CITIZENS DISCOURSES AND THE LOGIC OF POLICY
DELIBERATION: A POSTPOSITIVIST EVALUATION OF THE
SARDAR SAROVAR PROJECT IN INDIA

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This study is an empirical examination of the Logic of Policy Deliberation which is a multimethodological framework for policy evaluation advanced by Frank Fischer and is a widely acknowledged contribution to the postpositivist approach. Built around four interrelated discourses that constitute an evaluative deliberation, the Logic extends from concrete empirical questions to abstract normative issues concerning the way of life. According to Fischer, the Logic of Policy Deliberation is based upon ‘ordinary language philosophy’ of Toulmin and Taylor, which is based on a reconstruction of how people actually think when they evaluate an action or event. The framework is therefore not a prescription for how we ought to deliberate about issues, it is an empirical approach to how people actually do think about things. That is, to the degree that the Logic of Policy Deliberation is accurately formulated, the framework is more than simply Fischer’s conception of how we should talk about issues; rather it seeks to represent the way people in fact make arguments and is subject to empirical confirmation. This study seeks to verify the claim that the model represents the way ordinary citizens argue. Although the logic of policy deliberation has been applied to several policy cases, there has been no
empirical test of how ordinary citizens relate to it; more specifically how citizens respond
to the different phases of the Logic of Policy Deliberation in general as well as in specific
cases.

The Logic of Policy Deliberation is tested through a discursive analysis of the
Sardar Sarovar dam conflict in India. The study tests the Logic in a two step process.
First, the study undertakes a theoretical application of the Logic of Policy Deliberation to
organize and analyze the arguments in the Narmada debate that are carried out in textual
material produced by the anti dam movement, the government, academicians, media, etc.
This is done to explore how well the range of arguments in the Narmada debate can be
distributed across the different levels of the Logic. This theoretical application of the
Logic shows that the range of arguments in the Narmada debate are widely and
extensively distributed across the four levels of the Logic of Policy Deliberation. Having
established that, the study undertakes an empirical examination of the Logic through
citizens discourses about the Narmada conflict. Specifically, the study examines the
extent to which citizens identify, relate and respond to the various levels of the Logic in
‘everyday type’ conversations regarding the Sardar Sarovar dam. This empirical
examination finds that citizens may start out making arguments for or against the dam at
a particular level of the Logic, typically the levels of either Situational Validation or
Technical Verification but as the conversation proceeds and they are faced with counter
arguments and scenarios, they will inevitably expand their arguments to the other levels
of the Logic to defend their original position on the dam. Overall, the study confirms that
to a greater or lesser extent, citizens are attuned to all the various phases of the Logic of
Policy Deliberation.
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Chapter I Postpositivism and the Logic of Policy Deliberation

Introduction

This study is an empirical examination of a postpositivist framework for policy analysis. Postpositivism questions the technical conception underlying much of empirical social science, especially as manifested in the field of policy analysis. It seeks to reconstruct the positivist understanding of social science by extending analysis beyond empirical concerns to integrate the normative assumptions upon which such concerns are founded. Few attempts however, have been made to provide concrete methodological frameworks that can translate postpositivism’s theoretical critique into practice and offer a way to move inquiry from concrete empirical investigations to concerns of values and norms. The logic of policy deliberation, a multimethodological framework, advanced by Fischer (1980;1995), is a widely acknowledged contribution to the postpositivist approach. It offers a discourse oriented framework that incorporates both empirical rigor and normative exploration. Built around four interrelated discourses that constitute an evaluative deliberation, the logic extends from concrete empirical questions to abstract normative issues concerning the way of life. According to Fischer, the logic of policy evaluation is based upon “ordinary language” philosophy of Toulmin and Taylor which has sought to reconstruct how people actually think when they evaluate a real world action or event. The framework is therefore not a prescription for how we should discuss issues, rather it represents how people do in fact argue about issues. In that, the logic of policy deliberation is rooted in empirical reality and subject to empirical confirmation. This study seeks to verify the claim that the logic of policy evaluation reflects the way people argue about issues. Although the model has been applied to several concrete
policy issues, there has been no empirical test of how ordinary individuals actually relate to the phases in the logic of policy evaluation, in general, as well as specific policy contexts.

The logic of policy evaluation is tested through a discursive analysis of the Sardar Sarovar dam conflict in India. The dam is being built on the river Narmada in the Western state of Gujarat (see Figure 1), and has been the focus of widespread domestic and international debate because of its potentially colossal implications. It has been chosen for the study since it is concerned with both technical as well as social issues. The study is divided into two components – a theoretical application of the logic of policy deliberation where the logic is used to organize and analyze the arguments in the Narmada debate; and an empirical examination of the logic through the citizens discourses in the debate. Specifically, the study explores how well the range of arguments in the Narmada debate can be distributed across the different levels of the logic and to what degree the citizens themselves can identify and respond to the different phases of the logic of policy evaluation. Since the framework is based on the ordinary language philosophy of Toulmin and Taylor, which is based on a reconstruction of how people actually deliberate, the assumption is that to a certain degree citizens would be attuned to some of the levels but when probed or prompted with questions and different scenarios, they will see the other unperceived or missed levels.

In the following sections, the discussion begins with the trajectory of the field of public policy analysis – the intellectual and political developments that gave rise to the field, its grand intellectual visions, and the subsequent failure of the discipline to actualize its original promises. In the context of discussing the problems that led to the
irrelevance or failure of the field, the discussion turns to its positivistic epistemological assumptions and its limitations. The next section elaborates upon the postpositivist epistemological orientation and its turn to practical reason. The chapter then introduces Fischer’s logic of policy deliberation as one of the most well developed and sophisticated methodological frameworks that contributes to the postpositivist approach. The discussion elaborates upon the methodological foundations of the model and the interrelated phases of discourse that the logic is built upon. Having set out the theoretical backdrop against which Fischer’s logic of policy deliberation is developed, and having outlined it, the essay turns to clarifying the goals of the study. The chapter ends with a brief note on the data sources and methods of collection and analysis.

Emergence of the Field of Public Policy Analysis

Defining public policy analysis and its object, public policy, is a problematic endeavor. The literature of political science shows that there is no standard definition of public policy. Typically, public policies specify goals or ends to be pursued and the means for achieving them. Built around a number of considerations, a public policy will provide a definition of the problem to be addressed, indicate the participants involved in the policy and the ways the policy is to affect them; it will specify its intended effects on society as a whole, and declare the basic political and social values which it seeks to promote. A policy will also contain specifications about the means to achieving policy ends. It will indicate the principal sources of funding, the level of government that is to

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1 Carl Friedrich(1963): “Public policy is a proposed course of action of a person, group, or government within a given environment providing obstacles and opportunities which the policy was proposed to utilize and overcome in an effort to reach a goal or realize an objective or purpose”. Thomas dye (1984): “Public policy is whatever government chooses to do or not to do”. Richard Rose (1969): “Public policy is considered to be a long series of more or less related activities and their consequences for those concerned rather than a discrete decision”. Harold Lasswell and Abraham Kaplan(1950): “Public policy is a projected program of values and practices”. Hugh Heclo(1972): Public policy is a course of action or inaction rather than specific decisions or actions”
exercise control over the policy, the types of organizations that will implement the policy program, and the administrative techniques to be utilized (Fischer 1995). Difficulties are encountered when trying to define policy analysis as well. There is a semantic confusion associated with the terms “policy analysis”, “policy evaluation”, and “policy sciences”. In this work, policy analysis and policy sciences are used interchangeably to refer to the applied discipline concerned with policy evaluation. Policy evaluation is used to refer to the work of the field’s practitioners. Policy evaluation can focus on outcomes of the policy or on the processes by which the policy is formulated and implemented. Moreover, evaluations can either focus on ex ante evaluation, that is, on outcomes expected to result from the policy, or ex post evaluation, that is on actual results from the policy’s introduction. Public policies can therefore be evaluated at all stages of the policy making process.

Until the 1950’s policy issues were evaluated on a small scale and were seldom a formal part of the policy process. Various intellectual and political developments since then, have given rise to the field of policy analysis which is now a major undertaking. The intellectual foundations of the discipline have been attributed to Lasswell and Lerner’s landmark publication of The Policy Orientation of 1951. In their vision, policy science was to be geared towards the knowledge needed to improve the practice of democracy. It was to be the “policy science of democracy”. Lasswell sought to create a social science that was multidisciplinary; that had a problem oriented focus which was contextual in nature; and one that had an explicitly normative orientation (Torgerson 1985). Although the origins of the field were marked by promise and enthusiasm, its actual development has followed a different path from that envisioned by its founders.
Policy analysis has emerged along technocratic rather than democratic lines; in contrast to the multidisciplinary approach that Lasswell had in mind, the field has been dominated by empiricist methods that have insisted on rigorous quantitative analysis, the separation of facts and values, and the search for generalizeable findings applicable to a range of problems and contexts (Fischer 2000). Policy evaluation focuses mainly on judging a policy in terms of specified programmatic criteria. The appropriateness of policy goals and processes which arise frequently in policy conflicts, is considered to be beyond the methods and practices of the field.

The main impetus for the contemporary practice of policy analysis came in response to the Great Society legislation of President Johnson in the 1960’s.² The War on Poverty declared by Johnson, initiated a vast array of programs that were based on social scientific policy research and at times, were directly developed by policy analysts (deLeon 1989). Armed with special problem solving skills, policy experts gained presence and ascendancy in Washington. Beyond Washington, analysts became visible in think tanks, research institutes at universities, and management consultancy firms. The focus of policy expertise was on devising and shaping new programs to alleviate problems identified in varied areas of health, education, housing, etc. Problem recognition and formulation were the bailiwicks of analysts. In other words, little analytical attention was paid to the effects of the programs that they formulated or their implementation and evaluation. This was the case until it became clear that the poverty programs had largely failed to achieve its promised objectives. The focus of research then

² According to Fischer, although policy analysis is generally identified as part of the Democratic party’s approach to policy formulation with regard to the Great Society’s programs, conservatives have also been consumers of policy research. While liberal administrations used policy analysis to create new governmental programs, conservatives applied it to eliminate them
shifted from formulation to the evaluation of outcomes. According to Fischer, in many circles, evaluation came to be considered the since qua non of policy research.

During this time period, alongside the War on poverty, extensive analytical capabilities were also deployed in the war with Vietnam. Policy planning in Vietnam relied on quantitative measures and rational analytic techniques. The Vietnam war however demonstrated the limitations of empirically based rational decision methods. The war revealed that it was naïve to depend on empirical measures for planning purposes since data was vulnerable to subjectivity and manipulation. More importantly however, policy makers and analysts were forced to recognize that the context to which such decisions were applied, had to be taken into account. The cultural values, and the moral and political determination of the Vietnamese challenged the logic underlying their recommendations. Above all, the war illustrated the importance of including normative commitments in policy analysis.

The shortcomings of rational decision making, unreliability of quantitative measures, the failure to take the contextual nature of problems into account and the neglect of normative commitments led to policy scholars questioning their understandings and commitments. Outside the discipline, politicians, administrators and others began to criticize policy analysis’ findings as being unusable (Lindblom, 1979).3

In the face of limited practical achievements of policy analysis and the doubts about its usefulness, scholars began to think about the social relevance of the discipline. Some scholars (Rich 1979), saw the need to improve the process of advice giving – to find new ways of bringing the evaluator’s empirical analytic efforts to bear more directly on the

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3 According to Caplan, research into the utilization of policy knowledge showed that only a third of the administrators could put such information to concrete use, and often it was not too impressive
needs, concerns, goals and objectives of the decision maker. Other like Weiss (1977) argued that rather than understanding the task of policy analysis to be geared only towards achieving administrative goals, its functions should be redefined in terms of “enlightenment”. This meant that rather than just finding solutions to complex problems, policy evaluation should provide the decision makers with analytical perspectives that will help them in advancing their thinking and consideration of public problems. Towards this, Churchman (1971) suggested that policy evaluation may be more effective if redesigned as an informed debate between competing interests rather than as simply scientific problem solving. Scholars like Duncan Macrae (1976) and Kenneth Arrow, have emphasized the value of providing the field with procedures and rules for regulated discourse. Using the discipline of law as a model, he advocates drawing on the rules of evidence in developing logical rules for policy argumentation. Macrae and Anderson have advised adapting the rules of normative discourse in political philosophy to help refine the role of values in policy communication. While such scholars focused on integrating norms and values through a reconsideration of the relationship between decision makers and policy analysts, there were other like Tribe (1972) and Rein (1976), who brought attention to the more central role of social values. The problem as they saw it, was that public policy questions turned on underlying value conflicts which the quantitative methodology of policy evaluators were incapable of addressing. In other words, policy evaluators were misapplying their quantitative methodologies to questions inherently grounded in normative concerns (Fischer 1995). Such concerns had less to do with technical matters such as policy formulation and implementation and more to do with the arrangement of social and political values underlying society. According to Rein,
to be relevant, policy science would have to undertake a methodological integration of empirical and normative judgments.

The call to unify facts and values, brought to the surface, questions about the theory of knowledge underlying the field. It paved the way for a more full fledged epistemological critique. Policy scholars such as Torgerson (1986), Bobrow and Dryzek (1987) and Fischer (1995), began to argue that an important part of the failure of policy analysis was due to its outmoded epistemological assumptions of positivism. Neopositivist social science emulates an understanding of the physical and natural sciences that is no longer categorically accepted in the hard sciences. Drawing attention to the fact that the sciences no longer rest on the established concepts of objectivity and proof, these scholars suggest postpositivism not just as an alternative epistemological orientation but as a better description of what social scientists already do. Before turning to the postpositivist alternative, the next section details the epistemological problem of mainstream policy analysis.

**Positivism and Mainstream Policy Analysis**

The contemporary approach to empirical policy evaluation is founded upon positivism which is a theory of knowledge that explains the concepts and methods of the physical and natural sciences. It is also the source of epistemological ideals for the social

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4 According to Fischer, positivism is an epistemology which holds that reality exists and is driven by laws of cause and effect which can be discovered through empirical testing of hypotheses. Neopositivism refers to the modern version of positivism. Its techniques, concepts, theories, etc have their origins in positivism.

5 There is no specific definition of postpositivism. It represents an assimilation of contributions from poststructuralism, social constructivism, discourse analysis, critical theory, and the postmodern theory of knowledge (Fischer, 95). Although there are diverse assumptions and orientations in postpositivism, they are common in their critique of the objectivist epistemological assumptions of postpositivism. For postpositivists, reality exists but can never be understood or explained fully. Objective knowledge of reality therefore can never be acquired. Since it is critical of empiricism, postpositivism stresses the social construction of knowledge. (Guba, 1990). Postpositivism adopts a multmethodological approach to the discovery of knowledge.
and policy sciences and has shaped a social science that is in pursuit of quantitatively replicable causal generalizations (Fischer 1998). Neopositivist principles emphasize empirical research design, outcomes measurement, the development of causal models and other such empiricist and neutral procedures that are the staple of research methodology textbooks. In the field of policy analysis, positivism finds manifestation in quasi-experimental research design, cost benefit analysis, systems analysis, multiple regression analysis quasi experimental research designs and such. The fundamental assumption of positivism is that an orderly external reality exists (Cook 1985). Such an epistemology is therefore grounded in the empirically observable. According to this orientation, knowledge that is based on the natural observation of empirical events is genuine knowledge. Any proposition that cannot be empirically verified is rendered meaningless (Hawkesworth 1988). Reliable knowledge accumulation can only proceed through falsification. As opposed to knowledge about particular or specific places, circumstances or times, positivist knowledge aims to create empirical generalizations across social and historical contexts. In this view, such generalizeable knowledge is important for solving social problems.

Since positivism assumes that objective knowledge of a phenomenon can be achieved, it gives rise to the fact/value dichotomy. Facts are empirically testable propositions. They can be sliced off from values which are inexplicable subjective assessments of propositions, states of the mind or heart that are non empirical. To be considered genuinely scientific, empirical research has to be conducted divorced from its normative context or implications. Social scientists are therefore expected to adopt an orientation that has no trace of values and that is limited to empirical or factual
phenomenon. When translated into the practice of policy analysis, such an orientation seeks to evade partisan value conflicts that are typical of policy issues. The complex social and political problems of society are viewed in technical terms whose solutions are then to be found in the application of scientific decision making. This has given rise to a technocratic form of policy analysis that emphasizes the efficiency and effectiveness of means to achieve politically established goals (Fischer 1998). Far removed from Lasswellian vision, such an approach reflects not just a neglect of democratic processes, but the legitimacy and superiority of scientific methods over democratic exchanges, processes and methods. The distinction between facts and values also serves as a convenient partition between the activities of the scientific and political community. Value disputes are determined by a contestation of personal preferences and therefore are left to the politician; scientific investigations that require the exercise of principles are the domain of the scientist. As Fischer succinctly states, “the fact-value dichotomy identifies not only the appropriate focus for policy inquiry and the methods necessary for attaining objective knowledge, but the zone of demarcation between legitimate scientific authority and political involvement”.

Even though the fact value separation has been prominent in social sciences, there has been an uneasiness amongst scholars regarding it. Interpretive scholars hold that the world, especially its social aspects cannot be understood simply by observation. Human behavior is active and conscious, unlike the physical objects of the world of science. Actions are meaningful and directed towards the achievement of purpose and therefore cannot be understood in the same way as natural phenomenon. Positivism fails to take these meanings into account. It explains social action inadequately by not taking into
account, the meanings and understandings of the social situation that social actors hold. A more radical elaboration of the fact-value critique comes from postpositivism. Postpositivist scholars like Bernstein (1976), Hawkesworth (1988), Fischer (1998), and others extend the fact value critique from the realm of social action to the realm of science itself. They have shown the ways in which the activity of science is shaped by the normative assumptions and social meanings of the world it explores. They illustrate that science depends on theoretical and practical presuppositions in complex ways. As Hawkesworth puts it, “theoretical presuppositions shape perception and determine what will be taken as a fact, they confer meaning on experience and control the demarcation of significant and trivial events, they afford criteria of relevance according to which facts can be organized, tests envisioned, and the acceptability of scientific conclusions assessed, they accredit particular models of explanation and strategies of understanding and they sustain specific methodological techniques for gathering, classifying and analyzing data”.

The Postpositivist critique of empiricism

The postpositivist critique of empiricism is built upon the developments that have occurred in the natural sciences and the history and sociology of science (Fischer 1998). Postpositivist scholars argue that advances in the physical sciences like quantum mechanics and chaos theory, and the evolutionary theory in the biological sciences have shown that the traditional understanding of the physical world as being fixed is no longer adequate. Quantum theory undermines determinism and opens up the possibility of multiple realities. Some physicists argue that the behavior of a particle can be explained by the vantage point from which it is being observed. Relatedly, chaos theory places strict
limitation on the ability to gain complete knowledge about a system as well as on the ability to predict and control the world around us. Chaos theory demonstrates that a small change in any part of the system can cause a big change in the entire system. Such theories show that empirical phenomenon are not objective things that stand apart from human subjectivity. Fischer argues that such empirical phenomenon can be better understood as “participatory interminglings” where the observer and the observed are linked. Along with developments in the sciences, postpositivists also draw on the historical and sociological observations about the nature of scientific practices to show that scientific knowledge is rooted in historical and social contexts. They point out that according to historical studies of science, positivism emerged to address problems created by the Reformation and religious wars of the 15th and 16th centuries. The collapse of the church led to the need to establish a new foundation of certainty and truth that would return social stability. Towards this, philosophers at the time, sought to moor knowledge to empirical experience. Fischer argues that the positivist epistemology cannot be taken as a universal foundation for scientific practice as a whole since it emerged to address problems in a particular socio-historical context and can therefore not be relevant to all other contexts. Beyond historical considerations, sociological studies show that empirical inquiry is also conditioned by sociocultural practices. Foucault (1980), Latour (1987) and other philosophers have recognized that along with being a technical activity, science is also a sociocultural activity imbued with social and practical judgments. To comprehend scientific findings, one needs to fully understand the social and cultural settings that give them meaning and purpose. This means that scientific truth is never independent of the circumstances in which it is arrived at. Facts as conventionally
understood are in effect the decision of a particular group of inquirers and the theoretical presuppositions to which they adhere (Fischer 2000).

Postpositivist scholars point out that their critique in no way means that science should not be taken seriously. Their aim is not to reject the enterprise of science but to recognize and clarify that science is an interaction between physical and social factors. Postpositivism demands “acknowledgement of science as a human convention rooted in the practical judgments of a community of fallible scientists struggling to resolve theory generated problems under specific historical conditions” (Hawkesworth 1988). In other words, postpositivism seeks an understanding and reconstruction of that which already occurs when a scientific inquiry is engaged in.

The Postpositivist Alternative

Since reality is socially constructed, the postpositivist focus shifts to the situational context and the discursive processes that shape its construction. The focus of the postpositivist is on science’s account of reality rather than on reality itself. The goal is to understand how varying scientific accounts produced by different observers interact to discursively shape that which comes to be taken as knowledge (Fischer 1998). Towards this end, postpositivists reconstruct the scientific process on the “coherence” theory of reality as opposed to the neopositivist correspondence theory. Correspondence theory claims that a proposition is true when it corresponds to reality or facts. Coherence theory judges the truth of a proposition in terms of how it coheres or fits with the overall system of beliefs or propositions. In other words, something is true when it fits into a well integrated set of beliefs. Coherence theory addresses the indeterminate nature of empirical propositions. It seeks to include the varied theoretical perspectives and
explanations that can bear on a phenomenon. This means that quantitative research becomes yet another component of theory construction as does other modes of inquiry. Given the myriad perspectives through which phenomenon are observed, knowledge emerges from a discursive interaction of competing interpretations. In postpositivism consensus is arrived at through a synthesis of competing views as opposed to the reproduction of empirical tests in the neopositivist view. Deliberations are undertaken to develop a rich perspective on human affairs rather than the seeking of empirical proof (Toulmin 1990). In contrast to knowledge being understood as proof, postpositivists understand knowledge to be consensually “accepted beliefs” (Fischer 1998).

