CHAPTER-III

ENVIRONMENTAL MOVEMENTS
Redefining Concepts, Categories and Knowledge

... we begin to turn our attention towards the practice of ecological crisis, we notice at once that they are never presented in the form of crisis of 'nature' rather as crisis of objectivity [Latour, 2004:20]

...Nature becomes transformed into areas of action where human beings have to make practical and ethical decisions [Beck, et al, 1994: vii]

...as identities, nature can be thought of as hybrid and multiform, changing in character from place to place and from one set of practices to another [Escobar, 1990]

In our times, humans and their struggles have increasingly become a new description for the objects for knowledge grounded on specific culture, identity, habitats etc. In fact, peoples’ protests on the quest for environmental protection world over, itself underline the sentence of knowledge domain and critical practices. It was, due to the immense amount of grassroots mobilization and protest waged by the environmental movements, made use of these conceptual institutions of knowledge into the fundamental question of, why human society should be eco-sensitive in our age.
As a result of these changes in the cognitive regimes, recent scholarship in political ecology, under the rubrics of liberation ecology and feminist ecology, reverberate conceptual ambiguities of nature-society relationships once again. Above all, political-ecology, an emerging disciplinary regime, is appeared to be a new epistemological sight for cultural articulation of history and biology characterized by the discursive, material, social, and cultural dimensions of the human-nature relations. Because of this complex, but reflexive thought, among other things, there was a cognitive structural formation among the modern men to organize themselves to live in harmony with cultural sensitivity of nature. An attempt is being made, in this chapter, to explore a normative conceptual institution of the politics of nature by outracing a bench of facts that regulate human behaviour both as critical and reflexive, knowing the fact that nature does not have moral or immoral strands by its own. As Karl Popper rightly pointed out:

Nature consists of facts and regularities, and is in itself neither moral nor immoral. It is we who impose our standard upon nature, and who in this way introduce morals into natural world, in spite of the fact that we are part of this world. We are products of nature, but nature has made use together with our power of altering the world, of foreseeing and of planning for the future, and of making far-reaching decisions for which we are morally responsible. Yet responsibility, decisions, enters the world of nature only with us (Popper, 2005: 632).

Apparently, discourses on individuals and collectivities are occasioned by different sorts of social problems, that were caught in between the twin obstacles; theoretical ordering and practical consequences. However, studies in social movements, as an epitome of collective behaviour in our times, tend to learn a lesson from these inherent contradictions manifested in it and set out a model for collective learning and action. Subsequently, these collective learning and action gradually become an idiom of new domain of knowledge (Foucault, 1970:345).

It is in this context, this chapter, is to narrow down the existing pragmatic tools to the experiential realities of knowledge domains, by locating the praxis of
environmental movement, from a macro-social perspective. In fact, two basic premises are registered to be a focal point for our analytical enquiry. First, redefining developmental agenda and prioritizing the welfare state as it has hitherto been portrayed as antagonistic to the environment. In other words, it is viewed that environmental related issues are linked with heightened ruthless economic activities such as industrial growth, increasing energy consumption, intensive irrigation infrastructure and commercial felling of trees (Dreze and Sen, 2006: 218). Second, the environmental movement gradually challenged and resisted the centrality of theoretical shells of natural sciences as it appeared to be totally suspending the logic of nature and its sensitivity. As a result, scientific community was to be slowed down their epistemological and ontological questions of ecology into realistic tools.

Different approaches towards the environmental protection, therefore, are believed to be burdened with the existing domains of knowledge because of its dominant political and ideological preoccupations (McIntyre, 2006:90-91). However, it alarms for restoring scientific integrity and sanity of policy making once again. As Bruno Latour (2004: 20) rightly pointed out, ecological crisis in our times are not to be seen as the questions of crisis of nature; instead it was the crisis of objectivity itself. Environmental movements, it is this context, are not only challenging the established conventional power structures and its participants, but also are rewriting a new historical project, a vision for fundamentally different way of regulating everyday-life and thereby generating new description of knowledge (Jamison, 2001:72).

Needless to mention, movement participants themselves, today, are engaged in converging knowledge creation and analysis along with movement activities. Therefore, environmental movement in our analysis, perhaps, would make sense of how new sentence of knowledge is generated through collective learning, constant protest and action. Under this theoretical ambit, participants of the movement learn on not only to say 'what they do not want', but also reflect upon 'what they dream in
the future' as well. Such a politically charged reflexivity, indeed, advances discursive people's power emanates from the collective struggle and action and thereby challenging the dominant paradigm of power structures.

MOVEMENT SCHOLARSHIP: Collective Learning and Action
With the rise and reflexivity of modernity and differentiation of society, discipline of sociology inherently generated academic specialization. As a result, it formed multiple ways of thinking and knowing social lives that are unfolded before us in the forms of purposive rational action. Social movement studies, a sub-discipline of sociology, seeks to explain collective action of people that are essentially sources of social change. Although sources of changes were seen in conjunction with economic development, later on the agrarian unrest, industrial or information revolutions as instance of macro-social movements discursively produce different directions of change. However, those who were felt to be deprived of power in this process of change, recognize the significance of collective action, and to those, collective action. It is the collective action that has fundamentally become a weapon of the deprived against the oppressive forces.

To begin with, scholarship in social movement studies were to be useful for the preservation of the established political order, as they were conceptualized as external objects to be understood in terms of conventional theoretical models. As result, it overlooked its reflexivity and critical drive of new mode of thought and action. Therefore, in the initial stage, social movements were described as deviants who create instability in society. followed by it, conceptualizing them as organized conflicts, or as conflict between organized actors over the social use of common values. Contrary to this conventional treatment, when social movement used to be a mechanism for coping up with stress and strain, they were unlikely be seen as source of social change and development.
As against these trends, movements are viewed essentially as adaptive instruments in a period of rapid change and above all as a vehicle for innovative and creative ideas (Oommen, 1990, 2004). This inherent adaptability towards the process of social change, Oommen epitomizes as a long critical journey from mobilization to institutionalization in the movement studies. It is in this context, participants of the movements in our age are considered to be martyrs of their faith instead of deviant indulging into anti-establishment activities. They maintain a minimum level of social equilibrium that is evolved from consensus than coercive, and pilot a creative confrontation propelled by collective consciousness. According to Oommen, this kind of mobilizational strategy of social movements can be perceived as a positive and in fact a creative (Oommen, 1997:46). This new approach makes one to clarify Oommen's position in theorizing social movements perhaps deviating from the conventional approaches.

Although, movement, for instance, is conscious efforts of the part of men to mitigate their deprivation and secure justice, the sources of deprivation are still in question. To mitigate these ambiguities, to Oommen, movements are to be seen as a mechanism through which men traverse from the periphery to the centre. Subsequently, as the movements are conditioned by the structural factors, the actions are likely to be voluntaristic. In that case men create movements to achieve the goal they hold dear through their own 'frames of reference'. Moreover, movements can also be a right weapon by which the deprived sections to epitomize their power.

In social movement studies, mobilization would get crystallized when a social category was made commitment in ideology and organization. On the other hand, institutionalization gets materialized when they set specific goals based on purposive collective action. To Oommen (1990:30), these two kinds of conceptualization; mobilization and institutionalization, is the central theme in theorizing the movement studies. In other words, it can be argued that the mobilization takes place in discursive forms from individual (micro) to collective and to structural (macro)
level, thereby movements get institutionalized. At the micro-level, the basic meaning of mobilization is realized when individuals perceive their felt needs. When the problem is politicized by a prolonged communication with individuals, mobilization of protest would take place. Experiencing shared grievances with a sense of community feeling propelled for the collective action, which inspire individual to engage themselves in social movements.

Table No. 3.1: Stabilization of social movements

<table>
<thead>
<tr>
<th>Individual experience level</th>
<th>Collective interpretation level</th>
<th>Structural level</th>
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<tbody>
<tr>
<td>Motivation</td>
<td>Deprivation</td>
<td>Structural strains</td>
</tr>
<tr>
<td>Capacity</td>
<td>Sense of community</td>
<td>Scandalization patterns</td>
</tr>
<tr>
<td>Opportunity</td>
<td>Perceptions of opportunity</td>
<td>Ingroup/outgroup concepts</td>
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<td></td>
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<td>Strategy programmes</td>
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Source: Rucht and Neidhardt, 2002:9

As a result, rationalization of individual decision to participate in collective action will be realized. At the level of collective constructs, above of individuals, ideological apparatus frames collective consciousness that would also underline mobilization strategy. This collective construct not only articulates problems, but also their causal attributes, demanding justification and value orientation with the purpose of explaining facts, substantiating criticism and legitimating claims. Finally at the structural level, it finds out what way structurally induced potentials for community building and organization are available to fulfill the function of mobilization structures (see table no. 3.1). At this stage social movement can be explained not via individual variables, instead a constellation of variables that form a movement society interacting with one another reciprocally. In such a complex situation, it is very difficult to grasp individual contribution. Although it appears to be a shared individual and collective experience are less significant at the structural level, graduation of movement's outreach would provide its own theoretical explanation and their linkages (Rucht and Neidhardt, 2002: 7-30).
Rajni Kothari (1994: 49), indeed, argues that the social movements are the expressions of peoples' aspirations through fragmented discourses. But it is equally important that they also participate in the macro level post-developmental debates such as social policy discourses and its ideological terrain. Moreover, with alternative perspectives, the aspirations of movements of our times are being strongly articulated with the support of intellectuals and activists groups.

It is in this context, the trajectories of movement are to be studied with a new epistemology of modern scientific mode, underlining a mixture of both scholarship and craftsmanship. According to Andrew Jamison, the scholarship in the movement studies highlighted the need for making useful knowledge. This can be done by adopting new methods for investigation by archiving their cognitive praxis as discourse, method and practice in the course of history from the seventeenth century onwards. This historical detour itself brought about a broader movement that slowly crystallized into the formal institutions of modern sciences. Here movements were seen as incremental stages of intellectual growth of scientific knowledge through contestation and thereby shifting the established paradigm.

