengal and Gujarat in the last three decades of the past century are shown in Figure 1. The growth of NSDP in West Bengal follows a more or less steady path and there has been a rising trend from 3 percent in the 1970s to 4.5 percent in the 1980s and further to 6.7 percent in the 1990s (1991-92 to 2000-01). The per capita income has accelerated to around 5 percent in the post-reform period from 1 percent in the licensing regime.

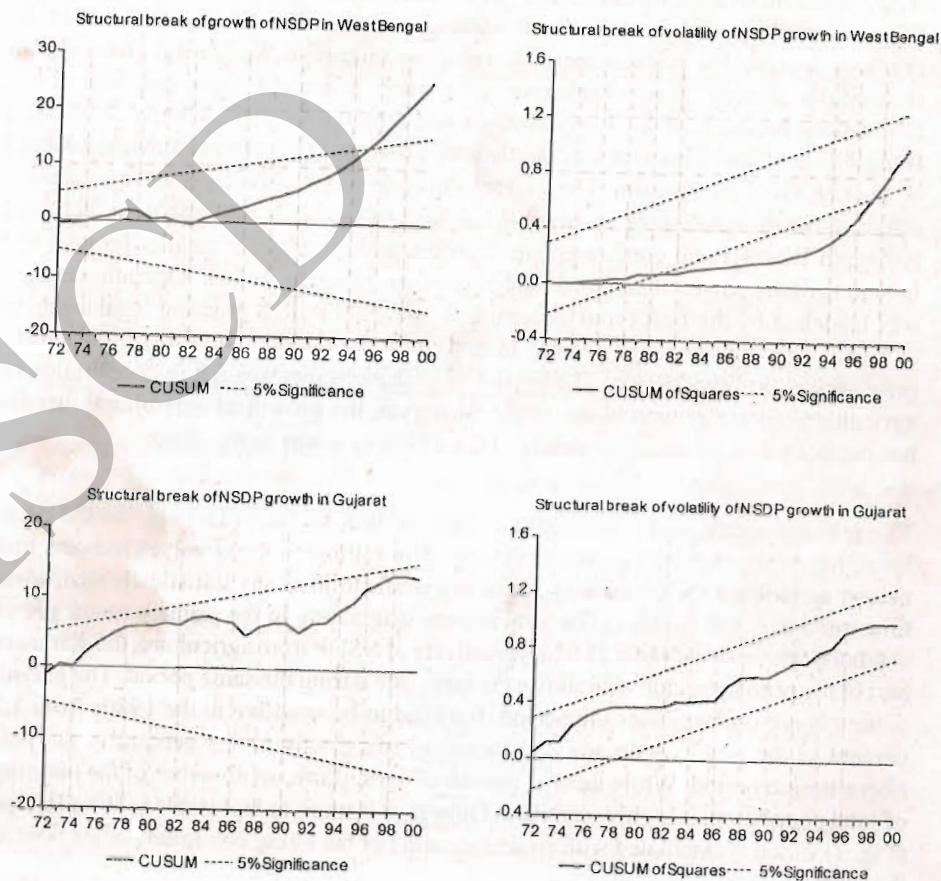
By contrast, the pace of growth in Gujarat is highly volatile throughout the period. During the 1970s the trend rate of growth was at around 4.6 percent for NSDP and 2.1 percent for its per capita value. The output growth remained at the same level in 1980s as for the previous decade, but the rate increased to 6.7 percent in the period of deregulation specified above in spite of a drastic fall of NSDP by 11 percent in 1987-88, a drought year. Although the growth of total output jumped by 2 percent in the 1990s compared to the earlier decades, the rate shows no improvement in the post liberalisation period compared to the period of deregulation. Even, the state economy has registered a marked deceleration in output growth since the mid-1990s.

We perform a CUSUM and CUSUM of squares test on the residuals. Structural break in the mean growth rates is indicated if the cumulative sum of the one-step ahead forecast error resulting from recursive estimation goes outside the area between the critical lines. The movement of cumulative sum of squares of the one-step ahead forecast error resulting from recursive estimation outside the area between the critical lines indicates the structural break in volatility of output growth. Figure 2 plots these two test statistics for NSDP in West Bengal and Gujarat. The CUSUM test, shown in the left panel, does reveal structural break in growth rates of NSDP in the mid 1990s and the CUSUM of squares test, shown in the right panel, detects structural breaks in the volatility of output growth beginning in the early 1980s in West Bengal. But these tests do not disclose any structural break both in the mean and variance of output growth in Gujarat.

IV. Sources of the Contrasts

We analyse the sources of contrasts in the pace of growth between West Bengal and Gujarat by considering the growth trajectories of the sectoral components of NSDP at constant (1993-94) prices.

Figure 2 Real NSDP: Structural break



4.1 Primary Sector

It appears from Table 2 that West Bengal experienced a big jump from 2.6 percent to 6.3 percent compound growth of agricultural income in the 1980s compared to the previous decade. The primary sector and also agriculture in West Bengal have shown statistically significant and high rates of growth at around 5 percent with minor fluctuations between 1970-71 and 2000-01 and it marks the end of 'impasse' in West Bengal agriculture. This is at least partly attributable to land reform measures adopted by the Left Front government. The land reform measures seem to have had a noticeable effect on the distribution of operational holdings of land in West Bengal. In fact, land reform in West Bengal confers greater freedom and security for smaller farmers and lessening of the power of landlords and big farmers (Bagchi, 1998). 'Operation Barga' was launched by the Left Front government in October 1978 granting legal rights to cultivate land was supposed a major incentive for the marginal and small peasants to raise agricultural production. The impact of such measures was felt in acceleration of agricultural output growth in the 1980s. However, the growth of agricultural income has not been as spectacular or steady in the 1990s as it was in the 1980s.

The primary sector, and particularly the agricultural sector in Gujarat, on the other hand, has been stagnant or even declining. The estimated trend values indicate that neither agriculture nor the primary sector as a whole follows any statistically significant time trend over the decades. The total income originating in the primary sector grows at around two percent (Table 2). The growth rate of NSDP from agriculture, the dominant part of the primary sector, also shows the same rate during the same period. The growth pattern is not uniform over the period. It turned to be negative in the 1980s from 3.2 percent in the previous decade and increased marginally to 1.6 percent in the post liberalisation period. While income growth of agriculture, an absorber of the majority of total population, is highly volatile in Gujarat, it is more or less stable in West Bengal (Fig. 3) which is associated with an amelioration of the living conditions of the poor in the state.

The fluctuations in crop productivity are induced mainly by variations in rainfall. The Gujarat landscape shows considerable heterogeneity in agro-climatic conditions. The land is predominantly characterized by semi-arid conditions with a large proportion of area facing frequent drought. The southern districts of the state covering 3.0 per cent of the net sown area generally receive high rainfall, central districts with 31.0 per cent of net sown area receive medium and northern districts covering 66.0 per cent of net sown area receive scanty and irregular rainfall. All the problems of agriculture in Gujarat cannot be blamed on nature. Public investment on irrigation shows a declining trend from the sixth plan period (Bagchi et al, 2005). No major change is observed in agrarian

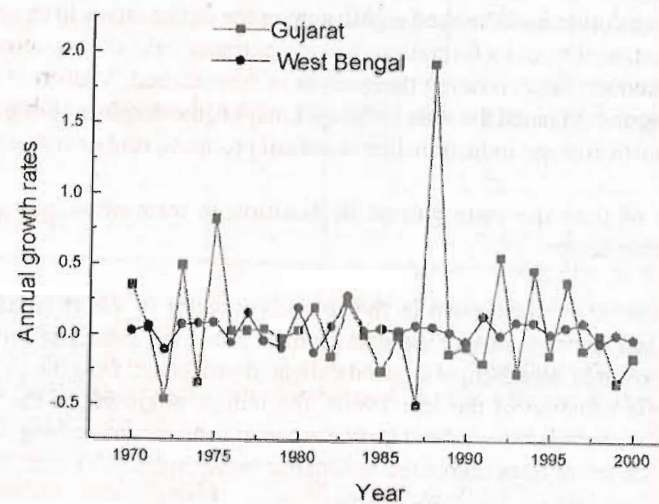
Table 2 : Growth Rates of NSDP from Primary Sector at Constant (1993-94) Prices in Gujarat and West Bengal, 1970-71 to 2000-01.

	Primary Sector		Agriculture	
	West Bengal	Gujarat	West Bengal	Gujarat
1970-71 to 1979-80	2.27	2.99***	2.64	3.22***
1980-81 to 1989-90	5.77	-0.42***	6.29	-0.67***
1970-71 to 1984-85	2.61	3.95	3.34	4.33
1985-86 to 1990-91	3.6*	7.65***	3.56***	8.06***
1991-92 to 2000-01	3.82	1.08***	3.94	1.14***
1970-71 to 2000-01	4.64	2.24	5.12	2.25

Source: As for Table 2

Note: * Significant at 5% level, **Significant at 10% level, ***Insignificant. The rest are significant at 1% level.

Fig. 3 NSDP from Agriculture: Annual Growth Rates



structure in terms of land relations between the various classes or castes in rural society, and between the regions in Gujarat. The Tenancy Act in Gujarat is, in fact, not pro-cultivators (Shah and Rutten 2002). It was believed that agriculture had benefited from economic reforms, at least indirectly, through the improvement in terms of trade. But, as observed in this study, the deregulation of the nineteen nineties had hardly any significant perceptible impact on the growth performance of the primary sector in either state. The shape of reform measures in India since 1991 has been marked by a significant neglect of the agricultural sector. Very little has actually been done for raising output growth in agriculture within the liberalisation framework, rather some attempts have been made that crowded out income originating from this sector. Badly designed cut in fertiliser subsidies not only caused for a fall in total fertiliser use but a marked worsening of the NPK ratio as well because of price imbalances. The financial sector reform drastically reduces the quantum of directed credit to agriculture. Public sector capital formation in the form of central government spending, both plan and non-plan expenditure, for agriculture, irrigation and rural development has been declining dramatically during the period of liberalisation.

4.2 The Secondary Sector

West Bengal was the second most industrialised of the major states in terms of value added and was at the top in terms of number of factories and employment even in the mid-1960s in spite of its rapid slow-down from the very beginning of independence. Thereafter West Bengal started to lose its industrial primacy: with a drastic fall in public investment, the rate of industrial growth in West Bengal not only fell further, but the state had to suffer a process of deindustrialisation as well (Bagchi 1998).

Gujarat, on the other hand, ranked eighth among the Indian states in terms of industrial production at the time of its formation as a separate state in 1960. Mainly cotton textiles and food products concentrating themselves in Ahmedabad, Vadodara, Surat, Rajkot and Bhavnagar dominated the state industry. Later on, the dominance of these industries declined drastically and industries like chemical products, rubber and plastic products, basic metal industries started to capture the industrial base of Gujarat. Within a very short span of time the state gained its position in term of output growth of the manufacturing sector.

Table 3 presents output growth in the secondary sector in West Bengal and Gujarat during the last three decades of the past century. While the industrial situation in terms of output growth in West Bengal showed a slight improvement from the 1970s, compared to its chaotic situation of the late 1960s, the industrial growth of the state was still sluggish. The secondary sector and its major constituent, manufacturing, in West Bengal grew at much lower rates compared to Gujarat between 1970-71 and 2000-01.

The damaging impact of the 'licence-permit' raj on industrial output growth in West Bengal is clear from the third row of Table 3. The state got not only a disproportionately small share of industrial licences but the number of industrial licences received by the state declined rapidly as well during this period. The number of licences received by West Bengal was lower than that received by Gujarat for most of the years during the whole licensing regime. Gujarat in some ways performed better in industrial growth during the licence-permit regime.

Economic liberalisation of the nineteen nineties had some positive impact on the growth performance of the manufacturing sector in West Bengal, but it had hardly any significant perceptible effect on the growth performance of this sector in Gujarat. While the manufacturing sector in Gujarat displayed higher output growth compared to West Bengal throughout the period, this higher growth was accompanied by high volatility (Fig. 4).

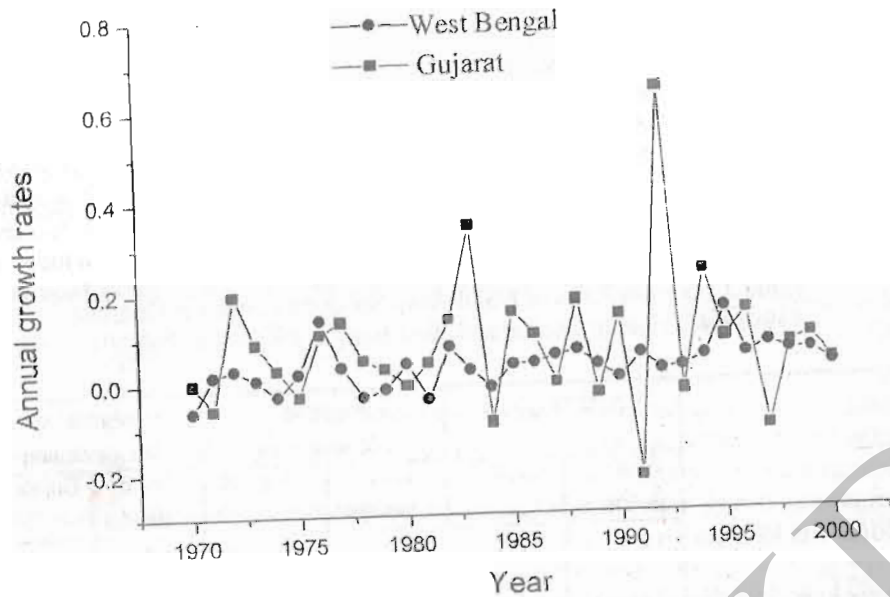
Table 3 : Growth Rates of NSDP from Secondary Sector at Constant (1993-94) Prices in Gujarat and West Bengal, 1970-71 to 2000-01.

	Secondary Sector		Registered Manufacturing		Unregistered Manufacturing	
	West Bengal	Gujarat	West Bengal	Gujarat	West Bengal	Gujarat
1970-71 to 1979-80	1.8	5.9	2.1	6.7	2.3	3.9
1980-81 to 1989-90	1.7	7.1	2.2	8.9	3.7	7.1
1970-71 to 1984-85	1.2	4.6	1.5	6.7	2.1	4.8
1985-86 to 1990-91	3.5	5.7*	3.4	6.4	4.2**	5.9*
1991-92 to 2000-01	5.2	7.8	5.5	8	6.3	9
1970-71 to 2000-01	2.5	6.1	2.6	7.5	3.6	6.6

Source: As for Table 2

Note: * Significant at 5 percent level, ** insignificant, the rest are significant at 1 percent level.

Fig. 4 NSDP from Manufacturing: Annual Growth Rates



The growth of industrial output is used by the advocates of economic reform of the 1990s as the major indicator of success of economic reforms. By looking at the growth experience of Gujarat and West Bengal we cannot reach a firm conclusion about the success of the reform measures. While West Bengal shows acceleration in the industrial growth, it appears decelerating in Gujarat particularly in the second half of the 1990s. In the post-reform period the trend growth of output in manufacturing, both registered and unregistered, in West Bengal is above the rate recorded in the immediately preceding decade but in Gujarat the rate has declined, particularly for registered manufacturing. Again, Figure 4 reveals that the growth trajectory of this sector is rather volatile in the course of liberalisation, especially in Gujarat.

4.3 The Tertiary Sector

The growth of the tertiary sector has been the subject of much discussion in recent years. Table 4 shows the trend growth rates of different services in Gujarat and West Bengal. In Gujarat the secondary sector had taken the lead in the growth process before liberalisation. But the tertiary sector starts to grow slightly faster than the secondary sector during the post liberalisation period. Among the service sectors, income from 'banking and insurance' recorded the highest growth of 10.3 percent followed by 'transport, storage and communication' showing 8.6 percent growth rate over the whole period. These two sub-sectors in the state had registered a dramatic rise in trend growth rates in the 1980s but a marked fall in the post reform period. The banking sector showed a miracle performance during the period of deregulation. What is more concerning, within services, is the public administration. The growth rate of income from services in public administration showed a steady rise throughout and a jump in the post-reform period in spite of different constraints in government expenditure due to economic reforms.

By contrast, income from the services sector in West Bengal grow faster than from the secondary sector throughout the period as well as the sub periods. Banking services and transports in West Bengal led the growth performance of the tertiary sector. 'Banking and insurance' exhibited the best performance registering a dramatic trend rate at 16.4 percent per annum, nearly double the rate recorded in Gujarat during the post-reform period. Unlike Gujarat, all the sub-sectors in West Bengal grow at a rapid rate in the post-reform period compared to the previous decades. Real estate and business services sector in the state has also performed significantly better in the last decade of the past century.