To encompass the multiple forms of reason that are manifest in scientific practices, postpositivists argue that it is necessary to adopt a multimethodological framework. They point out that the positivism over relies on reasoning based on formal logic which cannot capture the rich and varied interpretive judgments that characterize scientific investigations.\(^6\) To move beyond the dominant positivist paradigm for social research, one has to be exposed to new ways of thinking about research, data, language, and meaning (Herda 1999). Postpositivism thus steps out of the confines of formal logic of neopositivism and into the realm of informal logic and practical reason to meaningfully weld qualitative and quantitative orientations into a fresh methodological configuration.

Practical Reason

In articulating their alternative conception of reason, postpositivists begin by recognizing that formal models of reason do not fit well with common practices of

\(^6\) Formal logic is concerned with the forms that yield or guarantee valid inferences from a premise or premises to a conclusion.
argument. Scriven (1987) argues that “classical models of reasoning provide inadequate and in fact seriously misleading accounts of most practical and academic reasoning – the reasoning of the kitchen, surgery, workshop, the law courts, paddock, office, battlefield, and of the disciplines”. Rather than interpreting such reasoning as incomplete versions of formal reasoning, postpositivists conceptualize such reasoning as forms of informal logic with their own rules and procedures (Fischer 98). Whereas formal reasoning seeks eternal, invariable principles, regardless of context, practical reasoning pays close attention to matters of probability rather than universal truths. It varies according to context. Instead of assuming that arguments in all fields can be judged by the standard of mathematics, like formal logic does, informal logic emphasizes an assessment of arguments in its particular context. Its value lies in the recognition that the kinds of arguments relevant to different issues depends on the nature of those issues. As Toulmin (1990) points out, what is reasonable in clinical medicine or jurisprudence is judged in terms different from what is logical in geometrical theory or physics. Practical arguments are therefore contextualized, they are grounded in the specifics of the situation. Practical reason as such, seeks to bring in a wider range of evidence, arguments, explanations, strategies and analyses to bear on a problem under investigation (Hawkesworth 1988). It is not absolute proof that determines the validity or acceptance of a theory but the process of deliberation gives rise to a consensus among researchers about what will be taken as a valid explanation. As Fischer puts it across succinctly, “it is the practical judgment of the community of researchers and not the data themselves that establishes the accepted explanation”. Postpositivist scholars argue that although the informal logic of practical reason cannot confirm the truth of particular conclusions, it furnishes us with a rational
way of probing the much disregarded contextual dependence of most forms of argument (Scriven 1987). Given the under determination of available knowledge and that social context is a theoretical construct, practical reasoning focuses on competing understandings of a problem and the range of methods appropriate to investigating them. Postpositivist theorists clarify that this does not mean that formal logic needs to be abandoned altogether. It is just that its range of applicability is much narrower than has been claimed. There should be no illusion about the extent of their relevance to practical arguments (Toulmin 1990).

Postpositivist Policy Analysis and The Logic of Policy Evaluation

Adopting a postpositivist approach would be salubrious for policy inquiry. A postpositivist policy analysis means that more will be examined and less will be assumed. It will enable the inquiry of the assumptions that lie beneath the surface of facts, data and evidence. In the words of Haweksworth, “Postpositivist policy analysis derives its justificatory force from its capacity to illuminate the contentious dimensions of policy questions, to explain the intractability of policy debates, to identify the defects of supporting arguments, and to elucidate the political implications of contending prescriptions”. From the discussion so far, adopting a postpositivist approach would mean conceptualizing social scientific findings or conclusions of policy analysis as “arguments”. Drawing from science studies, postpositivist scholars show that scientific conclusions are in fact arguments crafted to convince other scientists to see a particular phenomenon one way or another. Findings are clothed in the language of empirical verification but there are various social, political, historical and cultural factors that structure the conclusion as well. The conclusion therefore can be better understood as an
argument rather than an inductive or deductive proof (Fischer 1998). One of the first policy scholars to reorient policy analysis as argument was Majone (1989). According to him, a policy argument is structured by a mix of factual statements, opinions, interpretations and evaluation. The argument provides the link between findings and conclusions. Majone however, did not clarify the normative dimensions that mediate between the data and the conclusions. According to Fischer the task for the postpositivist scholar is to “establish interconnections between among the empirical data, normative assumptions that structure our understandings of the social world, the interpretive judgments involved in the data collection process, the particular circumstances of a situational context, and the specific conclusions. The scientific acceptability of the conclusions depends ultimately on the full range of interconnections and not just the empirical findings”.

To integrate these concerns, Fischer has outlined a multimethodological framework referred to as the “logic of policy evaluation”, that contributes very significantly to the postpositivist approach (1980;1995). It is one of the few attempts that have been made to move beyond the epistemological critique of positivism, and engage in a methodological reconstruction that actually places normative inquiry on an equal footing with empirical analysis. In doing so, Fischer goes a long way in overcoming the deadlock between the advocates of empirical and normative analysis. According to Fischer, the logic of policy evaluation is based upon “ordinary language philosophy” of Toulmin(1958) and Taylor(1961), which has sought to reconstruct how people actually think when they evaluate a real world action or event. In other words, the framework is not a prescription for how we should evaluate issues, rather it represents the way people
in fact make arguments. Based in “ordinary language” tradition of philosophical analysis, Toulmin’s work is concerned with establishing the rational character of normative evaluation, even though it may seem less exacting than scientific reasoning. His approach clarifies the nature of the “informal logic” that governs normative or practical deliberation. According to Toulmin, formal reasoning is only one standard among many that are available for judging substantial arguments. An argument that fails to meet or fulfill the requirements of formal syllogism need not be judged to be incomplete or irrational (Toulmin 1958). The social context in which a normative judgment supplies the practical criteria capable of validating the giving of specific reasons. The completeness or validity or force of a normative statement is dependent upon standards that are context bound. Although the truth of practical/normative statements cannot be proven, such statements can be shown to be weak or strong, convincing or unconvincing because they are validated by context dependent reasons. Thus although normative statements are less definite and contingent in nature, they are in no way irrational.

Toulmin’s emphasis on different modes of explanation is derived from the way normative arguments are made in “everyday” language as opposed to scientific language. His informal logic is designed to reflect the way people actually deliberate about normative judgments. It is therefore based in empirical reality. The degree therefore to which Toulmin’s informal logic of ordinary language discourse is accurately reconstructed, the scheme represents the way people in fact make such arguments. The scheme itself is therefore subject to empirical confirmation.

Toulmin’s logical structure of a substantial argument is represented by six elements:

The structure of a substantial argument:
The elements of D, W and C conform to formal syllogism. The elements of Q, R and B show the difference between a formal argument and a practical or normative argument. Q and R show that practical arguments are tentative and contextualized. B shows that the warrant which deductively establishes the proof of the claim in formal arguments, has to be backed by good reasons in a normative argument (Toulmin 1958).

Beyond arguing that the warrant needs to be redeemed by the giving of reasons, Fischer points out that Toulmin does not clarify or give details about the nature of a full justification of the warrant (B). Fischer therefore extends Toulmin’s model of practical argumentation by incorporating Taylor’s logic of normative discourse into it (Fischer, 1980). According to Taylor, a justified normative evaluation is backed by relevant and good reasons. For a reason to be considered a good reason, it must meet all the questions of the four interrelated phases of Taylor’s general logical structure that governs rational judgment in evaluative discourse as a whole. By adapting it as a framework for the evaluation of public policy, the model tests the reasons given concerning a policy’s technical efficiency, its appropriateness to the circumstances of the situation, its
instrumental implications for the social system as a whole, and its relation to the ideological principles that justify the social system (Fischer 1980). By integrating Taylor’s logic of Normative discourse to Toulmin’s model, Fischer is able to represent what an extension of the justification of the warrant (W) is like.

The logic of evaluation based on Toulmin’s informal logic of practical argument, as elaborated by Taylor, and adapted to policy analysis by Fischer (1995), is built around four interrelated phases of deliberation. These phases pertain to the efficiency of a program, the circumstances to which the program objectives are applied, the instrumental impact of the larger policy goals on the societal system as a whole, and an evaluation of the normative principles and values underlying the societal order. Taken together these deliberations are designed to go beyond the technical conception of rationality that influences much of policy science. In the parlance of practical reason, the logic of policy evaluation, situates empirical social science methodology within the structure of a more comprehensive conception of rationality. The logic of policy evaluation is structured to move inquiry from the most concrete level of empirical investigation up through the higher levels of abstract exploration of norms and values. The framework therefore assists in the clarifying and assessing the full range of empirical and normative assumptions that contribute to a particular judgment.

Levels of practical discourse

The first two discursive phases of the logic of policy evaluation comprise the level of “first order evaluation”. It consists of program verification and situational validation. First-order evaluation is concerned with the specific action setting in which the policy initiative is undertaken. Evaluation focuses on both, the specific outcomes of the program
and the circumstances in which they occur. The second two discursive phases of the logic are referred to as “second order of evaluation”. They are vindication and social choice. At these phases, evaluation leaves the action context and shifts to the larger social system. It focuses on the instrumental impact of the larger policy goals on society as a whole and an evaluation of the normative values and ideals underlying the societal order. The logic of policy deliberation therefore functions on two fundamental levels: one that is concretely concerned with a program, its participants and the specific problem situation that the program addresses; the second level deals with the more abstract level of the societal system within which the programmatic action takes place. Policy evaluation can commence at any phase of inquiry. There is no inherent priority to start with one phase over another. It is the practical aspects of the policy issue to be resolved that dictates the phase to begin at.

In order to undertake an open and flexible inquiry of the concerns raised in the different phases, the four discourses are broken down into questions. These questions are not binding or fixed ones that have to be answered in a formal way. They only serve as guidelines to orient evaluation to a certain set of concerns. Each phase is also accompanied by methodological orientations that can support the deliberative process. Once again, these methodological techniques need only be used when judged appropriate to the specific concerns at hand. The logic of policy evaluation is not designed to be exacting and inflexible but to encourage dialogue at each phase in the hope of engendering clarification and mutual understanding between groups involved in the deliberation. Even consensus, perhaps.
Technical-Analytical Discourse: Program Verification: Technical analytical discourse is the most noticeable of the four discourses in the policy sciences. In the logic of policy evaluation it is addressed to the consideration of facts. It is concerned with measuring the degree to which the program has fulfilled its objectives and how efficiently it has done so compared to other alternatives. The assessments are quantitative in nature. The following questions serve to orient inquiry about verification:

--Does the program fulfill its objective/objectives?
--Does the empirical analysis uncover secondary or unanticipated effects that offset the program objectives?
--Does the program fulfill objectives more efficiently than alternative means available?

The methodologies that are used to pursue these questions are the everyday tools of conventional policy analysis – experimental evaluation research, cost-benefit analysis, etc.

Contextual Discourse: Situational Validation: After empirically verifying the outcomes of a program, the logic of evaluation turns attention towards normatively assessing the program objectives and the situation to which they are applied. In other words, validation focuses on whether or not the particular program objectives are relevant to the problem situation. This phase brings to the fore the conceptualizations and assumptions that underlie the problem situation. Validation is concerned with the following questions:

--Is the program objective relevant to the problem situation?
--Are there circumstances that require an exception to be made to the objectives?
--Are two or more criteria equally relevant to the problem situation?
The questions of validation are pursued through an interpretive process of reasoning that is bound by the particular normative policy beliefs from which the program objectives and goals are drawn. The concerns of validation are informed by the interpretive or phenomenological approach to social research.

**Systems Discourse: Societal Vindication** At this level, the logic of policy deliberation shifts from the concrete situational context to the societal system as a whole. The main concern here is to examine the compatibility of the policy with accepted political values and societal aims. Evaluation is focused on assessing empirically the consequences of a policy goal in terms of the system as a whole. The following questions guide deliberations at this phase:

--Does the policy goal have instrumental or contributive value for the society as a whole?
--Does the policy goal result in unanticipated problems with important societal consequences?
--Does a commitment to the policy goal lead to consequences (like benefits and costs) that are judged to be equitably distributed?

Attempting to examine the instrumental or contributive value of a policy’s goal and assumptions for the system as a whole, requires drawing on a wide range of social scientific techniques, depending on the nature of the policy problem. Macro cost-benefit analyses, systems simulations, etc are some of the methodologies that can address the concerns raised at this level.

**Ideological discourse: Social Choice:** In the final discursive phase of the framework, deliberations turn to the core values upon which the social order is based. The level of social choice is about establishing a reasoned basis for the choice of ideological
principles that should govern society or the way of life. Social choice raises the following types of questions:

--Do the fundamental ideals that organize the accepted social order provide a basis for a legitimate and equitable resolution of conflicting judgments?

--If the social order is unable to resolve basic value conflicts, so other social orders equitably prescribe for relevant interest and needs that the conflicts reflect?

--Do normative reflection and empirical evidence support the justification and adoption of an alternative ideology and the social order that it prescribes?

Social choice involves the interpretive tasks of social and political critique, as practiced in political theory and philosophy. This phase in the logic of policy evaluation seeks to bring out the value implications of policy arguments. More than a clarification of values, it is concerned with the way ideological discourses shape and reshape the world that we live in.

The logic of policy evaluation can be diagrammatically presented as follows:

[Diagram]

Social Choice (Because of)

Systems
Vindication (Because of)

Situational Validation (Because of)

Warrant (since)

Data → Technical Verification → So, (Qualifier), Conclusion
A critical judgment is considered to be one that has been pursued progressively through the four levels of evaluation. The formal logic of an empirical assertion moves from data to conclusion, mediated by a warrant which is backed by normative and empirical assumptions. Through advancing critique from validation to ideological choice, or the other way around, a comprehensive evaluation makes explicit the assumptions that typically remain in the background and are called into question only during conflicts. This portrayal of a comprehensive evaluation is based on Toulmin’s representation of the logical structure of a substantial argument (Fischer 1995) as discussed earlier. The logic of policy deliberation illuminates the interdependencies between empirical analytic knowledge and normative knowledge. At both, first and second order discourse there is an interaction between the empirical and the interpretive. At the first order of discourse, situational validation examines the normative construction of the problem situation underlying the program and its objectives; at the second order of discourse, the level of social choice, evaluates the normative foundations of the societal system. Neither the empirical nor the interpretive forms of analyses can afford to stand on their own. The logic of policy of evaluation in fact shows how they logically fit together in a more critical, comprehensive methodological framework (Fischer 1995).

The model has been applied to concrete policy issues in different ways. Hoppe (1993) has shown that the four levels of discourses correspond to the types of argumentation that occur across the phases of the policy cycle. The phase of agenda setting is significantly related to ideological concerns; policy formulation is concerned with issues of systems vindication; the implementation phase is relevant to matters of situational validation; and evaluation is connected to technical verification. In this respect
Hoppe illustrates the policy process as moving from reflective to practical orders of reason by combining his analysis to Lynn’s conceptualization of the policy process as a set of games: the high ideological game, the middle systemic game and the low technical game (Fischer 2004). Hoppe and his associates have also mapped out the structural properties of policy belief systems by using the discourses of the logic. Using Lakatos’ theory of a scientific research program as having a hard core that is surrounded by protective belts, Hoppe considers that the level of ideological choice is the hard core of a policy belief system; the systems vindication is the near core and the situational validation and technical verification as the secondary protective belts. The hard core of the belief system is understood to be stable and not inclined to change while the secondary components are more adaptable. A policy belief system’s long term prospect would be determined by the periphery’s capacity to produce a wide range of policy programs in various policy areas. The more the periphery creates different ways of dealing with problems of policy making, the more intact the policy belief system will be. In this regard, Mathur’s work (2003) shows that policy discourse coalitions protect core assumptions by directing challenges away towards the lower level considerations.

Goals of the Study

According to Fischer, the logic of policy evaluation is based upon ordinary language philosophy of Toulmin and Taylor, which is based on a reconstruction of how people actually think when they evaluate an action or event. The framework is therefore not a prescription for how we ought to deliberate about issues, it is an empirical approach to how people actually do think about things. In other words, the logic of policy evaluation is grounded in empirical reality. That is, to the degree that the logic of policy
deliberation is accurately formulated, the framework is more than simply Fischer’s conception of how we should talk about issues; rather it seeks to represent the way people in fact make arguments and is subject to empirical confirmation. This study seeks to verify the claim that the model represents the way ordinary citizens argue. Although the logic of policy deliberation has been applied to several policy cases, there has been no empirical test of how ordinary citizens relate to it; more specifically how citizens respond to the different phases of the logic of policy deliberation in general as well as in specific cases. The model will be tested through a discursive analysis of the Narmada dam conflict in India. The Narmada conflict is about one of the most controversial projects in India that envisages the construction of thirty large dams, one hundred and thirty five medium dams, and three thousand small dams on the river Narmada, which is India’s largest westward flowing river. This study will focus on the Sardar Sarovar Dam which is the largest and terminal dam on the river. The conflict reflects a wide range of concerns from the techno-economic feasibility of the project to the questioning of modern, developed society. The arguments in the debate are complicated and widespread; the groups involved are varied from citizens who are going to be displaced, to the farmers who are going to benefit, the bureaucrats, international agencies, and activists. The interplay of discourses between these different groups will shed some light on the workings of the model.

In seeking to examine the logic of policy deliberation through the Narmada conflict, the study will be divided into two parts: 1) The theoretical application of the logic of policy deliberation to organize and analyze the arguments in the Narmada debate
2) The empirical examination of the logic of policy deliberation through citizens discourses in the Narmada conflict.

More specifically, the study will examine:

1) How well can the range of arguments in the Narmada case be distributed across the levels of the logic of policy deliberation

2) Do citizens argue across different levels? If there are missed or unperceived levels, are they able to relate to it when prompted or provoked with scenarios?

Data sources, method of collection and analysis

The study rests upon primary and secondary data sources. Secondary data sources included reports, policy statements, brochures, newspaper articles, and in-house journals from both the government officials as well as the activist groups. In addition, data was also used from the official web sites of the government and the activists. The primary data was collected on a field trip that was made to:

1) Chimalkhedi, Dunel, Gaman and Manibeli, villages in the Narmada valley that were impending submergence

2) Mangrol, Gujarat, the head quarters of the ARCH vahini activists

3) Badwani, Madhya Pradesh, the head quarters of the NBA or the Save Narmada Movement

4) Baroda, Ahemedabad and Gandhinagar, Gujarat, where the various government offices for the project were located

5) New Delhi, where the offices of the Planning commission and the Ministry of Water Resources are located.
Primary data was collected through informal conversations with activists, government officials, ordinary citizens, and intellectuals. There were ten individuals in each group and therefore a total of forty participants. Selection of participants was made by first identifying key individuals involved in the conflict. They subsequently provided the references to other individuals who they thought would be able to give useful input. With regard to ordinary citizens and intellectuals, the selection was based on their awareness about the conflict and their willingness to participate in the study. The interview style that the study used was based on Gunderson’s (1995) method employed in his book titled “The Environmental Promise of Democratic Deliberation”. Gunderson conducted a series of interviews with a cross section of forty six citizens to show how deliberative process can work on both concrete and abstract environmental problems. The two key elements in his interview method were challenge and response and were designed to stimulate deliberation. The interview style borrowed from Gunderson, proceeds in a deliberative as opposed to an interrogative manner. Initially, general questions about the Narmada conflict were asked so as to examine the participant’s distribution of arguments across the four levels of discourse. The participant’s initial response then determined the line of questioning that followed through the conversation. After general questioning, if there were previously missed or unperceived levels of discourse, the participant was prompted or provoked with scenarios to see if they could relate to the missing levels. Overall, the conversation aimed to provide the participant with a deliberative opportunity. The duration of each conversation ranged from forty five to ninety minutes. Recorded transcripts of the conversation and field notes were made during sessions. The data was

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7 In the study an intellectual or academician is used to denote a person who holds an academic position in a university.
transcribed and the four levels of the logic of policy evaluation were used to organize, code, and uncover patterns within the data.

Conclusion

The purpose of this chapter was two fold: first to introduce the Logic of Policy Deliberation. To that end, the chapter began with a brief account of the development of the field of policy analysis, its promise to improve the practice of democracy and its eventual inability to be of relevance to decision makers and to the complex problems society faced. In the context of the failure of policy analysis, the chapter turns to a discussion of the epistemological assumptions of positivism that shaped the field, and that was considered to be an important part of the failure of policy analysis. Having examined the shortcomings of positivism, mainly its separation of facts and values, the postpositivist approach is outlined as one that seeks a synthesis of competing views, of facts and values, and of multiple methodologies. Its alternative to formal logic—informal logic and practical reason is discussed after which the Logic of Policy deliberation is introduced as a concrete multimethodological framework that contributes significantly to the postpositivist approach. The second purpose of the chapter was to elaborate upon the goal of the study, which is to undertake an empirical examination of the Logic of Policy Deliberation, and to give a brief explanation of the data sources, method of collection, interview style and analysis. Having introduced the Logic of Policy Deliberation and the main goal of the study which is to test the Logic, the study turns to the next chapter which is an introduction of the case through which the Logic will be tested.
Chapter II  The Narmada Conflict

The previous chapter introduced the Logic of Policy Deliberation and the main goal of the study which is to undertake an empirical examination of the Logic. As stated in the previous chapter, the study will be tested through the Narmada dam conflict in India. This chapter seeks to take a close and detailed look at the Narmada conflict. A brief background on the water resource development policy of India and a discussion of the framework of laws, institutions and procedures within which dams have come into being and functioned in India constitutes the focus of the first half of the chapter. The second half turns to presenting a historical overview of the Sardar Sarovar project.