<table>
<thead>
<tr>
<th>Trajectory</th>
<th>Movement</th>
<th>Institution</th>
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<tbody>
<tr>
<td>Cosmology</td>
<td>Protestant ethics</td>
<td>Mechanical philosophy</td>
</tr>
<tr>
<td>Technology</td>
<td>Instrument, experiments</td>
<td>Machines and methods</td>
</tr>
<tr>
<td>Organization</td>
<td>Decentralized groups</td>
<td>Formal academics</td>
</tr>
</tbody>
</table>

Source: Jamison, 2006:48

1 These aspirations, according to Kothari widespread world over, while taking into account diverse, but fragmented discourses, in the form of green movement, the peace movement, the women's movement, movement on behalf of the indigenous people, the alternative science movement and above all ideological movement for alternative development and civilization (see Kothari, 1994:49).
In fact, several forms of cognitive formations were unfolded whilst intellectual journey slowed down into movement studies. It created a hybrid identity, combining craftsmanship with scientific temper (table no.3.2). To begin with, European societies brought about new value systems or ethics with the institutional structures of mechanical philosophy as an expression of religious devotion. However, instrumental rationality led to the introduction of new methods and machines with the support of technology. Surfacing of these movements led to formal conceptual machines of academic enterprises, as it ever since found an inherent quality of human societies.

This scientific spirit led to a new identity to the scholars of movement studies underlining philosophical attributes of pragmatic issues. Articulation of philosophy of science such as positivism by Auguste Comte in the wake of Enlightenment and French revolution tried to democratize and institutionalize scientific practices and disseminate these knowledge apparatuses. It is, because of this, in each step, there has been a process of cultural appropriation of science in the cognitive process. This led to produce new forms of scientific knowledge and new scientific institutions underlining micro-movement initiatives and their cognitive praxis (Jamison, 2006:48-54). In other words, science benefited from the institutionalization of cognitive praxis of social movements when the knowledge interests of the labour movement entered into the new social science discipline such as economics and sociology, social work, urban and regional planning. Subsequently, new challenges articulated by the social movements led to reframe once again the scientific discourses, method and practices into new form of science and scientific expertise.

Apparently this sort of conceptualization unfolded a new insight for movement studies in the domain of development as well. In fact, it underlines the quest for a cognitive reading of movement studies to reconceptualise and reestablish a developmental agenda of the modern welfare states. Certainly, the trajectories of New Social Movements (NSM), in our times, are instrumental in giving some
desirable signals to this. It was basically because of the crisis of developmentalist models, generated critical thought that forced to imagine differently. This led to the emergence of powerful NSM that created a new space for intellectual enquiry and political action. Similarly, popular actions spilled over from the NSM brought about new descriptions of knowledge in social movement discourses (Escobar, 1992: 21). In this context, a logical question necessarily to be asked that, what kind of scholarship is useful in the studies of social movements.

While examining the trajectory of social movement India and else where, followed by Alain Touraine (1981) and Christopher Rootes (1990), Oommen finds an answer to this question by stating that the scholars need to be generated scholarship on sociology for social movement instead of sociology of social movement (2004: 185, 2006: 269). Precisely it means a new perspective in the movement studies to be generated in order to address more theoretical as well as practical questions under the shadow of the nation-state driven developmental paradigms. Understandably, it is a question of how does one respond to developmental problems critically. In so doing, the centrality of social movement studies of the old version were to be reframed according to their time and space. Perhaps the old is quite often spoken a language of modernization or dependency on their structural locations.

The new is seemed to be differentiated from the earlier to raise new set of questions of everyday-life created under the rubric of democracy, the state apparatus, political practices, redefinition of development and so forth. As a result, scholars of new movement studies are finding a new ontology in these domains. They paid more their attention on social actors and examined critical questions, for instance, construction of identities and autonomy by modifying every-day practices and beliefs. This in fact, would give a signal on, how the new is setting a stage that is qualitatively different from the old. This change promises a new way of problematising the nature of popular resistance and mobilization, which receive wide
currency among the academic circle. This resulted into a new set of rules for thinking and acting. Therefore, the old model is found rarely to be operational, since the developmentalist state is proved itself to be ineffective for qualitative transformation through established institutional structures.

A widely distinguished feature of late twentieth century NSM theories also offers a vantage point to re-conceptualize the interplay of different forms of movements. It is not only to the core principles of modernity, instead they are internally divers but globally inter-linked. For instance, one could see why certain elements of the 19th century movements like Romanticism was found very much in the ecology movement of our times, as system of aesthetic judgment on nature and appropriate lifestyle. In fact, Romanticism basically reinforced the discourses on nature and society relationships. After a detailed survey of 19th century movements, Craig Calhoun (1993: 392-314) identifies certain features of NSM. They are as follows;

- Engaging in self-realization and identity politics as vital force in the social democratic process for more autonomy.
- Recognizing specificities of life-world linking non-negotiable demands of unconventional historical opposition for endorsing instances of transformation.
- Politics of every-day life cutting across large scale system of the state and economy, grounded on variety of issues of sexuality, abuse of women, students' right, protection of the environment etc.
- Greater mobilization based on ascriptive identities replaced by class based mobilization. Understandably middle class formation, responding to the social cause is fast replacing the conventional mode of mobilization.
- A direct democracy rooted in anti-hierarchical structure is made less role differentiation, and made resistant to involve professional movement staff.
- A new set of direct action and novel tactics is found outside the normal routine of politics instead of indulging in the conventional modes of operations through parliamentary and political systems.
- Lucid claim on any sort of membership is less likely to be formed the same strategies for resolving a range of issues at once. Affinity groups in this regard are knit together not by superordinate logic, but by a web of overlapping membership.
Certainly this new dimension in the movement theories as NSM, to Touraine (2002: 90), would go down as near to the actor as possible so as to see how social groups form its representation according to their action. Precisely they form social movements by assuming certain ethical values, such as maintaining difference from the widespread popular opposition with the existing form of social life and action. According to Richard Peet (1999: 203) it is a new way of theorizing social movement which underscores social and cultural organization as:

- Contradiction of people's cultural meaning with the established perception and interpretations.
- Feeling of collective identity or commonality with others is often place-based or environmentally structured.
- Deprivation of aggrieved parties to different levels of actions, ranging from grim individual resistance to organized social movements.
- Creation of broad-based political force, linking social, cultural, and spatial arrangements with social movements.
- Solidarities of “old” with “new” social movements by advocating institutional forms of development (ibid, 203-204).

Despite the fact that the new social movement scholarship started in the west, one can find out proliferation of literature in the Third World countries as a critical quest in the last three decades as well. As potential agents of popular change, everyday struggles of the marginal majority underlines the centrality of power structures in order to relocate new kinds of power structure as a space for cultural struggle over meaning, material condition and needs. In this sense, in Third World countries, social movements are the late comers in the history of movement studies and Oommen (2004:220-223) would call them as fifth revolution². These movements have certain distinctive features as well. Firstly they, becoming transnational in character, when particular events in a specific context are getting reverberated and

² According to Oommen, the first three revolutions occurred conjointly state-societies mainly in Europe. The forth revolution was found in the ex-colonial countries. There are substantial differences found in the state-society relationships after the revolution. The fifth revolution is found a set of ex-colonial countries incorporating into the First World and constituting the underprivileged and poverty-stricken Third World.
are reflected globally due to the increasing interdependency between different societies through not only mass media but also pattern of migration of people from one country to another without leaving their movement context (Calhoun, 1993:389). In addition to that, they are multi-dimensional as the marginalized are the victims of incremental domination and inequality because of the multiple factors involved in it.

The nature of deprivation of the poor and destitute are treated in these societies were merely the recipients of benefits; object of relief and charity. Similarly the emergence of welfare state and the voluntary organizations with their strategies of development introduced numerable projects for the poor. Since the leaders and professionals were drawn from the middle class, they viewed development as a non-political, but techno-managerial activity. As a result, realizing people’s participation is not given adequate attention and the beneficiaries of the development are treated as clients and targets. In other words, the participatory potentials of the poor are deprived by the developmental paradigm of the modern nation-state, as if they are not equal-citizens. Under this circumstance, the radical question for redefining political process and dismantling of non-participatory developmental paradigms are overlooked.

When the conventional theoretical and practical deficits of the movement studies are exposed, including the dominant theories such as Marxism, they could not recognize the new changes. Discontents of modernity were one of the crucial elements in this regard particularly on the question of the state and society relationship; nonetheless the fact the very question is still found critical idiom in the new social movement discourses in different forms. A sociological narrative on modernity has always been emphasized a point that social and systemic integration are never themselves perfectly integrated. It is to be noted that social and systematic integration, or actor and system are not always grounded on situation and the conditions come to be seen sometimes as unacceptable to them. This disjuncture
between the social and system integration and their inherent contradictions gave birth to movement. As a result of this crisis, movement finds out pragmatic approaches through the game of institutionalizing conflict. And it obviously leads to evolve a mechanism to ensure action integrating with the system. With the intervention of the welfare state, it is believed that, the crises could be mitigated.

It is in this context, modern social movements make its entry point to mediate society with the state as a new epitome of moral and secular collective of ‘civic imaginary’ (Eisenstadt 2000). Subsequently, movement gets crystallized in the core political spheres of a modern society charged with all sorts of problems. Slightly different form, Ponna Wignaraj (1993:23) relocates the new social movement in an older civilized rhythm in which the objective of the exercise is not to get back with romanticism, instead to understand the contradictions and praxis reflected in the contested value domains of democracy and development.

Disappearance of conservative functionalism as a reactionary to anti-colonialism and the emergent phases of globalization, among other things, one could witness the end of modern utopia and its radical quest for emancipation. As a result the nation-states, the symbols of modernity start declining their mutual organic relationships (see Bartelson, 2001). Precisely this was a process of transforming the nation-states itself. This significantly affects the formula between the state and movements and gradually they detached one another from social integration to downsize public support systems. It is in this complex condition, the movements instead of remaining with the old paradigm, start using new vocabularies in defense of civilization against barbarity, the state against society and society against market.

3 Although at least for conceptualization, the state created a new home for man in a new world replacing pre-modern authoritative regime, now some would say that this home is about to crumble down and some see the modern state is withering away because of the process of globalization. Or one can see that it is a way of breathing new life into it.
Similarly, the old idioms like exploited class and class consciousness were replaced by new term excluded (Dubet 2004:696-703).

In fact, it was a sort of modernity responding to modernization of tradition, set a stage to situate emerging social movement with new set of values and non-class identities. Moreover, the internal ambiguities become complex, when the heterogeneous anti-globalization movements defended the historical model of society that appears to be perishing. It is understood the fact that those who defend for it are themselves not finding new space created by the very globalization. Apparently, anti-globalization movements of rich countries, seemed to be extending their support to protect the poor countries, indicated that the latter can come up only because of the former (ibid, 705). However, to Sanajay Sangvai (2007), today these NSM are more grounded on people's concerns, but their involvement and impact have perforce been multifaceted given the diversity of constituent population. Therefore, the real challenges to the NSM, however are to counter the new paradigm of modernism and development. And at the same time, it proposes alternatives that are not archaic or traditional; instead depends greatly on local cultures, initiatives, and knowledge as they hold key driving force behind mobilisation.