Table 4 : Growth Rates of NSDP from Services Sector at Constant (1993-94) Prices in Gujarat and West Bengal, 1970-71 to 2000-01.

	Services Sector		Transport, Storage and communication		Banking and insurance	
	West Bengal	Gujarat	West Bengal	Gujarat	West Bengal	Gujarat
1970-71 to 1979-80	3.9	4.9	4	7.3	5*	8.5
1980-81 to 1989-90	4.6	6.7	5.4	13.4	6.5	13.1
1970-71 to 1984-85	4.3	5.2	4.2	9	6.1	6.8

(Contd.)

(Contd.)

1985-86 to 1990-91	4.7	5.9*	9.1***	4***	4**	18.6
1991-92 to 2000-01	9.1	8.1	7.3	11.7	16.4	8.3
1970-71 to 2000-01	5.5	6.1	6.5	8.6	8.2	10.3

Source: As for Table 2

Note:

* Significant at 5 percent level

** Significant at 10 percent level

*** Insignificant

Rests are significant at 1 percent level

4.4 Changes in sectoral composition of incomes

Table 5 presents the data on the shares of the broad industry groups in the state domestic product during the past few decades in Gujarat and West Bengal. There is a sharp contrast in the structural change between these two states. The primary sector, in particular agriculture, was dominating in terms of relative contribution to total output in Gujarat compared to West Bengal in the licensing regime and then it declined sharply. The share of the primary sector in West Bengal, on the other hand, showed more or less no change in between 1970-71 and 1990-91, and then declined too slowly. What is surprising is that income from agriculture in West Bengal displayed rising trend in its share, although marginally, in between 1970-71 and 1990-91, contrasting to the normal feature of the growth process. In common with the experience of the other states of India, the percentage of people employed in agriculture in both these states declined much more slowly than the income generated by it. Agriculture still continued to be the major source of employment in spite of a sharp fall in its relative contribution to total output, indicating a strong mismatch between them, particularly in Gujarat.

Table 5 Gujarat and West Bengal: Sectoral composition of NSDP, 1970-71 to 2000-01.

	Gujarat				West Bengal			
	1970-	1980-	1990-	2000-	1970-	1980-	1990-	2000-
Primary Sector	49.0	40.8	29.2	15.0	33.3	32.7	32.8	26.3
of which								
Agriculture	45.2	38.1	26.7	13.4	26.8	27.4	28.1	22.9
Forestry and Logging	3.5	1.9	1.0	0.7	3.4	1.9	1.1	0.6
Fishing	0.8	1.2	1.6	0.9	3.7	3.6	3.7	2.8
Secondary Sector	24.7	27.7	33.3	38.1	33.6	29.8	24.8	21.2
of which								
Mining and Quarrying	7.2	5.5	4.2	2.2	8.0	6.1	2.5	0.9
Manufacturing	13.2	16.3	23.9	28.7	21.1	19.2	16.8	14.9
Registered	8.3	10.6	16.1	17.9	10.8	9.8	8.4	6.8
Unregistered	5.3	5.8	7.7	10.9	9.9	9.2	8.2	8.1
Construction	4.3	5.5	4.0	4.9	4.0	4.0	4.6	4.4
Electricity, Gas and Water Supply	0.4	0.8	1.4	2.3	0.7	0.6	0.9	1.0
Tertiary Sector	26.4	31.5	37.5	46.9	33.1	37.5	42.4	52.5
of which								
Transport, Storage and Communication	2.4	3.5	4.9	8.2	3.7	3.7	5.8	6.5
Trade, Hotels and Restaurants	9.9	11.7	12.9	13.8	12.6	11.7	11.7	13.7
Banking and insurance	1.8	2.6	5.6	8.5	3.5	4.5	5.7	13.2
Real Estate, Ownership of Dwellings and Business services	7.9	7.9	6.5	4.8	5.9	6.9	6.1	6.9
Public administration	2.2	2.9	3.0	4.1	3.1	3.7	5.7	5.7
Other Services	5.2	5.2	5.6	7.5	6.3	8.5	7.8	6.5

Source: As for Table 2

The contrast is opposite, as observed in agriculture, between Gujarat and West Bengal in the structural change in the secondary sector, and particularly in the manufacturing sector. In terms of output share total manufacturing was less dominant in the former state compared to the latter till the early 1980s. But the share of the net output of the manufacturing sector in Gujarat has increased from 13.2 per cent in 1970-71 to 28.7 per cent in 2000-01. The output of the unregistered manufacturing sector grew faster during the period of liberalization than the earlier decade. The share of the manufacturing in West Bengal, on the other hand, shows a steady declining trend from around 21 percent to 15 percent and at a higher rate for the registered manufacturing over the period.

The disaggregated figures of state income indicate that the structural change of the tertiary sector in NSDP in between these two states follows, more or less, similar pattern throughout the period. The income share of services in Gujarat was 46.9 per cent in 2000-01 as against 26.4 per cent in 1970-71, 31.5 per cent in 1980-81 and 37.4 per cent in 1990-91. The contribution of this sector to total income in West Bengal registered at more than 50 percent in 2000-01 through a rising trend from around 33 percent in 1970-71. The share of banking and insurance displays probably the fastest growth among all the major sub-sectors and faster in West Bengal than Gujarat, particularly in the post-reform period. The group of 'trade, hotels and restaurants' within the tertiary sector has been dominating throughout the period in terms of percentage contribution to total income in both the states.

V. Conclusion

By looking at the growth experience of West Bengal and Gujarat we cannot reach a firm conclusion about the success of the reform measures. The reform measures have had no perceptible impact on crop productivity. While West Bengal shows better in industrial growth, the output growth of the manufacturing sector in Gujarat is decelerating in the second half of the 1990s.

We have observed a sharp contrast in the pace of growth and structural changes between West Bengal and Gujarat. While the SDP growth in West Bengal is stable to some extent, it is highly volatile in Gujarat. Also the growth performance of West Bengal is no worse than that of Gujarat during the post-reform period although the latter performed much better in the period of licensing. The growth trajectory of the manufacturing industry has been significantly different from that of the primary sector in between these two states throughout the period.

The West Bengal economy is sustained at least partly by agriculture, where majority of the rural people is engaged for their livelihood, in output growth. A significant jump of output growth in the 1980s had marked the end of the 'impasse' in West Bengal

agriculture. This is at least partly attributable to land reform measures adopted by the Left Front government. Land ceilings were enforced, vested land was redistributed among the landless and marginal farmers, and the rights of sharecroppers were secured through 'Operation Barga'. This measure of defining property rights in a more meaningful manner narrowed the gap between ownership and actual operation, and widened the access of the small cultivators to technology and other inputs including institutional credit.

The economic growth of Gujarat, on the other hand, is sustained by the secondary and tertiary sectors and apparently this growth has had no positive impact on the primary sector. The growth experience documented in this paper highlights a peculiar disarticulation between the primary sector and the secondary sector in the post-reform period, particularly in Gujarat.

Notes

¹ For linear trend, the coefficient, b , simply denotes a constant absolute increment in y per unit of time, while for semi-log trend, the coefficient measures exponential growth. The compound growth rate can be estimated by taking antilog of the regression coefficient of the log-linear trend model and subtracting 1 from it.

² The CUSUM test does not require a prior specification of when the structural change takes place (Brown, Durbin and Evans, 1975).

³ Growth rates are reported from GLS estimation of fixed effect model of panel regression.

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Dynamics of Population, Forest and Development: A Linkage in the Northeast

Mohua Guha and Aparajita Chattopadhyay

Rapid population growth leads to shrinkage of forest cover, which adversely affects the process of development in the long run. From the environmental perspective, northeast being a vulnerable zone should be environmentally protected keeping pace with the developmental indicators as well as population growth. The present paper tries to study the linkages between developmental parameters, population dynamics and forestry in the northeast India. The data have been gleaned from multiple sources in view of the array of different parameters used for the study. Natural increase as well as the influx of people from bordering countries has remarkably altered the demographic characteristics of this region. Mizoram, with the highest Infrastructure Index value of 82.13 and a value of 0.548 in terms of Human Development Index (HDI) is the best placed state among the seven sisters. On the other hand, Arunachal Pradesh is a poor performing state both in the context of regional perspective and national performance. Since the economy of some of the states in the region is still forest based, the pressure on forest resources is increasing. Assam, Manipur, Meghalaya, Mizoram and Nagaland show a decreasing trend in total forest cover. Categorically, it can be stated that the benefits of planned development in the region have been offset by rapid population growth in many of the states and only a marginal part of the development contributes towards improving the existing indices of development.

Introduction

The states of northeast India, known as the seven sisters, comprise of the seven contiguous states of Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland and Tripura, which form the eastern frontier of India¹. The geography of the northeastern region has favoured the retention of local identity accompanied by a distinct physical entity and a significant cultural diversity. It is a distinct geographical unit connected with the rest of the country through a narrow land corridor denoting a strategic location in terms of the international border that it shares with Bhutan, China, Myanmar, Tibet and Bangladesh. Tribals form the majority in most of these states. The other important features which distinguish these states from many other states of the country are the difficult terrain and mountainous periphery, inaccessible areas, inadequate infrastructure (like roads and rails), low density of population (except in Assam and Tripura) and socio-economic backwardness. But recently, the increasing population pressure in the region has resulted in the shrinkage of forest cover, which has started to impinge on the process the development. State wise variation in terms of development has created regional heterogeneity.

The economy of the northeastern region is mostly rural-area based and dominated by tea, oil and timber and have large inaccessible areas with sparse population and inadequate infrastructure. Industries do not have significant impact on the economic growth of the region. In spite of sufficient financial allocation, the pace of development has not been satisfactory. Moreover, resource and development have not fallen in line. Added to this problem is the pressure of population, which has nullified economic development. The major causes of economic imbalances are due to increasing demand for forest resources to meet the basic necessities of food, fuel and fodder.

From the environmental perspective, northeast being a vulnerable zone should be environmentally protected keeping pace with the developmental indicators as well as population growth. Hence, there is a need for studying the linkages between developmental parameters, population dynamics and forestry in the northeastern region. The growth in population beyond the optimal size associated with socio-political development and technical revolution results in increased pressure on natural environment as well as on the process of economic development. The change in the total environment stimulates a new pattern of population dynamics that moves in its own cycle to alter the intervening factors of the developmental process. Therefore, uniform velocity in the same direction in all the sub-systems is a necessity to prevent disorderliness or malfunctioning of the whole system and to achieve the ultimate goal of sustainable development. Hence, this paper is a humble attempt to understand the growth of population in the northeast and its relation with forest and overall development not in sheer statistical terms but to explore the empirical association through our understanding.

Need for the study

The planning process that the country has been following focuses on the needs to bring parity in regional development. The development of the northeastern states, at par with any other developed states of the country, therefore, is a prime requirement. The region, accordingly, has been occupying an important place in India's efforts for socio-economic development. The states, because of their backwardness and strategic location in border areas combined with sparse population and high concentration of tribes, already enjoy 'Special Category Status' for favorable financial dispensation from the Government of India in the form of grants and loans. It is argued that a high growth of population gives rise to a situation where natural resources are under increasing pressure, threatening public health and development. Water shortages, soil exhaustion, loss of forests, air and water pollution and degradation of environment afflict many areas and northeast is not an exception. As the population grows, improving living standards without destroying the environment therefore becomes a global challenge. It is against this background, the paper intends to provide an explanation of the emerged linkages among the three

components – population, forest cover and development.

Objectives

Keeping these above facts in view, we have tried to understand the dynamics of demographics, forest cover and comprehensive development of northeast India with some specific objectives as follows:

- To understand the population dynamics, change in the forest cover and some developmental indicators over time in the Northeast.
- To explain the heterogeneity of socio-economic, environmental and health indicators across states.
- To study the linkages between forest, demographics and the developmental indicators.

Methodology

Proportions, rates, coefficient of variation and correlation have been calculated to bring out the relationship between all the selected indicators. Coefficient of variation has been calculated to measure the disparity in certain socio-economic, environmental and health indicators across the seven states in the northeast. Rank correlation was carried out to understand the linkage between the three components – population, forest cover and development.

Conceptual framework

Population parameters are intricately interlinked with forest area and developmental indicators. Human civilization started with cleaning forests. But excessive pressure on environment to fulfill human needs sometimes have negative outcome on human development. Northeast is a hilly and vulnerable zone, which needs adequate forest cover to protect its bio-diversity and environmental stability. However, recent industrial and infrastructural development coupled with population growth has started to clean the greenery with wide interstate variation. It is necessary to welcome the economic growth of a region for its prosperity, but at the same time, it is essential to protect the environmental sustainability for sheer human survival. Excessive exploitation of environment slows down the pace of development. Population characteristics, its growth and size affect development and also the quality and spread of forest cover. Again developmental parameters determine forest cover as with infrastructural development like rail, road, health facilities, factories, markets and city centres, forest

cover shrinks if due care is not taken. All these factors i.e., population characteristics, forest and developmental indices altogether control and modify environment and if environmental stability gets disturbed, it ultimately hinders development.

Sources of Data

The data for the present study have been gleaned from multiple sources in view of the array of different parameters involved to assess population change, forest cover and the developmental process. The different sources are Statistical Abstract, India, 2001; Census of India, 2001; Population of India, 2001; Basic Statistics of Northeastern region, NEC, Shillong, 1999, State of Forest Report, 1999; Compendium of Environment Statistics, 2000; Profiles of Districts, CMIE, October 2000; Eleventh Finance Commission Report, 2000 and Human Development Report 2001, Planning Commission (GOI, New Delhi)².

Results and discussion: Dynamics of Population

Northeast India supports a population of 37.40 million (Census of India, 2001), which is around four percent of the country's total population, with Assam accounting for

Table 1
Trend of population (1951-2001) in the northeastern region, India

States	Population (in lakhs)						Growth times over 1951-2001
	1951	1961	1971	1981	1991	2001	
Arunachal Pradesh ⁽¹⁾	NA	3.37	4.68	6.32	8.65	10.91	3.24**
Assam	80.29	108.37	146.25	180.41	224.14	266.38	3.32
Manipur	5.77	7.80	10.73	14.21	18.37	23.89	4.14
Meghalaya	6.06	7.69	10.12	13.36	17.75	23.06	3.81
Mizoram	1.96	2.66	3.32	4.94	6.90	8.91	4.55
Nagaland	2.12	3.69	5.16	7.75	12.10	19.88	9.38
Tripura	6.39	11.42	15.56	20.53	27.57	31.91	4.99

(Contd.)

(Contd.)

N.E. Region	102.59	145.0	195.82	247.52	315.48	374.03	3.65
India	3610.88	4392.35	5481.60	6833.29	8463.03	10270.15	2.84

Source: Statistical Abstract, India, 2001, Directorate of Economics and Statistics (GOI), New Delhi.

(1) Censured for the first time in 1961.

* Provisional Population Totals, Census of India, 2001.

** Growth times over 1961-2001

70 percent (26.6 million) of the total share of the region. Population dynamics in the northeast, as in the other societies and regions, have two basic components: dynamics through natural process and dynamics through induced process. Individual state-focused researches testify the statement that the case of northeast is also not an exception in this regard (Panda, 1988; Rai and Goel, 1984). As regards to the natural growth rate of population during the period of 1951-2001, all the states in the region have registered higher growth rate than the rate for the whole country (Butola, undated). The same trend stands irreversed for the period 1991-2001. Table 1 lends a microscopic view into the trend of population growth over the period 1951 to 2001. Nagaland with a nine fold increase in its population growth, records the highest growth rate among all the northeastern states. Tripura, Mizoram and Manipur also exhibits a four fold increase, depicting a higher rate of growth compared with the rest of the states like Arunachal Pradesh, Assam and Meghalaya. Each and every state has registered an increase in population growth which may be attributed to both natural and induced processes.

Table 2 : Population growth and density in the northeastern region, India

States	Growth rate (percentage)						Density (per sq.km.)			
	Decadal			Average annual exponential			1971	1981	1991	2001
	1971-81	1981-91	1991-2001	1971-81	1981-91	1991-2001				
Arunachal Pradesh	35.15	36.83	26.21	3.01	3.14	2.33	6	8	10	13
Assam	23.36	24.24	18.85	2.1	2.17	1.73	150	230	286	340
Manipur	32.46	29.29	30.02	2.81	2.57	2.63	48	64	82	107
Meghalaya	32.04	32.86	29.94	2.78	2.84	2.62	45	60	79	103

(Contd.)

(Contd.)