Water resource development policy of India

India is a country with a wide range of physiographic and climatic variations. Precipitation in the country is both season and region specific. Rainfall in the subcontinent occurs during the monsoon season. During this season, different parts of the country experience widely different amounts of rainfall ranging from 11000 mm in the east to 100 mm in the west. Due to the spatial and temporal distribution of water in India, there has always been a concern to impound river water in reservoirs to be able to transfer water from surplus to deficit areas and from one season to another (Singh 1997). India has over four thousand large dams as defined by the International Commission on Dams (ICOLD). At the start of the century India had 42 large dams but a spike in dam building activity took place after India achieved independence. Following Independence and the partition of 1947, it was realized that India was not producing the required amount of food grains to meet its demands. Food security therefore, became one of

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8 During the monsoon season the monsoon or the seasonal winds blow over the Indian subcontinent bringing heavy rain showers. The monsoon season in India runs from June through September.
India’s prime concerns and expanding irrigation through large dams, a strategy. Providing irrigation for agriculture was the main rationale for dams but other concerns such as hydro power generation, industrial and domestic water supply, and flood control became important considerations in undertaking projects as well. Although the contribution of dams to India’s food security is disputed, it should be mentioned that India’s food grain production increased from 51 million tonnes in 1950-51 to almost 200 million tonnes by 1996-97. About two thirds of this increase came from the irrigated area, which is around one third of the cultivated area (Thakkar 2000). The increase in food grain production has been attributed to a mix of factors such as high yielding variety seeds, chemical fertilizers, credit extension and irrigation. According to the Central Water Commission, 30% of the water for irrigation came from dams; the world commission on dams report (2000), however underestimates the amount and puts it at 10%. In the case of hydro power, at the time of independence, India had a 508 MW capacity which as of 1998 stands at 21,891 MW. Two thirds of this capacity comes from dams while one third comes from run of the river schemes. Apart from irrigation and hydro power generation dams in India have contributed to public water supply and flood moderation. No compiled data however are available for these.

There are no specific policy statements that are related to dam projects in India. The provisions related to water in the constitutional and legal framework of the country, guide the planning, approval, financing, and operations of multipurpose projects in India (Iyer 2003). The National Water Policy was adopted in 1987 (amended in 2002) which includes guidelines on managing the nation’s water resources. Water is considered to be a scarce national resource which has to be developed and conserved given the projected
magnitude of population growth, the rising needs in food, water, and energy, and the variations in rainfall. The policy states that the water resources available to the country should be brought within the category of utilizable resources to the maximum extent possible. The policy therefore reflects a favor towards large scale storage of water for meeting future needs. The policy however, also recognizes the need for alternative methods of developing water resources like rainwater harvesting and watershed development; and the need to allocate water with due regard to social justice and equity. Although water resource development is equated with large scale projects, policy statements have begun to include concerns for the environment, the impact on human settlements, the need for an integrated, multi disciplinary approach to project planning, etc. Their conversion to programs and sub policies however, still remain to be seen.

It is important to understand the environment within which large dams have come to exist and function in India. The Indian polity is a quasi federal structure. The allocation of responsibilities between the center and the state fall into three categories: the Union list, the State list and the Concurrent list. The Union list contains subjects that are of national importance, the State list includes subjects over which the State has legislative authority, and the Concurrent list contains items over which both the Central and State governments has jurisdiction. Water, in the Indian constitution, is included in Entry 17 of the State list. The state therefore has legislative competence in relation to water - that is to say water supplies, irrigation and canals, drainage and embankments, water storage and water power. States can therefore plan and implement dam projects (Garg 1999). However, this Entry of water in the State list is subject to Entry 56 in the Union list which states that the “regulation and development of inter state rivers and river valleys to
the extent to which such regulation and development under the control of the Union is declared by parliament by law to be expedient in the public interest” (Iyer 2000). As such the parliament has the power to regulate and develop interstate rivers if it is declared by law to be expedient in the public interest and it also has the power to make laws for the adjudication of any dispute relating to waters of interstate river or river valley under Article 262 of the constitution.

The water resource department of the state government concerned is the main agency involved in the preparation of a large dam project. A project might be identified based on the needs of a particular region, or technically, a certain location might be considered to be a suitable place for the construction of a dam or reservoir. The project first has to go through approval procedures within the State government, after which it goes to the Central government for approval. At this level a techno-economic examination of the project is undertaken, the basic criterion of which is the benefit cost ratio. A benefit cost ratio of 1.5:1 is considered to be desirable, but for drought prone areas a lower benefit cost ratio is acceptable. After the project is considered to be technically and economically viable, the project goes to the Ministry of Environment and Forests (MoEF) for clearance. These clearances however are not a statutory requirement and construction of projects often start without waiting for all the required clearances (Thakkar 2007b). The implementation of the project is the responsibility of the state government.

The legal, institutional and policy framework that guide multipurpose projects in India, reflect certain orientations, specific choices, and assumptions on the part of the government. Firstly dam building is essentially a governmental activity. Rivers are
assumed to be resources that belong to the state which it harnesses for the good of its people. This means that the right to develop water resources rests with the State and private enterprise is not permitted. The principle of “eminent domain” allows the state to acquire private land for a public purpose, in the process of which, it tends to prevail over the rights of people (Sengupta 2000). To compensate for this, the government provides project affected people with benefits, resettlement and rehabilitation. Lately, there have been some progressive compensation packages but these remain beset with problems when it comes to implementation. Although efforts are being made to formulate a national rehabilitation policy, none exists so far. People can express their dissatisfaction with the compensation they receive through grievance redressal committees and the courts through public interest litigation, but they cannot question the public purpose of the state. Stakeholders cannot participate in discussing alternate ways to develop the water resource in question. Their input does not play any role in the planning and implementation of such projects. Usually, it is the engineering and economic aspects of a project that are given importance and therefore civil society’s considerations about displacement issues or the environment are thought of as “delays” in the project (Sengupta 2000).

The process of approval for a project is not rigorous. The criteria are ad hoc; costs are routinely underplayed and benefits exaggerated just to arrive at the required official benefit cost ratio (Singh 1997). As for environmental and social criteria, there are no prescribed standards. Environmental viability is therefore very subjective and arbitrary and cannot be enforced by the ministry of environment and forests. There are no policy directives that prescribe standards for the extent to which social disruption because of a
dam is acceptable and can be compensated for, and beyond which, a dam would not be
considered viable no matter what its economic viability is (Iyer 2000). Apart from the
lack of standards and criteria that guide decision making about dams, the institutional
arrangements within which these decisions are made, are very compartmentalized and
fragmented. There are different departments and divisions that deal with different aspects
of water resources in India. As a result of this there is very little coordination and it
becomes difficult to come up with an integrated plan. Moreover there is no effective
monitoring system in place that can evaluate the project from time to time. Hardly any
projects get evaluated after they are completed and there is a tendency to invest in new
projects instead of supplementing and enhancing the capacity of existing projects.

Large dam planning in India is done without a comprehensive national water
policy. Overall, there is a need to add significant value to the existing, redundant policy
framework regarding dams in India. The policy framework needs to be infused with
norms and standards that can become indicators for governmental objectives regarding
water and energy development (Reddy 2002). To be effective the framework needs to
adopt a more integrated and rational approach to assessing the viability of dams. It should
incorporate policy directives that can guide the allocation of resources, efficiently,
effectively and in an equitous manner. It should have an enabling institutional structure
that is more participatory and transparent; mechanisms in place to ensure compliance
with prescribed conditions and safeguards; and agencies to conduct constant post project
evaluations. These strengthened institutions should have legal backing to ensure
effective implementation of policies and programs.

Growing controversy
The story of dams in India can be traced back to the time of India’s Independence.⁹ At that time, dams were considered to be the symbols of development, progress, and patriotic pride. They were indicators of postcolonial development, a kind of shedding of India’s terrible colonial past. Nehru, the first prime minister of India referred to them as nothing less than the ‘modern temples of India’. The focus was on achieving fast paced economic development which was presumed would then trickle down to the people and remove social disparities. Fifty six years later, such developmental projects are mired in controversy (Srinivasan 2000). Today dams are a symbol of a different kind in India - they are focal points of organized struggles in defense of millions of those who get displaced, in defense of the environment and in defense for a just and equitable society. The disenchantment with dams has been building up over the years, and has flared up with the rise in worldwide ecological awareness and the growing concern for the rights of indigenous people. There have been several cases of anti dam movements that have managed to stall, delay, or halt the construction of projects on account of the environment or displacement. The first victory for the resistance movement came when the Silent Valley project in Kerala had to be cancelled due to the concern for one of India’s few rainforest areas and the endangered lion tailed macaque. The resistance against Tehri and the Sardar Sarovar dams have acquired international significance and although they have not managed to stop the construction of the dams, they have put up severe opposition every step of the way and have succeeded in achieving policy changes with regard to compensation and conservation that otherwise might have been ignored.

The implicit faith in large dams to deliver and to be the means to a self sufficient, prosperous society has now given way to a full fledged debate which not only questions

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⁹ India achieved independence from British rule in 1947
the usefulness of large dams but also reevaluates the chosen path to development, and the very nature of Indian society. Beginning with deliberations about improvements in resettlement and mitigating harmful environmental impacts, the debate has elevated to being one about an entirely different model of political and economic development. The debate is marked by extremely polarized positions with both sides making fierce arguments that cover a wide spectrum of concerns. Technical and economic arguments about the degree to which dams have realized their projected benefits and at what costs are made by professionals and experts. Time and cost over runs and failure to meet projected benefits have led them to reassess the planning and performance dams in India. Going beyond the benefit cost calculus, arguments are made about the adverse consequences of dams and equity issues. The magnitude of human displacements, subsequent inadequacies in resettlement and rehabilitation policies, disadvantaged groups such as tribal communities being more adversely affected than others, and poor grievance mechanisms have moved activists and others to fight for dam affected people; awareness of environmental impacts such as disturbance of nature, submergence of fertile lands, the impact on flora and fauna, downstream impacts, etc have raised arguments about large dams being a viable means for sustainable development. Ultimately at the heart of the debate lies arguments that offer opposed views of the business of development itself (Fisher 1997).

Participants in the debate differ not just in their opinions about dams but in their world view itself. For dam builders, water that is allowed to flow into the sea is wasted. The value of the river is in controlling it, in impounding its flow, and putting it to varied uses for mankind (Moelle 2006). For the country to meet its ever increasing needs of
food, drinking water, and energy, renewable resources have to be tapped and brought under maximum utilization. The favored way of doing this is through large scale, centrally controlled schemes. Single, comprehensive, big dams are chosen over local ways of satisfying food and water needs. Alternatives to large dams are viewed only as supplements, not substitutes to large dams. An economic calculus is used to show that more benefits accrue from large dams than costs; cost benefit analysis is the main criteria that is employed to reach a judgment about a project. Costs to the people and the environment are justified by a utilitarian explanation that some must sacrifice for the interests of the nation. The underlying belief is that harmful consequences that result from large dams can be taken care of, mitigated and remedied (World Bank 1999). Critics of large dams on the other hand, argue differently. They see rivers as having their own intrinsic worth; as being of value to different species who depend on them for their food, water, and other needs (Patrick McCully). When free flowing rivers are regulated by dams, water gets transferred from one set of users to another; while the original users are denied access to their resource, it is the landed farmers and industrialists that become the recipients of the diverted river. The harnessed waters thus leaves the riverine community bereft of its means of survival while bestowing the already empowered with even more access to productive resources. According to the critics, dams therefore, perpetuate preexisting social and economic inequalities.

Opponents of large dams also take issue with the cost benefit assessment of dams, pointing out that benefits are overstated and costs underplayed. In addition, they question how economic value can be imputed to non quantifiable elements like an old forest or the loss of kinship. Ultimately for the critics, no matter how profitable a dam proposition is,
its adverse environmental and social impacts will always be irremediable. Future needs hence have to be managed through different means that are inclusive of diverse knowledge systems, participation and complex cultures. Alternative methods that they suggest are a combination of demand side management, local water harvesting, watershed development, etc.

Overall, dam builders take a limited view of the quantitative benefits that can be achieved for water deficient areas by harnessing large volumes of water at financially appealing costs. The opponents, however do not buy into the financial logic, taking a wider view of the impacts and consequences resulting from dam building. The debate is dominated by these strongly held positions at either end of the spectrum. In such a bipolar forum, any chances of a reasonable middle ground evolving have been slim.

Sardar Sarovar story

The Sardar Sarovar Project (SSP) is the center piece of the dam controversy in India and is part of the Narmada Valley Project. The entire project envisages the constructions of 30 major dams, 135 medium, and about 3000 minor dams in the Narmada valley. The SSP is the largest and terminal dam of this basin wide scheme. The 1300 km long Narmada is India’s largest Westward flowing river. It rises in central highlands of peninsular India and meanders its way for over 800 miles between the Satpuda and Vindhyachal mountain ranges and the three states of Madhya Pradesh, Gujarat, and Maharashtra to meet the Arabian sea, a couple of hundred miles north of Bombay. The settlements along the river are mainly farming communities in the plains\

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10 The rich agricultural plain which is inhabited by farmers is known as Nimad and is located in the state of Madhya Pradesh. However, there are also some tribal groups that live in this area.
while the forested ranges are inhabited by “adivasis” or tribals\textsuperscript{11} who depend on the river and the surrounding resource base for their livelihood. The tribals have their own social and political norms and have remained relatively unaffiliated with the prevailing Indian society. The Narmada is a rain fed river, in the sense that 90% of the river’s flow occurs during the monsoon season. It is this monsoon flow that the SSP aims to impound instead of letting it flow into the Arabian sea, unutilized.

The SSP includes a dam, a riverbed powerhouse and transmission lines, a main canal, a canal powerhouse, and an irrigation network. The dam will create a storage reservoir level of 455 feet to provide for a reliable supply of water for drinking, irrigation, and the generation of power. Since the dam is being constructed in a hilly area, the reservoir created behind the dam will be flanked by hills and will resemble a narrow lake extending for about 200 kms upstream from the dam. The full impact of the submergence is disputed but it is generally acknowledged that approximately 370000 hectares of land will be submerged and about more than 100,000 people will be affected by the submergence (Fisher, 1997). The main canal will extend up to 450 kms, and along with branch canals, it is considered to be one of the most extensive in the world. The command area of the project, that is the area where water is to be delivered for irrigation in particular is stated as being 1.8 million in Gujarat and 75000 hectares in Rajasthan (see Figure 3). Drinking water will be provided to 40 million people in the severely drought prone areas of north and west Gujarat. Power benefits from the dam are fixed at 1450 MW and will be shared between the three riparian states of Madhya Pradesh,

\textsuperscript{11} On the basis of social and economic features like self sufficient lifestyle, social system with no hierarchy, relative isolation and a strong sense of belonging to their habitat, the tribal people of India can be considered to be similar to the indigenous people in other parts of the world, but not in terms of their settlement preceding other communities in chronological terms(Patwardhan 2000).
Maharashtra, and Gujarat in the ratio of 57:27:16 respectively.

This enormous dam which stands in concrete today at more than 300 feet was a vision in the minds of political leaders and planners for several decades in India. Ideas of harnessing Narmada waters through dykes go as far back as the late 19th century (Patel 1988). However, the development of the basin was not favored at the time due to the topography and the nature of soils. The major impetus for the dam came around the time of India’s independence as part of the developmental policy. Although sites and schemes were proposed by the then Central Water and Power Commission (CWPC), the three riparian states could not come to an agreement about the equitable distribution of the river water. To break the impasse, the Government of India appointed the Khosla Committee (1965) to develop a master plan for the Narmada basin. The committee proposed the construction of a dam and a canal in Gujarat and several major projects in Madhya Pradesh. However, Madhya Pradesh took strong objections to the report on the grounds of unprecedented submergence and questioned the claims of Gujarat on the Narmada. Since no headway could be reached, the Gujarat government submitted a formal complaint under the Inter state Water Disputes Act, 1956 (Sangvai, 2000). Under this act, the Union government is empowered to constitute a tribunal to resolve the dispute, and the decision of the tribunal is binding on all the concerned parties. Subsequently the Central Government of India formed the Narmada Water Disputes Tribunal (NWDT) in 1969 with the purpose of resolving the long standing dispute.

Narmada Water dispute Tribunal (NWDT)

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12 Although 86% of the river runs in Madhya Pradesh and only 12% in Gujarat, the state of Gujarat claimed a larger share of water on the basis of its projected needs of its drought prone areas.
Many conflicting issues were raised before the Tribunal for an entire decade. The Tribunal deliberated upon the quantum of utilizable waters available in the river, what the equitable distribution of waters should be between the riparian states, how should the objectives of irrigation, power and drinking water be prioritized, how should costs and benefits be shared, what the terms of compensation should be in case of submergence of land, and the machinery that should be in place to oversee the implementation of the Tribunal’s order (Verghese, 1994). After a decade of contentious deliberations, the Tribunal announced its award in 1979. The award was considered by the Indian constitution to be binding on all concerned states. The tribunal held that amendments, alterations and modifications may be affected by “agreement between all the party states” (NWDT, 1979). The award allocated the waters and the costs and benefits between the riparian states and admitted the state of Rajasthan as being a beneficiary state by agreement. The tribunal assessed the quantum of water available for allocation to be 28 million acre feet (MAF) at 75 % dependability. Of this, Madhya Pradesh was allotted 18.25 MAF, Gujarat 9 MAF, Maharahstra 0.25 MAF, and Rajasthan 0.5 MAF. The height of the Sardar Sarovar dam was fixed at a full reservoir level (FRL) of 455 feet which then determined the storage, shape, and volume of the reservoir. The length of the main irrigation canal from the reservoir through the state of Gujarat and Rajasthan was also set at approximately 440 kms, along with a storage level of 300 feet. In addition to the structural and engineering features of the project, the Tribunal also determined how the costs and benefits would be shared between the contending states. Institutionally, it created the Narmada Control Authority to ensure the implementation of the Tribunal’s decision. The most important contribution of the NWDT however, was its decision
regarding resettlement and rehabilitation (R&R). It was a path breaking scheme which set the ball rolling for subsequent policy changes with regard to compensation for people affected by the SSP. The tribunal’s scheme for R&R was an advance as far as previous Indian norms were concerned regarding compensation. The new R&R package provided for allotment of a minimum of 2 hectares of agricultural land to a landholding family in lieu of the land lost in submergence. Previously, under the Land Acquisition Act, landholders only received monetary compensation for land lost (Patwardhan 2000). Since most of the affected in such cases are typically peasant and tribal communities who often live in semi monetized economies, cash compensation is found to be unsuitable because they are unable to handle large sums of money (Verghese, 1994). The land for land policy was thus a welcome break from past practices and set the policy framework for future R&R.

Further, the Tribunal stipulated that the oustees would be given the option of resettling in Gujarat (in the command area of the project) or in their own states. Gujarat was required to provide a minimum of 2 hectares of irrigable land and a house plot free of cost to every landed family if more than 25% of their land holding was submerged or acquired. Along with this, Gujarat was also supposed to provide for a range of civic amenities in the resettlement centers. Finally, the Tribunal stated that submergence could only take place after all compensation and resettlement costs had been taken care of by Gujarat, regardless of whether oustees chose to relocate in Gujarat or the other two states. The Tribunal however determined only the rehabilitation package that Gujarat was to provide to oustees, it did not outline any scheme in the case of Madhya Pradesh or Maharashtra. The thrust of the NWDT rehabilitation policy was directed towards
resettlement of project affected people (PAFS) in the command area of the project in Gujarat. Overall, however, the award was more liberal than anything before it, with land being its main linchpin.

Enter World bank

The World Bank’s involvement with the SSP began in the early 80’s. Soon after the Tribunal announced its award, the Government of India requested the World Bank for assistance. The Bank evinced an interest in the project because it saw the dam as being able to provide large scale, long term socioeconomic benefits to a poor country like India. The project would also help to modernize India’s irrigation sector which the World Bank had an interest in shaping. And lastly of course since the project was so gigantic in nature, the World Bank knew that India could not go it alone and that its involvement in the project would help attract financing from other sources and would also help in achieving coordination amongst different actors which was so crucial for a river basin project like the SSP (Fisher, 1997). The Bank engaged its team of specialists and carried out exhaustive appraisals in various areas concerned with the project as a prelude to the loan agreements. Its final report in the form of operational guidelines came after four years and contained a detailed description of the organizational arrangements, economic analysis, resettlement and rehabilitation of the affected people and environmental implications of the project (Fisher, 1994). The World Bank approved of the NWDT award and found it to be an improvement over previous Indian standards, however, in view of its own evolving norms based on experiences from similar projects in India and abroad, it added its own safeguards into the Tribunal’s provisions.
The World Bank report stipulated that encroachers and landless agricultural laborers should also be included in the category eligible for 2 hectares of land as compensation. The NWDT did not acknowledge encroachers or landless laborers as entitled to land benefits. But with insights from local NGO’s like ARCH, the World Bank recognized the characteristic relationship that the tribals have with their land. Majority of the tribals do not formally own their land. They cultivate forest land that they have traditional and customary rights over; these are lands that generations before them have been cultivating and based on that they see themselves as having rights to it. It would be unfair to treat such tribal families who have been cultivating their lands traditionally as encroachers with no rights. Likewise, there are landless laborers who eke out a living by cultivating land on which they are employed. Once these lands submerge, the laborers lose their livelihood. The World Bank pointed out that they too had to be compensated for their loss (Verghese, 1994). In addition to this, the Bank stated that the oustees should participate in the preparation of the resettlement and rehabilitation plans. The Bank therefore improved upon and added to the NWDT award. Based on this appraisal the World Bank entered into a $450 million loan agreement with the Government of India on behalf of the governments of Gujarat, Madhya Pradesh and Maharashtra. Later the Japanese government approved a loan of $150 million for the turbines and generators.