Apart from these changes in the movement studies, certain exogenous factors in the social sciences could perceive NSM differently. For instance, theories like post-modernism, with its constructivist stand point (Hjelmar, 1996) sets out an idea of different sources of modernity instead of singular modernity. More specifically, it redefines political space of plurality of collectivity of actors who struggle with their own socio-cultural spheres, instead of privileged of being a political subject. This new space tends to articulate their own respective domain either at the actors' point of view or social movements' point of view.

Alain Touraine (1981) for instance, saw the history of social movement is not controlled by mechanisms and laws but by ever-changing social relations. To him,
there is no solid structure and no ends of which the members of society are unaware. Instead, members of social movements are continuously being produced by human actors thereby subjected to constant transformation. However, their representations are being found as a part of the cultural space. In fact, it is the reproduction of cultural attributes and normative-inter-subjective dialogue make collectivity in social life more meaningful. In other words, social movement explicitly has been seen through the eyes of the actors. Here actors are more conscious about what they have in common (the kind of issues at stake in their conflict), and particular interest that they define in opposition to each other. In this terrain subjects are constituted in the struggle against the anti-struggle of its logic of apparatuses, particularly ideological apparatuses. Here subject seems to be less over determined, exposing an inner and outer world dichotomy that tries to ride off from rational/causal categorization (Touraine: 2004).

Finally, there is a growing tendency to formulate separate identity group located in cultural space through counter-hegemonic dialogue and practices, which brought about certain specificities in the studies of NSM. Similarly, with the writings of critical theorists, one set of scholars tried to conceptualize scientists' approaches in which the discipline intended to give attention at their respective subjects at different levels of abstraction of these cultural aspects of mobilization with grant theories at one hand and locate them in their particular knowledge context on the other.

Praxis in Movement Studies
Social movement scholarship in our times, unlike conventional methods, spells out new directions which prioritize not only the relevant theory building but it unfolds multiple effects including the changing characteristics of movement themselves. Notwithstanding, this new approach undertakes interdisciplinary method for theory construction. In fact, scientific attempts were made to carry out studies more relevant and meaningful for movement themselves. Since multi-dimensional
perspectives on theory construction makes our effort more complex, theory of praxis maps out different domains. Praxis can be observed whilst different dimensions are internalized by several actors, who are central in the process of transformation. It is in this context, praxis can be considered as a knowledge creating activity. Employing praxis as a method to study the dynamics of social movements, here we deal with both epistemological and ontological problems. In other words, we slow down our theoretical bit into praxis as a set of discourse, method and practices, which are very critical in movement scholarship.

In fact, the philosophical underpinnings of praxis, an intellectual trajectory traveled a long journey from the Aristotelian days to Kant in the age of enlightenment to conjoin scientific principles with practical consequences. Both the French and the American Revolutions, in fact, realized nexus on how the scientific spirit was organized new methods and theories of experimental philosophy. In Foucault's term, it was a new episteme or cognitive regime in the form of naming, classifying and ordering of things. Once these regimes of knowledge disseminated in different part of the world through print media, there was certainly be a democratization of scientific education and application of the mechanical philosophy into the every day practices. As a result, society would necessarily be an experimental ground for scientific enquiry. In this backdrop, the forms of scientific knowledge production and institutionalization led to a new direction in which instrumental rationality is taken as a form of hybrid identity among the modern scientific community. Gradually it resulted into a popular credo, when these scientific apparatuses are well programmed and activist organizations start experimenting it later on. In simple terms, it is testimony that how new ideologies developed in the form of scientific socialism in the late 20th century and how reform packages of the modern welfare state were scientifically administered and governed. Apparently, praxis of social movements and its different kind of cognitive formations even led to the emergence of new disciplines like social work, urban, and regional planning etc. in this backdrop (Jamison, 2006:50-53).
The question of praxis had been a dominant paradigm in the philosophy of science and social sciences in the 19th and 20th century which tried to elaborate its twin aspects; theory and practice. To Marx and Freire, it is a combination of activism and consciousness about one's work. However, in the period of modernism and post-modernism, the concept of praxis is elaborated practice and theory by integrating reflexive thought and action, working with 'the people,' and working for the cause of change (Seng, 1998:4 and Totikidis and Prilleltensky, 2006:48). For Totikidis and Prilleltensky (2006: 49), the praxis paradigm is all about vision and action unlike positivism for its objective fact-finding.

For an analytical purpose, praxis unfolded several dimensions such as its theoretical outlook, methodical approach for research and, above all, action. Conversely, one can argue that praxis would allow one to engage with the theoretically informed practice that yields further practice and theory. In the context of movement studies, two divergent propositions-practical experience and ethical values- are being put-forth by Manuel Castell and Allen Touraine by looking at the politico-democratic process in our times. While explaining the political praxis, Castell (1998: 359) is less likely to be standing upon intellectual stand point in this regard. To him, the most powerful political liberation is to be free from uncritical adherence to theoretical or ideological schemes. In so doing, one can construct a practice on the basis of experience by using whatever information or analysis is available to her/him from a variety of sources. On the other hand, Touraine is of the view that, because of the lack of interpretation and theorization in the current shrinking social and political space, that led to political bankruptcy. To overcome from it, ideas and actions, to Touraine (2000), are to be interpreted on political and moral ground. As we discussed earlier, subjects are the vital theoretical standpoint in Touraine's analysis. At the same time, there is a demand for recognizing both social (justice and fairness) and cultural rights (identity and difference). In order to enhance a new breath of democratic life, what Toraine proposing is to subordinate politics by ethics.
In other words, praxis is not only interplay between practice and theorization, instead it appeals for moral order with social responsibility. In fact, it is the very responsibility that makes a deeper ethical meaning in the pursuit of knowledge generation (Jamison, 2006: 50). While we put our actions higher than mere political interest in every practice, theories would necessarily acknowledge its underlying ethical and practical aspects in it. In the analysis of Eyerman and Jamison, these two aspects are the crucial elements of praxis in the movement studies. Therefore, according to them praxis plays

...a mediating role for social movements both in the transformation of everyday knowledge into professional knowledge, and, perhaps even more importantly, in providing new context for the reinterpretation of professional knowledge. This perhaps links the new, micro-level approaches of sociologists of science to the broader macro-level approaches of (critical) social theories. (italics is emphasized) (Eyerman and Jamison, 1991a:52)

In the era of globalization, praxis in the social movement studies make more complex, as and when, transnational social movements cut across their time and space, particularly by using advancement of science and information technology. Although transnational social movements are not new, their multi-dimensional alliances and the expanding influences over forming global civil society network, a new sort of technologies of power, set a stage to make sense of it with new ease and methodological sophistication than a conventional methods. Here the actors and agencies are numerous and their engagements with everyday protest would certainly be go beyond the narrow domains of disciplinary boundaries. As a result, movement studies plea for an interdisciplinary approaches. In such a context, there is a need to detour into the mobilization and institutionalization process between the lines where one may find mobilization process at multi-dimensional level of and, perhaps, similarly their institutionalization.
Some times, along with divergences, there can possibly be convergence of social movement as well. The World Social Forum (WSF), for instance, a typical metaphor in this regard. In fact WSF created a political space for the emergence of global civil society with different capabilities. In this new domain, one would find a space for interaction and common discourse that are evolved out from the movements of different types belonged to several cultural specificities. This new space, in fact, has been created by celebrating heterogeneity, fragmentation with a conviction for social transformation (see Fisher, Ponniah, 2003). To, Vandana Siva (2006: 96-97), this categorization seems to be in a new mode of political democracy based on the principles of diversity and self-organization. She called it as living democracy movement by acknowledging the fact that we can imbue our everyday action with a broader vision and deeper values.

When a committed group of people who think and act at different layers cutting across national, regional and local collectivities, makes the movements a global character. It clearly shows some of these new ideas were created out of this collective action world-wide. Hence at the same time, actions reinforce to re-conceptualize our ideas for further action, nonetheless the fact that these ideas and action are divergent according to their time and space. It is in this context, praxis is viewed as an alternative theoretical outlook required for practical transformation of the notion of development, a language of modernity. Research enquiries into the nature of resistance and political practice are quite significant as the NSM studies start problematising these changes differently.

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4 It implicitly means intrinsic worth of all species, all peoples, all cultures, a just and equal sharing of this earth’s vital resources; and sharing the decisions about the use of the earth’s resources (see Shiva, 2006: 6).

5 This idea has been conceptualized on the backdrop of the success movement against biopiracy of neem, of basmati and of wheat which reclaimed a collective biological and intellectual heritage as a commons (see Shiva, 2006:3).
This new trend certainly unpacks the fixed ontology for movement studies and signals for an epistemological shift. It is the theory of praxis that gives new space to make sense of the multi-dimensionalities of social movement studies, as different actors and agencies world over get involved in the process of local level protest vis-à-vis global levels. Theory of praxis, in this context, would leverage and shape different vantage points in the studies of NSM to see how inventions and practices are being made, how meanings and bodies are being formed, not for dying, but for reaching out different facets of social life. In other words, new social movement theory would raise multiple phases such as collective identities, activist communities including scholarship generation, movement cultures and above all social transformation through social action. In fact, the praxis model being proposed here for analytical purpose certainly would endorse certain characteristics of modernity as it recognizes multiple phases of social movements.

New Social Movements: Late Modern Praxis
Emergent theories of late modernity, unlike the false notions of modernity with unilateral idea of progress, set out certain specific agenda which brought our attention to make sense of NSM in the context of globalization. Contemporary social movements are obviously new, as they involve new actors equipped with different orientations and identities, aiming at achieving quite different ends than the old movements tried to follow. Apparently, the theories of post-modernism, is also grounded in the late modernity, as the central values of modernity project assumed and realized through active participation of several actions in social movements (Eyerman and Jamison, 1991:152). Ever since, post-modernism challenges the very foundation of knowledge, as it has been fragile and no historicity found in it. Meanwhile, NSM in this context concentrated its attention to new emerging questions such as ethnic resurgence, gender and environmental problems on social life and proposed new set of methods and values to address such problems. Jürgen Habermas sees its criticality within the paradigm of non-instrumental and communicative rationality. As he contends, modernity has established an inseparable
link between rationality and freedom that resides in a new format of democracy and human rights. To that extent, NSMs, quite expressive to realize these democratic values through latently available structures of rationality, which are transformed in the form of social practices...structured by cultural traditions.