Mizoram	48.55	39.7	29.18	3.96	3.34	2.56	16	23	33	42
Nagaland	50.05	56.08	64.41	4.06	4.45	4.97	31	47	73	120
Tripura	31.92	34.3	15.74	2.77	2.95	1.46	149	196	263	304
NE Region	26.4	27.46	22.02	3.17	2.43	1.99	77	104	123	147
India	24.66	23.42	21.77	2.20	2.10	1.97	177	216	267	324

Source: Population of India, 2001

Majority of the northeastern states have registered higher growth rate of population during the period 1981-1991, as compared to the preceding decades. Though the states are exhibiting a declining trend for the period 1991-2001, but still the rates are much higher than the national annual growth rate (1.97) with spectacular decline in Assam (1.73) and Tripura (1.46). One striking demographic feature may be mentioned here: the state with the highest growth rate in the country (Nagaland) and the state with the lowest growth rate (Tripura) belong to this region. The unprecedented growth of population in Nagaland cannot be explained except as a result of immigration. It is alleged that with the spread of wet-rice cultivation, the Nagas who are not adept in wet-rice farming technology, inducted skilled migrant labour, particularly from Bangladesh, but now feel alarmed about the shift in the demographic pattern (Roy Burman, 2003). Therefore, it is imperative to give special emphasis on this aspect of population dynamics.

In case of decadal growth rate (table 2), a declining trend can be observed over the decades 1981-1991 and 1991-2001. The population growth (1991-2001) in some states has been above the national average of 21.77, except in Tripura (15.7 percent) and Assam (18.9 percent). The decadal growth of population in Nagaland (64.4 percent) is the highest in the country. The population density (table 2) of the region has gone up from 123 to 147 persons per sq km during the period 1991-2001 whereas it was only 104 in 1981. In Arunachal Pradesh, the density of population has increased to 13 per sq km accounting for a 30 percent increase compared to 1991. This unparalleled increase in the population creates imbalance in the carrying capacity of land and thereby representing a high man-land ratio.

Table: 3 Population characteristics of the northeast India, 2001

States	Population (in lakhs)	Geographical are (lakh hectares)	Sex ratio (females per 1000 males)	% of ST propulation*	Population density (sq.km)
Arunachal Pradesh	10.91	83.58	901	63.66	13
Assam	266.38	38.52	932	12.82	340
Manipur	23.89	22.36	978	34.41	107
Meghalaya	23.06	22.49	975	85.53	103
Mizoram	8.91	21.09	938	94.75	42
Nagaland	19.88	16.53	909	87.70	120
Tripura	31.91	10.48	950	30.95	304

Source: Population of India, 2001

* Data from Census of India, 1991

Included among the contributing factors for such high natural growth rate of population in the northeastern region are minority status of tribal communities³, poor performance of family planning programmes⁴ and other socio-cultural factors, like the distinct social and cultural milieu of each tribal community. The region has also received large influx of refugees from bordering states due to increased tempo of developmental activities under the five-year plans and extension and strengthening of the administrative machinery in different parts of the region (Ganguly, 1983). Despite several and repeated agitation against migration, the immigration of people from the bordering countries is still taking place. While in Nagaland, Manipur and Mizoram there has been an influx of concerned tribes from Myanmar in the wake of the confrontation of the democratic movement with the military junta, in Tripura and Meghalaya migration of counterparts from Bangladesh have influenced the population statistics (Roy Burman, 2003). Thus both natural and induced means have remarkably contributed to alter the demographic characteristics of the region.

Looking at this demographic trend, it is imperative to raise a question whether the other sub-systems like the environmental quality and the developmental parameters have taken care of these factors of change related to population size, distribution and density with a view to improving or at least retaining the quality of life in the region.

Population dynamics and environment with special emphasis on forest

Many analysts blame the environmental crisis on poverty-population growth linkages (Buch, 1992). They maintain that explosive population pressure is responsible for environmental degradation. A high growth rate of population puts a pressure on the availability of resources, which in turn affects the per capita availability of Gross State Domestic Product (GSDP). In case of northeast India especially where the economy is mostly rural-area based with large inaccessible areas, sparse population and inadequate infrastructure, the situation is even worse. Seventy percent of the area being hilly, it is felt that much of the deterioration is due to indiscriminate felling of trees, shifting cultivation and mining. Thus, the environmental challenges that the region is facing today are greater than at any other time in the history of northeast India. Due to increased human activities and massive utilization of natural resources, the climate and ecology of the region have also been affected. The daily struggle of the rural poor to obtain the basic necessities of life is taking a heavy toll on the natural resources especially on the forests upon which depends their very survival. Even more importantly, the multiplication in the number of heads results in high man-land ratio, which in turn is responsible for bringing the already scarce resources under strain.

Life in the hills is hard, especially for the women, given that they bear the major part of the work load of the family. The huge time and effort involved in the critical activities of collecting water, fodder and fuel wood and the viability and productivity of hill agriculture are directly linked to the status of local natural resources like forests. Ill-conceived, lopsided policies and projects, locally driven by contractors push it towards the impossible, by degrading or destroying the natural resources on which people are directly dependent. This is the crux of the problem in the northeast too. The larger context, however, is the ability of a society to recognize the dangers that lie ahead and respond in a pro-active manner. There are, however, much larger issues involved, with the forests signifying only the proverbial tip of the iceberg. Large scale felling of trees took place in the area mainly because of greater demand for food from the agricultural sector. Trees were also cut for timber, fuel wood etc. Another major factor responsible for the loss of forest cover in the area was the sudden increase in the number of people inhabiting the area and the livestock they maintain. On the one hand, large areas of forest were cleared for agricultural purposes and on the other hand, the grazing pressure did not allow the remaining forests to survive and regenerate. Deforestation has led to overall degradation of the environment in this region. Water scarcity, a falling water table, soil erosion, flash floods etc are common, thereby deteriorating the ecology of the area.

Forest cover in the northeast

According to the State of Forest Report (1999), while in India 19 percent of the geographical area was under forest cover, the corresponding figure was 26 percent in case of the northeastern region. The National Forest Policy envisages bringing one-third of the geographic area of the country under forest cover to maintain the ecological balance and environmental stability. Present estimates show that the forest cover of the country is less than the goal laid down in the policy and trends over the years depict that the northeastern states, in particular, are losing forest cover more rapidly compared with the country in general.

The area under forest can be classified into reserved, protected and unclassified forests thereby constituting the actual forest area of a country. Table 4 gives a detailed report of the area under these categories. Arunachal Pradesh has the largest area under recorded forest cover. It is also evident from this table that out of the total forest cover of India, 26 percent lies in the northeast. But unfortunately little of the forest cover is protected or reserved. Out of the total reserved forest in India, only 11 percent are in the northeast while the figure is a meager five percent in case of protected forest. Comparatively, less forest cover is under in these two categories in case of Nagaland compared with the other states. Though area wise Arunachal Pradesh encompasses the largest forest cover, it holds the smallest area of protected forest in the northeast followed by Meghalaya. According to the State of Forest Report, the percentage of actual forest cover to the geographical area in the northeast is 76 percent (table 5) against 63 percent reported in official documents. In terms of percentage, the actual forest cover is 13 percent higher than the officially reported figures. The reasons for actual forest cover being higher than the officially reported forest is that in the hilly regions of the

Table 4 : Forest statistics of the northeastern region of India, 1999 (Area in sq.km.)

States	Actual forest cover	Recorded forest area	Reserved forest	Protected forest	Unclassified forest
Arunachal Pradesh	68847	51540	19880	0	31660
Assam	23688	27018	18060	0	8958
Manipur	17384	17418	1467	4171	11780
Meghalaya	15633	9496	1112	12	8372
Mizoram	18338	15935	7127	3568	5240
Nagaland	14164	8629	308	508	7813

(Contd.)

(Contd.)

Tripura	5745	6293	3588	509	2196
N.E. Region	163799	136329	51542	8768	76019
India	637293	768436	423311	217881	127881

Source: State of Forest Report, 1999, Ministry of Environment and Forest (GOI), Dehradun.

northeastern states which are mostly inhabited by different tribal communities, forest areas are privately owned by individuals, by religious groups or village communities (Pandey, 2000). A substantial proportion of the forest not owned by the state government has not been included in the official documents. Dense forest constitutes almost 84 percent of the total area under forest in Arunachal Pradesh followed by Assam, Tripura and Nagaland. This higher percentage can be attributed to the low population density in the state, which allows thick growth of vegetation. On the other hand, Mizoram, the most urbanized state of the region, records 79 percent of open forest in comparison to 21 percent of dense forest growth. Open accessible forests in the proximity of the settlement areas are reported to be degrading faster due to collection of fuel wood, cattle grazing, etc as compared with forests located in inaccessible localities with sparse population growth. Therefore, it is necessary to create a massive people's movement through involvement of village communities living close to the forest in protection and development of forests, especially through female intervention in a more comprehensive way. It is envisaged that the communities, in lieu of their participation in protection and development of forest areas, will be entitled to sharing of yields in a manner specified by the concerned State Forest Departments.

Table 5: Area under forest by type of forests in the northeastern region, India, 1999

States	Percentage				
	% forest to total area	Protected forest to total area	Dense forest	Open forest	Scrub
Arunachal Pradesh	61.55	11.04	83.89	16.11	0.15
Assam	34.45	2.95	61.28	38.71	1.37
Manipur	78.01	1.19	34.15	65.85	1.02
Meghalaya	42.34	1.88	37.90	62.09	1.67
Mizoram	75.59	4.60	20.64	79.35	0.68

(Contd.)

(Contd.)

Nagaland	52.05	1.43	36.27	63.73	0.10
Tripura	60.01	5.76	38.78	61.22	0.66
N.E. Region	63.40	5.98	58.17	41.83	0.64
India	23.38	4.65	35.06	40.02	8.14

Source: State of Forest Report, 1999, Ministry of Environment and Forest (GOI), Dehradun.

There is a negative correlation between population density and forest cover in different states of northeast India. Increase in population is directly correlated with per capita decrease in forest area. The increasing trend of population has shown marginal decline in the per capita availability of forest area in all the states of which noteworthy are Mizoram, Assam, Manipur, Meghalaya and Nagaland (Table 6). In case of Assam and Tripura, the decline is slow reflecting practice of scientific forestry keeping pace with the rate of population growth. Going by the current figures, approximately 1 to 1.5 percent of the forest area is lost every year in the northeastern region due to deforestation, diversion

Table 6: Change in forest cover in the northeastern region of India during 1990s

States	Per Capita Forest Area*		Change during different assessments (in sq. km)				
	1991	2001	1991-93	1993-95	1995-97	1997-99	1999-2001
Arunachal Pradesh	5.96	4.72	-96	-40	-19	245	-802
Assam	0.14	0.12	-243	-447	-237	-136	+4026
Manipur	0.82	0.63	-64	-63	-140	-34	-458
Meghalaya	0.54	0.41	-106	-55	-57	-24	-49
Mizoram	2.31	1.79	-156	-121	199	-437	-844
Nagaland	0.71	0.43	27	-57	-70	-57	-849
Tripura	0.23	0.20	3	0	8	199	+1320
N.E. Region	0.44	0.36	-635	-783	-316	-244	+2374

Source: State of Forest Report 1991 and 1999, Ministry of Environment and Forest (GOI), Dehradun.

of forest for increasing agricultural productivity and practice of shifting cultivation (Pandey, 2000). An assessment of the change of the forest cover over the years for the northeastern states show that Arunachal Pradesh has registered a significant increase in forest cover during the period 1997-99 as compared to the preceding decades. The forest cover decrease in the northeastern region was maximum during the year 1993-95. However, there has been significant increase in the forest cover in 2001 over the year 1999 by 2374 sq. km. mainly due to increase in the forest area cover in Assam and Tripura, while other northeast states have shown decrease in forest cover in the same period.

Developmental indicators: Heterogeneity and linkages

Humanity stands at a defining moment in history with a perpetuation of disparities between and among states, a worsening of poverty, hunger, ill health and illiteracy and a continuing deterioration of the ecosystems on which depends our well being. Therefore, integration of environment and development concerns and greater attention to them will lead to the fulfillment of needs, improved living standards for all, better protected and managed ecosystems and a safer, more prosperous future leading to sustainable development.

Population, environment and development are not antagonistic but different facets of the same issue that give momentum to environmental consciousness throughout the world. The concept of sustainable development follows a path, which harmonizes with the laws of Nature and can therefore be sustained without destroying or depleting the natural resources on which development depends. The northeast has its own environmental problems, which need to be urgently addressed if it has to continue feeding its growing population and meet their basic necessities. This alone has put tremendous pressure on land resources leading to large scale deforestation. The galloping population has underlined the demand for more land to be brought under agriculture, industry and housing. The deforestation problem, besides leading to wastelands and erosion of fertile soil, is also intimately connected with the problem of global warming.

In evaluating the developmental parameters of the northeast India in terms of a few selected indicators, it is imperative to analyze the interstate variation in the resources enjoyed by the people, which directly reflect the standard of living and the quality of life. Since the statistical units of the selected indicators differ along with a wide variation in their magnitudes, coefficient of variation is considered to be the appropriate

statistical technique to analyse the interstate variations. The coefficient of variation computed for all the 27 variables in the categories of population, environment, socio-economic and health indicators is presented in Table 7. For the five important indicators (18 percent of the total) the coefficient exceeds 75. Excluding only six, the computed coefficients fall between 25 and 75 for the rest of the 16 indicators. High coefficients of variation reveal the intensity of the inequalities in the selected parameters of developmental process. This variation may, in part, be attributed to the socio-political scenario which is worsening day by day. Frequent changes and instability of the government set up, the move for separation by some strategic states, continuing law and order problem, communal riots and intertribal conflicts are some of the factors that adversely affects the development of the northeastern region⁵. The influence of ethno-lingual elements on the resource distribution system poses some threats to quality of life particularly for the subordinated social group (Guhathakurta, 1994).

Table 8 presents the overall performance of the seven states in terms of different development indices which brings a composite comparative profile of the physical, social, economic, institutional infrastructure in the states. Amongst all the states, Mizoram (82.13) is the best placed in terms of infrastructure facilities whereas Arunachal Pradesh (69.71) is the weakest in infrastructural endowments. In terms of Human Development

Table 8 : Performance of northeastern states according to different developmental indices

States	Infrastructure Development Index*	Index of Social and Economic Infrastructure**	Human Development Index***
Arunachal Pradesh	71.89	69.71	0.328
Assam	104.39	77.72	0.348
Manipur	83.50	75.39	0.536
Meghalaya	77.60	75.49	0.365
Mizoram	84.49	82.13	0.548
Nagaland	89.89	76.14	0.486
Tripura	92.85	74.87	0.389

Source: *CMIE, Nov. 2000, Planning Commission (GOI), New Delhi.

**Eleventh Finance Commission Report, 2000 Planning Commission (GOI), New Delhi.

****Human Development Report 2001, Planning Commission (GOI), New Delhi.*

(HDI), Mizoram (with a value of 0.548) has the highest rank among the northeastern states with a national rank of seven while Arunachal Pradesh (value of 0.328) records the lowest value, even lower than the national value of 0.381.

A series of rank correlation was carried out to understand the linkage of population, forest and developmental parameters. Most of the correlation values were based on 1991 data, as 2001 data is unavailable. Table 9 shows that forest per capita is significantly and negatively correlated with total population as well as population density. This means, with increase in total population and population density, forest cover significantly depletes. However, no such values were found when correlation was calculated with population, forest and developmental parameters. The association of these development indices with forest and population should be analyzed empirically, not in statistical terms, as done in the following way.

Table: 9 Rank correlation coefficient of different developmental parameters with population and forest

Variables	1991	2001
Population density and forest	-.893*	-.857*
Population density and HDI	-.071**	-.893**
Forest and HDI	.214	NA
Population density and IDI	.714	NA
Forest and IDI	-.750	NA
Population density and ISEI	-.107	NA
Forest and ISEI	-.214	NA

*5% level, **1% level, N = 7, NA-Not Available

Table 10 depicts the ranks of seven states with respect to three aspects that are encompassed in the paper. Ranks are shown against population density (population indicator), per capita forest (forest indicator), literacy and road density (development indicators) along with Human Development Index (HDI), Infrastructural Development Index (IDI) and Index of Social and Economic Infrastructure (ISEI) [comprehensive indices]⁶. It is possible to explain the situation of each state one by one. For instance,

Arunachal Pradesh is having the lowest population density, highest per capita forest cover and lowest development. Mizoram, like Arunachal Pradesh, also has a low population density and high per capita forest cover. However, it performs quite well in HDI and ISEI but not in infrastructural development indicators.