Work on the project however did not begin as soon as the loan was sanctioned. A delay occurred because the project did not get the required environmental clearance from the newly created Ministry of Environment and Forest (MoEF). The ministry was not comfortable giving a “go ahead” without complete and detailed environmental impact studies. It felt that more time was needed to review the project’s environmental
consequences. Nevertheless, the Ministry was prevailed upon because of the severe
drought conditions in Gujarat, and in the interest of keeping momentum built up thus far,
the ministry granted conditional clearance in 1987. The clearance however had
stipulations regarding catchment area treatment, command area development,
compensatory afforestation, resettlement and rehabilitation of affected people, and other
aspects. These environmental safeguards were to be executed pari passu\textsuperscript{13} with the
implementation of the engineering works. The project finally got off to a start in 1987.
The delay regarding concerns about the project’s impact on people and the environment
however, was ominous of the contentious public debate that was around the corner.

Implementation and evolution of the R and R package

The NWDT as mentioned earlier, presented a rehabilitation package which was an
improvement over previous practices in India. However the award left out categories like
landless laborers, encroachers, canal affected people, and other land related categories.
The World Bank then made further improvements to the award and filled in the lacunae
that was there in the NWDT award to an extent. The NWDT award however, applied
only to those who opted to settle in Gujarat. The other two states- Madhya Pradesh and
Maharashtra were not obliged to provide identical benefits for those who chose to resettle
locally instead of moving to Gujarat. Gujarat took the lead in expanding its policy to
incorporate the World Bank guidelines; both encroachers and the landless were included
within the definition of a project affected person. In addition to this it also included major
sons of both the landed and landless to be entitled for the same 2 hectares of land\textsuperscript{14}

Gujarat’s liberalizing policy has been attributed to the efforts of NGO’s particularly

\textsuperscript{13} Pari passu is a Latin term which means with equal step

\textsuperscript{14} Major son is defined as eighteen years or older
ARCH and Anand Niketan Ashram (Fisher 1997). They found the initial response of the Government of Gujarat falling short of the NWDT norms, it therefore put pressure to interpret the NWDT package liberally instead of restrictively and in fact go beyond it (Verghese, 1994).

At nearly the same time, other NGO’s in the states of Maharashtra and Madhya Pradesh realized that the level of information among people there was very low; the villagers were ill informed, and were not aware of their rights to be rehabilitated. Under the pressures of the NGO’s, the World Bank, and the policy improvements in Gujarat, the Governments of Madhya Pradesh and Maharashtra slowly began to improve their R and R packages. Gujarat took the initiation to make changes because it was the major beneficiary of the SSP. Also, the SSP was the last major project that Gujarat was undertaking since there were no other rivers that had the potential to be harnessed. Madhya Pradesh and Maharashtra on the other hand had been lacking in the readiness that Gujarat had shown because most of the submergence area lay in these two states, Madhya Pradesh more than Maharashtra. Moreover, both the states had other river basins that could be developed in the future and so they did not want to set any precedents by conceding to very liberal measures in the case of the SSP. However, both the states have in varying measures improved upon the NWDT award. Maharashtra for instance has finally included landless people, encroachers, and major sons as project affected and entitled to land. While Madhya Pradesh decided that all landless oustees would be given cash compensation. Therefore the landless oustees who choose to stay in Madhya Pradesh, their home state and not move to Gujarat, will have to utilize their cash compensation to buy land and are at risk of not being able to resume their standard of
living. Madhya Pradesh recognizes major sons as separate families but entitles them to only cash compensation, no land. An important point of difference between the three states is that as far as Gujarat and Maharashtra are concerned, the submergence area is rural and tribal, but the in the case of Madhya Pradesh, rich farmers in the fertile Nimad area and urban populace will also be displaced along with the tribals. The state has therefore set out plans for rehabilitation of urban oustees in new townships.

Although the three states have tried to come closer together in terms of their R and R policies, they still do vary in the compensation they make available to their oustees (Khagram 2005). The three states differ in their treatment of major sons, encroachers and the landless. These variations in treatment of the oustees on the part of the three states means a disparity in the level of benefits (Fisher, 1997). For those who decide to relocate to Gujarat to avail of the R and R benefits that are significantly better than the other two states, compensation would mean migrating to another state and a “long cultural journey”; for those who remain in their own state, compensation would mean a lower standard of living, a financial sacrifice (Independent Review, 1992). Disparities between policies, disagreements between what constitutes appropriate compensation, and dissensus about whether all the oustees can possibly be fully rehabilitated became the springboard for the entire antidam movement.

Anti dam struggle

Initially in the early 80's the NGOs starting with ARCH in Gujarat worked towards monitoring the implementation of the NWDT award and pressurizing the government of Gujarat to adopt an improved, more inclusive R and R policy. In the mean

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15 Encroachers are tribals who reside on and cultivate land to which they have no legal title and the Landless are tribals who earn their living by working on land owned by another and hence lose their livelihood one the land is submerged
time by 1985, NGOs in Maharashtra and Madhya Pradesh like the Narmada Dharangast Samiti (NDS) and the Narmada Ghati Navnirman Samiti (NGNS) also began demanding policies similar to the ones being made in Gujarat. So at first, different NGOs across the three states worked on winning a better R and R policy for those being displaced (Caulfield 1996). In response to protests from ARCH and pressure from the World Bank, the Government of Gujarat announced its expanded, liberalized policy in 1987. ARCH welcomed and endorsed this policy, deciding to throw its weight behind the project, ensuring its effective implementation and asserting the rights of the tribals to what was rightfully theirs. The other NGOs in the neighboring states however embarked on a path very different from the one that ARCH undertook. According to the different NGOs in Madhya Pradesh and Maharashtra when they began work in the area, and started questioning the government about the availability of land for resettlement, the number of people to be displaced, the environmental effects of the project, the costs of supplying drinking water, etc, they realized that the government had no clear answers and was not interested in resolving any issues; according to them the government had lost all credibility (Medha Patkar, 2003). Persistent failure on the part of government to foresee and handle resettlement issues led them to conclude that the claims of the project were unattainable and resettlement in a fair and just manner was impossible (McCully, 96). In 1989, this network of various NGOs came together as the Save Narmada Movement or the Narmada Bachao Andolan (NBA) - a grassroots organization of human rights and environmental activists, academics, scientists, and project affected people (Fisher, 1997).

16 A problem with the availability of land was that the government of India had enacted the Forest Conservation Act (1980) which stated that no forest land could be diverted for non forest purposes. This had rendered many potential resettlement sites out of reach.
The collective efforts of the NGOs thus diverged after 1987 when Gujarat announced its new R and R policy. Groups like ARCH started working with the government of Gujarat to oversee the fair implementation of the improved R and R policy, while the NBA opposed the construction of the dam despite the new resettlement policy. Even though they had fought to ensure a better rehabilitation policy, over time they realized that due to the magnitude of displacement, total rehabilitation was just not possible; even if at all, it was possible as the government claimed, the NBA was convinced that the tribals would be worse off after resettlement (Patkar 1997). ARCH on the other hand having worked closely with the tribals in Gujarat maintained that it was their wish to avail of the resettlement benefits that was on offer. ARCH was confident that the tribals in the other two states would also have opted for resettlement and were disappointed that NBA decided to shift its focus from better rehabilitation to opposing the dam all together. It is interesting to note that both groups had the best interest of the tribal at heart but assessed it in very different ways (Fisher 1997). In its arguments, the NBA expanded its focus from implementation of resettlement to environmental issues, the adequacy of the cost benefit ratio, the technical validity of the project, and finally the nature of India’s development; they broadened their critique of the project to include economic viability, human rights, environmental sustain ability, and alternatives to the SSP and thus expanded the debate. The NBA and others who opposed the project started launching protests, marches, fasts unto death, public demonstration, and petitions. The project authorities, the Government of Gujarat and the people of Gujarat on the other hand rose to defend the project as Gujarat’s lifeline (Verghese, 1994). Soon the NBA and its opposition to the SSP found linkages with groups outside of India, particularly in the
US, Western Europe and Japan; a very local narmada story became an international concern within no time. An international campaign against the SSP was launched by a loose coalition of individuals, NGOs, advocacy groups. This international alliance used the political skills and influence of the northern advocacy groups and the moral determination of the villagers to drown in the rising waters rather than leave their homes, to finally get the World Bank to take the unprecedented step of instituting an independent review of a bank project by an impartial team (Patel and Mehta 1997).

Exit World Bank

The Independent review was commissioned by the bank in 1991. This was the first time in history that a review of this sort was undertaken on the part of the bank. The review was headed by Bradford Morse, former head of the United Nations Development Program (UNDP). The review was to conduct an assessment of the degree to which the three state governments had complied with the NWDT award and the Bank’s loan agreements in 1985. In particular, the review had to focus on the resettlement and rehabilitation of the affected people and on the environmental impact of the project. The review submitted its report in 1992. It was very critical of the way the Bank supported the project knowing that its own operational guidelines had not been followed. The report pointed out that R and R was not feasible, that the parri passu approach to environmental aspects was not working out, and that the project was ultimately based on questionable assumption. It rebuked the Bank and the Government of India for not adhering to the policy guidelines and for handling the most important aspects of the project in an inept manner.

In light of the review’s findings, the World Bank began to reconsider its role in
the Sardar Sarovar project. It agreed to support the SSP only on the condition that India would comply with the various R and R and environmental measures. The Bank decided that it would send a review team again after a year in 1993 to assess the performance and compliance of the agreed upon conditions. If it found that India had failed to implement the measures, the Bank would withdraw funding. Before the team could visit India to reassess the situation, the Government of India terminated the remaining portion of the loan\textsuperscript{17}. By this time Japan had already withdrawn its funding, and India was determined to proceed with the project on its own. (Saranthan and Prasad 2000).

Legal recourse

The arguments that the NBA was making all along were vindicated by the Independent Review’s findings. The withdrawal of the World Bank gave a boost to their efforts and they pressurized the Indian government to undertake a comprehensive review of the project. In the mean time work on the dam continued. Due to heavy monsoons large scale submergence inundated the homes, lands and possessions of many villagers. NBA’s opposition became more intense with fast unto deaths and vows to drown themselves if the government did not take any action to review the project. The Government of India then constituted a five member group of experts who were nominated by both the NBA and the dam supporters to “look into all aspects of the SSP” (McCully, 1996). The group worked with the concerned state governments, affected people, activists, and technical experts. Gujarat however refused to cooperate and boycotted the review and through legal action delayed the release of the report (McCully 1996). It was at this point that the NBA decided to approach the Supreme Court of India with the case. This option was not without apprehensions and limitations. NBA was

\textsuperscript{17} A hundred and eighty million dollars
aware that Indian courts were very traditional as far as developmental issues were concerned. There was no precedent of the court abandoning a dam or even accepting a petition challenging the public purpose of a large project (Sen 2000a). Petitioning the Supreme Court also meant that other options would have to be given up. The NBA had adopted a multi-pronged strategy through various actions, across different regions in order to keep the struggle constantly alive. The NBA would now have to refrain from major actions on the street, press campaigns, international campaigns and other such preferred methods of protest. Finally a full scale litigation in the highest court of the country meant mobilizing massive resources and marshalling mountains of information to match up to the government that was clearly better equipped than they were. The NBA could only depend on voluntary contributions from supporters within India. Despite these limitations, the NBA decided to go ahead. Under the circumstances they saw the Supreme Court to be the best available option (Patkar 1997).

Mr. Shanti Bhushan who was India’s former law minister and a senior advocate in the Supreme Court came forward to help the NBA and agreed to do the case without taking any money. A writ petition was filed in 1994 urging the court to stop construction on the dam and undertake a review of the project. They contended that the dam’s impact studies were incomplete and environmental and other conditions were unfulfilled; that the basic cost benefit analysis was flawed; that the dam would only benefit resource rich central Gujarat instead of drought afflicted areas of North Gujarat; that other available options for water resource development were not being considered. But most importantly, they argued that the project was violating the fundamental rights of the people that were being displaced, their right to protection of life and personal liberty and equality before
law. The numbers of all those displaced were not known. There was no common rehabilitation policy between the three states. Compensation was available only to those who were displaced by the reservoir, while those who were displaced on account of the canal, the colony, or the downstream region were not entitled to any compensation at all. Even rehabilitation as per the stipulations of the Tribunal Award was not being followed. Thousands of families were being displaced without just rehabilitation. There was also no certainty that the land necessary for rehabilitation would be available. The authorities had not taken the consent of the affected people or even informed them about the project or their choices for rehabilitation. They argued that the project was progressing in violation of the Tribunal Award and the fundamental Rights of the tribals (Cullet 2007).

The Supreme Court Judgment

The Supreme Court considered their writ petition and hearing went on for more than six years. Initially in 1994, the court ordered work on the project to stop and in depth study of the project to be undertaken. It also ordered the release of the government commissioned report. The report was once again critical of the project and governmental efforts. For four years construction on the dam was halted. State governments were asked to submit reports about the status of rehabilitation and how they proposed to provide for future evictees. Authorities were also asked to submit their plans for overcoming environmental impacts. Hearings continued till 1999 and in 2000 the Court gave its final decision to continue with the full construction of the dam in 5 meter increments conditional upon clearance by the environmental and rehabilitation sub groups of the Narmada Control Authority, the monitoring agency for the project (Hill 2008).

According to the judgment, two conditions had to be kept in mind: 1) The
completion of the project at the earliest and 2) Ensuring compliance with the conditions on which the project was given clearance, including the completion of R and R work and ameliorative and compensatory measures for environmental protection in compliance with the scheme framed by the government, thereby protecting rights under Article 21 of the constitution. The judgment emphasized that dams were in the interest of national economic development. That they had played a pivotal role in achieving food security, domestic and industrial water supply, power generation, and flood control. Not only that, dams had lead to an improvement in the living conditions of the oustees and was essential for the economic prosperity of the country (Kirpal 2000). However, it was important to ensure that R and R went according to plan. For the Supreme Court, large dams were not only permissible but also desirable as long as the administrative machinery for R and R is in its place (Visvanathan 2000). The judgment entrusted the Narmada Control Authority with its subgroups and the creation of the Grievance Redressal Committee for implementation and monitoring of rehabilitation. Overall, the judgment held that while protecting the rights of the people from being violated in any manner, the court took utmost care to not transgress its jurisdiction and not to interfere in matters of policy (Rajgopal 2000).

The Struggle Continues

The Court’s decision came as major blow and disappointment to the movement (Black 2000). They felt that the court dealt with R and R in a cosmetic way and overlooked the disastrous social, environmental and economic impacts of the project. They saw the verdict as being against the fundamental rights and interests of the people in the Narmada valley (Sen 2000b). Their struggle however, has evolved and goes on.
They see themselves as more than a group that has been challenging a singular dam. Medha Patkar, the founder of the group has joined other groups all over India that are against developmental projects which deny the poor their right to livelihood. The NBA, along with other activist groups have now formed the National Alliance of People’s Movement attempting to building a people’s force against forces of destruction and inequality. The groups share an ideological platform that unites them in their quest for equity and justice through non violent means.

The purpose of this chapter was firstly to introduce the institutional and policy framework that guides multipurpose projects in India and secondly to give a detailed account of the Sardar Sarovar project. Having introduced in detail the case study through which the Logic will be tested, the study now turns to undertaking a theoretical application of the Logic to the Narmada debate. In other words, the study turns to examining to how well the broad range of arguments in the debate are spread across the various levels of the Logic.
Chapter III: Narmada Debate and the First Order of the Logic of Policy Deliberation

Introduction

In this chapter an attempt is made to undertake a theoretical application of the Logic of Policy Deliberation. The framework is used to organize and analyze arguments about the Narmada conflict that are carried out in society at large, in newspapers, magazines, journals, brochures, etc. The effort is to examine how well the range of arguments in the Narmada debate are distributed across the four levels of the Logic. The focus in this chapter is on the First order of discourse. The chapter that follows next will deal with arguments related to the Second order of discourse. The chapter begins with a brief introduction about the multisided, contentious, multilayered nature of the Narmada debate where conflicted groups exchange complex arguments that seem disparate and disconnected. The Logic of Policy Deliberation is introduced in the next section as being able to offer a way of understanding and organizing the arguments in the case to show that what at first seems like arguments that are varied and disconnected, are ultimately only different components of a comprehensive evaluation. Beyond that the chapter outlines and discusses the arguments in the debate that correspond to the level of Technical Verification and Situational Validation. An analysis of the arguments in the Narmada debate show that extensive arguments are made that correspond to the level of technical verification. Dam promoters use benefit cost ratios to demonstrate the economic viability of the dam and point out that it has been examined by several independent and international agencies that come to the same conclusion: the economic benefits of the project far outweigh its costs. Dam critics on the other hand, question whether the benefit
cost ratio validly demonstrates the economic viability of the dam. Examining in detail the data and methodology that have been used to arrive at the stated benefits and costs, they conclude that benefits have been overstated and costs underplayed to meet the stipulated benefit cost ratio criteria for large projects. They show that when benefits are not exaggerated and omitted and underplayed costs are included, benefit cost ratios show the dam to be unviable. In the Narmada debate arguments that are made about whether or not the cultural, archeological, geological features of the Narmada valley are so unique as to require the valley not be submerged correspond to the level of Situational Validation. Those who oppose the dam argue that regardless of how economically beneficial the dam is shown to be, the Narmada valley is an area of immense archeological, historical, ecological, geological and cultural significance that should not be submerged. Dam supporters show that the valley is an area that does not have any unique characteristics or features that would merit preservation. Compensatory measures are elaborated upon to show that efforts have been made to mitigate or reverse any losses that might be incurred.

The Narmada Debate

India is one of the most active dam building countries in the world\textsuperscript{18} (Ward 2003). After independence India undertook dam building at a frenetic pace to be self sufficient in food grain production. India did become self reliant and dams became elevated from being objects of engineering which were built to supply water, to being objects of worship that none could question. Nehru who was the first prime minister of free India famously referred to dams as the “modern temples of India” (Visvanathan 1998). This conferred a legitimacy upon dams that went unchallenged for a long time to come. It was

\textsuperscript{18} India is the third largest dam builder in the world after China and the US. In the fifty years after independence, India has built 3,300 dams.
the Sardar Sarovar Project that forever changed the fascination and admiration the people of India had for large dams. The dam as mentioned before is being constructed in the Western state of Gujarat. It is a state that is at once blessed with the bountiful resource of the river Narmada on the one hand and cursed with a drought afflicted region\textsuperscript{19} on the other. It is this double vision of the urgent need for water in the drought prone areas and the large untapped waters flowing uselessly into the sea that provided the justification for the SSP. The idea of damming the river and diverting the waters to the parched areas of Gujarat was at the time a feasible, standard and, established approach to the problem. Since no significant opposition had been made towards large dams in India, little controversy was anticipated for this project. However contrary to expectations, while impounding and taming the largest westward flowing river in India, the dam unleashed one of the most volatile debates in Indian society.

The debate started out with promise since it was the first time that large dams were questioned or even discussed in India. There was communication between various stakeholder groups, the government had responded with positive policy changes regarding resettlement and compensation after receiving feedback from the non governmental community, and NGOs were working together, side by side securing the best deal for the displaced tribal groups. It seemed that an effective dialogue was underway amongst these different cast of characters. An interaction of this sort between the groups involved had never taken place in India before. It could have become a precedent and model for other infrastructural projects to come. But it was only a matter of time before the debate turned into an increasingly harsh and polarized one with pro and anti dam forces digging in their heels. The Government of Gujarat took an oath to finish

\textsuperscript{19} The regions of North Gujarat, Kutch and Saurasthra are considered to be drought prone (see figure 2).
the dam at all costs while the NBA opposed it at every step and turn. The issue acquired an intense emotional tone unlike any other and all confrontations began to be marked by high drama and even violence (Sangvai 2002). Somewhere down the line, the dam became a symbol of Gujarat’s *gaurav*\(^{20}\) and anyone who opposed it, a traitor. Things have come to such a pass that both the Government and the NBA have an irrational distrust of the other. In an interview with the author on July 11\(^{th}\), 2003, Sandhya Bodvekar, a freelance journalist noted, “the NBA accuses the Gujarat government of state sponsored and upper class terrorism and using all sorts of rhetoric, secrecy, defamation and repression against those who dare to question the dam. The government on the other hand, accuses those who are opposed to the dam as anti-national, anti-Gujarat, agents of Pakistan, and the CIA and as stooges of foreign power who have to be boycotted and banished”.

Although the debate is acrimonious, its significance lies in the fact that it showcases India’s fair political environment that is open to deliberations, negotiations, domestic and international pressures, opinions, and persuasions. It demonstrates that the public sphere is robust and has an ability to generate and sustain debate. Discussions about the SSP emerged at a time when there was a growing worldwide awareness for ecological standards and human rights concerns. Information regarding these issues was allowed to flow freely and alliances with international organizations over various issues could function rather effectively. In fact such associations with northern activist groups resulted in a more organized, concerted, and vigorous opposition to the dam (Fisher, 1997). Apart from drawing attention to the dam and its effects, the debate has created a heightened awareness in Indian society about sustainable development, so much so that in the future, no large dam project can hope to escape without detailed scrutiny.

\(^{20}\) Gaurav is the Hindi word for pride
A well disposed domestic environment and a propitious international consciousness regarding the social and environmental consequences of large dams impelled one of the most complicated and widespread debates in Indian society. Its complexity comes from its broad and inclusive orientation in terms of its participants, issues, and arguments. The conflict has an imposing group of participants which include state actors and agencies, political parties, think tanks, non governmental organizations, financial institutions, transnational alliances, academics, civil society, etc. These various players collaborate and compete across local, national, and international borders (Fisher 1997). Since the discussion takes place across these different arenas, certain issues get emphasized or de-emphasized depending on where it is being discussed. Environmental consequences of the project for instance, have more visibility in international forums, than the details of the resettlement policy which tend to be discussed at the local and national levels. Each domain has its own priorities and agenda which are pushed forward and this makes it difficult for the average citizen in India to discern the true magnitude and seriousness of the various problems that beset the project. As Dr.Bandukwala observes in an interview with the author on July 29th, “there are times when people think that the environmental problems caused by the dam have been overstated because of the involvement of international groups”.