In the domain of late-modernity, social movements discourse were anchored into the emerging reflexive quest for green concerns that geared up from grass-roots resistance and give up the forces of colonizing the life-world. Anthony Giddens on the other hand, viewed reformist agenda of modernity wherein NSMs hold novel issues of cultural identity as a global phenomenon. Rapid increase in communication technologies and recognition of the important cultural differences are the vital factors behind these global tendencies (Tucker, 1998: 137-139). While rejecting postmodern claims of a surpassed modernity, Giddens contends that the project of modernity is traveled throughout the globe by encouraging expert and abstract systems of knowledge, represented both by the social and natural sciences. As a result, it succumb narrow domains of time and space and henceforth re-embedding in new ones through reflexivity. NSM in this context, as Giddens sees, is grounded on a new life-politics, as an integral to the modernity project (ibid, 126). It is in this context, emergence of NSM as an agent of carrying innovative discourses and practices in the struggle of late modern era assumes great significant.

It is also equally interesting to see how constitution and reconstitution of scientific enterprises brought about remarkable changes in the cognitive praxis in the domains of science and technology. Among other things, Schumacher's *Small is Beautiful* (1973), and Ulrich Beck's *Risk Society* (1992) showed that how our perception about science and technology to be salient in the social movement studies. Over a period of time, regulatory potentials were sought out the world over, by the state agencies with the support of courageous scientist, to reduce the risks associated with emergent technologies produced. For instance, technological improvements in the areas of alterative energy systems are represented in
conjunction with national and international policy priorities. It influenced research and development in searching of alternative energy sources and sectors (Rose, 2007).

Similarly, adaptation of technologies, such as media and communication strategies by the social movements themselves transformed local level micro-movements into transnational movements.

In order to document problems such as environmental contamination for further research enquiries and possible technological adaptations, social movements heavily bank on new technologies. In nutshell it is observed that the NSM continued to be interacting with the advancement in science and technology as different actors such as challengers, producers and sometimes advocators of different fields. The following table (table no.3.3) shows how movements are being negotiated with technological impacts on society and as a result, how these negotiations paved the way for alternative technological options.

<table>
<thead>
<tr>
<th>Social Movements</th>
<th>Oppose Existing Technologies</th>
<th>Develop Alternative Science and Technology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health</td>
<td>Antismoking, antivaccine</td>
<td>Health-care access, embodied health movements</td>
</tr>
<tr>
<td>Environment</td>
<td>Antinuclear, anti-GM food, environmental justice</td>
<td>Organic food, recycling and remanufacturing, green chemistry</td>
</tr>
<tr>
<td>Peace/weapons</td>
<td>Disarmament</td>
<td>Non-violence defense</td>
</tr>
<tr>
<td>Information/med</td>
<td>Media reform</td>
<td>Alternative media, open source</td>
</tr>
</tbody>
</table>

Source: Hess and et. al, 2008: 478

Although movements emerge as against the specific research agenda or technological innovation, they also grew out, through times, in supporting alternatives in various forms. Today, social movements are slowly tracking into the scientific and technological advancements in the crucial areas through prioritizing
their research activities, professional practices, research methods, technology of
development, market managements and above all public policy measures (Hess, et al

It is all the more important to note that, NSM discourses basically strive to
depict a novel idea for maintaining cultural identity as a result, separating from
conventional political life. It gradually found in epistemological shift from the
material consciousness to the culture consciousness as a key driving force in the
cognitive praxis of social movement. This trend has been very crucial in the late-
modernity period. For an analytical purpose, the characteristics of NSM can be
conceptualized generally under the following give theoretical regimes:

- **Return of the oppressed:** It is a bottom-up approach which tries to return the
  oppressed back to become an active participant. Participants of the movements
  were the victims either exploited by different ideological prerogatives or
  exploited by the modern forms of capitalist formation like the state and the
  market. Apparently, they are the subaltern masses of peasantry and forest
  dwellers victimized by environmental degradation.

- **Cultural identity:** It is a process of rethinking and reevaluating tradition that
  evoked moral and ethical questions, instead of objectification and
  universalisation. More specifically, modern form of subjectivity is evoked
  cultural identity, that is, pre-requisite for the marginalized, in order to utilize
  this knowledge to evaluate their everyday action.

- **Reflexivity:** It enhances the capacity of self-conscious individuals and group to
  critically apply knowledge for themselves and the larger interest of societies.
  However, rational reflexivity replaces the tradition by new beliefs and
  possibilities, as it is being the main source of social solidarity.

- **Scientific practice:** Emergence of different sub-disciplines and intelligentsia
  outside of the mainstream academic environment and becoming part of
  pedagogic practices in the institutions of higher learning with the support of
  mass media and critical strategies.

- **Alternative model:** It envisages an alternative modernity through reflexivity and
  critical assessment of the established paradigms. It, in turn, sets out new
  avenues and possibilities drawing from the experiences of both local and global
  arena.

From the above inferences, one can draw distinctive dimensions of
conceptualizing NSM as a cognitive praxis transforming itself into multi-fold
analytical baggage. In other words, a sensible approach to the modernity project is always seen as a location for social practices, as it is central to the ongoing reproduction of societies (see Omvedt, 1993; Beck, et al, 1994 and Tuker, 1998). Late modernity project, to that extent, is groomed on possible universal tendencies such as grass-root activism, cultural identity with criticality and reflexivity. In this regard, scientific activism envisages alternative models of practices. The ongoing debates on the late modernity, endorses undifferentiated domains which cut across science, technology and human knowledge.

Third world reflections of social movements, in the context of praxis, have also been systematically schematized as a pragmatic tool for participatory democracy and development. Therefore, at least, for the scholars in the studies of ecology, rely on a holistic view and the humanism within it as against the anthropocentricism propagated by the European modernity or the eco-centricism by the radical environmental groups. Subsequently, instead of technology, scientific mastery over nature to be blamed for it's over simplification. This resulted into practically devaluing nature. Thus, the ecologist and their holistic cognitive process allow to find out new type of epistemology in the late-modernity paradigm. This new epistemology, in fact, not only imaginative for a fresh paradigm of ecological sensibilities, but also consciously cleansing non-scientific elements, perhaps to readmit as new ones (Wignaraja, 1993: 5 and Tim, 1994: 14-23).

This newly developed ecological sensibilities and thoughts with the emergence of environmental movement in our age, perhaps not endorses an epistemological or methodological issue, but it also impels material mastery too. In other words, there is a more ecology than what we have understood by science narrowly. Locating contemporary science with new perspectives, ecological thought in a broader sense can be grasped in ecological reality as its epistemology is neither reductionistic, nor its ontology dualistic, nor its ethics altruistic (Tim, 1994). Apparently, with the emergence of environmental movement with radical approach
in our times; the fixed ontology of modernity was challenged on many grounds and slowly alternative views were unfolded through critical thought and reflexivity. This new discourse turned our attention to the question of ecological sensibility; for that matter ecocentrism, being seen as one of the attributes of the praxis of late-modernity.

**Environmentalism: Criticality in the Praxis of Modernity**

The project of modernity, as we know, in the age of enlightenment had always been aimed at liberating men and shifting their sovereignty over nature and other fellow individuals. It was a period coincided with the disenchantment of the world, the dissolution of myth and the emergence of scientific temperament. Ultimately, it was a project of mastering man over nature through rationalization tied to the emergence of capitalism, demystification of myths, bureaucracy, and science. Such an approach resulted into thinking and acting in social and natural world in terms of coherence, calculability, systematic planning and efficiency.

Classical sociologist, in fact, could well understand the functional organisms of the modernity project with great deal. In their scheme of thought the core sources of modernity were seen in the form of growing differentiation and division of labour (Durkheim), emergence of rationality and bureaucratization (Weber) and creative activity of history through dialectical materialism (Marx). In other words, modernity of the west was subjected to the promise of emancipatory quest for consolidating the foundation of liberal, rational and secular order. However, with the passage of time, the promises of modernity witnessed innumerable contradictions within itself. Ironically, growth of science coupled with industrialization have created new sort of risk in society. Failure of knowledge and modern expertise led to spiraling of ever newer problems than finding solution. It was in fact with the protagonist of post-modernism, that the unintended consequences of modernity were unfolded. This has been observed in the form of crisis of secular characteristics of the nation-state, growing cultural identity by articulating cultural differences, ecological distrust and
the emergence of environmental movement, the ubiquity of media and mass communication. In a sense, the centrality of the language of science, development and progress are severely challenged by new set of assumptions and values.

As the development of science slowly getting graduated into the all spheres of social life under the shadow of modernity project, we could see a shift in the balance of power. It was, certainly, in favour of human against the nature through the application of advanced technologies. This resulted into privileging instrumental values over intrinsic value. This shift is conceptualized as anthropocentricism; a system of belief and practices that favours humans over and above than organisms. According to Patrie Curry (2006: 43) it was an attempt to unjustified privileging of human beings, as such, at the expense of other forms of life. Further, it reveals in the form of dominant mindset, privileging over nature that extended in to the everyday life of politics, economics, science or culture.

Tim Hayward (1995:12) viewed that the advancements in scientific knowledge promoted liberation from prejudice and superstition via their technological application, from helpless subjection to forces of nature. In a sense ecological critics doubt the claims of technologically embodied science, as it has left no room for enlightenment logic to explain, how our ecology has been very sensible for the survival of human beings. Technology, to them, is a concrete link between the mastery of scientific knowledge over nature that in turns produce disastrous consequences. In other words, the promises modernity project could not rescue from the constraints of the world that itself produced.

Emergence of the new discipline like ecology\textsuperscript{6} shifted our attention to conceptualize this question differently. It was generally accepted the fact that the

\textsuperscript{6} The world Ecology was coined by German natural philosopher Ernst Haeckel in 1886 to describe the scientific study of the relations among organisms and between them and their environments.
discourses on modern environmentalism begun with the writings of Rachel Carson's \textit{Silent Spring} (1962). It was rather a turning point in resurgence of interest in the domain of ecology. The \textit{Silent Spring} sounds alarm the unintended consequences of both wildlife and human health due of the application of new organic pesticide after the Second World War. The great achievement of the book underlines a scientific approach in ecology into a wider perceived ecological problem that was began to contest politically, legally and above all in media and in popular culture (Garrard, 2007: 6).