It is more or less clear that with infrastructural development, forest cover per head denudes. For instance, Tripura ranks first in road density, second highest in IDI; Assam stands second in road density, first in IDI; Nagaland stands third in both the indices. It can be noted here that in the first two states mentioned above, forest per capita is low and population density is high. But infrastructural development does not also corroborate with socio-economic/human development. For example, Tripura though stands second in IDI, it ranks sixth in ISEI. Again Assam, though stands first in IDI or second in ISEI, it is fifth in literacy and sixth in HDI. The only state the northeast

Table: 10 Ranks of different states of the northeast in population growth, forest cover and development indices

States	RANKS						
	Population	Per.	Literacy	Road	HDI	IDI	ISEI
Arunachal Pradesh	7	1	7	7	7	7	7
Assam	1	7	5	2	6	1	2
Manipur	4	3	4	5	2	5	5
Meghalaya	5	5	6	4	5	6	4
Mizoram	6	2	1	6	1	4	1
Nagaland	3	4	2	3	3	3	3
Tripura	2	6	3	1	4	2	6

that is keeping pace with all its indices is Nagaland. It stands third in all the developmental indicators, also in population density and road density. At the same time, forest cover is also not very much depleted here like in Assam or Tripura. Another worth mentioning state is Mizoram. Though infrastructural development is not up to the mark, still in terms of socio-economic index and forest cover, its performance is relatively better probably due to the fact that socio-economic development of this state is forest/environment based.

Table : 7 Statewise variations in selected developmental indicators in northeast India.

Selected developmental indicators	Ref. year	A.P.	Assam	Manipur	Meghalaya	Mizoram	Nagaland	Tripura	C.V.
Environment indicators									
Percentage of forest area	2000	88.03	33.20	80.00	69.80	86.20	86.90	50.90	27.71
Per capita net cultivated area (in acre)	2000	0.54	0.30	0.22	0.19	0.21	0.37	0.26	38.12
Per capita forest area (in hectares)	2001	4.72	0.12	0.63	0.41	1.79	0.43	0.20	29.26
Socio-economic and development indicators									
Per capita food production (kg)	2000	218.49	117.23	180.73	77.75	91.30	126.45	162.50	33.55
Percentage of main workers	2000	45.22	31.19	38.55	40.32	42.09	42.29	29.09	14.52
Level of urbanization	2000	12.38	11.10	27.52	18.60	46.10	17.21	15.30	53.47
Percentages of pucca houses (Rural & Urban) 2000									
	R	7.30	NA	1.70	10.50	5.00	5.90	21.00	71.79
	U	47.80	NA	11.80	26.70	49.00	57.20	40.60	39.35
Per capita consumption of electricity (K.W)	1999-2000	68.6	95.5	69.5	160.3	120.7	84.7	95.5	30.11
Per capita consumption of petroleum products	2000	86.71	41.58	38.65	65.92	46.38	44.63	25.75	37.30
Road (km/100 sq.km)	2000	8.90	87.80	30.30	34.90	17.60	53.10	124.10	75.20
Percentage of surfaced road to total road	2000	33.19	15.73	40.52	37.42	34.19	77.70	34.19	44.67
Area served by a post office (sq.km)	2000	311.15	22.31	33.33	44.65	56.00	56.11	15.08	25.69
Per capita budgeted expenditure on education (Rs.)	2000	512.50	217.41	433.93	436.81	670.75	605.55	453.83	28.27

(Contd.)

(Contd.)

Selected developmental indicators	Ref. year	A.P.	Assam	Manipur	Meghalaya	Mizoram	Nagaland	Tripura	C.V.
Per capita net state domestic product (Rs. in current price)									
	2000	5046	4014	3893	4530	4280	5006	3430	12.73
Population (1000/bank)	2000	9.13	17.31	17.74	8.00	8.37	13.51	13.20	30.43
Percentage of population below poverty line 1999-2000	2000	33.47	36.09	28.54	33.87	19.47	32.67	34.44	16.84
Percent distribution of employment by industrial sector 1999-2000									
	Primary	67.12	57.90	63.49	70.34	NA	NA	38.20	19.16
	Secondary	2.47	3.81	6.33	1.31	NA	NA	3.87	47.17
	Tertiary	30.41	38.29	30.18	28.35	NA	NA	57.93	29.69
Access to safe drinking water (in percent of households)									
	1991	70.02	45.86	38.72	36.16	16.21	53.37	37.18	36.24
Health indicators									
Area served by a hospital (sq.km)	2000	4.64	0.29	0.89	2.81	1.51	0.53	0.46	93.21
Population served per hospital bed	2000	755	1968	1203	1055	627	979	1647	37.78
Health expenditure ratio	1998-99	5.43	4.65	4.67	7.22	4.93	5.39	4.69	16.06

Source: Basic Statistics of Northeastern region, NEC, Shillong, 1999.
Report of Planning Commission (GOI, New Delhi).

Summary and conclusion

In the mid-eighties, there had been a shift in the assumption that human resources are not only means but also an end in the whole socio-economic developmental process. Accordingly, the task of improving the quality of life as the ultimate aim of developmental process rests with the people. This results in generation of various kinds of resources in terms of developmental indicators and in making them available for consumption. From the ongoing discussion, it can be concluded that development in the northeast has not been at par with the rich natural resource endowment, thereby revealing a lower standard of living with wide interstate variation. To summarize the main findings: the rate of population growth in the northeastern region is much higher than the national annual growth rate. The state with the highest growth rate in the country (Nagaland) and the state with the lowest growth rate (Tripura) belong to this region. Spectacularly high population growth rate in Nagaland might be attributed to immigration, especially skilled migrant labour from Bangladesh. Arunachal Pradesh accounts for 84 percent of dense forest growth followed by Assam, Tripura and Nagaland which may be due to low population density resulting in thick vegetative cover. Subsequently, the loss of forest cover is also much rapid in case of northeastern states compared to the country as a whole, thereby showing a marginal decline in the per capita availability of forest particularly in the states of Mizoram, Assam, Manipur, Meghalaya and Nagaland. Assam and Tripura exhibits a gradual increase in its forest cover over the decades, denoting successful implementation of forest management programmes and scientific afforestation techniques. In terms of availability of infrastructural facilities, Mizoram is the best placed whereas the performance of Arunachal Pradesh is the poorest. Per capita forest cover is significantly and negatively correlated with total population as well as population density because with infrastructural development, forest cover per head denudes thereby highlighting a mismatch between socio-economic and human development. Nagaland, in spite of high growth rate, stands third in all the selected developmental indicators and also in respect to population density and road density. Mizoram, though a better performing state in terms of socio-economic indicators and forest cover, lags behind in infrastructural development to some extent.

Northeast India is endowed by nature with abundant forest resources. The economy of some of the states in the region is still forest based or under transformation from forest to agriculture. But the pressure on forest resources is increasing with gradual rise in population. Sudden changes in the life style of people have caused rapid depletion of forests and thus degradation of bio-diversity in the region. The population pressure on forest resources is relatively less but while looking at the structure of the economy and utilization of forest resources, the impact of the pressure gets multiplied in the region. Therefore, it is imperative to improve the economy and infrastructure of the region keeping pace with the population growth. But development without giving due impor-

tance to its forest resource will be dangerous in the near future from the viewpoint of sustainable development.

Notes

¹ All these states have a prime position in India's geo-political system with an areal extent of 2550.83 sq kms, representing around seven percent of the total geographic area of the country and accounting for about four percent of the total population of the country (Census of India, 2001).

² Statistical Abstract, India, 2001: Trend of population (1951-2001) in northeast India.

Census of India, 2001: Provisional population totals, 2001 and percent of ST population.

Population of India, 2001: Decadal and annual exponential growth rate, density per sq. km, geographical area and sex ratio.

Basic Statistics of Northeastern region, Shillong, 1999: Socio-economic development indicators of the northeast.

State of Forest Report, 1999: Forest statistics of northeastern region.

Compendium of Environment Statistics, 2000: Change in forest cover (in sq. km) over the years.

Profiles of Districts, CMIE, October 2000: Infrastructure Development Index.

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³ The National Commission for Minorities was set up vide Ministry of Home Affairs Resolution dated 12-1-1978 to safeguard the interests of the minorities. There are 209 Scheduled Tribe in the region, belonging to six different ethnic categories and 420 spoken languages out of 1652 spoken countrywide (Hazarika, 2000). The All India Tribal Convention also includes the charter of demands for the better life of the tribal people.

⁴ Percent distribution of currently married women by contraceptive method currently used, northeast India, 1998-99

State	Any method	Any modern method
India	48.2	42.8
Northeast*		
Arunachal Pradesh	35.4	32.8

(Contd.)

(Contd.)

Assam	43.3	26.6
Manipur	38.7	25.9
Meghalaya	20.2	15.5
Mizoram	57.7	57.1
Nagaland	30.3	24.2

Source: National Family Health Survey (NFHS-2), India, 1998-99

* Data for Tripura is not available

⁵ Extremist related violence in the states of northeast India, 1998

States	Incidents	Civilians killed
Arunachal Pradesh	34	9
Assam	427	285
Manipur	320	233
Meghalaya	14	3
Mizoram	1	-
Nagaland	380	92
Tripura	303	205

Source: Nag, 2000

⁶ The dimensions of HDI are related to longevity, education and command over resources. The indicators of IDI include villages electrified, railway route length per 100 sq. km. of area, surfaced roads per 100 sq. km. of area, unsurfaced roads per 100 sq. km. of area, gross irrigated area as percentage of gross cropped area, bank branches per lakh of population, post offices per lakh of population, telephone lines per 100 persons, primary schools per lakh of population, hospital beds per lakh of population, primary health centres per lakh of population. The dimensions of ISEI include physical, social and institutional infrastructure.

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Occupational Structure and Gender-based Segregation in North-East India : The Case of Arunachal Pradesh

Aparimita Mishra

The present study is an attempt to explain the existence of gender based segregation in the occupational structure of workers in Arunachal Pradesh. Within the obvious limitations of secondary data, an attempt has been made to construct an index of gender based segregation for states of North East India, as well as for the districts of Arunachal Pradesh. By analyzing inter-temporal variations in the industrial classification of workers, the study notes the relatively slower occupational diversification of female workers in Arunachal Pradesh. The relative stagnation in the sectoral shifts of female workers vis-à-vis the male workers in the state has also been analysed by constructing an index of overrepresentation in various sectors. It is found that among the north eastern states, gender based segregation is highest in Arunachal Pradesh. It is also noticed that employment dissimilarity among the male and female workers has increased during 1981-91. Another significant finding was that segregation among the ST is less than that among all social groups. The inter-district variation in the index of employment dissimilarity is found to be positively related with share of tertiary sector in gross district domestic product and negatively with literacy and sex ratio. Thus, the process of structural transformation of the economy has no doubt opened up new possibilities for women, but they lag behind the males in terms of occupational diversification as well as access to modern, non-agricultural employment opportunities.

Introduction

Gender based segregation in occupations is a world wide phenomenon which causes labour market rigidity and economic inefficiency. It is beyond doubt that it disadvantages women and perpetuates gender inequalities. Theories on occupational segregation by sex explain the fundamental basis of gender inequalities and hence the vicious circle of discrimination¹ in the labour market. However, the causes underlying the existence and persistence of gender discrimination are varied and complex. The present study is an attempt to explain the existence of gender based segregation within the occupational structure in Arunachal Pradesh, a relatively underdeveloped state of India.

In section-I, an overview of the theoretical issues on labour market segregation has been presented. The changing occupational structures in the north eastern states have been discussed in section-II. In section-III we have explained employment dissimilarities between male and female workers of the state. The determinants of inter-district variations of employment dissimilarities between both the genders have been analysed in section-IV. Key findings of the study have been placed in the last section.

I

Gender Discrimination in Labour Market: Theoretical Issues

The theoretical approaches to the study of women's labour market segregation can be broadly classified into three groups: (i) Neo-classical/human capital theory, (ii) Marxian, and (iii) Feminist. Within the mainstream neo-classical approach, there have been various attempts to explain the labour market segregation from different perspectives. We have presented a selective review of the main theoretical arguments of each of these schools.

Neo-classical theory assumes that workers and employers are rational and labour markets function efficiently. The supply side of this theory (neo-classical /human capital) emphasizes the lower level of female human capital and justifies the pay differential in relation to their productivity. However, this theory has been criticized as women's education, work experience and her occupation are bi-directional in nature and the effect of the former on the later is an important determinant of occupational segregation in the labour market. Again, the argument of this theory on women's preferences for particular occupations which influences employer's preferences for workers and the general perception of high indirect cost associated with female workers have been criticised.

However, two complementary theories, employer's taste for discrimination and compensating differentials, focusing on the demand side of labour market, have been developed by neo-classical economists to understand the persistence of occupational segregation by sex without forgoing the basic assumptions.

An influential theory on women's employment within the Marxian framework is the theory of segmented labour market, which tries to bring in the role of patriarchy explicitly into the analysis of labour market. The three factors, which are prominent in the theory of labour market segmentation, are (i) the male dominance and male strategies leading to the exclusion of women from employment; (ii) the restructuring of jobs with accumulation of capital and change in the organizational forms of production and management control; and (iii) the restructuring of sexual division of labour based on the pre-existing notion of femininity and masculinity (Laxmi Devi, 2002).

The Labour Process Theory of Braverman is one of the most important contributions in the theory of labour market segmentation (Braverman, 1974). According to this theory, skills are socially constructed and hence are gendered. Under capitalism as the process of capital accumulation progresses, the displacement of human labour by machines ensures a simultaneous process of deskilling which leads to the creation of a hierarchy of jobs. Given the already marginalized position of women in the society, they get inferior positions in the job market as well. As skilled male labourers are generally reluctant to take up unskilled work, female workers are pushed into the unskilled segments of the labour market. Braverman's theory of deskilling has been criticized on the ground that capitalist development also ensures a process of re-skilling. The theory of exclusion, developed by Cockburn (1988) and Hartman (1979) among others, argues that in any up-gradation of work through re-skilling, women are typically excluded.

The feminist school argues that it is patriarchy² which creates the conditions for discrimination against women in the fields of education, skill and training, which in turn leads to inequalities in opportunities in the formal job market³. Patriarchy creates and sustains a pattern of gender division of labour in which household maintenance, child bearing and rearing activities become socially the primary responsibility of women (Beneria, 1979). As a consequence, women are forced to take up jobs, which are flexible in the sense that the market activity can be performed without disturbing the domestic responsibilities. The relatively greater participation of women in the low-paid, low-skill informal labour market is explained through such discriminations and male dominance. By adding a new dimension to the existing models of female labour force participation, this approach resulted in a dual system theory, one dealing with the labour market and the other dealing with the position of women in it.

Marxist-Feminists argue that it is capitalism which is responsible for the discrimination against women. According to Hartmann, 'Marxists were aware of the hardships women's labour force participation meant for women and families, which resulted in women having two jobs, housework and wage-work. Nevertheless, their emphasis was less on the continued subordination of women in the home than on the progressive character of capitalism's "erosion" of patriarchal relations' (Hartmann, 1979). The debate on housework raised by Dolla Costa (1973) and others concentrated on the relation between capitalism and patriarchy. In recent years women's fractured identity has been emphasized in the neo-Althusserian Marxist perspective and it has been argued that given the pluralities of the processes that condition women's subjugation, work force participation cannot be only possible arena for solving the problem of gender discrimination (Thakur, 1999).

Notwithstanding the differences in their methodological standpoints and ideological underpinnings of the different theoretical perspectives on women's work participation, together these contributions emphasize various aspects of women's access to and participation in gainful employment. The empirical literature on female labour force participation further substantiates these causal interrelationships postulated by the theoretical constructs.

In developing countries female labour force participation has been rising relatively fast, while participation rates of males have been falling. This is partly because of better statistical measures for women's work (Tzannatos, 1999). Data shows that in majority of the countries male participation rate has fallen, but total labour participation has increased. This suggests a strong change in gender division of labour and also the fact that the entry of women to the labour force is more than substituting for men. Some authors have argued that the spread of more flexible and informal employment accounts for the upward trend of female share in the labour force. The substitution of female for male workers might also have been a result of the lower wages received by the former. However, most of the theories on labour market segregation have focused on developed economies, with well developed labour markets (Barry, 1985; Siegers, 1984). What happens to segregation based on gender in relatively less developed economies is an interesting question. When relatively insulated and weakly integrated market economies get integrated with larger economies the gender relations undergo substantial changes. Boserup's well-known thesis that women's productive contribution and social status declines with the 'female-farming system' in shifting/slash-and-burn cultivation to male-centered plough-based system has been criticized on many grounds. But, in the context of north east India, an important question that remains to be fully investigated and understood is the impact of the structural transformation on gender relations. This paper concentrates only on the occupational distribution and, within the obvious limitations of secondary data, tries to construct an index of gender based seg-

regation for states of North East India, as well as for the districts of Arunachal Pradesh.