Not only are the players in the case varied and far removed in space but they are also internally conflicted. As Fisher (1997) correctly points out, the groups are not homogenous or monolithic entities. It would be wrong for example, to think that tribal groups as a collective are opposed to resettlement on account of the dam. There are some tribal groups who have accepted resettlement while there are others who have vowed to
drown themselves in the rising waters of the reservoir rather than accept compensation. Similarly not all NGOs are pitted against the government in the conflict. Different groups both defend and oppose the dam. Some in fact have worked closely and effectively with the government. In the case of the World Bank, although it supported and funded the project as a group, there was internal dissonance regarding the project going ahead without environmental clearance from the Indian Ministry of Forest and Environment and with resettlement being done *parri passu*. This was evident in the Independent review which came out in 1992. Such simultaneous conflicts between and within groups further complicate the case. The arguments put forth by such fragmented groups and institutions are susceptible to attacks by opposing groups and are open to persuasion and influence (Fisher, 1997). Far from being a black and white debate with pro and anti dam sides, the debate is a multisided, conflicted and multilayered one where positions are hard to define and change is constant. The issues that are deliberated between these varied, removed, and conflicted groups include the tension between environment and development, competing models of development, conflicting knowledge systems, finding the right balance between provision of basic necessities and the interests of adversely affected groups, and so on. Needless to say, such deliberations engender a maze of complex arguments that seem disparate, competing, and conflicting.

The opposition to the dam started out with the issue of involuntary displacement. Since the dam would cause the displacement of a large number of tribal groups, different NGOs began to work collectively to secure a better deal for them. However, as soon as the Government of Gujarat announced its new and improved resettlement and rehabilitation package, the NGO groups diverged in their arguments and efforts. The
arguments in the debate moved from seeking compensation for the tribal groups to questioning the dam’s economic viability, the environmental risks to society on account of it, and the value of the prevailing developmental paradigm. Some NGOs made arguments within the mainstream developmental discourse, focusing on how to implement the project more effectively, how to mitigate its adverse social and environmental consequences and how to distribute the costs and benefits more equitably. ARCH for instance threw itself into work, ensuring that the improved compensation policy was fully implemented. Such critics shared a belief in the positive potential of development and so had a common ground with the government. Criticisms that stayed within the developmental framework were more acceptable to the government and other proponents of the dam. Parting ways with the rest of the NGOs, the Save Narmada Movement (NBA) went on to questioning the very rationale of the dam, the impact that dams had on India, and ultimately stepping outside the prevailing value system, they take issue with the dominant, centrally planned, modernist approach to development.

The cacophony of conflicting factual claims and competing value judgments makes it extremely difficult to unscramble the arguments and make an informed judgment about the Narmada case. How and why do such different views persist? Isn’t there enough evidence that would be conclusive one way or another? Is there a relationship between these disparate claims and arguments? Is there a way these conflicting assessments can be separated and resolved?

The Logic of Policy Deliberation

An apparently intractable public problem such as this does not lend itself to being resolved or even explained by conventional policy evaluation. To be sure, questions
about the dam’s performance and its economic efficiency can be examined by the methodologies at hand. But these issues are relatively uncontroversial and do not really convince stakeholders about the success or failure of the dam (depending on which side of the issue they are). When the debate is about the kind of development that India ought to be pursuing or the very way of life citizens ought to be living, or whether an entire political system ought to be changed, the judgments turn on a matter of principle. What needs to be explored in such situations are not facts and figures but competing ideologies and values. A methodology that is at once capable of evaluating the empirical aspects of a policy as well as the normative evaluation of its goals can prove to be particularly useful in roily political and social issues. The Logic of Policy Deliberation is a methodological framework that has been built upon the efforts of three different philosophers to extend the concept of rationality to include different modes of reasoning. Fischer has adapted the works of Habermas (comprehensive rationality), Toulmin (informal logic of practical argument), and Taylor (logic of evaluative discourse) to the field of policy analysis. Troubled by the treatment of values (or the lack of it) in contemporary positivist evaluation, Fischer moves beyond reviewing the failure of policy analysis to incorporate the neglected normative dimension and offers a concrete, multimethodological approach to policy analysis. It was one of the first efforts at crafting a systematic method that allows exploring the normative concerns along with empirical questions that arise in policy inquiry. It is considered to be a valuable contribution to the post positivist approach since it shows a way of going beyond the technical concerns that have dominated the social sciences to the realm of norms and values which is the stuff of social and political action.
Confronting the dominant perception that values are irrational, that they cannot be measured or evaluated and hence have no place on the policy analysis tabula, Fischer turns to practical reasoning which is the work of “ordinary language philosophers”. Inspired by how ordinary people argue about everyday issues, such philosophers point out that the empirical-analytical mode of reasoning is a partial or limited form of rationality that can be used for empirical assessments (Fischer 1998). The everyday world finds little use for scientific reasoning in analyzing or understanding complicated issues. That however does not mean that logic is absent from ordinary arguments. Such discussions are governed by an informal logic. Far from being irrational, as proclaimed by positivists, the logic is perhaps as exacting and rational as scientific logic because it is the way people actually or in fact make judgments (Fischer, 1995). It is thus rooted in empirical reality. And although such statements about values and goals cannot be empirically verified to see if they are valid, practical judgments can be supported by the giving of context dependent reasons and therefore one can judge such practical arguments to be weak or strong.

Recognizing the importance of informal logic for the evaluation of values, Fischer utilizes it as a basis for his model and offers a methodology for a comprehensive evaluation of policy issues. It illustrates the elements of a complete evaluation through four interrelated discourses. The first two discursive levels constitute the first order of evaluation with verification and validation of program objectives. At the level of verification the nature of discourse is technical-analytic and is the most familiar to policy analysis. The arguments at this stage center around whether or not the program in question can meet its stated objectives, targets or claims. The focus is on empirically
verifying the program outcomes, therefore all the methods of empirical analysis are brought to answer the question of whether the program works or not. The second level is Situational Validation where arguments are made about the context to which the objectives are applied. It is concerned with establishing the relevance of the objectives. Unlike the previous level where the main mode of reasoning is empirical, this level requires a normative process of reasoning. The problem situation to which the objectives are employed is evaluated to see if there is anything about the situation that might require an exception to be made to the objectives or if there are objectives that are in conflict with one another. At the second order of evaluation, there is a shift in gears to the larger societal system. At the level of Vindication, the instrumental impacts of the larger policy goals on the societal system as whole are examined while at the most abstract level of Social Choice attention is directed to the normative evaluation of the values that the societal order is based upon.

Applying the Logic of Policy Deliberation to the Narmada debate will make its normative underpinnings upon which the empirical and other aspects of the debate are based, explicit. It will enable in understanding what the connection or relation between the disparate and disjunct arguments in the debate is. What at first seem to be arguments that have little in common will be able to be organized systematically and shown to be different components of a comprehensive evaluation.

Technical-analytic discourse

The technical level of the logic of policy deliberation is addressed to the dominant empirical concerns that have characterized the field of policy analysis illustrating that empirical approaches to policy still have an important role to play in the reconstructed
methodology. It is concerned with measuring the efficiency with which programs accomplish predetermined objectives. The goal is to produce quantitative assessments of the degree to which a program fulfills its objectives and a determination of how efficiently the objective is fulfilled.

In the Narmada debate, arguments concerned with verifying the economic efficiency of the dam corresponds directly to technical verification in the Logic of Policy deliberation. Verification here, is concerned with the measurements and calculations of the benefits and costs of the dam. The benefit cost estimates are a moot point in the Narmada debate. At this level, both sides use a technical discourse rather than a political one, where benefits and costs are assessed not in rhetorical terms but in quantitative details. Considering economic benefits to be the most important criteria for judging the dam, government documents, brochures reports, web site, etc. focus on benefit cost analysis to demonstrate the dam’s economic viability. The NBA on the other question the calculations and data used to arrive at the benefit cost ratio and argues that benefits have been overstated and costs underestimated to justify the dam (Ramanathan 2002).

Benefit cost analysis as a criteria

In India the basic criterion for the approval of projects has been the BCR. Prior to independence (1947), project selection was based on IRR (Internal rate of return), the rate of financial return to the exchequer. Projects were sanctioned for the purpose of earning revenue. After independence instead of continuing with this dominant commercial approach, the IRR was discontinued and a more liberal benefit cost analysis became the criterion for investment. Economic cost benefits analysis attempts to evaluate all the costs and benefits of a project to determine whether or not its implementation will improve the
overall economic welfare or well being of society\textsuperscript{21}. With the advent of economic planning, it was felt that projects should be judged on the basis of benefits accruing to the economy and not just revenues accruing to the government. Irrigation projects were viewed to be instruments for fostering socio economic development, especially by augmenting income, employment, and food production. The Gadgil committee in 1964 recommended a BCR of 1:1.5 and that is the ratio that is considered desirable, but lower standards of 1:1 (or even less) are considered acceptable for projects in drought prone areas (Verma 1993).

This BCR however was simplistic- costs were considered to be direct costs incurred on the project while benefits were measured in terms of agricultural production expected as a result of irrigation (provided by the project) and the value of power that would be generated on account of it. It did not include a sophisticated socio economic cost benefit analysis. Discounted cash flow calculations were left out of the calculations as well. The criterion for approval of projects therefore was a rather simple BCR assessment that not only lacked sophistication but was amenable to distortion as well. It has been pointed out that costs were deliberately understated while benefits were overstated to meet the BCR criterion of 1:1.5 (Ramaswamy Iyer 2003). Dissatisfaction with the appraisal system led to the establishment of the Desai committee which submitted its report in 1983, and recommended an improved appraisal system including a socio economic cost benefit analysis, leading to the determination of an economic rate of return. The BCR has therefore been replaced by the IRR but it still excludes a socio economic component. The IRR for drought prone areas is 7% and for other areas it is 9%. Unfortunately the new IRR is not all that different from the old BCR. Although clear

\textsuperscript{21} Society is typically defined as the county or region in which the project is being implemented
policies for project selection do exist, opponents of infrastructural development projects point out that they are seldom applied strictly because of political or other socio economic reasons. As pointed out to the author by Kirit Bhatt an activist in an interview conducted on July 28th 2003, “such policies exist only so that projects can pay lip service to them”.

In the SSP case, the government points out that the economic performance of the dam has been examined very critically by various independent and international agencies over time who have confirmed that the scale of benefits is very large with multiplier effects compared to any other alternative (Raj 1990). The first economic appraisal was carried out by Tata Economic Consultancy Services, a private business group, in 1983, which indicated that the project would confer a BCR of 1.84:1 and an IRR of 18.3% at economic price, both much higher than the required ratio for approval. Apart from Tata’s, the World Bank estimated an IRR of 13% in 1985. In 1995, the World Bank undertook another appraisal with particular attention to environmental costs and benefits which were omitted or underestimated in the original analysis and they came up with an IRR of 12.2%. Apart from these agencies, several independent research institutes have conducted economic reviews and have come up with IRRs within the range of 16-20% (Patel 1991). Overall, the government undertakes a conventional assessment to verify the economic value of the dam. The basic measurement of the project’s economic performance is the BCR. It is used to demonstrate the economic profitability of the dam. The project is acceptable on economic grounds because it meets the stipulated BCR standards. Not only that, the cost benefit analysis has undergone a process of detailed examination by several private and international consulting firms who arrive at the same conclusion - that the
dam is economically viable. The economic analysis is therefore transparent and replicable. Utilizing benefit cost analysis as the main decision making framework, and showing that the project has passed repeated and detailed economic feasibility tests, the dam emerges as an economically rational choice and the most competitive option.

The NBA raises questions about whether the benefit cost analysis validly demonstrates the economic viability of the dam (Kalpavriksh 1988). In most of their brochures, newspaper articles, campaign newsletters, web site articles, etc. they raise the question of whether the benefits are exaggerated and costs underplayed to justify the dam. Undertaking a comprehensive and critical assessment of data, methods and calculations that have been used to arrive at benefit cost estimates, they systematically show how benefits have been exaggerated and costs underplayed, or even omitted to meet the stipulated benefit cost ratio criteria.

Water Availability in the Narmada

The first issue they bring up involves the estimation of water availability in the river. At the very outset, the NBA examines the claims made by the government that the Narmada has 27 MAF (million acre feet) of water at a 75% dependable yield\textsuperscript{22}. They point out that an imprecise and unscientific methodological procedure was used to calculate the amount of water in the river (Ram 1997). Project authorities used a process known as hind casting where rainfall data from 1891-1947 was used to estimate the flow in the river. They combined this with the actual river flow data from 1948 to 1992 and arrived at a 27 MAF. However, if the actual flow data of forty two years is used alone, it shows that there is only 22 MAF available in the river. The NBA argue that experts recommend using actual data instead of hind casting, but the government insists on hind

\textsuperscript{22} Availability for three out of every four years
casting because the higher yield of the river shown by this method allows the claims of the project to seem viable. A decreased yield of 22 MAF amounts to a decrease of 17% in the availability of water. Any decrease in the amount of water translates to lowered benefits (Ram 1997; Roy 1999; McCully 1994). Less water would result in less irrigation and less drinking water. A decreased water yield they argue casts doubts on the entire feasibility of the project and the scope of claimed benefits.

Irrigation

Examining irrigation benefit claims, the NBA and other opponents point out that the estimate of the SSP providing irrigation to two million hectares of land is made without regard to field conditions, existing data, observed estimates, and irrigability studies. To begin with, they cite that the command area of the SSP has been divided into thirteen agro climatic zones (ORG, 1982). On the basis of these irrigability classifications, 52% of the command area is considered to be unsuitable for irrigation due to water logging and salinization. Not only will this spell doom for SSP’s irrigation plans but will also be a costly affair. Large amounts of water will have to be pumped out from certain areas for which major surface drains will have to be created and more land will have to be acquired for drainage canals. Added to this is the cost factor for installing tube wells that will pump groundwater, the cost of energy for pumping out the water and the expenditure for drainage canals.

Apart from underestimating the problems of the command area, they show that planners have overestimated the water efficiency of the canal system. Water use efficiency is determined as the ratio of water reaching the target to that released at the
The SSP authorities have arbitrarily fixed the overall water use efficiency at 60%. Considering that in similar projects in India, the rate of usable water in such canals on an average is 25-30%, the water use efficiency in the case of the SSP is really high (Ram 1993). In arriving at the rate of 60% project planners have completely neglected evaporative losses in the canal system. This is an important consideration, given that large parts of the canal are to run through arid areas of Kutch, Saurashtra and North Gujarat where evaporation losses can be expected to be very high. Also, seepage rates, field application losses and operational losses are calculated at much lower rates without providing any concrete explanation. For the NBA this is “foolhardy at best and willful deception at worst” (Ram 1993). Using more realistic and observed estimates, the NBA calculates the irrigation efficiency at 46% which is identical to World Bank estimates (Krishnan 2006). Besides the canal system being fraught with problems, the NBA brings up the issue of conjunctive groundwater use. The SSP assigns the use of 2.7 MAF of groundwater along with canal water. However, the estimate of so much groundwater being available is based on data from the years 1970-79 according to the NBA. Planners have neglected to consider that over the years there has been a considerable use of this groundwater resource, which has also lead to salinization. Official documents contain no technical information on anti salinity measures either they point out.

Power generation

According to the NBA government claim that the SSP will generate 1450 MW of power is misleading. The SSP has a planned installed capacity of 1450 MW, of which 1200 MW will be generated by the riverbed power house (RBPH) and 250 MW from the

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23 If 400 ml of water reached the field for every liter released at the dam, the efficiency would be 40%. The rest is lost due to evaporation, seepage, etc.
canal head power house (CHPH). However, the NBA clarify that installed capacity is not equal to the power produced. It is the firm power, that is power generated on a reliable basis that should be considered as opposed to installed capacity. In the initial phase of the project, when water is not diverted for irrigation, the SSP will produce 415 MW of firm power at the riverbed power house and 24 MW at the canal head power house. This is because as the dam impounds water initially, the water can be sent to turbines in the riverbed to generate power. But as canals of the project are complete and water supply for irrigation increases, less water will be diverted to the river bed power house. Therefore in the final phase of the project, the firm power drops to 0 at the river bed and increases to 50MW at the canal head. The river bed power house then remains idle and functions only for peaking power and during periods of excess flow like in the monsoon season. Although proponents of the SSP say that it is the peaking power capacity that is the most appealing feature about the SSP, they ignore the fact that it is a very inefficient way to provide such power illustrate the NBA. Peaking power will be generated both by direct and pump back generation. During peak demand, water will be pumped back up from the Garudeshwar weir which is located downstream of the demand sent through the turbines to generate peak power. Pumping water up the dam this way consumes more water than the same amount flowing down from the dam. The result is that pump back generation ends up consuming more energy during non peak hours to provide energy during peak hours. Gradually, as more water is diverted towards irrigation, most of the peaking power will be produced by pump back generation rather than directly. Ultimately the peaking power generated by the SSP is no generation at all because there will be no addition to

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24 Power provided for a few hours every day to meet peak demand
overall power availability and more power will be consumed than generated (Dharmadhikary 1997).

Apart from showing that the SSP will not generate 1450MW of power, the NBA draws attention to the fact that the authorities have not taken into account the power that would be required for running the canal network, for lifting water from the canals for certain areas at the tail end like Kutch and Saurashtra, for operating tube wells that are in place to pump groundwater out so no water logging occurs, and for supply of drinking water. None of this has been estimated by the authorities. All this power consumed by the SSP has not been taken into account while stating the power capacity of the SSP. Taking the power consumed by the SSP into account, the NBA contends that the power generation claims do not stand up to scrutiny.

**Drinking water**

With regard to benefits of drinking water for over forty million people, the NBA argue their analyses show the claim to be unsubstantiated. No detailed available plan about the drinking water component of the SSP exists. The limited planning that is there is careless and full of inconsistencies (D’souza 2002). Different and constantly changing numbers are put out by authorities without any thought given to information, facts and studies (Patkar 2000; Tiss 2008;) Confusion abounds about the actual number of beneficiaries of drinking water from the SSP. At the time of the Narmada Water Dispute Tribunal when several issues were being deliberated upon, there was no mention of the number of people that would benefit from drinking water supplied by the SSP. Over the years, the number of beneficiaries has fluctuated from 28 million to 40 million (Ghosh 2000). While the number of beneficiaries keeps escalating, the amount of water allocated
for drinking remains unchanged (1.06 MAF). According to Bose (2004) for the NBA and others who are skeptical of the SSP, estimates of drinking water are based on rhetorical flourishes rather than actual plans or careful, realistic studies.

Project Costs

NBA and other critics of the project point out that analyses of the costs reveal that many costs have been underestimated or not included at all (Kalpavriksh 1988; Thakkar 2007a; Vincent and McCully 2000;) Among those are the costs of resettlement and rehabilitation, environmental mitigation measures, and even the cost of drinking water. No definite costs of supplying drinking water has been factored into the overall cost estimate of the SSP, even though drinking water is mentioned as one of the main benefits of the project in the cost benefit calculations. Apart from that, they show that many of the impacts themselves still need to be assessed fully- the submergence zone has increased and may increase further, the number of affected people may rise, the land for their rehabilitation will have to be identified and bought, etc. Since these impacts are not fully assessed, their costs still need to be estimated.

Apart from excluded or underplayed costs, dam critics raise concerns about project delays and the issue of cost overruns (Hardikar 2004; Alagh et.al 1995; NBA 1996) According to the construction advisory committee of the NCA (2004), the original cost of the SSP dam as per the economic appraisal report was Rs.42 billion in 1983. It shot up to Rs 64 billion in 1988 and stands at Rs. 400 billion today. In an interview with the author on August 12th, 2003, activist Rohit Prajapati, expressed concern that “the government had given no thought to where and how it is going to get the money to meet these escalating costs”. Foreign aid from the World Bank and Japan have been withdrawn
so state governments have resorted to raising money through reckless market borrowings (Upadhyaya 2003b). According to the latest figures, the government of Gujarat had spent 22% of the total expenditure of the dam towards interest payment and servicing debt liabilities alone. These interest payments have become the largest portion of the state government’s revenue expenditure, surpassing all other social sector expenditure like education, arts, culture, etc. (Narmada Samachar 2003). Opponents lament that not only has this shrunk social sector expenditure but that it has also crowded out other developmental projects that might be more efficient. They warn that instead of being the lifeline of Gujarat, SSP will turn out to be a sinking ship since there are no systematic plans for redemption of debts while borrowing continues indiscriminately.

In addition, they specify that benefits have been calculated on gross values as opposed to net profits. The costs of operation and maintenance, interest and depreciation has not been deducted from the benefits to obtain net profit (Ram 1997). If these mentioned costs are added without being underestimated, and the benefits are calculated on the basis of net profit, not gross values, the BCR reduces tremendously, making it below the accepted value. Based on their examination of stated benefits and costs, dam critics point out that there is a mass of evidence that shows benefits have been systematically overstated and costs omitted or underplayed so as to meet the stipulated benefit cost ratio criteria; that such technical analyses undertaken at the institutional level, was predestined to arrive at the desired conclusion that the project was economically worthwhile, and reflects entrenched political and economic interests (Kalpavriksh 1988). Citing the economic appraisals that have been undertaken by different agencies that include the omitted costs and consider more realistic benefits, they
demonstrate that the SSP’s benefit cost ratio is far below the stipulated 1.5:1 (Upadhyaya, 2003a).

At this level in the Narmada debate, arguments are concerned with determining how validly the benefit cost ratio demonstrates the economic viability of the project. Project authorities emphasize that the benefit cost ratio is far above the stipulated criteria and has passed and continues to pass thorough economic evaluations conducted by private and international agencies. The NBA, limiting its arguments to empirical concerns, assesses the methodologies, procedures, calculations, and data that have been used to arrive at the stated costs and benefits, to determine whether or not it is economically worthwhile. Their arguments at this level stay within the mainstream discourse of prescribed standards and criteria. At this level, they do not question the criteria (yet) but raise arguments about whether the methodology in fact demonstrates the economic value of the project. Differences on the cost benefit calculations however are a precursor of more fundamental disagreements to come, which the other discourses in the Logic of Policy Deliberation will help unravel.