An eco-critical reading of the text \textit{Silent Spring}, in fact, unfolded environmental debate as an instance of rhetoric. Added to that, over the last fifty years, there has been a series of environmental disaster\footnote{The world over has witnessed a havoc during this period; for instance, 1950's there was a mercury poisoning in Minimata Bay in Japan, in 60's there was the ecological devastation of Vietnam and countless discoveries of waste and pollution from the factories, in 70's there was a disaster in Seveso in Italy when a factory exploded and nuclear accident at the Three-Mile Island in Pennsylvania, in 1984 there was an explosion at Union Carbide Chemical Plant in Bhopal in India, 1984 there was an accident in Ukraine resulted into spreading radioactivity across northern and central Europe (see Jamison, 2001:21-22).} throughout the world that brought about a separate realm of non-human nature as well. Given these facts, there was a shift in the environmental political agenda by recognizing a new challenge to the humanity. When non-human spheres of existence redefine and conceptualize nature and the quest for protecting nature, to Andrew Jamison (2001: 21) was, in fact, \textit{Reinventing Nature}. Jamisons' conceptualization of \textit{Reinventing Nature} basically charts out a detour from anthropocentrism to ecocentrism in order to suggest that the environment, as similar to human society, has never been static, unchanging and in equilibrium from the time memorial.

This paradigm shift in the epistemological outlook was graduated by a variety of fashion than the western modernity project supposed to promise. It was possible basically due to the significant changes in western environmental thinking and acting
in the early 70s. If the earlier conceptualization of environmental problems were local or regional to resource depletion and pollution, at present, our understanding of environmental problems were global in character so that it got global attention as well. Bringing nature into the definition of social order, wisdom of western modernity had always tried to control over nature as a provisional neutral political actor. Regrettably, it could no longer continue, as political ecology has finally been rethought of an extent in which the same west could catch-up with militant ecology.

This radical green thinking in fact made an attempt to situate life conditions of humans in harmony with the planet. As a result, in the later part of the 70s mainstream organizations and the nation-states had to heavily depend upon the environmental sciences such as ecosystem and community ecology, climatology, oceanography, etc. to define and organize key environmental problems. Consequently it began to questioning the earlier notion of the static or equilibrium notions, and framed the contours of debates within both pure and applied disciplines (Chiro, 1997: 205, Scoones, 1999: 482-483, LePoire, 2006: 154). Incorporating various degrees of approaches, structure, and power of natural agency, challenged the fixed ontology in these intellectual movements. As a result of this diverse approach in the discipline of science, alternative models and tools were developed in order to counter ecological crisis. This new multiple directions towards our sensible thought and action to protect our ecology, according to Bruno Latour (2004), is the un-thought of the Politics of nature. In other words, nature starts assembling social behaviour (organization and practices), disciplines (indigenous knowledge system), and political order (new culture) of human society.

On the road to knowledge production, certainly, hypothetical assumptions regarding the intellectual trajectories of environmental consciousness world over can also be evaluated on the basis of what extent scholars and their intellectual contribution have been made in this cause. The anthologies of ecological studies of 1960's have provided resource material in order to create a history of
environmentalism but it was little on actual history of ecology. Despite the fact that the narrow views of the origin of modern environmental movement are found, the ecological publications made implicit assumptions about the historical roots of the current environmental crisis. In other words, it is evident that the origin of ecological crisis certainly did not begin with the Industrial Revolution of the 18th century, instead, it was found in first time with a group of green writers who identify the problem of ecology with critical comments on the emergence of mechanistic and anti-ecological world view (Madge: 1993:151). Added to that, act of reading and writing under the post-modern rubric have created a new space for metaphorical representation on environmental discourses. For instance, Michael Cope's Tea Ceremony (1991) paraphrases the act of drinking a cup of tea. It evokes one to sense the vast eco-social system and memoirs experiential reality of the social-fabric embodied in it as workers, farmers, tea plants, rain, sun, air etc. Hence, an act of drinking tea, perpetually becoming an act or reverence and remembering (cited in Martin, 1996).

Graph 3.1: Scholarly published work on environment world over

Source: LePaire, 2006:156-161
In fact, literary critics and scholars of both sciences as well as in social sciences have paid enough attention towards this quest in the recent times. Similarly, there are scholarships which undertook logistic analysis of recent environmental interest among the scholars has been schematized. David J. Lepoirè (2006), for example, shed light on the scholarly works published in popular magazine articles, popular books, and research oriented books since 1970 and major international environmental treaties in this domain (see graph, 3.1).

| Table No. 3.4 Trajectories of environmentalism |
|----------------|----------------|----------------|
| Period          | Emphasis       | Instances      |
| 1    Awakening  | Public debate  | World Wild Fund |
| (Pre-1968)      | Issue identification | Silent Spring, 1962 |
| 2    “age of ecology” | Organization | Friends of the Earth |
| (1969-74)       | Program articulation | Only One Earth, 1972 |
| 3    Politicization | Social Movement | “No Nukes” |
| 4    Differentiation | Think tanks  | WRI, CSE, Earth First! |
| 5    Internationalization | Sustainable development | UNCED |
| 6    Integration  | Incorporation  | Agenda 21 |
| (1994-        | Resistance     | Natural Capitalism, 1999 |

Source: Jamison, 2001: 82

In order to get a holistic and wider perspective on the issues of ecology, various measures were carried out from 1950 onwards. Subsequently, strategies were progressed in the later part of the 70's, elevated environmental interest high. Jamison outlined six main trajectories of environmental consciousness that itself signifies a cognitive process that begun in 1960's (see table no. 3.4). To begin with, the first phase was witnessed by transformation of traditional mode of natural preservation and conservation into a new kind of environmental consciousness with inspiring writing of Rachel Carson's *Silent Spring* (1962) and the institutionalization of World
Wildlife Fund. The second phase was the *age of ecology*, spearheaded by new activist group Friends of the Earth. It unfolded discourses on negative impacts of growth which are apparently interrogated the limits of growth.

During this period, many national parliaments enacted comprehensive legislation in the backdrop of United Nations Conference on the Human Environment (UNCHE) in Stockholm in 1972. Added to that, there was an attempt to reorient science and in search of radical alternative technology. It resulted into a wide range of appropriate technological investigation, particularly with the inspiring wrappings of E.F. Schumacher's *Small is Beautiful*. As the energy issue became top of the agenda of the most national political parties, new kind of disciplines or sub-disciplines were developed in and around ecology in order to suggest environmental policies. This led to the third phase of environmental consciousness.

In many parts of the European countries, new research centres and government departments were built up. Universities then, start linking with environmental movement organization to create a new kind of service culture among students and faculties. Consequently, movements could provide an organizational learning experience to the youngsters relating theory with practices. A wide range of discursive practices on the quest for environmental protection gave rise to fourth phase. This phase was a historical landmark for the crystallization of institutional interest by different departments in the universities, research institutions and non-governmental organizations. Subsequently, it led to the development of professionalism and the emergence of independent think-tank groups.

With sophisticated technicalities and new innovations, for instance, the Greenpeace activists made watershed for mass campaign and awareness building on environmental problems throughout the world. The fifth phase was begun with the era of globalization in which narrow national concerns were regrouped into a broader international challenges as the characteristics of environmental issues, such
as climate change, ozone depletion, bio-diversity and so on and so forth become the problems of entire humanity beyond national territory. Today, both government and business outlets are conjointly start building a new doctrine under sustainable development quest.

From the above reflections, the quest for sustainable development served environmental discourses into three direction; (a) internationalization of the environmental discourses including foreign aid and technology transfer, (b) framing of environmental issues with other developmental questions like income and distributive justice, poverty and gender and (c) searching for a new epistemological space in the disciplines of social sciences. With a diverse strategies adopted in the backdrop of sustainable development, in a sense ecological issues are getting themselves to be modernized, with a strong faith in technology, for that matter alternative technology. This resulted into the development of new entrepreneurial activities for research and knowledge production with the support of different agencies including corporate sectors, government bodies and non-governmental agencies (see Jamison, 2001: 82-97).

In fact, new sensibilities of reflexivity and criticality, are not to be seen as the reversal of the core values of modernity project, instead, new theories of post-modernism and post-colonialism accentuated the process of a distinct variety of modernity. It was not only found in the sphere of academic and cognitive formations, but also experiential reality of everyday-life through variety of ways (Pathak, 2006). The experiential reality of modernity, as Giddens sees, has unfolded enumerable possibilities through the process of NSM such as Feminism, Ecology, Guy movement and Ethnic-identity. The kind of challenge ecological crisis of our

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8 Reflexivity in fact penetrated into the reproduction of personal and institutional life. It radicalizes modernity, as traditions are rethought and problematised. As reflexivity is inseparable from the texture of social relations, social practices are constantly reformed in light of new information about these practices.
times given to rethink the pathologies of modernity, and alternative views for ecological sensibilities in the light of incoming information and conscious practices, are very central to the discourses on late modernity. In other words, if modernism claimed to be detached from the constraints of the world, ecology and its constituencies get attached to everything. It is in this context, the discourse of environmentalism appeals for great relevance not only for theory construction, but also a quest for collective and conscious action and intervention as a form of discursive method.

Environmental question perhaps be on its way to becoming a crucial factor in the widely discussed transformation of modernity. Ecological modernization theory, as Arthur P. J. Mol (1996) tries to argue, has been a vantage point to analyze the contemporary reflexive reorganization and transformation of eco-friendly production relations. It can thus be interpreted as the reflective reorganization of industrial society in its attempt to conquer the ecological crisis. In this backdrop, ecological modernity theory generated a standpoint by drawing three general possibilities to deal with contemporary ecological challenges (Mol, 1996: 311-314), they are:

- **Ecological reform through modern science and technology**: It opens up wider possibilities by replacing more advanced environmental technologies that are not only redirect production processes and products into more environment friendly outlook, but are also by starting in a selective contraction of large technological systems that can no longer fulfill stringent ecological requirements.

- **Economizing ecology through internalization of external effects**: Increasing importance of economic and market dynamics in ecological reform, and innovations, entrepreneurial skills and other economic agents became social carriers for restructuring sustainable development. Modern economic institutions and mechanisms can be reformed through ecological rationality.