II

Changes in Occupational Structure in Arunachal Pradesh and North East India

According to the 2001 census data, of the total workers in Arunachal Pradesh, 58.44 per cent were cultivators, 3.85 per cent were agricultural labourers, 0.86 per cent were in household industries and the rest were in other occupations. In this section, the differences in the occupational distribution of male and female workers in the state have been discussed in comparison with that in the other north eastern states. The occupational classification of 2001 shows that the proportion of female cultivators in Arunachal Pradesh, closely followed by Nagaland, is highest among the north eastern states and more than double of the all-India figure. While the opposite scenario is observed in case of agricultural labourers. Because of the predominance of self-cultivation, labour sharing practices and underdeveloped labour markets, the percentage share of female agricultural labourer in the state is around one ninth of the national average. Except Nagaland, all the states in northeast region are having a higher share of agricultural labourers than this state.

At the same time, though the proportion of male cultivators among the total main workers in this state is significantly higher than that of the national average, its share is less than that in Mizoram and Nagaland. But the percentage of female cultivators employed in Arunachal Pradesh is more than one and half of their male counterparts. The share of male agricultural labourers is found very low in comparison to the all-India level and other states of this region. Even its proportion is less than that of female labourers. Thus, a very large proportion of women are engaged in agricultural and related activities till today.

Similar picture is observed in case of household industry where the share of both male and female employment in the state is very low. Only 1.05 percent of females are engaged in this sector in comparison with 6.36 percent in all other north eastern states. Not only that, the percentage of females employed as other workers is also very low in Arunachal Pradesh. The only state in this region where the share of females in this category of other services is marginally lower than that of Arunachal Pradesh is Nagaland. On the other hand, the share of male workers in this state is higher than the national average. Among the north-eastern states, except Tripura all other states exhibit a less proportion of male employment in other work than this state. Apart from that, the share of male in this category of workers is two and half times more than that of female within the state in 2001.

Table-1 reveals the changes in the industrial distribution of work force since 1971 to 1991 for both males and females in Arunachal Pradesh. When an economy develops, it is generally observed that the relative share of workforce declines in the primary sector and increases in the secondary and tertiary sectors. Here in this state, it is observed that between 1971-91, the changes in work force structure are very slow. During these 20 years, the share of workers in the primary sector has gone down by 13 percentage points. The decline in the share of females in this sector is 7.19 percentage points as against 14.27 percent for males. In 1971, only 2.88 percent of female workers were engaged in the secondary and tertiary sectors. By 1991 the share of female workers in these sectors has gone up to only 10 per cent. At the same time 45.4 percent of males have been engaged in these sectors. Not only that, the gender gap in employment in these sectors has also been aggravated during this period.

By analyzing sectoral shifts of the workers in Arunachal Pradesh, it is observed that there has been a steady shift of male cultivators during 1971-91 from agriculture to non-agriculture, but the decline was sharper between 1981 and 1991. A similar trend has been seen in female cultivators but the decline is more prominent for male cultivators. As a result, around 84 percent of females in the state are still engaged in agriculture⁴. The share of male workers in agricultural work, livestock and forestry, mining etc., non-household industry, trade and transport has increased moderately and in 'other services' it has increased sharply. In the construction and household industry, it has declined.

After a marginal decline in the share of female labourers in 1981, it has increased from 2.11 percent in 1971 to 5.12 percent in 1991. In other sectors like, livestock and forestry, mining etc., household industry, non-household industry, construction, trade and transport, there has been a moderate shift of female workers during this period. But the proportion of female workers in other services has gone up significantly in 1991. But this figure is little more than one-third of the male workers. However, during 80s, the shift of female workforce from cultivation was mainly towards construction, whereas in 90s the shift was also towards other services and agricultural labourer.

The relative stagnation in the sectoral shifts of female workers vis-à-vis the male workers in Arunachal Pradesh, can also be judged from the index of overrepresentation⁵ in various sectors. As pointed out in Table: 2, in 1981 women in Arunachal Pradesh were overrepresented in cultivation and under represented in all other sectors. In 1991, overrepresentation of women in cultivation has continued, but equal representation of women workers as agricultural labourer is a perceptible change. However, during 1981-91, over representation of women in cultivation has increased, which implies higher concentration of women in cultivation in comparison to that of the total workers in

state in 1991 than the previous decade. Again, though women are under represented in all other sectors, their representation has gone up in all the sectors except in mining and quarrying; and non-household industries. And the increase in women's representation in the state during this period is significant particularly in household industries, livestock, and other services as well as in agricultural labour.

So far as district level trends are concerned, women were over represented in all the districts of the state in cultivation in 1981, and in agriculture (cultivation and agricultural labour) in three districts out of nine districts. At that time, there was absence of women's overrepresentation in any other sectors. Again, in 1991 women were over represented in cultivation in all the districts and in agriculture (cultivation and agricultural labour) in six out of twelve districts of the state. However, during 1981-91, women workers have shifted to services and household industries. In 1991 women were over-represented in household industries in Papumpare, Upper Subansiri and Lohit districts of the state.

III

Employment Dissimilarity among Male and Female Workers

Labour market segregation is important to understand the existing inequality in the male and female employment. It is a major source of labour market rigidity and economic inefficiency. Excluding majority of workers from important occupations is not only a waste of human resources, it also increases labour market inflexibility and reduces an economy's ability to adjust to change (Anker, 2002). It also concerns the tendency for both the genders to be employed horizontally (in different occupations) and vertically (within the same occupation). Although sex segregation is difficult to measure, a commonly used statistics is Duncan index⁶, an index of employment dissimilarity between any two groups of workers, taken here as one of the measures to estimate occupational segregation in the labour market.

Table: 3 reveals occupational segregation by sex in India and other north-eastern states. It is found that in 2001, in Arunachal Pradesh gender based segregation was highest (0.31) among the states of the North eastern region. This level of segregation was even substantially higher than the all-India figure. Assam as well as Meghalaya has lowest value for the dissimilarity index. A similar picture is found in rural segments of India and Arunachal Pradesh, but a relatively higher segregation, though not very significant, is found in urban India than that in the urban areas of the states of the northeastern region. Among the north eastern states maximum index values have been seen in rural areas of Arunachal, followed by Tripura, Manipur and minimum values have been

found for Assam and Meghalaya. In the urban segment there seems to be highest segregation in Manipur, i.e. above the national average as well as other states in this region. An insignificant degree of occupational segregation by sex was found in the urban areas of Tripura in 2001.

Table: 4 presents the horizontal segregation⁷ by industries in Arunachal Pradesh during 1971-1991. It is found that between 1971-91, inequality between men and women in the labour market continued to increase in Arunachal Pradesh. Again, occupational segregation among both the genders was prominent (0.44) and was higher in the urban areas in 1971 than in the rural area. While the dissimilarity in urban employment persistently come down during 1971-1991, it increased in the rural areas of the state. In 2001, the value of the index was lower in urban areas (0.15) than in rural areas (0.26)⁸. It is also seen that the changes in employment dissimilarity in the state was sharper during 71-81 than 81-91. It is expected that the discrepancy between both male and female employment would gradually vanish with economic development, particularly in the urban areas of the state.

In the rural areas of Arunachal Pradesh it is observed that female employment in the agricultural activities is significantly higher than males, and the proportion of male employment in this sector has been coming down during these years because of availability of non-agricultural job opportunities. By and large, women workers continue to be tied up to agriculture. Further, as the males have started shifting to non-traditional, non-agricultural and urban occupations, women have taken up the responsibility of farming (Mishra, 2003; Krishna, 2005). All these factors have resulted in higher employment dissimilarities in the rural areas of the state than in the urban areas.

Table: 5 shows the district-wise gender inequality in employment during 1971-81⁹. It is observed that there was a very sharp increase in dissimilarity in employment of both sexes in Subansiri district during this period. In rural areas, all the districts except Lohit, showed some increase in segregation. But only in the urban areas of Kameng district, an increase in gender inequality in employment (from 0.40 in 1971 to 0.43 in 1981) was found. However, there was a sharp fall in this dissimilarity in the urban areas of both Siang and Lohit districts of the state.

Table: 6 reveals district wise employment dissimilarities (by industries) in the state during 1991-2001. Papumpare district is found to have the highest gender inequality in employment, followed by Dibang valley, while it is lowest in Lower Subansiri district in 1991. In 2001, maximum dissimilarity in employment was observed in West Kameng, followed by Tawang district, but it cannot be concluded that gender in equality had gone up¹⁰. Changlang had lowest occupational segregation in 2001.

In the rural areas of the state index of dissimilarity had gone up from 0.31 in 1981 to 0.32 in 1991. In 2001, maximum gender inequality in employment was observed in the rural areas of West Kameng closely followed by Tawang district and minimum in Changlang district. On the other hand, segregation was found to be significant in the newly urbanized East Kameng district.

The large scale migration of workers from outside the state to Arunachal Pradesh affects the segregation of workers in several ways. Firstly, since a substantial portion of the migrants are basically male economic migrants who seek employment in various non-agricultural sectors, the presence of migrant workers affects the sectoral distribution of male and female workers in the state. Secondly, the participation of women in economic activities is also affected by the social norms, particularly the hold of patriarchal values in the society. Since the migrants come from diverse socio-cultural backgrounds, its affect on the work participation pattern of migrant women is difficult to judge. That is why it would be interesting to see the employment inequality among the ST workers in the state, who generally belong to the various indigenous tribes. By comparing employment inequality between all workers and ST workers it is found that segregation among the ST was less than the former. Still, maximum dissimilarity among the ST workers is found in Papum Pare (0.26) followed by Upper Subansiri. Similarly, in the rural areas of the state gender inequality was less among ST workers than all workers. But in urban areas this trend was quite different in 1991. The dissimilarity index for urban ST workers was marginally higher than that for all urban workers in the state in 1991. It is found that in West Kameng and West Siang districts urban employment dissimilarity among ST workers was more than that of all workers (Table:7). In urban areas of all other districts labour market segregation among ST workers was lower than that among all workers. It can be concluded that dissimilarity in employment is noticed in all the districts, but the extent of dissimilarity varies over time and also among rural and urban workers of the state.

District-wise Occupational Dissimilarities in Employment: 1991

Analyzing occupational segregation, it is found that Dibang Valley had the highest segregation index in 1991 (according to NIC and Occupational classification). Again between these two classifications higher segregation was seen in NIC. However, by excluding agriculture and related activities it is seen that gender inequality in other occupations also persisted in the state. Although it was not very significant, still Tirap district had highest (0.24) and East Kameng and Changlang had the lowest dissimilarity index in 1991. To some extent it could be related with the pattern of district per capita income¹¹.

It is being argued that occupational segregation by sex has a positive side for women as

it protects some areas of the employment of women from male competition and maintains demand for female labour (Lehto, 1991). Although, the proportion of female employment in the state was very high, the polarization in the labour market by gender has also been observed, as there were qualitative differences between women and men's work. That is, women were mainly engaged in agricultural sector as less than 20 percent females engaged in non-agricultural activities even in 2001. The employment of women in the typical, monotonous, traditional agricultural work had reinforced further unequal opportunities and perpetuated inequality across generations through out all these years.

IV

Determinants of Inter-District Variations in Employment Dissimilarity

Inter-district variations in employment dissimilarity index indicates that the between 1981-91, the coefficient of variation among the districts of the state has decreased. This is also true when we consider the trends in employment dissimilarity in the rural areas alone. It implies that the differences, extent of dissimilarity in employment in the districts are narrowing down. The causal mechanisms underlying employment dissimilarity requires a thorough analysis of the linkages between development and expansion of opportunities and capabilities of males and females.

As a preliminary attempt, we have tried to fit the following model to estimate the determinants of inter-district variations in the index of dissimilarity.

$$Y = \alpha + \beta X_i + \varepsilon$$

Where, Y is the dependent variable, in this case the index of employment dissimilarity among males and females in the districts; X_i are the explanatory variables and ε is the random disturbance term. An OLS estimate yields the following result.

$$I_{01} = -1.037 - 0.005 Lit_{01} + 0.004 Ter_{01} - 0.001 SR_{01}$$

(3.736) (-2.301) (3.111) (-3.073)

[N= 13; $R^2 = 0.623$; Adj $R^2 = 0.497$]

In this equation, I_{01} is the index of employment dissimilarity at the district level for the year 2001; Lit_{01} is the over all literacy rate; Ter_{01} is the percentage of tertiary sector in the Gross District Domestic Product for the year 2000-01; and SR_{01} is the sex ratio in the district in 2001.

The result of the regression analysis shows that both literacy and sex ratio have a negative effect on it. Thus with increase in literacy and a better sex ratio the segregation in terms of sectoral distribution of male and female workers tends to come down. However, the worrying aspect of the result is the positive linkage between share of the tertiary sector in district domestic product and the index of dissimilarity, primarily because the former is an indirect index of diversification of the economy in the context of Arunachal Pradesh. With economic progress it is expected the share of tertiary sector to GDDP will increase. The estimation shows that this explanatory variable is positively and significantly related to the index. Although, the model could explain around fifty per cent of the variations in the dependent variable, it has to be interpreted rather cautiously, firstly because it is a single period cross sectional analysis; secondly the inclusion of the sex ratio as an explanatory variable is not free from problems¹².

V

Conclusion

The study brings out some important aspects of the gender differences in the process of structural transformation of Arunachal Pradesh. It is found that the proportion of total workforce employed in the primary sector in the state has come down during 1971 - 1991 and seems to have declined further in 2001, which is a positive indicator of economic development. However, the decline in male workers in the primary sector is sharper than that of the female workers. This shows that the economic growth of this state has not been accompanied by a shift of female workers from the primary sector to the desired extent. As a result around 90 percent of female workers are still engaged in the primary sector activities. Again, both in rural and urban areas, the proportion of female workers in the primary sector has decreased and it is more pronounced in urban areas.

It is found that among the north eastern states, gender based segregation was highest in Arunachal Pradesh. It is found that employment dissimilarity among the male and female workers has increased during 1981-91. Another significant finding was that segregation among the ST workers was less than that among all social groups. Although women are moving out from agriculture to other sectors of the economy, it is found that they are overrepresented in cultivation and are underrepresented in many other sectors, including the services. The inter-district variation in the index of employment dissimilarity is found to be positively related with share of tertiary sector in gross district domestic product and negatively with literacy and sex ratio. Thus, the process of structural transformation of the economy has no doubt opened up new possibilities for women, but they lag behind the males in terms of occupational diversification as well as access

to modern, non-agricultural employment opportunities.

Notes:

1. Discrimination in the labour market can be defined as unequal treatment in the employment of various groups given the educational qualification and work experience. Two categories of discrimination can be identified: *pre-market discrimination* - less access to productivity augmenting opportunities (education, training, work experience and mobility) - hence restriction to labour market; *post-market discrimination* i.e. subjective preference for individuals /groups due to certain non-economic characteristics.
2. Patriarchy, though used in various ways by different feminist theorists, basically denotes a 'structural system of male domination'. See Gail Omvedt (undated).
3. Issues relating to work and labour are not the central focus of all feminist theorists. Radical feminists such as Catherine MacKinnon, for example, argue that 'Sexuality is to feminism what work is to Marxism... The moulding, direction, and expression of sexuality organizes society into two sexes - women and men - which division underlie the totality of social relations' (MacKinnon, 1982:515-516). Thus gender in society is determined by sexuality and not vice versa. Issues of work and labour are considered to be secondary and derivative to the fundamental issue of sexuality seen as involving a necessary male domination.
4. It is expected to be around 76 percent in 2001.
5. Women are defined as overrepresented if $F_i / (F_i + M_i) > F / (F + M)$, Where F_i , M_i are respectively the number of women and men working in industry i , and F and M are respectively the number of women and men in the employed labour force.
6. It is difficult to measure sex segregation and the existing statistics do not represent adequately the complex economic and social processes that generate it. However, a commonly used statistic is Duncan Index which measures the employment dissimilarity between any two groups of workers. In the case of women and men Duncan Index, $D = \frac{1}{2} \sum_{i=1}^N |f_i - m_i|$, where $i = 1, 2, \dots, N$ is the total number of sectors of interest, f_i and m_i are the sectoral employment ratios of women and men to their respective labour force, and the summation represents their absolute differences between women's and men's ratios within each sector (Duncan and Duncan, 1955). The minimum value of the index is zero; it occurs when women and men have identical employment distributions across sectors,

i.e., when the percentage of women in each sector is the same as the percentage of men in the same sectors. The maximum value, unity occurs when there is complete dissimilarity.