Situational Validation

At the technical level there is no normative discussion of the criteria against which the policy is judged and no assessment of the situation to which it is applied. It is evident that norms and standards against which the policy is judged come into play in most policy conflicts (Fischer 1995). Positivist policy evaluation however falls silent when it comes to understanding and dealing with such issues. The level of situational validation allows one to transcend the technocratic and empirical concerns of the technical level to investigate the situational context of the program. Whereas verification
attempts to show how efficiently a program fulfills or fails to fulfill its objectives, validation asks whether the objectives are appropriate to the problem situation under investigation. In other words, the empirical proof of a program’s efficiency is judged against the particular circumstances of the situation to which it is applied. The focus of evaluation at this level is on the empirical description of the situation and on examining the conceptualizations and assumptions underlying the problem situation which the program is designed to influence. In the Narmada debate, at the level of technical verification, the focus was only on examining whether the dam was technically sound and economically efficient; the issue was whether or not the benefit cost ratio had in fact demonstrated the economic viability of the dam; there was no discussion of the context or circumstances of the Narmada valley. At the situational level in the Narmada debate, evaluation moves from an empirical assessment to undertaking an assessment of the social and environmental circumstances in Narmada valley. The issue turns on whether the social, environmental, religious, cultural, historical, archeological, and geological characteristics of the valley are so unique and significant that regardless of how economically viable the dam is, it should not be built.

Various activists, environmentalists, researchers, anthropologists and historians call attention to the valley being home to tribal groups, rich forests, endangered species, and ancient monuments. For them, regardless of how economically beneficial the dam is shown to be, the Narmada valley is an area of historical and cultural heritage and significant biodiversity and should not be submerged. Policy makers, government officials and independent researchers who support the dam admit that there will be social and environmental loss in the Narmada valley but insist that the economic benefits of the
dam will far outweigh any losses incurred. In addition, they argue that extent of submergence will not be as vast and will not cause as great a harm as dam critics make it out to be; whatever losses do occur will be more than compensated, mitigated or reversed through excellent policy measures (Sen 1995). Groups like the ARCH contend that even though it might be shown that the dam will generate economic benefits, it should only be built if it also results in better opportunities for the tribal. Towards that, they focused their efforts on seeking and later securing improvements to the resettlement and rehabilitation policy and towards its implementation (ARCH 1993).

Overview of the project area

The literature of the NBA, environmental activists, writers, and independent researchers is replete with descriptions about the overwhelming archeological, religious, and mythological significance of the Narmada valley, the richness and uniqueness of the tribal way of life, and the area’s high level of biodiversity (Roy 1999; Baviskar 1995; Kothari 1997). They argue that regardless of the economic benefits of the dam, the ssp should not be built since there is danger of rich, sacred, historical legacy being lost, threat to the tribal way of life, risks of a major earthquake and endangerment to biodiversity and wildlife.

Loss of Tribal way of life

The Narmada Valley is home to non tribal and tribal groups. The non tribal communities live mainly in the fertile plains of the Nimad area. They have developed agriculture for centuries and are prosperous communities. The tribals on the other hand have remained autonomous from the outside world. They live in the mountainous Satpuda and Vindhyachal ranges. They have been coexisting with the forests in the
valley, fulfilling all their needs through common natural resources for centuries. The forests and river therefore play a central role in their cultural and economic life (Sangvai 2000). They have their own languages, rituals, and social, cultural and political norms. Tribals have spiritual ties to their land, legal ownership therefore has very little significance. Much of the forest is harvested and grazed on a communal basis. In the valley, the distinction between landed and landless is artificial. Those who do not hold revenue land, cultivate encroached plots and make same use of the land and other resources as those on revenue land (Dhagamwar, Ganguly, Thukral 1997).

Dam critics like the NBA, anthropologists like Baviskar (1995), and writers like Roy (1999), researchers like Dhagamwar (1997) worry that displacement caused by the dam will lead to the separation of these people from their natural surroundings. The forests and rivers that they so depend on will be lost forever. The NBA lament that “displacement will affect the tribals’ very culture and basis of livelihood – their beliefs, myths, rituals, festivals, songs, all closely associated with the hills and woods. As these disintegrate, so too will the joy of their existence” (Alvares 1988). Their culture and way of life will be lost forever (Oliver-Smith 2000).

Loss of Biodiversity and Wildlife

Environmental groups and activists like Kothari (1994) Ram (1997) Alvares and Billorey (1988), Baba Amte etc. submit that the Narmada valley includes thousand of acres of rich, thick forests and fertile agricultural land. These forests provide habitat to a number of rare species of plants and wildlife. Not only are the forests home to tigers, panthers, black buck and the unique chinkara\(^{25}\), they also include rare and threatened wildlife that are included in Schedules I and II of the Wildlife protection act of 1972.

\(^{25}\) Indian gazelle
Submergence will be a devastating blow to biodiversity and will result in the loss of rare wildlife. They also point out that the dam will lead to the extinction of the Hilsa which is one of India’s favourite fish and has a large potential for export (Sangvai 2002). Narmada estuary is one of the last known breeding places of the Hilsa fish. According to Roy (2000), the Narmada produces over thirteen thousand tonnes of Hisla fish and over ten thousand families depend on it for a living. Going beyond the Narmada valley, opponents bring up the Rann of Kutch which is an area that will be affected by the canal network. They point out that dam will impact adversely the Rann of Kutch which is a unique salt desert and a wetland ecosystem not found anywhere else in the world (Kothari 1995). Also, the Rann of Kutch is the only home to the Wild Ass (Equus heminuous khur) which is one of the world’s most endangered mammals and is classified as such by the World Conservation Union (Kothari 1995).

**Submerging history and culture**

Archeologists like Sankaliya, Dhavalikar, etc and cultural activists interested in preserving culture, heritage and ancient monuments note that the Narmada valley is an archeological treasure trove. It is the only valley where an uninterrupted chain of archeological evidence from Indian prehistory to historical times can be found. The valley contains signs of the Ice Age, the early Stone Age, Neolithic Age, the Chalcolithic, Copper and Iron ages (Sangvai, 2002). There is concern about the many archeological mounds that still need to be excavated and studied in the interest of history and prehistory; submerging this would mean that it would remain largely unexamined. They also question the propriety of destroying a river that is sacred and holy. It is considered to
be one of the five most sacred rivers in India\textsuperscript{26}. It is associated with Lord Shiva\textsuperscript{27} and it is said that the mere sight of the river cleanses one of all sins. It is therefore an important pilgrimage site. The banks of the river are dotted with thousands of ancient and medieval temples and pilgrim places (Veeraragavan 2002). It also happens to be the only river where the centuries old tradition of parikrama\textsuperscript{28} can be observed. According to Sangvai (2002), “losing such a heritage would be akin to losing the soul of the valley and Gujarat”.

\textbf{Siesmic Zone}

Geologists, seismologists and environmental activists point out that one of the most serious concerns with the valley is that it lies in a seismically active zone. The Narmada flows on the Narmada-sone lineament which is a rift and fault zone (Patkar 2001). Several faults traverse the reservoir basin and the dam alignment. The Narmada Basin is classified as a zone of moderate seismicity. This fact is borne out by several tremors and landslides that the area experiences time and again. In January 2001, one of the most devastating earthquakes shook Gujarat. It destroyed more than a hundred thousand homes and killed over 20,000 people. The earthquakes along with previous ones are a warning against the SSP. In such a situation reservoir induced seismicity (RIS) becomes a real concern. Since the Narmada basin is disturbed, faulted and fractured, it is in general porous and susceptible to the development of pore-pressure at depths, particularly following the impoundment of reservoirs. According to various studies conducted the geographical distribution of the reported RIS cases show that reservoirs exhibiting intense seismicity are generally situated in moderately seismic regions.

\textsuperscript{26} The other sacred rivers being Ganga, Yamuna, Kaveri and Godavari
\textsuperscript{27} Lord Shiva is a major Hindu God and represents the aspect of the Supreme Being
\textsuperscript{28} Circular pilgrimage of the entire route of a river
Alternatives to the Sardar Sarovar Project

Given the loss of legacy, heritage, tribal culture, biodiversity, activists, environmentalists, and researchers argue that the situation is not sufficiently unambiguous for reasoning from the point of economic benefits to be conclusive. They urge for the consideration of alternatives that will minimize submergence, displacement and environmental loss. A few like Paranjpye and Joy (1990), Reddy, Raina, etc. have suggested the structural solution of lowering the height of the dam from 455 feet to 310 feet or less. This will minimize submergence while still retaining most of the benefits of the dam. However activist groups like the NBA, while not completely against such a solution contend that it cannot by itself be a holistic solution as other relevant issues also have to be addressed (Bakshi 2000a). The NBA has convened discussions, workshops, and seminars involving experts and bureaucrats in and outside the Narmada valley to explore an alternative policy for land and water management that will be equitable and sustainable. For them a more viable and permanent solution lies in a combination of decentralized, ecologically sound watershed development, rain water harvesting, restrained use of water, well recharging, and rejuvenating thousands of small check dams, ponds and other non structural solutions. They point out that these are all viable options and cite that many non governmental organizations and people in various towns and villages of Gujarat and Rajasthan are already relying on these methods (Bavadam 2003a).

While dam supporters like officials, politicians, non governmental organizations like Narmada Abhiyan, Narmada foundation, independent researchers like Omvedt,
Verghese etc. acknowledge that submergence will lead to loss in the valley, they argue that given the water situation in Gujarat there is no other alternative but to build the dam. In the absence of perennial rivers and fresh water sources in the areas of Kutch, Saurashtra and North Gujarat, no amount of non structural options like rainwater harvesting will help. Such options are important they agree but insist that they cannot be a substitute to the SSP (Vyas 2006). A reduction in the height of the dam as suggested by some dam critics is also not an acceptable solution for them. Any reduction in the height of the dam, they warn will result in a consequent reduction of benefits. They maintain that it is only at its maximum height of 455 feet that the SSP will be able to deliver the benefits of drinking water and hydropower (Patel 1991). In addition, they remind that Gujarat has already accepted a reduction in the height of the dam since they had initially pleaded for a height of 530 feet. However the NWDT (1979) giving special emphasis on reducing submergence had arrived at the height of 455 feet which Gujarat has accepted since and not asked for a reconsideration of the decision. It should be mentioned, that the state of Madhya Pradesh however has been calling for the height of the dam to be lowered even though it will result in a reduction of benefits for them since it will make a significant difference in terms of inundation and displacement (Dharmadhikary 1996). However, the government of Gujarat clarifies that it is only because most of the displaced are from Madhya Pradesh that the government of Madhya Pradesh wants the height of the dam to be lowered. This should not be an issue argue Gujarat’s dam promoters since in accordance with Supreme Court orders (2000), the dam’s height will be increased in five meter installments only after all the requisite R and R conditions and environmental measures have been undertaken. The government of Madhya Pradesh however, argues
that Gujarat has failed to keep up its end of the deal (Badiwala 1998). Activists groups like NBA and Association for India’s Development (AID) point out that there is a political nexus between the governments of Gujarat and Madhya Pradesh and it is ultimately politics that determines how and when the construction of the dam progresses (AID 2006).

Unfortunate Water Situation in Gujarat

Project supporters underscore the unfortunate water situation in Gujarat and the resultant adverse impact on human, ecological and economic development impact to justify their support for the dam. Rainfall in the state of Gujarat, they point out is very scanty and erratic; it ranges from 2500mm in the southern and central parts of the state to 400mm or less in the North and arid areas of Kutch and Saurashtra. Apart from the spatial distribution of rainfall, the surface water availability within the different regions of the state-mainland Gujarat, Kutch and Saurashtra (see Figure 2.), is skewed from water abundance to water scarcity (Sharma 2000). Out of the total of 185 rivers that flow through the state, only eight are perennial and all of these eight rivers are located in the southern parts of the state; the others are ephemeral and run through the areas of the North, Saurashtra and Kutch. It is this unfortunate distribution of water resources dam advocates maintain that has lead to severe water problems for the state. Rivers remain dry and ground water resources are limited, and arid conditions are seen in most parts of the state. Groundwater levels have fallen drastically sometimes going beyond 1000 ft. Salinity ingress through the long coastline of Gujarat has contaminated the groundwater in many districts, making it unfit for use (see Figure 5). Advancing desertification from the North has affected several districts of Gujarat like Mehsana, Banaskantha,
Surendranagar, etc. Many of these districts are slowly getting converted to desert lands. The most serious problem that dam backers cite is the recurring droughts that Gujarat faces\(^{29}\) that has resulted in negative consequences for the state and its people. While the brochures and booklets of non governmental organizations who oppose the dam is filled with pictures and descriptions of the tragedy of displacement, those of the state governments of Gujarat and Madhya Pradesh and the various institutions that address issues related to the project like the SSNNL, the NVDA etc., is replete with the depictions of the sufferings that recurring droughts have inflicted on the lives of people.

They emphasize that hundreds of towns and villages in dry and arid areas have to struggle for every drop of water. With no luxury of having running water in their taps, people have to queue up for water once a week which is transported to them in “water special” trains and tankers. Frequent, intense and at times violent water riots take place between farmers and urban dwellers, industry and agriculture and towns and villages (Sethi 2000). Water scarcity has affected women the most since it is their traditional responsibility to fetch water for their homes. Rural women in water starved areas undergo the drudgery of fetching water from distant places and travel several miles with pots of water on their head just to meet the minimal water requirement of the family. This not only deprives her of a human right but impairs her health, and deprives her of having sufficient time for her children, and other social and productive activities. Rural farmers are another group that are adversely affected. Every year more than 50% villages of the state face crop failure (Vyas, 2003). Successive droughts have resulted in burgeoning debts for peasants in Gujarat (Bunsha 2002). In Kutch and Saurashtra, the continuous exploitation of groundwater without adequate recharge has resulted in contamination with

\(^{29}\) Once every three years
fluoride or nitrate contents (see Figure 4). People face untold miseries of skeletal and dental fluorosis (Pathak 1991). Many have resorted to migration as a strategy for survival. Mass migration has occurred from the drought prone regions of Kutch and Saurashtra to the Central and Southern regions of the state that command 70% of the state’s water resources. Intra state regional imbalance of water resources has resulted in the level of economic development being lower in water deficit states compared to water surplus areas. Literacy rates are also lower than the state average in arid districts. Economically, government officials point out that every year a large part of the state development fund is required to be spent on short term measures to mitigate water scarcity. In an interview conducted with the author on July 26th, 2003, Joshipura, a senior government official recalled that “during the scarcity situation of the last two years the government spent about hundred million dollars on providing fodder and transporting water”. These funds have deprived the development of social and other infrastructural facilities that might be needed. Overall, officials argue that the intra state imbalance of water has created an unfortunate water shortage situation which has resulted in several negative consequences that have led to constrained socio-economic and industrial development, and environmental and ecosystem degradation.

Situational Relevance of the SSP

Given the harsh conditions in the state, dam promoters like the World Bank (1990) and state governments forewarn that if the Narmada waters are allowed to flow unused, human deprivation would only escalate. If harnessed, they proclaim, the SSP would be nothing less than the “lifeline” of Gujarat (Buch 2000). A dependable supply of potable water will finally quench the thirst of water starved areas of Kutch Saurashtra and
North Gujarat and be a boon to rural and urban communities who live in these areas. No longer will they be forced to drink water with high fluoride or nitrate contents, or saline water; forced migration will be prevented; women will be emancipated from the burden of collecting water and will be enabled to pursue income earning activities which will improve their health and socio-economic status. Most importantly, government will be relieved from exorbitant expenditures on crop insurance and supplying drinking water. Water supply will also meet industrial demands which will give an all-round boost to production (SSNNL 1988).

Apart from meeting urgent drinking and industrial water needs, officials promise that it will banish droughts from the regions of Kutch, Saurashtra and North Gujarat. Majority of the farmers who will get irrigation benefits they point out are small and marginal farmers and a sizeable number are from the schedule caste and scheduled tribe. SSP will also enable Gujarat to develop its full irrigation potential. The total geographic area of Gujarat is 19.6 million hectares out of which cultivable land is 12.4 million hectares. Only 23% of this cultivable land gets irrigation from surface and groundwater schemes. The remaining 77% of cultivable land does not get any irrigation at all. As a result, irrigation potential that has been developed till 1996 is only 3.5 million hectares against the ultimate potential of 6.5 million. In view of increasing needs, it is imperative to provide irrigation to this land (Narmada Planning group 1981).

The SSP will also generate renewable and environmental friendly hydropower in an area where power generation is predominantly thermal based and where there is an urgent need to meet peak load requirements. Project promoters remind that Gujarat has to transport coal from long distances (eastern states) which makes Gujarat’s thermal plants
not only polluting but also relatively expensive to maintain. Thermal plants are also prone to frequent tripping and they are much less suited to handling fluctuating demands. Hydroplants on the other hand are one of the most economical ways to provide peaking power. State officials express concern that the lack of power, has hampered not only industrial but also agricultural development in the state. Most rural farmers get only a few hours of power supply a day to run their pump sets for irrigation. Industrial growth in Gujarat has also fallen since 1990. The SSP will provide 1450 MW of power which is very essential for overall industrial and agricultural development (NCA 1990).

To be sure bureaucrats, political appointees and policy makers and dam funders recognize that the project will have negative consequences in the Narmada valley, however they advance that dam critics have propounded “myths” about the characteristics of the Narmada valley that just are not true (SSNNL 1990). They assure that they have conducted detailed surveys of the Narmada valley and found that the area does not contain any special or unique characteristics that will be significantly impacted by the project. They avouch that whatever little losses do occur, will be mitigated or reversed through compensatory measures.

Myths about the Narmada Valley

Contrary to what dam opposers portray argue government officials, no dense forests will be submerged by the dam. Much of the forest land they point out is severely degraded or denuded. Forests are being damaged or cleared, mainly illegally, for a variety of reasons such as fuel wood, fodder for cattle, as well as industrial needs. There are also no endangered species of plants and animals in the area and therefore there will be no loss of any gene pool (Jhala 1988). Environmental concerns have been part of the
project from the very beginning aver officials. The project had been appraised by the ministry of environment and forest and was given clearance in 1987 itself. It was determined that no environmental concern was serious enough to threaten the viability of the project if proper safeguards were adopted. The ministry had therefore granted clearance subject to detailed surveys being carried out, and safeguard measures being implemented parri passu under the Narmada Control Authority. Bureaucrats and politicians say the government has since embarked on a massive compensatory program of afforestation and reforestation and in lieu of 13,386 hectares of forest submerged, has brought 42,000 hectares under plantation. They point out that there is substantial progress on all suggested parameters and mitigation work is being monitored by experts.

With regard to the historical and archeological significance of the Narmada valley, officials cite that complete surveys have been undertaken of all cultural and religious sites in the submergence zone. Findings show that no centrally or state protected cultural sites are located in the submergence area of the SSP. However there are temples like the Shoolpaneshwar and Hanfeshwar that are of importance and these will be shifted to suitable locations. No state protected archeological sites have been found either but thirty eight archeological mounds of interest that have been identified, will be relocated or excavated.

Concerns about the threat of earthquakes are allayed by stating that thorough investigations have been carried out and national and international standards have been followed. Even though the Narmada is located in a seismically active zone, it is an area of low seismic activity where in the past, only low medium earthquakes have taken place. Nevertheless, seismic designs have been implemented and all safety requirements have
been met. Nine seismological monitoring stations have been established around the periphery of the reservoir for monitoring reservoir induced seismicity and are mentioned in various government brochures and leaflets.

According to government officials, the most serious myth that has been circulated by the anti dam lobby has been about the life of the tribal in the Narmada valley. Using field observations and satellite imagery they dispel notions about tribals living in pristine forests, in a traditional manner, as hunter gatherers in harmony with nature (Buch 1990). Images show that tribals live in mostly stony, barren, steep and degraded hillsides with only a small part of their income derived from forest land. Many of them are shown to welcome the opportunity to improve their life in the more fertile and prosperous common area. It is believed that they are influenced by the culture of mainstream India and see little future for themselves in the degraded submergence area. The R and R policy that has been evolved is considered by officials to be the means by which they can leave their life of deprivation and join the mainstream and share in the fruits of development (Indiresan 2000). Project affected families (PAFs) that have already been resettled are used as examples to show that a better, more prosperous awaits them. Oustees are displayed as land owners who are covered under comprehensive health care, family welfare programs and training and employment programs; who are able to enjoy civic and other amenities like primary school, children’s park, village tank, electricity, etc. Life in their original villages is portrayed as being devoid of bare minimum services and necessities. While in the submergence zone, tribals were treated with traditional medicines and had to walk long distances if they wanted to reach a health center, in the R and R sites, best possible health and medical services are provided to them through
dispensaries and mobile medical units; while in their homes on the hills, children who were keen to study had to walk for miles to reach the nearest primary school, in the new sites they had easy access to education as most sites had schools running in the village itself. According to government officials, this has resulted in improvement in the rate of school going children and also in literacy rates post relocation (Jasol 1992). Reports also show a considerable improvement in their economic situation post relocation. There has been a trend towards crop diversification, leading to a shift from subsistence farming towards high crop production for markets (Center for Social Studies Report 1997). Several studies that have been conducted by various academic institutions, research groups, non governmental organizations, and independent agencies, show PAFs to have adapted to their new environment and to have taken advantage of new economic opportunities and to have even contested in gram panchayat elections.