- **Political modernization through environmental policies**: Environmental policies of the state are being changed from curative and reactive, to preventive, from 'closed' policymaking to participative policy-making, from centralized to decentralized, and from rigid to contextual steering. Moreover, a number of tasks, responsibilities and incentives for environmental restructuring are reaching out from the state to the market.
Ecological modernization theory perhaps put-forth a radical transformational phase, as and when, the way modern society track record on it. In so doing, the institutions of modern society, such as the market, the state and science and technology, are to be radically transformed in tune with the environmental crisis. Yes, ecological modernists tried to incorporate ecological crisis into a set of social theories into a language of modernization and precisely attributes of modernity. This kind of slight abstraction stresses new kinds of innovation and new forms of dialogue and cooperation taken place in business firms, policy makers, politicians and environmental organizations. Recently, it is observed that the interplay of these modern institutions had undergone in crisis situation that brought about conscious effort to change as a result of the protest by different actors from local to the global level. In fact, these protests, questioned the moral ground of science and it brought about political role of science in question. It is true that, the criticism against science is centred on the question of its theoretical and empirical validity or true, but it doesn’t mean that one will take an anti-science stand. The same can be applicable to science of ecology too. To that extent:

...science of ecology was, of course, a major inspiration for metaphysical and political ecology. Another is that science plays a massive part in our awareness of the fact of eco-crisis; it supplies many of the indicators outside of our personal experience, and virtually all of the quantifiable and statistical ones. Further more, it is needed to underpin the limited but important role of green technology in alleviating that crisis.... (Curry, 2006: 19).

It is understood by the fact that the techno-science cannot offer a solution by itself to the eco-crisis, instead, the value attached with the science by its proponents and practitioners, in fact, contribute positively. In other words, the politics of science need to be situated into democratic values of science. When science detours in to the democratic domain, the great debates on science and technology came not from the scientific academies, but from political movements. It was the local struggles against trawlers, missiles, pollution, monoculture, and industrial accidents that created a dialogue between science and democracy. Perhaps, environmental crisis, we
ourselves have introduced into our world, increased the public and institutional demand on science in our times. The recent Bali conference on the United Nations Framework Convention on Climatic Change (UNFCCC) unfolded a new language of science called for politicians and policy makers to be seriously responded to its conclusions. In other words, the events of the conference alarmed that science never been truly free from politics (Sethi, 2008:26).

Struggles in India, for instance, starting from Chipko movement to Narmada valley, Bhopal Gas disaster thrown into the resolution of scientific controversies that could not just be left to scientific experts, but it was largely a politically charged question from the citizens. In such a complex scenario, experts were tongue-tied with their scientific attributes or but the illiterate subaltern at the margin of history of struggles, challenged it on the technical grounds with their own logic. This language of protest, in other words, calls for a living ecology of knowledge instead of the grammar of violence which embodied in science.

Pursuing these struggles, with new forms of knowledge forms, was to have minimum resemblance of justice deliverance without being subordinated by official and state-sponsored forms of knowledge (Visvanathan, 1998:43). It could be possible through reclaiming and recreating freedom of all species. Vandana Shiva (2004:118) however calls it as living democracy as it has been directing towards an alternative movement for people's right as well as community rights over the natural resources. Living democracy movement, to Shiva, embodies; indivisibilities and continuums. If the former is on the quest for freedom for all life on earth, the latter appeals for justice, peace and sustainability. Similar to the changes in scientific approach to the environmental question, the discipline of social sciences in general, sociology in particular began to conceptualize the same in the backdrop of radical changes taking place man-nature relationship world over today, specifically dealing with two concepts environment and ecology. In fact, Ulrich Beck et al (1994: vii) clarify this position by stating that:
.... ecological question cannot simply be reduced to a preoccupation with 'environment'. The 'environment' sounds like an external context of human action. But ecological issues have come to the fore only because the 'environment' is in fact no longer external to human social life but through penetrated and reordered by it. What is 'natural' is not so thoroughly entangled with what is 'social' that there can be nothing taken for granted about any more....as many aspect governed by tradition, 'nature' becomes transformed into areas of action where human being have to make practical and ethical decisions. [italics is emphasized]

The recent scholarship in the discipline of sociology clearly outlines the environmental question as a new enterprise, acknowledging the fact that the classical sociological tradition perhaps could not given adequate attention to this question. Reflexive modernization pressed for environmental issues rather than to becoming part of social theory as it has been conceptualized under the spheres of ecological sensibilities and rationality (Mol, 1996). This new approach, for Alan Irwin (2001) has dual challenge; challenging the foundation of the discipline of sociology, and questioning the conventional construction of environmental problems. In other words, Irwin appealed for reframing conceptual tools in order to see how the natural world is constituted, contested and defined within the institutional practices; how environmental questions are debated and above all, how new expertise is being formed from these very discourses. Further, it went on to argue that without nature, one cannot speak the language of sociology as it has been core of interpreting and understanding social-nature relationship.

Scholars start using the term “social-ecological” system to emphasize the integrated concept of humans in nature and to stress that the delineation between social and ecological systems is artificial and arbitrary. Studies infer that social-ecological systems have powerful reciprocal feedbacks and act as complex adaptive systems (Folke, Hahn, Olsson and Norberg, 2005:443). Through a collective network of human (through disciplinary approaches) and nonhumans, there is no such thing as being pure nature or pure society, only nature-culture hybrids of quasi-objects and quasi-subjects which stand between two modern poles of Nature and Society.
An historical insight on the question of nature-man relationship reveals immense reflections of the inherent qualities of mutual advantage, a paradigm of inter-dependence and co-operation. It is viewed that the nature itself has a long history and being imprinted in historical forces which inaugurates another moment for generating new ideas. As Raymon Williams would argue, the idea of nature contains an extra ordinary account of human history. In other words, it is argued that the idea of nature is precisely the idea of man. In doing so, the idea of man in society, indeed, is the idea of kinds of societies (Williams, 1980). Subsequently, while anthropologist entered into the studies on new ecology, it extended further into the domain of nature-culture dimensions by diversifying its disciplinary boundaries and thereby bringing their symmetrical relationships (Little, 1999). It is true that, ethical issues places crucial to all these apparatuses while taking into account nature as a value at the core. Although ecological ethics is appeared to be a new comer in this venture, but in actuality reworking of something old has been in our collective cultural memory since long. According to Curry:

...there is something ancient about an ecological ethics; it is something we forgotten, rather than never known. Indeed, its fundamental intuition concerning the Earth and our fellow-creatures therein is still clear in the culture of virtually every indigenous people, where they have not been colonized by modern commerce... (Curry, 2006:7).

Ecological ethics, certainly expresses certain universal principles by unraveling man-nature relationship historically. This can be considered as a global ecological ethics to an extent to realize it at the ground level. Therefore, the vitality of social science in general and sociology in particular in the environmental question cannot be seen as a given, instead it is created and interpreted through collective practices cutting across space and time. It clearly shows that how significant our physical environment is and, therefore, it is not only creating a space for theory construction, but also linking it with the everyday life of human society. Perhaps, this could be a vantage point to begin a new disciplinary domain. It is in this context;
locating the significance of ecology as region in the disciplinary terrains of sociology, Radhakamal Mukerjee (2001:23) argues that the very regions are treated to be web of socio-ecological life. This sort of socio-ecological life, to him, is the melting spot of ecology and sociology. In other words, in his analysis, one can find an organic link and mutual dependency between human and ecology. As Mukerjee observes:

...man and the region are not separate but mutually interdependent...Man's mastery of his region consists not in a one-sided exploitation but in mutual given and take, which alone can keep alive the never-ending cycle of the region's life processes. The region also is not a passive entity but a living organism which exhibits the harmonious working of different living systems such as the vegetable, the animal and the human worlds. These mutually influence one another establishing some kind of balance of species, the comprehensive physiology of life in all its forms, not only throws light on social origins but also gives the clue to an understanding of the regional balance of population (Mukerjee, 2001:23).

This holistic philosophical strand of environmentalism, in fact, examines, analyzes, and (in part) justifies direct ethical principles of human action. It reframes our understanding about the relationships between humanity and the non-human natural world. Even the Philosophies of science, for that matter, revoke their conceptual relations to highlight the ethical principles of scientific rationality. These principle domains become crucial elements to evaluate scientists' actions and their achievements. However, principles of rationality are located in specific social location as their practices have been found in the temporal phenomena, nonetheless the fact that these practices have their historical roots. Hence, one can argue that the ethical principles are arisen out of the actual intellectual traditions of their respective cultural context. As a result, ethical question in philosophy needs to be engaged with specific practical consequences. So that it leads to unfold critical debates. In so doing, philosophical ideas and principles might rework accordingly, instead of directly engaging in action. In the case of philosophical side of environmentalism, to begin with, it had to face several controversies and challenges on their validity; framing a philosophical branch and their various frontiers of applications. Precisely, they are
not free from the conceptual ambiguities. Following elements are appeared to be
dialectical dilemma on the ethical questions in the discourses on environment:

- **Anthropocentrism vs. non-anthropocentrism:** is an environmental ethic, based on
  human values, interests, and goods, or the value, interests, and goods of
  nonhuman nature?
- **Instrumental vs. intrinsic value:** does nonhuman nature have value in itself, or is
  nature valuable solely for the production of human goods?
- **Individualism vs. holism:** is moral concern directed towards individuals, as in
  human-based ethical theories, or can it be directed towards non-reducible
  groups, collectives, communities, or systems?
- **Shallow resource conservation vs. Deep ecology:** the shallow view justifies
  environmental preservation on the basis of human interests, such as long term
  survival; deep ecology proposes a modification of human consciousness or
  attitudes towards nature so that humanity is seen as unified with the natural
  system (Katz, 1991: 80-81).

Elaborating the concept community with ethical principles and, a new
conceptualization of the individual-self as a guiding principle subjected to rest of the
natural world, perhaps, allow one to get away from this dyadic proposition. Bruno
Latour (2004) somewhere calls it as the Collective. The very conceptualization of Our
Common Future by the World Commission on Environment and Development, for
instance, is based this new ethical philosophy. While elaborating the concept The
Limit of Growth, implicitly the commission negotiated on two vital principles;
economic growth and sustainable development. The sustainability proviso, in fact,
articulates development as to meet the needs of the present without compromising
the ability of future generations to meet their own needs. It reframed the concept of
development with two fundamental ethical questions: needs and limitations. If the
former is set out a priority over the world's poor, as the victims of established
paradigm of development; the latter was of course the limitations imposed by the
state of technology and social organization on the environment's ability to meet
present and future needs (Langhelle, 1999).