7. Due to the non-availability of further disaggregated data only industrial classifications has been taken.
8. Deshpande (1993) has highlighted the interconnection between segmentation in the urban and that in the rural labour markets. He has argued that the segmentation of the urban labour market begins in the rural areas. Often agricultural development and intensification of farming systems lead to heterogeneous outcomes for male and female workers and also for women workers of different categories (Mishra and Mishra, 2000).
9. In 1971, there were only five districts in the state and in 1981 districts are combined accordingly for comparison.
10. The figures for 2001 and 1991 are not comparable because the former includes both main and marginal workers and also because the calculations are based on four-fold industrial classification.
11. Although there was not any significant positive correlation (.40) found between district per capita income and employment dissimilarity index by National Industrial Classifications still, highest index value and income (1993-94) was seen in Dibang Valley. Similar pattern was found in the low-income districts of East Kameng and Changlang.
12. Sex ratio in Arunachal Pradesh is not a reliable measure of women's well being and survival, primarily because of the influence of sex-selective migration to the state. As such the sex ratio among the ST population is higher than that of the general population. So at the district level it gets influenced by migration and the resultant changes in population composition.

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Table-1

Percentage Distribution of Workforce in Arunachal Pradesh: 1971-1991

Year		I	II	III	IV	V(a)	V(b)	VI	VII	VIII	IX
1971	M	66.76	1.86	0.15	0.00	0.45	0.04	0.16	0.92	0.01	29.63
	F	94.90	2.11	0.11	0.00	0.10	0.03	0.01	0.08	0.00	2.66
	T	78.34	1.96	0.14	0.00	0.31	0.04	0.10	0.58	0.00	18.54
1981	M	58.22	2.79	2.18	0.03	0.43	2.28	10.42	3.40	0.66	19.60
	F	92.69	1.99	0.42	0.00	0.13	0.58	1.29	0.28	0.01	2.60
	T	71.26	2.49	1.14	0.02	0.32	1.64	6.97	2.22	0.41	13.17
1991	M	46.98	5.14	2.20	0.28	0.21	3.54	8.60	4.83	1.75	26.48
	F	83.78	5.12	1.02	0.00	0.15	0.65	1.41	0.63	0.05	7.19
	T	60.36	5.13	1.77	0.18	0.19	2.49	5.98	3.31	1.13	19.47

Sources: Census of India, Economic Tables, Various Years.

Note: I-Cultivator, II-Agr.Labourer, III-Livestock, forestry and Logging, IV-Mining and quarrying, V(a)-Household Industries(b)-other than Household Industries, VI-Construction, VII- Trade, VIII-Transport and communication, IX-Other Services.

Table-2

Index of Overrepresentation in Various Industrial Categories in
Arunachal Pradesh: 1981-91

District	Year	I	II	III	IV	Va	Vb	VI	VII	VIII	IX	F/F+M
West Kameng	1981	0.52	0.41	0.09	0.00	0.22	0.20	0.18	0.12	0.02	0.09	0.36
	1991	0.50	0.55	0.15	0.00	0.15	0.13	0.20	0.17	0.01	0.16	0.34
East Kameng	1981	0.48	0.47	0.20	0.00	0.07	0.11	0.12	0.06	0.04	0.07	0.42
	1991	0.54	0.39	0.13	0.00	0.30	0.19	0.14	0.15	0.03	0.11	0.45
Lower Subansiri	1981	0.53	0.39	0.14	0.00	0.34	0.10	0.06	0.07	0.03	0.07	0.42
	1991	0.54	0.38	0.14	0.00	0.20	0.15	0.06	0.08	0.03	0.15	0.39
Upper Subansiri	1981	0.54	0.20	0.03	0.00	0.13	0.07	0.01	0.17	0.00	0.05	0.46
	1991	0.53	0.19	0.02	0.00	0.82	0.03	0.12	0.12	0.02	0.10	0.39
West Siang	1981	0.53	0.30	0.09	0.00	0.16	0.13	0.0	0.02	0.00	0.08	0.43
	1991	0.52	0.24	0.05	0.17	0.34	0.19	0.09	0.04	0.01	0.12	0.38
East Siang	1981	0.46	0.20	0.02	0.03	0.02	0.05	0.03	0.03	0.01	0.08	0.35
	1991	0.49	0.37	0.15	0.00	0.09	0.09	0.08	0.05	0.01	0.15	0.3
Dibang Valley	1981	0.51	0.36	0.06	0.00	0.13	0.03	0.02	0.01	0.00	0.07	0.31
	1991	0.51	0.40	0.27	0.00	0.23	0.07	0.04	0.04	0.02	0.14	0.3
Lohit	1981	0.40	0.21	0.10	0.00	0.01	0.15	0.04	0.02	0.01	0.07	0.27
	1991	0.42	0.27	0.20	0.00	0.32	0.01	0.04	0.03	0.01	0.12	0.21
Tirap	1981	0.46	0.31	0.12	0.00	0.09	0.16	0.04	0.01	0.01	0.06	0.37
	1991	0.50	0.33	0.30	0.00	0.23	0.10	0.04	0.04	0.02	0.11	0.38
Arunachal Pradesh	1981	0.49	0.30	0.11	0.00	0.15	0.13	0.07	0.05	0.01	0.07	0.38
	1991	0.50	0.36	0.21	0.00	0.28	0.10	0.09	0.07	0.02	0.13	0.36

Sources: (i) Census of India: Arunachal Pradesh (1981), Series-24, Part-III(A&B)
(ii) Census of India: Arunachal Pradesh (1991), District Census handbook, 1991, Series-III

Note: I-Cultivator, II-Agr.Labourer, III-Livestock, forestry and Logging, IV-Mining and quarrying, V(a)-Household Industries, V(b)-other than HHI, VI-Construction, VII-Trade, VIII-Transport and communication, IX-Other Services.

Table: 3

Employment Dissimilarities in India and N.E. States: 2001

States	Duncan Index		
	Rural	Urban	Total
India	0.1853	0.1832	0.2312
Assam	0.0955	0.0689	0.1208
Arunachal Pradesh	0.2603	0.1456	0.3121
Nagaland	0.1384	0.1899	0.2210
Manipur	0.1702	0.2465	0.1852
Mizoram	0.1151	0.1264	0.1656
Tripura	0.1976	0.0363	0.2073
Meghalaya	0.0956	0.0824	0.1248

Sources: Calculated from Census of India, 2001.

Note: The calculation of index is based on four fold industrial classifications according to census 2001, i.e. Cultivators, Agricultural Labourers, HHI and other workers.

Table: 4

Employment Dissimilarities in Arunachal Pradesh: 1971-91

Year	Duncan Index		
	Rural	Urban	Total
1971	0.2518	0.4422	0.2839
1981	0.3080	0.2547	0.3446
1991	0.3242	0.2368	0.3680

Sources: Census of India, 1971, 1981, 1991.

Table: 5
Employment Dissimilarity by Industries in Arunachal Pradesh: 1971-81

Districts	Duncan Index					
	Rural		Urban			Total
	1971	1981	1971	1981	1971	1981
Kameng	0.2889	0.2992	0.4036	0.4274	0.3168	0.3128
Subansiri	0.2019	0.2273	0	0.2604	0.2019	0.2892
Siang	0.2088	0.2143	0.4961	0.3558	0.2878	0.2881
Lohit	0.3617	0.3557	0.3842	0.2626	0.4124	0.3780
Tirap	0.2444	0.2514	0	0	0.2444	0.2514

Source: Calculated from Census of India, 1971 and 1981

Table: 6

District-wise Employment Dissimilarity by Industries in Arunachal Pradesh: 1991-2001

Districts	Duncan Index					
	Rural		Urban		Total	
	1991	2001	1991	2001	1991	2001
Tawang	0.3469	0.4359	-	0.0053	0.3469	0.4295
West Kameng	0.3845	0.4508	0.1289	0.0102	0.3859	0.4304
East Kameng	0.2916	0.1767	-	0.4232	0.2916	0.2747
Papum Pare	0.4150	0.3350	0.2334	0.446	0.4309	0.2623
Lower Subansiri	0.2143	0.2199	0.4703	0.3180	0.2814	0.2661
Upper Subansiri	0.3837	0.1838	-	0.3336	0.3837	0.3068
West Siang	0.3267	0.1983	0.3280	0.2225	0.4000	0.2932

(Contd.)

(Contd.)

East Siang	0.2939	0.2305	0.3502	0.0549	0.3421	0.2735
Dibang Valley	0.3915	0.2552	0.2920	0.0348	0.4247	0.3066
Lohit	0.3000	0.2189	0.2571	0.1294	0.3747	0.2806
Changlang	0.2825	0.1529	-	0.1063	0.2825	0.2058
Tirap	0.3155	0.1927	0.2512	0.0603	0.3678	0.2879
Arunachal Pradesh	0.3242	0.2603	0.2368	0.1456	0.3680	0.3121
C.V.	0.1760	0.3920	0.3440	0.9860	0.1450	0.2170

Source: Calculated from Census of India, 1991 and 2001.

Note: - means no urban area in the district, in 1991.

Table: 7

Employment Dissimilarity by Industries among S.T. Workers: 1991

Districts	Duncan Index		
	Rural	Urban	Total
Tawang	0.1507	0	0.1507
West Kameng	0.1601	0.2433	0.1771
East Kameng	0.1677	0	0.1677
Papum Pare	0.1804	0.1737	0.2640
Lower Subansiri	0.1322	0.4628	0.1504
Upper Subansiri	0.1993	0	0.1993
West Siang	0.1407	0.3901	0.1663
East Siang	0.1225	0.2191	0.1398
Dibang Valley	0.1544	0.2843	0.1691

(Contd.)

(Contd.)

Lohit	0.0976	0.1447	0.1230
Changlang	0.1637	0	0.1637
Tirap	0.1214	0.2465	0.1404
Arunachal Pradesh	0.1407	0.2382	0.1601

Source: Calculated from Population Census Data, 1991

Table: 8
Employment Dissimilarity by Occupations

Districts	Duncan Index		
	Industrial Classification	Occupational Classification	Occupational Classification excluding Agriculture
Tawang	0.331	0.329	0.165
West Kameng	0.366	0.363	0.182
East Kameng	0.276	0.274	0.137
Lower Subansiri	0.382	0.383	0.191
Upper Subansiri	0.366	0.364	0.182
West Siang	0.381	0.382	0.191
East Siang	0.326	0.326	0.163
Dibang Valley	0.420	0.420	0.210
Lohit	0.363	0.365	0.183
Changlang	0.276	0.277	0.139
Tirap	0.367	0.344	0.241
Arunachal Pradesh	0.356	0.324	0.145

*(Contd.)**Notes:*

Col.2 As per National Industrial Classification (NIC); it includes main workers engaged in Agriculture (Cultivators and agricultural labourers); Hunting, Mining & Quarrying; Electricity, Water Supply; Construction; Trade & Restaurant; Transport and communication; Community Social and Personal Services etc; Finance; Activities not Defined.

Col.3 Occupations include Professional, Technical and Related Workers; Administrative and Managerial Workers; Clerical and Related Workers; Sales Workers; Service workers; Farmers, Fishermen, Hunters, Loggers and Related Workers; Transport Equipment Operators and Labourers; Workers not Classified by Occupations.

Col.4 excludes Farmers, Fishermen, Hunters, Loggers and Related Workers from Col.3.

Source: District Domestic Profile 1991.

Knowledge Based Industries: The Key to Development for the North-East Indian States like Tripura

Ashish Nath

A casual glance over the last few decades strongly supports the notion that technological change has been an important factor in the economic growth and development of nations. However, economists have been slow in developing a precise understanding of the process of technological change and its contribution to growth. Investments in knowledge can increase the productive capacity of the other factors of production as well as transform them into new products and processes

The term "knowledge-based economy" results from a fuller recognition of the role of knowledge and technology in economic growth. Knowledge, as embodied in human beings (as "human capital") and in technology, has always been central to economic development. But only over the last few years has its relative importance been recognised. Traditional "production functions" focus on labour, capital, materials and energy; knowledge and technology are external influences on production. Now analytical approaches are being developed so that knowledge can be included more directly in production functions. Investments in knowledge can increase the productive capacity of the other factors of production as well as transform them into new products and processes. And since these knowledge investments are characterised by increasing (rather than decreasing) returns, they are the key to long-term economic growth.

A casual glance over the last few decades strongly supports the notion that technological change has been an important factor in the economic growth and development of nations. However, economists have been slow in developing a precise understanding of the process of technological change and its contribution to growth. Recently, as technological change has apparently increased in pace, and as experience with different development strategies has accumulated, economists have once again tackled the

based industry, it is necessary to focus on the concept of 'high-technology'. In much policy analysis, it is common to use the terms 'high-technology' or 'knowledge-intensive industries' in a somewhat loose way, as though in fact they are both meaningful and interchangeable terms.

Recognizing the importance of technology as a major force in national development, India laid special emphasis on creating a strong research and development infrastructure during initial years after independence. A large number of public research labs and institutions of higher learning were created to work on basic science. Depending on the need of the moments these centers of learning were directed to focus on applied research, which resulted in green revolution and import substitutions of a number of products. Foreign aggression on India directed them to the defence, space and nuclear research. Public R&D institutions established a strong research base and became capable of conducting research at frontier level. The result was strong technological capabilities in the defence sector, but little benefit to the industrial sector. Indian firms hardly made major innovations. The linkage between the R&D institutions and industry was nearly absent. The industrial and economic growth and competitiveness were low (Kaul, 2002). A chain of about 3000 scientific institutions of which 2000 were devoted to research and development (including about 1400 in-house research and development units of industrial sector, academic institutions, testing laboratories and technology centres) were created (Research and Development Statistics 1998). Establishment of venture capital funds was started during the mid 1980s and Technology Policy Statement (1983), Research and Development Cess Act (1986) and Technology Development Board Act (1995) were enacted by the Government with an objective to provide risk-sharing funds as well as the managerial expertise for technology development and commercialization. These along with the desire of the states to develop and/or transform themselves into knowledge states have forced them to invest heavily in research and development (Table 1). The states are also setting up industrial growth centres and IT parks to transform themselves into knowledge states.

Table 1: Statewise Public Sector Industrial R&D Units and R&D Expenditure

Sl.No.	State	No. of R&D Units	R&D Expenditure (Rs. Lakhs)		
			1994-95	1995-96	1996-97
1	Andaman & Nicobar Islands	0	0.00	0.00	0.00
2	Andhra Pradesh	18	7508.94	7819.23	8572.62
3	Arunachal Pradesh	0	0.00	0.00	0.00
4	Assam	2	1113.25	1130.28	1128.00

(Contd.)

(Contd.)

5	Bihar	10	2670.39	1948.57	1964.64
6	Chandigarh	0	0.00	0.00	0.00
7	Delhi	3	22.44	34.81	17.30
8	Dadra & Nagar Haveli	0	0.00	0.00	0.00
9	Daman & Diu	0	0.00	0.00	0.00
10	Goa	0	0.00	0.00	0.00
11	Gujarat 12	3684.70	2300.24	2650.00	
12	Haryana	9	2883.90	5163.47	6099.24
13	Himachal Pradesh	0	0.00	0.00	0.00
14	Jammu & Kashmir	0	0.00	0.00	0.00
15	Karnataka	14	10219.35	10441.10	10650.35
16	Kerala 13	439.56	701.42	826.17	
17	Lakshadweep	0	0.00	0.00	0.00
18	Madhya Pradesh	7	629.48	274.60	279.13
19	Maharashtra	19	2319.08	3288.83	3569.33
20	Manipur	0	0.00	0.00	0.00
21	Meghalaya	0	0.00	0.00	0.00
22	Mizoram	0	0.00	0.00	0.00
23	Nagaland	0	0.00	0.00	0.00
24	Orissa 3	70.13	94.23	96.51	
25	Pondicherry	0	0.00	0.00	0.00
26	Punjab	9	802.63	969.92	8647.94
27	Rajasthan	4	356.48	425.68	492.85
28	Sikkim 0	0.00	0.00	0.00	
29	Tamil Nadu	10	1395.25	1452.55	1574.57
30	Tripura	0	0.00	0.00	0.00
31	Uttar Pradesh	16	7006.91	6256.32	6580.99
32	West Bengal	17	338.45	456.31	455.57
	Total	166	41460.94	42757.56	53605.21

Source: Data collected and compiled by DST

However, North East India remained well behind this race for development measured in terms of research and development expenditure. North-East India comprises of the

problem of modelling the growth process. They have succeeded in constructing models in which technological change is viewed as the accumulation of production-relevant knowledge, subject to economic decision-making, and affected by industrial structure, the nature of markets and government policy. It is not a new idea that knowledge plays an important role in the economy. Adam Smith refers to new layers of specialists who are men of speculation and who make important contributions to the production of economically useful knowledge. Friedrich List emphasises the infrastructure and institutions that contribute to the development of productive forces through the creation and distribution of knowledge. The Schumpeterian idea of innovation as a major force of economic dynamics has been followed up by modern Schumpeterian scholars such as Galbraith, Goodwin and Hirschman. And economists such as Romer and Grossman are now developing new growth theories to explain the forces that drive long-term economic growth.