It is acknowledged that a sizeable number of people still remain to be settled from the states of Maharashtra and Madhya Pradesh, however it is contended that successful implementation of the resettlement policy is possible. As evidence, the elaborate network of authorities and assistance from non governmental organizations is pointed to that will make sure that relief and rehabilitation measures are properly implemented and grievances redressed (Ahmed, Chand, Gupta 2004). Overall, dam promoters like officials, politicians bureaucrats, etc using various studies and reports show that no unique historical, archeological, cultural, ecological, or geological features of exceptional value or significance occur in the Narmada valley. Compensatory measures are seen to not only be able to mitigate losses but to bring an all around improvement to the life of the displaced and the environment.
Unsatisfactory protective measures

Dam opponents like the NBA, independent researchers, etc. consider that the life of the tribal is so enriched that it can never be compensated by the kind of measures that the government has on offer. According to Sangvai (2001), “the tribals are a people who have all the resources they need – freedom, pure air and water, social systems to fall back on, and a better quality of life than people who live in urban ghettos”. The NBA regards compensatory measures as being insensitive to the resources and way of life of the tribal people. They emphasize that their relationship to their land is not a material one and therefore exchanging one piece for another is not just complicated but undesirable. As Raina (1994) puts it, “how can one identify and compensate such people whose full relationship to the land is not well understood by those who determine compensation”? There is a profound disparity as Fisher (1997) notes between the way government administers and registers land and the way tribal groups conceive of and use land. The way tribal groups use land does not lend itself to the kind of land records that states use to calculate compensation. Apart from land, they urge attention to the more intangible assets like community resources, social networks, their places of worship, etc that dominate their belief system can never be compensated for (Baviskar 1995). Not only are government plans rebuked for their lack of understanding and sensitivity towards the life of the tribal, dam opponents also point out that they are beset with problems. The government lacks the resources—land, money and political will to resettle such a large number of people. To substantiate that they show that despite the Supreme Court order of 2000, that stated the dam should increase in five meter increments only after clearance has been given by NCA and the NWDT award that stipulated resettlement must precede
submergence by six months respectively, the NCA has been issuing approval for raising the height of the dam without the oustees being resettled. They also point out that till date there is no rehabilitation master plan with land records, list of project affected families, details of agricultural land to be given to them, etc. There has been no identification of cultivable land for thousands of people who are entitled to rehabilitation with land. Officials are making no efforts towards creating rehabilitation villages as envisioned in the NWDT award (Indian People’s Tribunal on Environment and Human Rights report, 2004). State authorities have been callous and coercive and have failed to adhere to the commitments of law, rehabilitation policies and universally accepted norms of justice. For the NBA, it is not just rehabilitation that has failed but also protective measures, the government, and democratic processes. As Sanjay Sangvai (2001) of the NBA puts it, “the protectors have turned connivers”.

Overall at the level of Situational Validation, in the Narmada debate, an analysis in undertaken of the area of submergence- the Narmada valley to determine whether or not there is anything about the factual circumstances themselves that would require the dam not be built. Dam opposers portray the life of the tribal to be unique and rich, the valley to be an archeological and historical treasure trove, and the geology of the area to be unfit for a dam. Considering the social and environmental destruction that the dam can cause, they call for alternatives that will avoid submergence altogether. Dam proponents argue that there is no alternative but to build the dam given the water situation in Gujarat. The dam is offered as a lifeline that will confront all the major problems Gujarat faces and will have minimal negative consequences. Extensive surveys have been conducted and it has been found that the valley has no unique or significant species or monuments.
The life of the tribal is described as being harsh and one that should not be museumised but integrated with mainstream Indian society. Compensatory measures are shown to be in place with mechanisms to ensure that whatever little losses do occur will be mitigated or even reversed.

To conclude, in this chapter a theoretical application of the Logic of Policy Deliberation was undertaken to examine how well the range of arguments in the Narmada debate could be distributed across the first two levels of the Logic—Technical Verification and Situational Validation. The chapter shows that extensive and detailed arguments are made in the Narmada debate that clearly correspond to the First Order of the Logic. Arguments are made about whether or not the benefit cost ratios really demonstrate the economic viability and these relate to the level of Technical Verification. Beyond an empirical assessment of the project’s viability, arguments are raised about whether or not there is anything unique about the Narmada valley or its inhabitants that would require that no matter how beneficial the dam is shown to be, it should not be built. Such arguments comport with the level of Situational Validation. The remaining test of the theoretical application of the Logic is to see how well the range of arguments in the debate could be distributed across the Second Order of the Logic of Policy Deliberation—Societal Vindication and Ideological Social Choice. This is what the next chapter of the study turns to.
Chapter IV: Narmada Debate and the Second Order of the Logic of Policy Deliberation

Introduction

In the previous chapter a theoretical application of the Logic of Policy Deliberation was undertaken to examine how well the range of arguments in the Narmada debate could be distributed across the First Order of discourse, that is the levels of Technical Verification and Situational Validation. This chapter seeks to undertake a theoretical application of the Logic to examine how well the range of arguments are distributed across the Second Order of Discourse which comprises the levels of Societal Vindication and Ideological Social Choice. While the focus at the First Order of Discourse is on the specific action setting of a policy initiative, and involves evaluating both the specific program outcomes and the situational context in which they occur, at the Second Order of Discourse, evaluation shifts to the larger social system of which the action context is a part (Fischer 1995). At the level of Societal Vindication, the emphasis is on examining the instrumental impact of the larger policy goals on the social system as a whole; at the level of Ideological Social Choice, the focus is on evaluating the normative principles and values that underlie this social order.

In the Narmada debate, this shift from the concrete situational context to the social system as a whole is evident when arguments logically move from the economics of the dam and the particularities of the Narmada valley and its inhabitants, to the evaluation of the contribution that large dams and its benefits make to India. Dam proponents urge that a wider perspective has to be brought to bear on the Narmada project; the dam cannot be subject to a purely local perspective disregarding the value that dams have for India’s modernization and development. Described as the modern
temples of India government officials and other dam supporters remind that they have made India self reliant and enhanced its water and energy security. Drawing attention to India’s exploding population and fast growing economy, they posit that the only way India can sustain its self sufficiency, keep hunger and poverty at bay and provide electricity to homes and industries is by building more large dams. Dam opponents, on the other hand emphasize that there has been no post facto analyses of large dams in India and therefore suspect the extent to which dams have contributed to India’s food, water and energy security. More significantly, they raise the issues of the huge social, environmental and financial costs at which these benefits have been derived and the gross inequity in the distribution of these benefits. They urge that decision making processes, planning, and implementation of India’s dam building enterprise should be improved. Towards this they turn to the criteria and guidelines for dam building that have been suggested by the WCD. While it is acknowledged that there are social and environmental costs that come with dams and that these need to be addressed, government officials and other dam supporters argue that India’s developmental imperatives have to be given priority; human and ecological sacrifices must be made for the common good. Criteria and guidelines for dam building that are suggested by the WCD are therefore typically seen as being insensitive to India’s dire developmental needs.

While suggesting criteria and guidelines for improving the way India builds dams, opponents of the dam like the NBA, Lokayan, etc. point out that they are limited in that they do not challenge the modern industrial mode of development that gives rise to the problems that dams create in the first place. Normative arguments in the Narmada debate about India’s modern industrial way of life correspond to the level of Ideological Social
Choice. The NBA point out that ultimately it is important to address modern development of which dams are but an instance. They take a sharp view of modern industrial development in all of its aspects and call for a fundamental restructuring of society. In place of it they offer their vision of a non modern alternative based on Gandhian values.

Adherents to the techno industrial way of life point out the unviability and impracticality of such an alternative deriding it as being archaic and pre-industrial. In addition they underscore the fact that modern industrial progress has brought improvements to every aspect of Indian life. Admitting that there are still social and environmental problems that need to be resolved they call for more vigorous economic growth and technological progress.

The chapter begins with a description of the postcolonial state in India which supplies the norms that have shaped India’s dam building policy. It then turns to a discussion of the need for dams in India and the contribution they make to Indian society. Next, in the context of those who do not question the extent of developmental benefits that dams provide but are concerned about the social and environmental costs at which the benefits of dams are achieved, the WCD criteria and guidelines for dam building are examined and the impact of their adoption to India is assessed. Finally, in light of opponents who question the extent of developmental benefits that dams provide and point to the iniquitous distribution of their benefits and their high social and environmental costs, the chapter turns to a discussion about the need for a post facto analyses of dams and finally to an assessment of the social and environmental costs of dams and the distribution of their benefits. After showing the arguments that relate to the level of Societal Vindication, the chapter turns to examining the arguments in the debate that are
concerned with the level of Ideological Social Choice. First the NBA’s critique of modern industrial progress is discussed which is followed by an examination of the NBA’s alternative non modern worldview. In the next section the NBA ideology especially its emphasis on participation and democracy in practice is illustrated through a description of two projects- the Bilgaon model and Jeevanshalas. Finally the chapter concludes with a discussion of the limited space in Indian society for NBA’s alternative vision and a discussion of the dominant modern industrial worldview.

Rise of Dam Building Policy in India

Fundamental to vindication is the turn from situational circumstances to the level of the system as a whole. The discussion therefore first locates the dam building policy within the framework of the postcolonial state in India which supplies the norms and principles that have shaped India’s dam building policy. India achieved independence from colonial rule in 1947. After a long period of subjugation, India was distressed with a stagnant economy, poor infrastructure and terrible social conditions. Extreme poverty was rampant, public health services were inadequate, and mortality rates were high. Famines devastated human lives and laid lands to waste. The extremely narrow base of industries remained confined to very few cities and was the monopoly of a few privileged families. Local enterprise was confined largely to trade and commerce mainly around port cities like Bombay and Calcutta. The railway system was built only for connecting the ports with export production centers and import markets. The first task of the Indian government in the immediate post independence period was to improve the material and human conditions of life.
India at the time had a choice of two diametrically opposed visions of its future: that of Gandhi and Nehru (Raina 2000). Nehru’s vision was that of a modern, industrialized society based on the use of science and technology, committed to economic growth within a central planning framework. Gandhi was opposed to the idea of India taking to the industrialism of the west. In 1927, he wrote, “God forbid that India ever take to industrialism in the manner of the West. The economic imperialism of a single tiny island (England) is today keeping the world in chains. If an entire nation of 300 million people took to similar exploitation, it would strip the world bare like locusts” (Randeria, 1999). His vision of India foresaw small autonomous village communities with moderate needs and small units of production that would be politically self governing. Due to various political and circumstantial reasons at the time, the postcolonial state in India chose to realize Nehru’s vision of modernity.

Nehru along with other planners then became the chief architect of India’s development. Educated in the West, Nehru was influenced by ideals of democratic socialism and modernity. They were to shape the design of policies to come (Desai 2005). India, under Nehru’s guidance committed itself to establishing a modern, industrialized, democratic socialist state. To achieve this vision Nehru chose to pursue rapid economic growth and social development through science and technology. The need for high and fast economic growth was justified because as Nehru categorically put it, “we are trying to catch up with the industrial revolution that occurred long ago in Western countries” (Jean-Jacques et.al 1994). The belief was that such economic growth would lead to self reliance, alleviation of poverty and an improved standard of living for all. The application of science and technology was central to achieving economic growth.
For Nehru, Indian civilization with its superstitions and religious strife was in need of a radical change. He believed that a scientific temper needed to be imposed on Indian society to solve the problems of hunger, insanitation, illiteracy, etc. (Jean-Jacques et al. 1994). His government did their utmost to develop scientific institutions and applied scientific and technological research in a planned and systematic way. It was organized along the lines of the Soviet model with central planning and strong state control over priorities and orientation. The goals of rapid economic growth through science and technology were to be achieved within a democratic socialist policy framework using the mechanism of a mixed economy. Since India’s private sector would be neither willing nor able to undertake the substantial investment which capital intensive and heavy industries required, the public sector was accorded the pride of place in carrying forward the onward march of industrialization. The belief was that by taking control of the essential area of the economy, the state could introduce a social component into it. This they hoped would ensure that the benefits of economic growth reached every Indian (Tharoor 2003). Private enterprise was not disallowed but it was confined to the small scale industries and consumer sectors.

The Planning Commission was established in 1950 to translate this national imagination into reality. It was set up by the Union government and was charged with the responsibility of making assessments of all resources in the country, augmenting deficient resources, formulating plans for the most effective and balanced utilization of resources and determining priorities. The commission was to advise and provide guidance through the formulation of five year plans, annual plans, and state government plans. It was these five year plans that held out the promise of productivity and rapid
growth. The first five year plans\(^30\) (during the first four decades 50’s-80’s) concentrated on resurrecting the economy through infrastructure development in agriculture and industries. Dam building in India can be traced back to the very first five year plan that was launched in 1950-51. The plan was based on the Harrod-Domar model of economic growth and primarily concentrated on raising the level of investment in irrigation, power and other infrastructure for economic growth and self reliance (Parikh 2001). It is in this context that dams become the embodiment of the scientific imagination. The ideology of high modernism found immediate translation into large scale multipurpose projects modeled after the Tennessee Valley Authority (Klingensmith 2007). Dams became the symbol for the ideology of modernity and the means whereby the power of science and technology could be invested to deliver economic development. If India needed to increase irrigation and power, the only way to do so was through large dams. If economic growth was to be achieved through the application of science and technology, dams were an instance of technology at its best. They would be the most appropriate symbol for what free India’s scientific prowess could accomplish. They would symbolize a breaking of chains of the past and would be nothing less than temples of modern India (McCully 1996). Dams were thus the centerpiece of efforts to establish a modern, industrialized society. They were concrete manifestations of the goal of achieving rapid economic growth through the application of science and technology.

Dams, essential for India

Dam supporters emphasize that the contribution of dams to India’s economic growth and development have been tremendous; food and energy security, the core

\(^{30}\) During the first four decades of 50’s-80’s
requirements and fundamental drivers of economic growth have both been enhanced significantly from irrigation and hydropower generation respectively. Irrigation has lead to an increase in agricultural productivity and foodgrain production; the irrigation potential of India has increased from 22.6 million hectares in 1952 to 89.6 million by 1997, making a fourfold growth over a period of fifty years. Simultaneously the production of food grains has increased from 51 million tonnes in 1950-51 to over 200 million tonnes by 1996-97. This has transformed India into a self reliant country. Soon after independence India had to import foodgrains for its people but today not only is India self sufficient, it also boasts of an exportable surplus. Today, officials claim that India is emerging as a world granary and is a major player in the global food cycle (Verghese, 2005). Hydropower generation plays a very important role in India’s energy development. At the time of independence, the total installed generating capacity was 1362MW, with 508MW coming from hydropower capacity. In 1998, the installed capacity stood at 89000MW with a hydropower capacity of 21,891MW. Hydropower has the advantage of producing energy that is environment friendly, renewable, and relatively cheaper. It has reduced our dependence on and vulnerability to petroleum exporting countries while also reducing the burden of foreign exchange flow (SSNNL 1990). Hydropower plants can also start up and shut down quickly and economically which makes it especially useful in responding to wide fluctuations in demand across seasons and at different times of the day. This is particularly important for a highly populated country like India where household electricity demand is a significant portion of total demand and this demand is concentrated in a short period of time, typically in the evenings.
Dam proponents like state government officials, politicians, central government officials, etc. draw attention to the fact that India’s population explosion and rapid pace of economic growth, industrialization, and urbanization have spurred a soaring demand for food, water, and energy. To sustain self sufficiency, meet the basic needs of its teeming millions, and keep poverty and hunger at bay, it is essential for India to harness its entire water resources for much needed hydropower and irrigation. Others like Iyer, Thakkar, Reddy, emphasize the huge social and environmental costs that come with the benefits that dams provide. Such critics acknowledge the potential for development that dams offer, but argue that only if the benefits are obtained in an economically acceptable, socially just, and environmentally sound way should dams be supported; agreeing with WCD (2000) recommendations, they suggest that where alternative options offer a better solution, they should be the preferred choice. In other words, dams can only play a role in India’s development if its planning and management are subject to strict guidelines and criteria, alternatives are fully considered, and projects are implemented through transparent and accountable processes. Towards this they recommend accepting the criteria and guidelines pioneered by the WCD.

Criteria and Guidelines for Dam Building

The WCD report notes that the negative impacts that dams have on the environment and society is primarily due to the lack of political will, legal framework, planning infrastructure and an absence of a comprehensive water policy that explores alternatives. Basing their work on a set of five core values of equity, efficiency, participatory decision making, sustainability and accountability, the WCD proposes a new approach to decision making based on “rights and risks”; this means that all
stakeholders whose rights might be affected, and all stakeholders who have risks imposed on them involuntarily should be included in the decision making process. Such an approach, the WCD (2000) believes, “offers an effective way to determine who has a legitimate place at the negotiation table and what issues need to be included on the agenda”. The commission has developed seven strategic priorities for this new approach to development.

- Gaining public acceptance: No dam should be built without the “demonstrable acceptance” of the affected people and without free, prior, and informed consent of affected indigenous and tribal people. This should be achieved through negotiated agreements that are legally binding.

- Comprehensive options assessment: Prior to building a dam, there should be a transparent and participatory assessment of food, water, and energy needs. All options of meeting these needs should be considered. First priority should be given to making existing systems more effective and sustainable. During the options assessment phase and throughout the construction and operations phase, social and environmental concerns must be given the same weight as technical and economic concerns.

- Recognizing entitlements and sharing benefits: Adversely affected people should be the first to benefit from the project. They should participate in the identification, distribution and delivery of the benefits. Negotiations with affected people should result in legally enforceable mitigation provisions.

- Sustaining rivers and livelihoods: Options assessments and decision making should try to avoid impacts and follow minimization and mitigation of harm to the river system; cumulative impacts of the dam on the eco systems should be considered.
- Addressing existing dams: Existing dams should be rehabilitated and upgraded so as to maximize benefits. Dam operation should be modified to mitigate environmental impacts. Retroactive compensation should be made available to communities impacted by existing dams.

- Ensuring Compliance: Financial institutions and project developers should adopt a clear set of criteria and guidelines that should be complied with by both sanctions and incentives. Efforts should be undertaken to end all corrupt practices.

- Sharing rivers for peace, development and security: WCD principles should be incorporated into National Water Policies to help resolve disputes over shared river basins. Measures should be developed to resolve disputes and cooperate over issues concerning transboundary rivers.

These recommendations have found acceptance and support amongst those critics who believe that reforms in the way dams have been planned and built in India can lead to more sensitive and sustainable water resource development. However, dam proponents, in particular government officials, express concern about falling in line with the recommended guidelines. They point out that the approach to water resource development proposed by the WCD is limited and does not take into account India’s water stressed conditions. The options that the commission has offered to avoid the construction of dams fails to recognize the limitations and ground realities that India faces (Gopalakrishnan and Prasad 2000). India’s rainfall distribution is uneven in space and time which necessitates large storages to be built to hold the run off to make available the water when and where required during the non monsoon period. India’s limited monsoon flows suggests the need for all types of storages- major, medium and
small. India cannot afford to focus only on rainwater harvesting, demand side management and other alternatives while allowing enormous and precious monsoon flows to be wasted to the sea year after year. In addition, engineers and officials question the efficacy of small scale local solutions to meet India’s growing demands. India’s water situation and needs of a large population require the harnessing of all options available – big and small, ground and surface water, rainwater harvesting and demand side management. However, the non dam options are not a substitute or alternative to large dams, they can only be a supplementary solution. Officials strongly contend that it is an indisputable fact that dams are the only solution to meet the needs of a large and growing population in a water stressed country like India (Menon 2001).

Apart from taking issue with the commissions approach to assessing alternatives for water resource development, the government raises concern over the proposed decision process that asks for formal multistep negotiations between all stakeholders. The entire negotiation process is considered to be cumbersome and complicated. Not only is direct consultation seen as a sure way to cause delays and cost escalations but is considered to be impractical when the number of people affected by implementing or not implementing a project runs into hundred of thousands (Navalawala 2001). Insisting on adopting the proposed criteria will only have the effect of preventing or seriously delaying urgently needed water resource projects. The rights of affected people, government claims can be more than adequately addressed through the socio-political institutions and legal framework of India’s democratic society.

With regard to the social and environmental aspects that the report emphasizes, officials stress that the decision making with regard to water resource development have
taken social and ecological considerations into account. In an interview conducted on August 2nd with the author, Mansingh, a senior official with the government of India, pointed out that “safeguards and mitigative measures have evolved and continue to do so and are becoming part of the decision making process”. However, as a developing country India cannot afford to give undue emphasis to human, equity, and environmental costs. Dam proponents point out that during the hey days of the Industrial revolution, economic development received top priority without giving due consideration to human rights or ecological consequences. It is with the accumulation of wealth and affluence that the Western world could afford to turn to resolving social and environmental issues (SSNNL 1990). Similarly, India cannot afford to slow down the tempo of its developmental efforts. This is not to say that human and environmental aspects should be overlooked; But that the cost of not implementing a project has to be weighed against its social and ecological consequences; the miseries of people who live in water starved areas with aggravated droughts, without access to basic amenities of life such as potable water, minimum food, fuel, and lighting have to be weighed against the trauma of displacement and disturbance in the ecology of submerging areas. Such social and environmental costs are the sacrifices that have to be made for the larger common good of the country (Navalawala and Gopalakishnan 2002).