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This new derivative obviously would detour from convention mode of development and would see how environmental effects are being judged from the vantage point of view of sustainable development. It brought about difficult and holistic judgments on the question of what condition prior to an action was undertaken and, whether any other sort of alternative activities were found to replace the existing one. Apparently, the significance of social movements become pertinent in this context, that not only demonstrate multiple strategies and action through their every-day struggles and protest, but also shown a mixed feelings of affection between parts of environmental concerns and the very notion of sustainable development.

ENVIRONMENTAL MOVEMENTS: Cognitive Institution of Praxis

Movements today are multi-dimensional in their character, as their demonstrational effect discursively produces multiple-vocabularies. One can make sense of it while epistemological sights were framed to engage ourselves with the implications and its consequential effects in the social science disciplines. Dedifferentiation of disciplinary boundaries and their cosmopolitan vision, relocate the issues from specific locations to global scenario. It was made due to the changing landscape of human cognitive regimes of life conditions conjoined with imagining for a pluralistic world view. Similarly, environmental protests world over, have reframed the discourses on nature through inter-disciplinary approaches, to begin with, and efforts are being underway to crystallize and institutionalize these discourses.

Yes, it is plausible to argue that the issues of ecology, has increasingly been a problematic category among the social scientists in our times. This unintended consequence resulted into detour from the old paradigms to establish new conceptualization on the question of nature-man relationship. Social movement activities, in this regard, not only pulled into a manageable modes of protests to felt presence of the environmental question into the public authorities, but also many intellectuals and scientists made use of knowledge, as collective learning, in their respective areas to defend for nature. As a result of people’s protest and intellectual
support, environmental question has indeed become a niche in today's meta-theoretical discourses on risk and modernity (Elzinga, 2000). As potential carriers of cognitive praxis, variety of environmental movements brought about protest that attracted larger audience world over. This led to form a new identity as scientific paradigm. Under this, new theories, methods, and instruments in the domain of ecology were reframed.

Radical environmental movements since 1970's, were also in a way contributed to make these discourses at the levels of human thought and action ever since (Laska, 1993:4). In this context, John Hannigan (2008:39) identifies three typologies of environmental discourses generated out of environmental movements. They are Arcadian, Ecological and Environmental Justice. These discourses, according to him, were central concerns before the environmental movements in a chronological order. Here, environmental discourses were visualized in different forms ranging from story-line providing signpost for action within institutional practices to social movement frame. Later on it paved the way for environmental organization to an environmental rhetoric constructed around words, images, concepts and practices. For social scientist, obviously it opened up an epistemological sight to conceptualize how these changes are taking place in the theoretical domains with new insights. A consensus is evolved among the scholars in this regard on how to theorize environmental movements in a rapidly changing social scenario to be seen as a loose, non-institutionalized network of informal interactions. These interactions were actually taking place among the individuals and groups. However, they do not hold any formal organizational affiliation but are constantly being engaged in collective action motivated by a shared identity (Rootes, 2004:610).

It is true that many formal environmental organizations waged their protest for protecting the environment through several means. Hence, these engagements were identified as environmental movement, as and when, there are such
organizations and their actors get involved, with one another, in collective action. On the other hand, for Christopher Rootes, movements are to be distinguished from its manifestations. As he argues, they are neither to be identified with environmental movement organizations nor with an episode of environmental protests.

Although the differences are visible from mobilization to institutional strategies of the trajectories of movements studies in general, Rootes, proposition seems to be inappropriate in the context of environmental movements studies in our times specifically in the backdrop of complexity of the problems it dealt with. It was not only in terms of theorization, instead, was in search of possible and immediate pragmatic tools to overcome from it. If the conceptualization was made in the theoretical rubric of NSM paradigm, perhaps one may get a probable answer from this dilemma. As theoretical perspective on NSM has been imbued into the cultural radicalism of actors, and their effort to develop new, oppositional, counter-discursive forms of consciousness and action; environmental question here is being slowdown into the primordial process of nature-society ontology to interconnect both movement and activist identities. In other words, it is a complicated dialectics of praxis as the professionally competent environmental movement shuttling between fundamentalism and realism. It means, environmental activists:-

... live double lives. As activists and politicians, even as technicians and entrepreneurs, they must think their efforts worthwhile, they must believe they will win. In these roles energy and initiative are essential, and it is optimism, not any depressive realism, that opens paths to profit and advantage. Yet greens are lost without their darker suspicions...It is a movement common place that political diversity is crucial, that radicals back up pragmatists, stiffening their spines, and that the two groups combine into a stronger force than either could muster alone (cited in Jamison, 2001:72).

Cultural articulation of environmental quest for a political act has been central thesis of NSM studies as they generate new aesthetic expressions and political identity. If the aesthetic practices were found to be in the form of songs,
performance rituals, environmental arts, political identity formations, their institutional characteristics were seemed to be in terms of organizing green party, policy initiative, legal and administrative reforms. It also searches for alternative approaches to science and technology, as the existing technological apparatuses appeared to be against the protection of nature as well as bypassing alternative participatory democratic ideals. Seeking for alternatives of these kinds in the environmental movement studies has been a new challenge before the ongoing debates in the cognitive dimension of praxis. An endeavor for alternative strategies, Andrew Jamison (2001) conceptualizes as a trajectory of *Making of Green Knowledge*.

**MULTI-DIMENSIONS OF PRAXIS**

As we have seen earlier, philosophy of praxis in environmental question, in fact, has many facets in it, i.e., epistemological, practical and organizational dimensions. These sources eventually transcend natural process into social terms for possible political action. Social ecology, for instance, has increasingly been an essential component in the new political program and, theorization in social science too. When ecology was translated by the environmental movement into the social ecology domain, it would further extended to ecological social philosophy (Ecosophy). As a movement, the discourses of environmentalism carved out a new conceptual sight to epitomize nature into the domain of political, cultural and economic restructuring (Eyerman and Jamison, 1991: 77). The political culture of ecology unfolds error of perspective by sighting incapable consequences. From ecological point of view, it appears to be social representation of nature than the militant ecologist claims over ending up anthropocentrism. It is not because of the fact that ecocentrism is autonomous from ethnocentrism of the west. Instead, ecology movement throughout the world proved a point that nature is fast recycling politics rapidly. In other words, movements try to regulate our public life in order to account and index nature very seriously and adapt our systems of production as nature’s demand. The quest for political sustainability in modern times, as we see today, is primarily a question of what extent we preserve nature from all sorts of human degradation.
A new direction towards the political culture itself indicates how rapidly our cognitive structural changes are taking place in different directions. In a sense, nature has already composed, totalized and instituted to neutralize politics as far as the global thinking is concerned, whilst some of the popular slogans like 'Think globally, Act locally' risen out of ecological discourses begun to discovering new institutional structures. Therefore, in the discourses of ecology, nature does not have crises; instead, it is a crisis of objectivity in science that tends to separate practical work of science (Latour, 2007). Perhaps, nature starts redesigning political culture of the epistemological and ontological outlook of human behaviour. This detour from the earlier conceptualization, in fact has totally been guided by the cognitive praxis not as dialectical, but multidimensional. Apparently, there were two types of discourses unfolded under political ecology. First, how the dominant discourses imposed by the state movement and Non-Governmental Organisations frame different methods to understand alternative discourse on nature and the environmental degradation. Secondly, how power relations embodied in national and global conservation agenda are explored and distributed in a discursive form. Non-Governmental Organizations working on environmental problems are very impressive to press the issue globally in theoretical and as well as practical terms. Today they are found in three groups as campaigners, think-tank and business alliances (Gough and Shackley; 2001).

New sub-disciplines of sociology, for that matter, interdisciplinary groomed in a short span of time, in applied research to show its intellectual growth as praxis model. Here, sociology may well inform society on the question of how one would interrogate conventional approaches and why one would need to change practices,

9 Campaigners are conventional groups with high public profile who are generally engaged in research activities.

10 Think-tank groups generally constitute professionals and scientists who are engaged in technical and policy dialogue. They often mediate with stakeholder around the problems and suggest policy options.

11 This group represents for the interest of the business firms.
so that unintended social problems can easily be avoided, in the long run. This can be possible through theoretically based research as a disciplinary power gaining a ground for social change. Sociology can also make its relevance in their experimental bit with non-sociological perspectives successfully as its social dynamism keep on tracking the macro-structural formations in different social settings (Laska, 1993).

Recently, wide array of movements are engaged themselves to harness science and technology to be useful for sustainability quest. These movements are assumed to be reconciling society's development goals with the planet's environmental limits in the long run. It cut across a vibrant arena of scholarship vs. practices, global vs. local perspective, north vs. south, a discipline across natural vs. social sciences, engineering vs. medicine (Clark and Dickson, 2003). From this perspective, three dimensions of environmental movement were evolved to theorize cognitive praxis model. These dimensions are the synthesis of several disciplinary systems like ecosystem, landscapes, culture and society, livelihood and economic opportunities. They are to be seen as complementarities to understand how diverse cognitive structural formations are becoming new sight for praxis. In other words, it can be argued that complementarities of different ways of knowing will permit different social actors to work in concert, even at a time of uncertainty and limited knowledge at hand.

*Detour from abstract to practical.* Studies of environmentalism translated philosophical or epistemological categories into operational categories of knowledge of interests. It setout worldviews grounded on emancipatory potentials. Unlike in the past, it would search out new ways of perceiving reality and subsequently purposive action. It is in this context, knowledge production is not merely an exclusive domain of academics all the time. Movement themselves, for instance, are generating new vocabularies of theory largely outside the ambit of academic circles. According to Bevington and Dixon (2005), it is a sort of new epistemology, which grew out from the internal discourses of everyday struggles, charts out new set of theories.
This may reiterate movement themselves for what they actually strive to do so. In other words, a set of theories need to have practical implications as the activists of movement took up serious interest in studying their dynamism. As a result, science itself was to be reconstituted to face new challenges given by the social movements as a repertoire of cognitive regime. Conversely, stimulating interdisciplinary sciences, when they interact and integrate each other, conceptual tools give shocks to one another. This epistemological shift later on transforms the intellectual continent to engage with various domains of activism, knowledge production and policy formation.

*Green Knowledge Making* through the discourses of ecology, in fact, challenges the existing paradigm and at the same time, reorients our scientific understanding. The idea of changing paradigm through integrating nature in social science discipline is not as a human science desire; rather it is to be seen as nature-imposed necessity. Therefore, ecology became a central disciplinary paradigm in our times, as it has become a global-science in the last three decades or so, to evolve a mechanism for bringing scientific information into political discussions. It was aiming for summarizing very sensitive scientific facts, (on widely confirmed results as well as on uncertainties and areas of disagreement) (Carpenter, 2006).