The knowledge-based economy is marked by increasing labour market demand for more highly skilled workers, who are also enjoying wage premiums. Studies in some countries show that the more rapid the introduction of knowledge-intensive means of production, such as those based on information technologies, the greater the demand for highly skilled workers. Other studies show that workers who use advanced technologies, or are employed in firms that have advanced technologies, are paid higher wages.

The miracle economies of South East Asia have also shown how knowledge and technology can be used extensively to grow and become competitive. They have made extensive use of international trade and foreign direct investment as the channels of knowledge technology transfers. Moreover, there is mounting evidence that the productivity-enhancing benefits of research and development activities in rich countries raises productivity in much poorer countries, but only to the extent that high and low income countries are open to international trade, foreign investment and knowledge diffusion.

In this context, learning and knowledge have attracted increasing attention as a result of claims that knowledge-intensive industries are now at the core of economic growth, and that we are now entering a new type of knowledge-driven economy. At the outset, it must be said that there is no coherent definition of this term: it is at best a widely-used metaphor, rather than a clear concept. The OECD defined the knowledge-based economies in very general terms, as meaning "those that are directly based on the production, distribution and use of knowledge and information". Knowledge-based industries are those industries operating in high technology. In the knowledge-based industries, technology owners guard the source of their competitive advantage, making their technology available only on restrictive terms. Before moving to a discussion of knowledge

eight states of Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Tripura and Sikkim. They form part of the East Himalayan region which extends from Sikkim eastwards and embraces the Darjeeling Hills of West Bengal. The location of the region is strategically important as it has international borders with Bangladesh, Bhutan, China, Myanmar and Tibet. The literacy rate of all states of this region is very high and number of states have rates much above the national average. This means that the human capital base of this region is also very high. However, the region has failed to take advantage of the contribution of this positive factor into economic growth and development. Now, let us look at Tripura and its preparedness to enter the knowledge economy. Tripura is the second smallest state in India and is a landlocked state endowed with vast green forests and abundant natural resources. Tripura's geographical isolation and poor development in infrastructure have gone a long way in hindering the scope of its economic progress. However, the literacy rate of Tripura is much above the national average. But, the state has failed to use this vast pool of human resources into active production process. In terms of infrastructure development, the CMIE index for the year 1992-93 is 63 compared to the All India average of 100. The study focuses on these issues. Specifically, the study examines the following research questions. What is the human capital base of Tripura? What is the role of the government in developing the knowledge economy of Tripura? Is there any alternative thinking for the growth and development of Tripura? The study has been divided into four sections. The following section presents the main features of the economy of Tripura. The next section analyses the knowledge base of Tripura. The conclusions and implications are presented in the section four.

II

The North East is one of the most ethnically and linguistically diverse regions in India. Each of the seven states that form this part of India has its own culture and tradition. Assam occupies the lush lowlands of the Brahmaputra Valley, and is the most densely populated state of the region. Arunachal Pradesh occupies the densely forested and sparsely populated foothills of the Himalayas, and is one of the major tourist attractions because of its Buddhist influence. Meghalaya, with its pine clad hills and lakes, is famous as the wettest region of the world. Nagaland has a rich war history that attracts tourists. The other three states - Manipur, known as the 'land of jewels', Mizoram and Tripura - make up a fascinating area consisting of green valleys, lush hills with variety of flora and fauna. The area is characterised by rich bio-diversity, heavy precipitation and high seismicity. It is endowed with forest wealth and is ideally suited to produce a whole range of plantation crops, spices, fruits and vegetables, flowers and herbs. The rich natural beauty, serenity and exotic flora and fauna of the area are invaluable resources for the development of eco-tourism.

The region has a high concentration of tribal population. The states of Arunachal Pradesh, Meghalaya, Mizoram and Nagaland are mostly inhabited by a number of native tribes. Each tribe has its-own distinct tradition of art, culture, dance, music and life styles. The numerous fairs and festivals celebrated by these communities and their friendly nature are irresistible attractions for the visitors.

These north eastern states have a good human capital base measured in terms of literacy rates, or, in terms of public spending on education and health (Table 2). However, because of their geographically disadvantaged location and lack of long term vision towards development, they have failed to develop a strategy based on this human capital.

Table 2: Public Spending on Education and Health in Indian States: 1980-81/1998-99
(% of Gross State Domestic Product)

State	Education			Health		
	1980-81	1990-91	1998-99	1980-81	1990-91	1998-99
Andhra Pradesh	2.8	2.94	2.43	1.44	0.99	1.61
Assam	3.46	4.53	5.23	1.48	1.32	1.05
Bihar	3.36	4.54	4.02	1.31	1.37	0.75
Gujarat	2.33	3.4	2.78	1.17	1.18	0.94
Haryana	2.15	2.37	2.57	1.24	0.71	0.71
Himachal Pradesh	5.44	6.45	7.06	4.77	2.75	2.63
Jammu & Kashmir	3.8	6.08	6.01	4.29	2.81	2.72
Karnataka	2.78	3.33	2.92	1.19	1.32	1.01
Kerala	5.22	5.25	3.25	2.02	1.49	0.95
Madhya Pradesh	2.28	3.18	2.69	1.57	0.99	0.94
Maharashtra	2.28	2.78	2.21	1.13	0.84	0.61
Manipur	8.63	10.26	9	5.57	2.39	1.95
Meghalaya	4.83	7.12	5.58	7.93	2.78	2.3
Orissa	2.86	4.09	3.92	1.6	1.37	1.25
Punjab	2.61	2.68	2.87	1.04	0.89	0.86
Rajasthan	3.19	3.95	3.96	2.51	1.35	1.35
Tamil Nadu	2.91	4.04	3.08	1.5	1.94	1.35
Tripura	5.81	10.35	7.58	2.38	3.26	2.14
Uttar Pradesh	2.3	3.51	3.09	1.06	1.14	0.91
West Bengal	2.59	3.63	2.71	1.39	1.18	0.94

Source: Government of India, National Human Development Report, 2001; Government of India (2002)

Tripura is the only state which is surrounded by a single country in three sides of its border. Geographical isolation, poor infrastructural facilities, low capital formation, almost non-existent industrial activity, prolonged insurgency, poverty and unemployment characterize the state. It shares a long boundary with Bangladesh (856 km) and with neighboring states of Assam and Mizoram. The state was merged with Indian Union on October 15, 1949. The state is located in the bio-geographic zone of 9B-North-East Hills and possesses an extremely rich bio-diversity. The local flora and faunal components of Indo-Malayan and Indo-Chinese sub-regions. Tripura, in the past, had excellent transportation links with the erstwhile East Bengal and through Bangladesh, with West Bengal. The straight-line distance between Agartala and Calcutta is only about 350 Kms (approximately the distance between Madras and Bangalore). Many large towns in Bangladesh are within 150 Kms of the towns in Tripura as can be seen from the following :

- Agartala-Dhaka : 150 Km.
- Kailashahar-Sylhet : 90 Km.
- Sabroom-Chittagong : 75 Km.
- Sonamura-Comilla : 11 Km.

The transportation links were through rail, road and waterways. The railway network of Bangladesh runs along the state's border. The economy of the State and the adjoining parts of Bangladesh have always been integral and any separation of trade, commerce and economy between the two is artificial and possibly not maintainable. The ties between Tripura and Bangladesh are further cemented by very strong social and cultural linkages. The people till date share kinship ties and relationships through marriages. The languages and dialects spoken in different parts of the state are common with those in the neighboring districts of Bangladesh. Thus, the natural links of Tripura with Bangladesh are historical, deep-rooted and at several planes.

During recent years, a number of initiatives have been taken at the level of the Government as well as the business community, aimed at re-establishing the historical links between Tripura and Bangladesh. The official trade between Tripura and Bangladesh was started during 1994-95. The Bangladesh Government has also set up a Visa Office at Agartala. The present volume of trade is about Rs 170 million per annum, but the same is expected to increase fast, with the bringing down of tariff and other barriers under SAARC initiative. The declared goal of SAARC nations to make South-East Asia a "Free Trade Area" has the potential of revolutionizing the Tripura Economy, as it is expected to put an end to the geographical isolation of Tripura. Serious initiatives have also resulted in getting a transit route through Bangladesh, to connect Tripura

with the rest of India as well as to the Chittagong Port of Bangladesh. Commencement of border trade with Bangladesh is also under active consideration. There are also suggestions to re-establish the old Rail/ Road/ Waterways links with Bangladesh. All this augurs well for Tripura. It will effectively integrate the Tripura Economy to the rest of India as well as to the other countries in the region. In fact, it will make Tripura the "Gateway to the North-East" and will give a great boost to the state economy. It is expected that within next few years the Tripura Economy will be effectively integrated with Eastern India as well as other countries in the region. This would open up a vast market for the industrial units based in Tripura.

But, Tripura has always been lagging behind the national economy in terms of the standard of living. The Planning Commission, Government of India, treats the state as a 'special criteria state' due to its backwardness and geographical isolation. The state is heavily dependent upon central assistance in all the sectors for real macroeconomic growth. The disparity in per capita income between Tripura and the nation has grown with time. The per capita income of the state has remained more or less stagnant during the last few years. The annual compound growth rate of NSDP from 1980-81 to 1996-97 has been worked out at 11.07% at current prices and 5.31% at constant prices. In so far as the sectoral growth is concerned, it has been observed that between 1980-81 and 1996-97, agriculture, the major sector in the economy of the state, demonstrated a growth rate of 9.92% at current prices and 2.25% at constant prices. Similarly, the manufacturing sector showed a growth of 5.48% at current prices and 3.24% at constant prices. Tripura's Net State Domestic Product at current prices in the 2000-01 (quick estimates) was Rs.4,18,350 lakh (Table 3). For the period 1993-94 to 2000-01 the average annual rate of growth of NSDP was 14.52% which was lower than the national average. During the period 1993-94 to 2000-01, the compounded annual rate of growth of the primary sector was 12.8%, the secondary sector was 23.65% while that of the tertiary sector was 13.91%. The per capita income of the state of Tripura has continuously lagged the national average.

The chief occupation of the population in the state is agriculture. The main activity of more than three-fourths of the workers is agriculture. About 24.3% area is available for agriculture use. The principal crops are paddy, wheat, jute, sugar cane, potato, turmeric, coconut and oil seeds. Agriculture is being practiced in about 2.5 lakh hectares. The soil in the valley is fertile with rich alluvial deposits and therefore suitable for the cultivation of paddy, jute, oilseeds, pulses, fruits and vegetables. About 54.5% of the land is under forest. Only about 24.3% area is available for agricultural use.

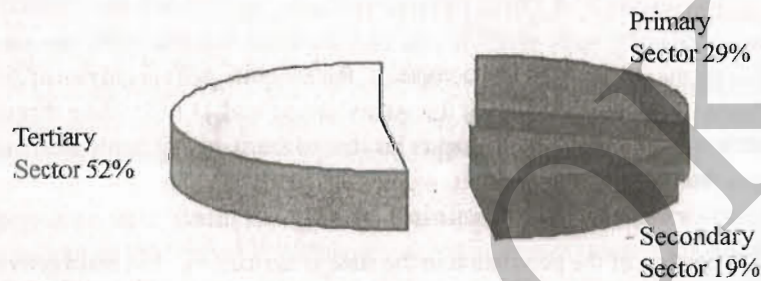
Table 3: Net State Domestic Product at Factor Cost by Kind of economic activity at Current Prices (Rs. In lakh)

Industry	1993-94	1996-97	1997-98	1998-99	1999-2000	2000-01
1	2	3	4	5	6	7
(A) PRIMARY SECTOR	61555	91868	105995	121200	131661	143007
(B) SECONDARY SECTOR	13265	28005	35607	44938	51399	58625
(B) TERTIARY SECTOR	87107	130118	159932	181188	198217	216718
Total State Domestic Product (A+B+C)	161927	249991	301534	347328	381277	418350
POPULATION ('00)	30265	33603	34872	36132	37331	38271
PER CAPITA INCOME IN Rs.	5350	7440	8647	9613	10213	10931

Source: Statistical Abstract of Tripura 2001.

Note: P=Provisional Estimate
Q=Quick Estimate

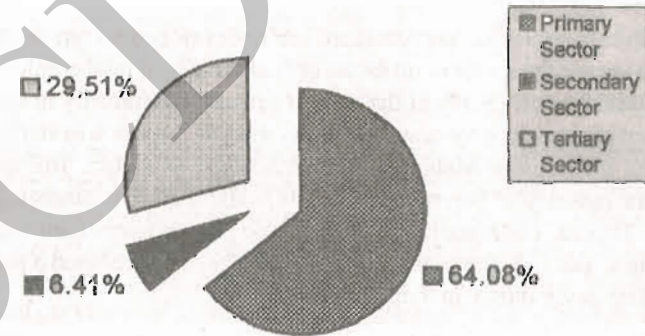
Figure 1: Sectoral Contribution to NSDP at Current Prices - 2000-01



The state is industrially backward. The almost isolated geographical location of the state and lack of power and communication facilities have proved to be the major handicap for the development of industries in the state. The level of industrialisation of the state is evident from its contribution to the state's GSDP at current prices. The

contribution of the manufacturing sector, both organised and unorganised combined together, was 2.12% in 2000-2001, which is a very low proportion. Tripura's handicrafts in structure, beauty and variety are in great demand outside. Tripura Handloom and Handicraft Development Corporation Ltd has taken up market-

Figure 1: Sectoral distribution of Workforce as per 1991 census



ing of the handicrafts in a big way and is exploring the possibilities of exporting its products. For improving the design and quality of the products the All-India Handicraft Board has set up a research unit at Agartala. About 5000 craftsmen are now engaged in production of handicrafts (mainly cane and bamboo) products.

Handloom weaving is the single largest industry. It is essentially a tribal household industry. Another age-old industry of the state is silk. This industry is now confined to one small village in the suburb of Agartala town. The Seri culture industry is developing fast. During the reign of Maharaja Birendrakishore Manikya (1909-23), a school was opened at Agartala for giving training in Seri-cultural weaving. The area under mulberry cultivation is about 500 hectares and production of cocoon is estimated to be 5000 Kg per year. Besides loin looms occupy the pride of place in the local industry of Tripura.

A jute mill set up in Agartala under public sector produces about 20 tonnes of jute products per day and employs about 2000 persons.

Tripura has abundant in natural gas, and a number of gas-based industries have sprung up. Foundation has been laid for a Rs.126 crore methanol project of the state owned Tripura Petro-chemicals Ltd. There are approximately 809 small-scale industrial units in Tripura.

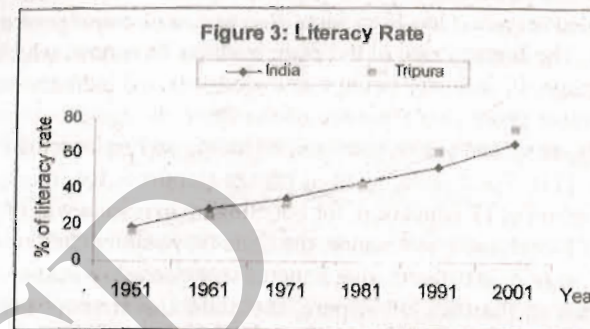
In recent years, the government has taken significant steps to educate the rural people in the technique of the industry so that the industry could be of real benefit to the rural people. The North-Eastern council (NEC) has come forward for providing financial and other help for developing the industry.

Thus, the Industrial Sector has remained too undeveloped so far, despite the vast potential. The secondary sector contributes only about 5% of total employment and about 7% of the total income (SDP) of the state at present. Tea industry in the state occupies an important place in its economy. Tea cultivation in Tripura was started as far back as 1919 during the reign of Maharaja Birendrakishore Manikya. Tourism has been declared as an Industry in the state since 1987. Handicraft is emerging as a potential industry in Tripura. The Handloom Industry also plays an important role in rural Industry of Tripura. The Government of Tripura has already developed a package of incentives to set up any industry in Tripura.

The State government will also set up a Software Technology Park in Agartala with the help of STPI, a registered society under Department of Electronics (Ministry of Information Technology, Govt. of India). In this park, provisions will be made for single window clearance for software development units to be set up, as per the existing schemes of Government of India. The State government will administer the Software Technology Park through a designated agency/corporation.

III

From the above section, it is clear that Tripura is placed in a highly disadvantaged position. Because of high transport costs and landlockness, industries are not coming up in the state. But the state has the potential to grow and develop. The government of Tripura has realized that knowledge and technology are the leading factors in the growth and development of any state. As regards social infrastructure, it may be noted that the state has a vast pool of educated/ trained manpower. As mentioned earlier, the literacy rate in Tripura is quite high and the state has a good network of educational institutions, including technical institutions. The unemployment rate of educated youth, including those who are technically qualified, is quite high. This can be turned into an advantage, by suitably deploying the available manpower, to meet the industrial needs. The total literacy campaign has been launched in the state in February 1994. Since then



384179 people have been made literate as per norm of the National Literacy Mission and they have reached the next phase of Post literacy campaign. In fact, in order to attain the basic objectives of universalisation of primary education, the state government has laid special emphasis on mass-literacy campaigns, non-formal education and formal school-education. The endeavour has been given through five-year-plans to ensure universal provision of primary school for the age group of 6-14 years (Table 4).

Universalisation of primary education is the main objective of the state government in the field of education. In fact, Tripura has made a comprehensive progress in the field of education since launching of the first five-year-plan. It has been the endeavour of the government to spread education in all sections of the society, especially the tribal population. The priority has also been given to new school-buildings as well as to the reconstruction and repair of the existing school-buildings despite resource crunch. Side by side, steps have been taken to extend the facilities of science education and vocational education including computer education at school-level in the state. The hostel facilities have also been extended to all over the state especially for ST, SC and OBC students.

Table 4: Gross Enrollment ratio in Classes I-V, VI-VIII, and I-VIII in 2001-2002

	Classes I-V (6-11 years)			Classes VI-VIII (11-14 years)			Classes I-VIII (6-14 years)		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
India	105.29	86.91	96.30	67.77	52.09	60.20	90.69	73.56	82.35
Tripura	111.20	93.28	101.88	72.22	62.99	67.59	97.17	82.87	89.93

Source: Indian Economic Survey 2003.

Keeping in view the position of the state, the information technology (IT) sector (including IT-enabled services) has been identified as one of major potential growth sectors by the state. The literacy rate of the State is about 74% now, which is higher than the national average. IT industry being a knowledge-based industry, educated human resource is the most promising resource of the State. It also has a good network of schools and colleges spread across the state, including an Engineering College, a Polytechnic and four ITIs. For development of human resources for Information Technology through adoption of IT education, for boosting up investment in IT sector and also for promotion of Electronic Governance, the State Government has announced the "IT POLICY 2000". Again, in order to give impetus to the development of the Information Technology sector in the state of Tripura, the State Government decided to form a separate Directorate of Information Technology (IT) under the Department of Industries. IT Policy has three broad missions:

1. Development of human resource for IT through adoption of IT education in educational institutions of Tripura.
2. Promotion of electronic governance for
 - a. Efficient and effective delivery of government services
 - b. Improved revenue collections
 - c. Improving financial management
 - d. Better dissemination of information on government functions, through setting up of IFCs and hosting of websites.
3. Positioning the state as an attractive location for investment by global and national companies through attractive packages. This will be with an objective to create employment potential in the state in IT industries.

This goal of creating an IT - conscious and IT - driven government and society cannot be achieved without building competencies in human resource development driven development. The research and development units and expenditure are almost nil. This is all the more required because of the existing levels of IT education in Tripura, especially in areas outside Agartala. As envisaged in National IT Action Plan, the Government of India proposes to launch three schemes - Vidyarthi computer scheme, Shikshak computer Scheme and School computer scheme - to enable students, teachers and schools respectively to purchase computers under attractive financial packages. The State government will adopt this scheme and encourage its wide implementation.

In recent years, a number of initiatives have been taken to improve the basic as well as industrial infrastructure in the state. The Government of Tripura has already declared a

package of incentives to set up any industry in Tripura. In addition to these incentives, the following incentives are proposed to be given to encourage young entrepreneurs to set up industry, especially for software development, in Tripura:-

1. The Government of Tripura will give the same status to the sector of IT-enabled services as is given to the sector of software development.
2. IT software industry will be exempted from locational regulations.
3. The IT Software industry will be exempt from the provisions of certain acts/regulations, like Pollution Control Act, Factories Act and Contract Labour (Regulation) Act to facilitate easy setting up of software units.
4. Department of Industries & Commerce shall create a separate area for setting up the units for major IT companies. This area shall be designated as an IT Park. The State Govt. would provide basic infrastructural facilities at the designated IT Park, including uninterrupted power supply.
5. The State government will also set up a Software Technology Park in Agartala with the help of STPI, a registered society under Department of Electronics (Ministry of Information Technology, Govt of India). In this park, provisions will be made for single - window clearance for software development units to be set up as per the existing schemes of Government of India. The State government will administer the Software Technology Park through a designated agency / corporation.

IV

Tripura has been considered the second best IT destination in the North East, after Assam, in an independent study conducted by NEDFi. Encouraged by this, NEDFi is setting up an IT Park in Tripura, which will provide all necessary infrastructure facilities required for the IT sector. The state government has also accorded special status to this industry and special incentives have been announced for IT industry in the new Incentive Package.

The goal of creating an IT-conscious and IT-driven government and society cannot be achieved without building competencies in human resource development. This is more required because of the existing levels of IT education in Tripura, especially in areas outside Agartala. The State government will therefore give top priority to the accomplishment of this objective of its IT Policy and place emphasis on development of IT educational facilities in district HQs and sub-divisional towns.

It is expected that within next few years the Tripura Economy will be effectively integrated with Eastern India as well as other countries in the region. This would open up a vast market for the industrial units based in Tripura.

Government policies, particularly those relating to science and technology, industry and education, will need a new emphasis in knowledge-based economies. Acknowledgement is needed of the central role of the firm, the importance of national innovation systems and the requirements for infrastructures and incentives which encourage investments in research and training. Among the priorities will undoubtedly be:

- **Enhancing knowledge diffusion** – Support to innovation will need to be broadened from “mission-oriented” science and technology projects to “diffusion-oriented” programmes. This includes providing the framework conditions for university-industry-government collaborations, promoting the diffusion of new technologies to a wide variety of sectors and firms, and facilitating the development of information infrastructures.
- **Upgrading human capital** – Policies will be needed to promote broad access to skills and competencies and especially the capability to learn. This includes providing broad-based formal education, establishing incentives for firms and individuals to engage in continuous training and lifelong learning, and improving the matching of labour supply and demand in terms of skill requirements.
- **Promoting organisational change** – Translating technological change into productivity gains will necessitate a range of firm-level organisational changes to increase flexibility, particularly relating to work arrangements, networking, multi-skilling of the labour force and decentralisation. Governments can provide the conditions and enabling infrastructures for these changes through appropriate financial, and other policies.
- **Outsourcing Knowledge** – The state should take all the necessary steps and amend laws so that it can outsource its knowledge. This will require building required infrastructure and incentive mechanism so that there is no brain drain from the state.
- **Knowledge Based Industries** - The state should give more weightage to setting knowledge based industries, i.e. the industries which directly use and disseminate knowledge for growth. With the development of information and communication technologies, the state will be in a better position to leverage the products of these types of industries.

Given the geographical isolation and infrastructural bottlenecks of Tripura, heavy and medium industries are unlikely to come up in this state. As such, the state should properly use its human capital and initiate measures to set up industries based on the notion of knowledge. This will go a long way in promoting the development of the state.

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On Civil Society

M.N. Sanil

N. Jayaram

On Civil Society Issues and Perspectives
(Themes in Indian Sociology, Volume 7, Sage) Rs.380
ISBN 0-7619-3376X

The concept "Civil society" is contested on nuanced grounds. In India, the contextual contingency of that concept differs in every respect. This book deals with the potentials and pitfalls of the civil society discourse.

N. Jayaram's piece "Civil Society: An Introduction to the Discourse" tries to capture the multifaceted dimensions related to the discourse on civil society. It is an attempt to trace the geneology of the discourse. The author problematises the open ended/closed interpretations on the civil society. It leads to confusion which is determined out of the multidisciplinary wilderness. He is also aware of the transfer of the concept in the case of non English speaking Indians. It is a kind of cultural translation that will gain hegemony over the linguistic translation. It starts as a critique of the sociocultural specificity of the concept of civil society.

D.N.Dhanagare's essay "Civil society, state and democracy: contextualising a discourse" points out the dearth of civility in the age of transnational schaden-freud. It also marks the proliferation of debates on civil society in the post-eastern Soviet block era. The limitations of parliamentary democracy cripple the search for a healthy civil society.

Vikash.N.Pandey's chapter "State and Civil society: Reframing the question in the Indian context" deals with relationship between the critique of the state and civil society and antimodernist/resurgent market friendly articulations. According to Pandey, dualism like state/civil society results in the retrogressive romanticization of tradition/culture and civil society.

Satish Saberwal unveils the instability of democracy and civil society in India. His piece "Democracy and Civil society in India: Integral or Accidental?" reveals the dilemmas

of democracy and civil society. The author demands the growth of civil society to tame the segmentary logic of multistratified societies.

P.K.B.Nair's piece "Civil society, state and Democracy" shares the geneological aspects of the concept. He deals with the unhealthy nexus between CSOs and the state. Simultaneously, the author raises the question of weak CSO culture.

B.S.Baviskar's essay "Nongovernmental organisations and civil society in India" shows the heterogeneity of the NGOs as the civil societal associations/roles. He observes the significance of regional mapping of NGOs.

Donald. W. Attwood's piece "State versus Local control in common resource management: A comparative analysis" denotes the ambiguities of local organisations and state in the field of local resource management. Author gives a detailed analysis of the successful sugar co-operative systems in Maharashtra.

Dipankar Guta's chapter "Nation-state and open systems of stratification-making room for politics of commitment" connotes the potentials of citizenship within the trajectory of the nation-state. Author problematises the existence of new social movements within the civil society discourse.

T.K.Oommen's chapter "Civil society, Religion, caste and Language in India" foregrounds the organized groups and communities as the legitimate inhabitants of civil society. Oommen discards the derogatory subordinate stereotyping of such groups. He considers it as a right to their space in the society. Author evaluates the mobilization of the underprivileged social groups as the struggle for equality and dignity. A kind of hegemony of the dominant social groups is created through a different type of mobilization.

Ananthakumar Giri's piece "Civil society and limits of Identity politics" transcends the limitations of identity politics through the reconstruction of civil society. He imagines the civil society as a space for the non identitarian politics and ethics. His case study on USA-based Christian socio religious movement of the Habitat for Humanity leads him to conclude on the spiritual preparation for a non identitarian civil society. A kind of democratised identity politics will raise reactionary/narrow boundaries of the identity politics.

Staffan Lindberg's chapter "Farmers' agitation, civil society and the state" delineates the paradoxical/status quoist dimensions of the peasants' movement. New social movements acquire a contradictory status within the binary opposite like state/civil

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society. Such nonparliamentary political formations create space for status quo through a reactionary kind of political assertion.

J.P.S. Uberoi's piece "On civil society" provides the geneological growth of the civil society discourse. It represents the historical roots of the debates on civil society. Author tries to place civil society as a universal human agency.

Andre Beteille's chapter "Civil society and good society" considers civil society as a historical category. According to Beteille, roles of open and secular institutions are essential as the mediating institutions in the arena of civil society.

Rowena Robinson's chapter "Religion in the Net: An analysis of the global reach of Hindu fundamentalism and its implications for India" debunks the role of internet hinduism in the terrain of parallel universe/internet. The ramifications of cyber neo hindutva practices raise threat to the debate on healthy civil society.

This book captures the differences in the debate on civil society. It problematises the contextual contingency of the idea of civil society.

Working Children Around the World: Child Rights and Child Reality

Pankaj Das

Edited by G.K.Lieten; Institute For Human Development, 3rd Floor,

I.P.Estate, Mahatma Gandhi Marg, New Delhi-110002, Rs350.

The issue of child labour continues to be a major concern for policy makers, politicians and child rights Activists across the globe. Even as the International Organisations such as the *ILO*, *UNICEF* and the *World Bank* protest against child labour and its repercussion on the whole global society.

Most shamefully, children stand as the most abused community today. As per *ILO* report, almost 5.7 children globally are trapped in forced and bonded labour: 246 million are victims of prostitution and of perilous work.

But why does this continues to be a problem? How it affects child's psychosocial development? What are the main factors that explain the magnitude of the problem? What does it mean "nowhere children"?

Through a critical analysis of child as a labour and child as a worker, this book examines these questions. In this edited volume, the concept of child labour has been contextualized across the different cultures. In fact, the articles in this book are drawn from varied fields of expertise which deals the issue of child labour in-depth.

The key argument of the book is to make a clear distinction between what are the child's rights to live and how the child lives in the actual world; through vivid representation of case studies drawn from Vietnam, India, Guinea, Bolivia and Brazil.

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The structural composition of the articles in this book goes to the credit of the editor. For a general reader's understanding of the issue of child labour, the editor compiles the articles in a well structured manner. For the comprehension purpose the book is divided into three parts.

The first part of the book deals with the issue of Child Rights according to *ILO* and *UN* conventions. In this section, first two chapters by **Jaap Doek** and **Sharon Detrick** has mapped out in detail the two conventions' future plan of action for the complete abolition of child labour. Major protective plans and policies of *ILO* and *CRC* are discussed to protect the child from all types of exploitation.

The second part of the book has basically contextualized the issue of child labour in relation to the ongoing process of globalization, poverty and child participation.

In one chapter, **Ingrid Stegeman** has explored the problem of child labour in the context of globalization. Ingrid has pointed out that child labour is a result of social as well as economic development. Going beyond poverty as the only explanatory factor of child labour, the author has pointed out that causes of child labour are the growing level of inequality, growth of informal sectors, commodification of goods and services and lure of consumerism.

Lieten in his chapter: "**Child Labour and Poverty**," has analysed the problem of child labour by putting forward the *Keynesian theory of demand factor* and opposed the neo-classical theory of *rational choice factor*. Indeed, the author has emphasized that it is very important to examine the pull forces rather than push forces behind the incidence of child labour in the present situation. The author has also gone to the extent of exploding of the general myth that there is a strong correlation between poverty and child labour by citing the comparison of two states in India.

In the next chapter; **Preeti Lalwijk** has talked about child participation and its role in the empowerment process through the concept of "child parliament" and "child council". **Preeti** has also pointed out the active cooperation of NGOs in the process of child participation.

The last part of the book focuses on the chapters dealing with case studies of laborers across the globe.

Evaluating the implications of the economic reforms in Northern Vietnamese village, the author argues that the new economic policies have on the one hand marginalized the agenda of education for all and created the result of more school dropouts, on the other have helped children's work become more commercialized, diversified and mobile.

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This has resulted in the uncertainty of education and favours the market economy of the children.

Marten Van in his case study of Bolivia has provided sociological insight to the issue of child labour. The author has examined the issue deeply and tried to see the problem from a structural point of view. He has proposed that structural solution of the needs is the real solution to the problem of child labour.

Similarly, the last four chapters of the book focuses the case studies of child labourer of different forms across the world giving a real picture of how the children live in the world of labour.

Throughout the book, the editor has tried to elicit the issue of child labour in the context of globalization, economic reforms, poverty, child participation and working children's approach to work across the globe.

This book is not only a powerful critique of the neo-classical model of "rational choice factor", which continues to emphasize that push forces are utmost important for the cause of child labour, but also underlines the need for the examination of pull forces for the study cause of child labour.

However, this book has failed to address the issue in an holistic perspective. This book emphasizes more on the conditions of child labourer rather than on any panacea for the problem.

But no doubt this well-research work is of utmost relevance to academicians, activists and policy makers interested in the programme of abolition of child labour from this globe.

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Social Change and Development is a journal of Omeo Kumar Das Institute of Social Change and Development, an institute of Social Science Research co-sponsored by the Indian Council of Social Science Research, New Delhi and the Government of Asom. The journal intends to provide an academic platform to scholars belonging to the northeastern region of India as well as outside the region to project issues of social relevance.

The Journal solicits original articles from scholars on topics of social sciences more particularly pertaining to the northeast. The articles should follow the format of articles published in the journal. The manuscripts should be neatly typed in double space, either in MS Word or in PageMaker 6.5, Times New Roman Font, sized 12 points. The articles must be accompanied by an abstract of about 150 words. Two copies of the articles and abstract along with a soft copy containing the article should be sent to The Editor, Social Change and Development, Sapta Swahid Path, Dispur, Guwahati-781006. Additionally the articles may be submitted for publication via email: dkdscd@yahoo.co.in. The articles are properly reviewed and edited before publication. In some cases, authors may be requested for further revision by the Editorial Board.