As in the case of techno-sciences such as genetic engineering and nanotechnology, there has been a proliferation of sub-disciplines in environmental sciences as well to develop new modes of knowledge (Naik and Tiwari, 2005: 153). It results to the emergence of special areas within larger fields such as environmental economics, environmental chemistry, environmental history, geography,

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*In order to understand natural and engineered purification processes, one has to look into the biological and chemical reactions involved in the process. The role of environmental engineers, for instance, would build a bridge between chemistry, biology and technology by applying all the techniques available with them to clean up debris left in the wake of an indiscriminate use of technology (Naik and Tiwari, 2005:152).*
oceanography, earth sciences etc. Above all, a new hybrid identity is set as cognitive praxis that transcends disciplinary boundaries without necessarily being exclusively captured by dominant regimes through mediation between activists and academics.

**Scientific Pluralism:** Network of scientific disciplines, in fact, allows us to know nature better way, as it was already found in the history of sciences and nature. Although science has emancipatory potential to unveil inherent laws of nature, the same rule is less likely to be operational to understand environmental changes. It is because of the fact that, science has achieved success by dividing problems into parts and addressing them one at a time. But the same strategy cannot be worked when we try to understand the effect of environmental change on human societies such as its gravity of implications, divergent perceptions and the outside agencies.

To begin with, disciplinary orientation, such as New Political Ecology, has been explored in anthropology under the shadow of post-colonial writings particularly the problems related to the issues of cultural ecology. New enquiries in this domain, unfolded our understanding about the complex relations of polity, ecology and culture while they entered into a discursive and ideological realm. Added to that, it reveals how perceptions and constructions of nature and politics are actively shaped by material facts (Goldman and Schurman, 2000: 568-570). These perceptions, out rightly rejected classical economic growth paradigm through the reflections which are in favour of preserving and managing both ecosystem as well as growth. This new world view crystallized within the environmentalism gave rise to the conceptualization of *environmental economics*. The sustainable development paradigm, in fact, reframed our understanding about limits of natural resources use in this planet and gave a new insight for optimal use of these scarce resources.

Similarly, new sub-disciplines like Gender and Environment bringing feminist and environmental movement, analyses both strands for egalitarian and non-hierarchical systems. For instance, Bina Agarwal (2007: 316-361) tried to
conceptualize a new theoretical perspective through eco-feminist discourses and indigenous knowledge production. Attempts are being made to organically link society-nature relationship, by evoking gender discourses in the domains of resource access, use and degradation around the world. In third world countries, it is assumed that, the synergy between women's interest and environmental interest are deeper as it has been surrounded by the issues of sustenance such as growing food and fetching water, gathering fuel and fodder etc.

Growing markets of environmental friendly products and technological innovations has emerged as new area of how the middle class start changing their conception pattern as part of environmental protection and propagation of eco-friendly products and technologies. Subsequently, social and ethical values were evoked to conceptualize consumerist behaviour as well. As a result, social values were attached to prioritize consumer preferences not to choose but to value for future century. Apparently, new technologies were also introduced as repairable technologies. In other words, green consumerism has been a path break in road to realize the best way for sustainable production and conception (Madge, 1993: 149-166).

The plasticity and inner dynamism of technology systems, in fact, reflect the creative depth of human intelligence instead of treating it as anti-people. In principle, if the systems are placed in right direction, it certainly opens up new vistas of human life. In this context, technological dimensions of knowledge interest calls for a purposive action. However, uncertainties and ambiguities created by the existing apparatuses of science and technology were altered themselves, and in turn, paved the way for searching of alternatives technologies. Movements for environmentally sound and appropriate technologies were to be seen in the backdrop of the criticism against modern technologies on their environmental, economic and social grounds (Reddy, 2001:321-345). This radicalization of technological apparatuses basically was
found first time among the professionals as ecological designed movement in the 1970s through their radical writings.\textsuperscript{13}

Propagation of alternative technologies or \textit{clean technology} in the specialized disciplines in agriculture, energy, medicine and even in industrial production were also evolved from environmental movements. \textit{Techno-Garden}, for instance seems to be a new innovation wherein environmental friendly technologies are used in agriculture, construction and energy, and ecosystems are engineered and intensively managed. Efficiencies improve the delivery of ecosystem services and make it possible to set aside more land and ocean for parks and reserves (Carpenter, 2006: 313). Similarly, alternative technologies were treated as advanced technologies as their advanced charter has been judged not from the trivialization of ecology, instead from the sophistication of the new scientific and engineering thinking that goes hand in hand. Therefore, an appeal for new approaches to technology driven production based on minimal use of capital, energy, scale and skills cannot be satisfied without mastery of engineering (Reddy, 1975: 338).

Globally science question, in the context of sustainability, is required to be understood the fundamental phases of interaction between nature and society by unfolding their specific ecological and social characteristics. Specificities in science, in fact, make relevant research to redesign our operational tools across the full range of scale from local to global. Towards this end, one required advanced fundamental abilities to cognicise the complex behaviour of self-organizing systems interacting with multiple forms of nature-society stress. Quite surprisingly, scholars of science and technology participating in the movement studies are being testimony to the fact that how far democratic participation is crucial component in this regard.

\textsuperscript{13} Some of the writings, for instance, Victor Papenek (Design for the Third World), Guui Bonsiepe (Developing Countries: Awareness of Design and the Peripheral Condition and Designing the Future) and E.F. Schumacher (Small is Beautiful), addressing the problems of modern technological impact upon the developing countries.
These studies, in fact, unfolded a question of how to enhance public participation in scientific and technical decision making, how to include popular perspectives in the specialized fields, and above all how to contribute policy-making process so as to ensure greater participation of different actors in society. In so doing, scholarship in movement studies to be helped to advance our understanding on how the knowledge making process works in science and how the politics of expertise and technology design play out in various political arenas. Some times, it undergoes tremendous changes in social movements in terms of their organized network particularly whilst scientific and intellectual group entered into the crucial areas like environment (Hess and et. al, 2008: 473). Therefore, technological aspect of movement studies shows different shades of democratic ethos which includes new technological innovations, configuration of technology, policy options and practices.

**Institutionalization**: ecological sensibilities become limelight only when the relevant interdisciplinary environmental education merges with environmental movements. Environmental movement organizations such Friends of Earth, Green Pease and Pollution Probe become experts on environmental issues by devoting their considerable amount of time and resources for in-house research activities. As a mobilization strategy, ecological discourses were crystallized in accordance with a mixed form of expertise both on technical ground and on action repertoires of protest group. With the support of mass media, these innovative strategies were spread-out across the globe. Those who were activists in the initial stage become professional experts and consultants for companies and politicians. Their expertise becomes a critical lesson to overcome from the environmental challenges in order to realize sustainable socio-economic development. Eventually, these experts' knowledge systems crystallized into institutional form, whilst these very issues were
introduced in the universities, government agencies, non-governmental organizations etc. Peter M. Hass (1992) refers this group as epistemic community.

Inclusion of environment as a separate discipline in the teaching machines of higher learning, the issues of ecology become part of planning and innovative strategies to direct cleaner production and eco-efficiency in the long run. Through times, there was synergy between organizations and official policy makers entering into a dialogue in which knowledge and information produced by their position in public arena were critically debated.

Institutional dimensions of environmental question, has been an outcome of movements that brought about operational strategies at different levels. This can broadly classified into the west, eastern Europe and the third world countries. In the west, the growth of NSM was witnessed by a network of professionalized mass membership organization. Since they are professionally competent, they articulated local issues like pollution as global environmental problem. Departments of the environmental studies in different universities and Green parties brought this issued at the centre stage as part of cognitive structural formation. These radical approaches were eventually linked with the theoretical rubrics of ecological modernization as an advent of post-modern criticism of grant narratives.

In addition, the emergence of non-institutionalized groups like Earth First operating in wide range of areas from heterogeneous (multiculturalism) to eco-socialism and an alternative life-style against neo-liberal tendencies brought about a

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14 Epistemic community is defined as a network of wide range of expertise including professionals of diverse discipline, government, activists who come to share a common interpretation of policy relevant knowledge of the problem they address for a broad policy and political action (Hass, 1992:3-4).

15 The role of the universities was discussed globally, for instance, Dalhousie University, Halifax, Canada organized a conference on University Action for Sustainable Development. The Halifax declaration underlined the role of universities as vital actors in shaping academic discourse in road to sustainable development thereby environment.
radical counter-current. Similarly, Europe also established green parties in the eastern European countries when it found the weak institutional base of the environmental movements. However, contrary to the west, mobilization in European countries, the environmental agenda was articulated in the context of national sovereignty and growing demand for public health in response to mounting pollution.

It is to be remembered that the militant groups like Deep Ecology movement, were frequently negotiating the virtues of democracy, egalitarian, decentralization and even for that matter socialism in their aggressive campaign. These campaigns, in a sense, recasted the institutional practices of democracy towards more sensible to ecology as political obligation (Jayal, 2001:68). It is in this context, it becomes extremely important to understand how third world countries conceptualize and institutionalize the discourses of environmentalism under the democratic process, as it has essentially been different from the west or European countries. To begin with, in these countries, articulation of the environmental issues was grounded on development demands, protection of the livelihood of the poor and social justice. The conceptualizations of ecological question in these countries were to link local specificities with nationalistic and post-colonial discourses (Van der Heijden, 1999:201-210). Indian society, for instance, radicalization of the issues of environmental was against the modernity and modernization process. Such a radical protest, led to think alternative approaches grounded on our own realities. Here non-western, indigenous methods based on Gandhian thought highlighted as an alternative strategy for sustainable development. These discourses could easily be linked with the questions of protecting ecologically sensitive areas such rain forests and trees, and protest against urban pollution and desertification etc.

The ongoing saga of greening through different approaches in society is making new constituencies of knowledge domains. At the core of this analysis, environmental movements and their cognitive praxis, the way human consciousness acted out or put into practice, are making new centers of power for new social order.
Making praxis as conceptual institution, in this chapter, we try to make sense of, how discourse on environment as knowledge terrain is getting shaped and reshaped in our times. It is true that green knowledge is discursively generated out of mass protest and critical discourses towards ecological sensibilities. New insights evolved out of this tacit form of knowledge have to be seen as the strategies of environmental quest that shuttled between mobilizational strategies and institutional formation.