Need for Post fact Analyses of Dams in India

While dam proponents consider the benefits from dams to be self evident, dam opponents raise questions about the very existence and validity of these benefits. They point out that the true extent of benefits cannot be ascertained since there has been no systematic analyses of large dams in India; while India has been building dams one after
another, there has never been a comprehensive post facto analyses of large dams to examine whether dams have delivered their projected benefits. India’s dam building exercise has basically been carried out without any real assessment of the benefits of previously built dams; critics therefore accuse the government of having created a myth about the successes of India’s iconic dams without undertaking a reality check (Thakkar 2005a). India’s huge increase in food grain production and self-sufficiency has been widely attributed to dams by promoters; however, opponents draw attention to the WCD report which shows that only 10% of the increase in food grain production comes from dams. According to the WCD report, the irrigation potential of India increased from 22.6 million hectares (ha) in 1951 to about 89.6 million hectares by 1997, marking a fourfold increase in fifty years. The production of foodgrain increased from 51 million tonnes in 1950-51 to 200 million tonnes in 1996-97. Two thirds of this increase came from irrigated areas, which is around one third of the cultivated area. The increase in foodgrain production was the result of a combination of several factors like chemical fertilizers, pesticides, high yielding variety seeds, credit extensions, etc, but irrigation played an important role too and some of that irrigation came from large dams. Taking the ‘major/medium’ category (which accounts for 36.8% of irrigation) as a proxy for large dams, the WCD report says that 36.8% of the increase in foodgrain production in the irrigated areas, came from the areas irrigated by large dams. Looking into how much of this increase can be attributed to dams themselves, the commission puts the quantum of increase at 10%, excluding the effects of other inputs. Not only have dams contributed marginally to the increase in foodgrain production, critics of dams point out that other factors such as groundwater irrigation, multicropping, fertilizers, etc have played a much
larger role in increasing India’s self sufficiency. They cite the recently published report of the Manthan Kendra titled ‘Unraveling Bhakra’ (Dharmadhikary, 2005) which for the very first time attempts to assess the real contribution of India’s iconic dam – the Bhakra Nangal. The Bhakra project is synonymous with India’s self reliance and until now enjoyed a sacrosanct status. The report reveals that Bhakra did not lead to India’s green revolution or self sufficiency; it did not have any dramatic impact on the country’s food grain production; and the figures put forward for areas irrigated by Bhakra have been highly exaggerated. According to the study, the contribution of the project to Punjab’s agricultural production was 11%, while about 43% of the state’s agricultural production and prosperity was in fact based on the mining of ground water. The Bhakra therefore played a very small role in the increase of India’s foodgrain production; in essence the report has broken the ‘Bhakra myth’ that has been perpetuated for decades and been used as a justification for all large dams.

Apart from the meager benefits of irrigation, opponents also state that there has been no assessment of the real benefits of hydropower. One of the claimed advantages of hydropower projects is that it offers peaking power which many other sources proposed as alternatives cannot offer. To meet the needs of peaking power, the power source needs to be able to push up its generation quickly as demand goes up and also bring it down the same way. Whereas coal plants take very long to increase generation and come back down again, hydropower projects can be started immediately. However, there are no official figures or studies that show how much peaking power hydro projects have really provided, and how much they have simply operated as base load power stations. In the absence of such information, the unique benefit of hydropower is at best an assertion

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31 Punjab is a state in Northwest India
A more important benefit of hydropower that opponents of dams question is the claim that it is a clean source of energy. Dam advocates have long considered avoidance of the burning of fossil fuels to be one of the strongest selling points for such projects. However, critics argue that there is now growing evidence which suggests that reservoirs emit significant quantities of greenhouse gases; emissions are particularly high from hydropower in the tropics, in some cases greater than those from similarly sized gas fired plants (IRN 2003). Large dams are known to be emitters of greenhouse gases like methane, carbon dioxide and nitrous oxide. These gases are caused by the rotting of vegetation and soils flooded by reservoirs and of the organic matter that flow into and also grow under reservoirs. Latest scientific estimates conducted by Brazil’s National Institute for Space Research (INPE), show that large dams in India are responsible for about a fifth of India’s total global warming impact. The estimates also reveal that Indian dams are the largest global warming contributors compared to other all other nations (Thakkar 2007c). The study estimates that total methane emissions from India’s large dams could be 33.5 million tonnes per annum. The estimated methane emissions from all the reservoirs of the world is about 120 million tonnes per annum. By theses estimates, the methane emissions from India’s dams could be 27.8% of the world, which is more than the share of any other country. Although China and India have more dams than India, one of the reasons why Indian dams could be such a big contributor to global warming is because India is situated in tropical climate. Methane emissions are one or more orders of magnitude higher in tropical climate than those from reservoirs elsewhere. Critics argue that the fact that these projects emit global warming gases in
such significant proportions shatters the myth that energy from hydropower projects is clean.

Hydropower is also promoted as a reliable source of energy by dam supporters but critics point out that policy makers need to take into account the unanticipated effect of reduced water availability on account of global warming (Schneider 2009). Global warming could lead to changes in rainfall patterns, reduced glacial flows, more evaporation from lakes and rivers, resulting in lower river and lake levels. India and China are considered to be the most vulnerable regions where vanishing glaciers will impact water supplies in the coming decades (Scripps News 2005). Opponents therefore warn that with global warming there will not be enough water to generate the anticipated energy from dams.

Overall, with regards to the benefits of dams, opponents question the extent to which irrigation and hydropower generation have been beneficial to India as a whole. They assert that there need to be more credible and independent studies on the performance of large dams so that the myths that have been create by the government and dam advocates about large dams in India are no longer perpetuated. Some NGOs like the South Asian Network for Dams, Rivers and People (SANDRP) call for a moratorium on all dam building until a truly independent review has been undertaken to evaluate what the performance of dams have been. Beyond seeking to show that hydropower and irrigation have not been as beneficial to India as claimed by dam supporters, opponents focus on the huge costs at which these benefits have come and the inequity in the distribution of benefits.

Social and Environmental Costs and Iniquitous Distribution of Benefits
Opposers of dams argue that the meager benefits of dams have been secured at an unacceptable and unnecessary price in social and environmental terms. The most significant social cost of large dams is borne by those who face displacement and potent due to submergence of their homes and agricultural land. In India, it is the Adivasi or indigenous population that has been disproportionately affected by displacement. A study by the WCD showed that more than 47% of those displaced were Scheduled tribes despite the fact that they make up only 8% of the total population. Most of these displaced were not rehabilitated in any meaningful way; they were mainly given cash compensation and left to fend for themselves (Thukral 1992). There is no official information on what has happened to project affected people over the years. The WCD estimates that about 75% of people displaced by dams in India have not been rehabilitated or are impoverished. Opponents fear that rehabilitation is impossible since the number of those displaced is so large and there are serious limitations in the rehabilitation policy as well as its implementation (Dharmadhikary 2007). Until 2004 there was no national rehabilitation policy; states in India followed differing rehabilitation programs. Although attempts have been made to make the national policy more progressive and comprehensive, a large number of needs are not provided for or are inadequately and inappropriately provided for. The policy provides for a maximum of one hectare of land in lieu of land lost and that too if it is available point out dam opponents; the policy is not even binding on any state or agency. This allows different agencies to maintain that the policy does not apply to its projects. Most importantly, the policy does not recognize any category of affected people except those losing their land. Apart from the adequacy of the policy, is the problem that even the inadequate provisions
of the package are not implemented in full. According to the WCD report, many of the
promised benefits did not materialize. When land was given, it was of an inferior quality;
even basic necessities are like water, shelter, etc are not always provided for. The entire
process of rehabilitation planning and its implementation is bureaucratic with little or no
involvement of the affected people and is reportedly rampant with corruption.
Rehabilitation of the displaced is treated as a marginal issue with minimum sensitivity.

In addition to tremendous social costs, opponents worry about the significant and
serious negative impacts that dams have on the environment and the manner in which
environmental assessments, protection and monitoring are undertaken. Although dams
are known to submerge forests, result in loss of habitat, reduce biodiversity, cause grave
impacts downstream, lead to waterlogging and sedimentation, among other harmful
effects, yet, India’s environmental assessment remains dismal (Menon 2001). The
government of India made it mandatory for large dams to undergo environmental impacts
assessment and environmental clearance from 1978. The WCD notes that these
guidelines are very sketchy and do not provide a comprehensive assessment. Even these
most basic assessments do not have to be completed before the construction on a project
begins. Many times states obtain clearance before the assessment is completed, with the
stipulation that it will be completed by a future date and that safeguards will be
implemented pari passu with construction work.(footnote). However, even when these
requirements are not met, the project does not get abandoned since considerable costs
have already been incurred. The process of environmental assessment is a rushed one
because it is started when the project is in an advanced state of preparation rather than
when the project is conceived. Support and momentum are already built up for the project
by the time it reaches the MoEF for an environmental assessment. The MoEF is therefore pressurized to avoid delays that come from scrutinizing projects thoroughly and clear the project quickly. Once the clearance is given, the MoEF has practically no ability to enforce the conditions that it prescribes; indeed a project escapes all scrutiny after the environmental assessment is done since there is no real post clearance monitoring of projects. Although the impact of dams on the environment are so grievous, point out opponents, there is a lack of comprehensive environmental assessment, standards, monitoring, transparency, and participation.

Apart from the huge social and environmental costs, critics contend that there has been gross inequity in the distribution of benefits. Irrigation benefits are garnered by rich farmers with large landholdings; electricity is also used up by the urban and rural rich as opposed to the poor in these areas (Vincent and McCully 2000). Dams then as the WCD states “may not only have helped to maintain current inequities in the Indian society but, in some ways have exacerbated them”. Towards this the WCD recommends class benefit analyses to be carried out on proposed dams and the establishment of equity standards to which proposed dams must conform before they are considered socially viable. However, dam opponents, particularly the NBA do not accept that improvement of decision making processes, additional safeguards, scrutiny, etc will help (See Patkar comment, WCD report). While they endorse the criteria and guidelines proposed by the WCD and support the devising of mitigative measures, they argue that inequity, injustice and unsustainability are a symptom of the prevailing modern-industrial worldview in India and its approach to development. This moves arguments up to the level of ideological social choice in the Logic of Policy Deliberation. In the final phase of the Logic of Policy
deliberation, a critical move is made by questioning the very desirability of the normative values and principles that underlie the existing social order. Reflecting the classical issues of political philosophy, social choice pertains to the effort to establish a reasoned basis for the selection of one way of life over another. In the Narmada debate at this level, the conflict is between the NBA who critique the extant modern industrial worldview and advocate an alternative vision of society and the adherents of the modern industrial worldview who extol its values and principles and deride the NBA alternative as being archaic and idyllic.

The NBA Critique of Modern-Industrial Progress.

Beyond opposing the dam, the NBA raises questions about the dominant Western model of development of which dams are a prime example, and its corresponding implications (Patkar 1997; Sangvai 2002) This leads to a discussion about the nature of techno industrial society in India. The NBA point out that in the dominant model of development, generation of material wealth is of paramount importance. Rapid economic growth is taken to be the foundation of human progress and this tenet is deeply embedded in societal institutions. Economic growth, it is assumed creates wealth which is necessary to raise the standard of living, alleviate poverty and address all social and environmental problems. It is also seen as the only way that India can catch up with the Western world.

The NBA however argue that far from resolving social and ecological problems, such a model of development has lead to unmindful industrial, urban, and technological expansion. (Subramaniam 1997). It has given rise to a consumerist society and a materialistic conception of the good life in which the more intangible, non materialistic and ethical aspirations of life have little meaning. Modernist development has also
resulted in extreme centralization with no space for the people. There is a contempt for people’s voice, their understanding, and their knowledge base. Decisions about their life and death are taken by a handful of social and political elites far removed from them. Natural resources upon which the poorest sections of society depend are privatized and corporatized, disregarding the rights of communities over them. Not only has such development deprived people of the right and access to resources, it has also destroyed the non renewable natural resource base rapidly. It has emphasized capital intensive technology, western indicators of development and failed to prioritize the needs of the landless, the unemployed, and laborers (NBA 1992). Modern-industrial worldview in its current phase of liberalization and globalization further marginalizes and excludes a majority of the people; it exhausts the resources of the nation and leads to the accumulation of profit at the hands of a few at the national and international level.

The NBA opposes sharply the model of development and the techno industrial society that accompanies it in virtually all of its aspects. They warn that the social and environmental problems that beset society cannot be addressed by modern industrial worldview that emphasizes economic growth that exacerbates inequalities and exclusion; a good life according to them can never be achieved when the goal is amassing of wealth and material goods (Sangvai 2002). In an interview with the author on May 25th, Jojo, an activist with the NBA remarked, “although modernist ideals have permeated Indian society and have become pervasive, it is still possible to bring about change since these are human constructs”. The NBA ultimately call for a fundamental transformation of existing socio-economic structures including the very pattern of political and economic development. In other words, they call for a comprehensive restructuring of society
Towards that, they offer an ideological and programmatic basis for societal reconstruction with an alternative set of goals and institutions.

Beyond Critique: The NBA Worldview

NBA ideology sets out a fundamentally different program from that of modern-industrial ideology. While the former emphasizes economic growth, the NBA gives priority to equity, justice and sustainability. While modern industrial worldview emphasizes domination over nature, the NBA calls for conservation and harmony with nature. Modern industrialists rely on centralized administration while NBA stresses communal decentralization and participatory democracy. The NBA literally turn the modernist worldview upside down (see box). The NBA worldview is committed to an economic system that is people oriented and ecologically sound. Priority is given to the protection of people’s livelihood, production for people’s needs in a sustainable way, and the generation of useful and remunerative employment. Such an economic system is based on people’s control over natural resources. The village community is to be in full control of planning utilizing, implementing and replenishing the use of natural resources. The first use of the resources has to be made with regard to the satisfaction of basic needs and the protection of livelihood. Further use of resources will have to proceed through public debate, democratic planning and decision making through a revised Panchayati Raj\textsuperscript{32} (Sangvai 2002).

The polity in the NBA worldview calls for decentralization of power and a fully participatory democracy. Maximum political and economic power rests with the people and the role of the state is reduced to a minimum- it will be there to protect the interests of the most vulnerable and weak. Electoral politics will have to be replaced by people’s

\textsuperscript{32} A system of self governance at the village level
politics where people’s agenda will be brought to the center stage (Patkar 1997). In their view, nature is not to be dominated or irreversibly destroyed, but respected and conserved. It is to be treated as sacred and not merely a commodity. It is seen as a giver of life, and something that has to be endowed to future generations (NAPM 1996). They call for an immediate arrest of the destruction of forests and species and regeneration to receive the highest priority. In NBA’s alternative vision, the knowledge base of every community, as well as traditional knowledge systems that have existed for ages becomes important and useful. Science and technological innovation are not to be rejected but a careful choice of technology will be made based on goals, values and vision. Labor intensive technology is supported that will not create unemployment but livelihood opportunities for people. The goal is to create an organic interaction between traditional knowledge systems and beneficial new discoveries in order to promote a more sustainable and prosperous society (Patkar and Bhaduri 2009).

In order to provide equal life necessities to all on a sustainable basis, the NBA emphasize restricting consumption. Restricting consumption is aimed at making available life sustaining comforts to all, within the overall resource matrix. Towards this the NBA calls for replacing modern day consumerism and co modification with a moderate lifestyle. They clarify that a moderate life style does not mean denial but the enjoyment of what is available, to the extent it is available for all (Sangvai 2002). For them all alternative lifestyle such as this will be conducive to an enriched personal and social life. The inspiration for their worldview claim the NBA, comes not merely from Gandhi or Marx but from a combination various analyses offered by new and conventional groups
like the socialists, neo-Marxists, environmentalists, Sarvodayis\textsuperscript{33}, peace groups, women’s groups, and people’s science groups (Sangvai 2002).

**NBA Ideology: From Theory to Practice**

The NBA does provide a thoroughgoing challenge to the dominant Indian system and offer a cogent program for societal reconstruction. But how does this NBA alternative bear directly on the more practical concerns of public policy? As Fischer (1995) points out, ideological differences can indeed be a major factor in a policy dispute. With regard to the problem of water resource development, while the techno-industrial solution is to focus primarily on techno-economic benefits of dams, the NBA calls for environmental democracy. The NBA draw on their experience with varied community oriented projects to illustrate the importance of participation and democracy.

Two projects in particular that support the NBA emphasis on democracy are the Bilgoan microhydel and Jeevan shalas, an indigenous primary education system.

**Bilgoan Project**

Bilgaon, a tribal village in the Narmada valley of about 180 families is one of many villages that has had no electricity even several decades after India’s independence. To be sure, there were electric poles that had been there for ages but they had never been wired. Villagers here, had given up hopes of ever getting any electricity. That changed in 2002 when the NBA decided to locate a micro hydel project since the village had a nine meter high natural waterfall. The village formed a committee with representation from every household which passed a resolution supporting the project. The NBA received help from Kerala’s People’s School of Energy to draw up the blueprint, while the Indian...
Institute of Science designed the turbine and the Association for India’s development, a nongovernmental organization provided the required funding. With voluntary help from people of the village, activists and others, they constructed the Bilgoan micro hydel project consisting of check dam, canal, penstock and powerhouse. The project has provided much awaited electricity for every house in the village. Now every single house in Bilgoan can flick on a light at night for the fist time ever; the village also has five television sets. Energy use has been prioritized with preference given to lighting homes, pumping of drinking water, agriculture and finally entertainment. Comparing it to the SSP, activists of the NBA point out that while the project provides electricity to tribal hamlets, the SSP produces very little power and none of the tribal villages will be electrified by it; the SSP will destroy innumerable villages and thousands of acres of forests while the Bilgaon project has not caused any damage; to avoid submerging agricultural land, the water channel was constructed by digging through rock (Bavadam, 2003b).

Basic to the success of Bilgoan was the effort to build participation into the decision process from the beginning, and to give utmost consideration to the principles of sustainability, equity, and justice. The Bilgoan experience shows that a democratically inspired discourse can lead to a positive end which stands in stark contrast to the dominant modern-industrial approach to water resource development. According to the NBA, the project serves to build a more than unambiguous case for their alternative of environmental democracy. But the question that arises is whether there is space for NBA’s vision in Indian society?
In recent years there has been a wide variety of projects in the area of energy, water, organic farming, schooling, etc. that have been based around the principles of environmental and participatory democracy. Such projects have even enjoyed widespread support from central and state governments. One such project is the Jeevan Shalas which are the schools of life, established by the NBA that run primary classes for tribal children. They are run by parents and village communities who contribute in grains and cash. In remote regions they are the only providers of formal education that tribal children have access to. Although some government schools do exist in these areas, they are not functional. The ones that do operate, treat tribal culture and knowledge as primitive. Jeevan shalas attempt to provide relevant education. They provide an education that is a blend of the formal state syllabus and the skills of forest protection and regeneration, use of alternative energy sources, watershed management, and a self respect for tribal culture and knowledge. The idea of jeevan shalas is embedded in their overall struggle to create another way of life. They are loci for alternative ways of managing natural resources, alternative ways of generating material progress in deprived communities, and alternative ways of learning (Nilsen, 2005). These Jeevan Shalas were initially not recognized by the state, and children who had their primary education there were not allowed to join secondary school. That has changed; NBA’s work in primary education is now recognized by the state. Children who started their education in these remote hamlet schools made of bamboo and grass have now gone on to graduating from high school in different schools all over the state. The acceptance of these students indicates the appreciation of such decentralized alternatives and their principles by the government.
However, the larger program of societal transformation within which such projects are embedded are not acknowledged.

Limited Space for NBA’s Vision

For proponents of the dominant techno-industrial worldview, any talk of an alternative society is dismissed as being retrogressive, preindustrial, and neo-luddite (Verghese, 1999). Critics of the NBA like Omvedt (1999) and others express concern that an alternative vision that is rooted in a decentralized village economy will perpetuate old patterns of feudal bondage. In advocating such a society they accuse the NBA of depriving the poor and backward people from enjoying the benefits of modernity. Far from having the interests of the poor at heart, they fear that the NBA represents the voice of eco romanticists of the world (Bakshi 2000b). For the government, the NBA represents an obstruction in India’s path to development, hence they become ‘anti-development’ and ‘anti patriotic’. They are blamed for playing into the hands of Western groups that do not want to see India progress (D’souza 2002). For others, their call for a different way of life seems fanciful and unrealistic in a world where power rests with global corporations and the market.

A small group of academicians, environmentalists and writers like Roy, Kothari, Bakshi, etc. see the significance of the NBA in challenging the prevailing notions of ‘development’ and thus expanding the frontiers of the possible. Convinced that the prevailing modes of development and modernization can never provide for the needs of all, particularly the most downtrodden, they see the need for a radical re-examination of the extant system. Far from being romantics and impractical dreamers, they see the people involved in the *Andolan* (movement) as realists. They are aware that the vast
majority of people are on the fringes of the power structure and the economy and it is they who clamor for a change in the patterns of consumption, production, and resource use (Bakshi, 1999). The NBA represent their voice, and not those of the Western environmental movements that they are accused of. Realizing that their vision has not captured the public imagination, these writers have tried to generate public awareness through various essays and books. Arundhati Roy (1996), the young celebrity booker prize winner by lending her support in the form of her writings and protests has been credited for drawing the attention of people both nationally and internationally, to the plight of the tribals in the valley. Conversely, she has also been criticized for drawing attention away from the tribals because of her glamour and celebrity status. For these scholars and writers the Narmada movement raises critical questions and points to possible answers (Kothari, 1999). They urge that there should be a more rigorous dialogue which involves different segments of society so that a common understanding of what kind of society India should be, can evolve. As Bakshi puts it, “it would be tragic if most of us cling to whatever is ‘given’ at the moment and fail to closely examine processes of radical, even ‘romantic’ questioning (Bakshi, 1999). Their efforts hence aim at generating a constructive dialogue in mainstream society about more creative possibilities than the current system.

Enthusiasts of techno-industrialism on the other hand argue that it is heretical to challenge the modernist vision that has led to economic development, technological progress and modernization of Indian society. Critics of the greens like Patel, Blinkhorn, etc. put forth the advantages of living in a modern industrial India by pointing out that industrial progress has transformed India for the better. There has been a rise in living
standards, decrease in poverty levels, increase in life expectancy, and an improvement in education, transportation, housing, agriculture, etc. In short, just about everything that is now taken for granted has come from techno-industrial progress. In addition it has enabled India to emerge from its colonial past and become a major contributor to the world economy. They do not deny that there are social and environmental problems that need to be addressed. However, unlike the NBA they argue that such problems do not come from modern industry but from the lack of it. They emphasize that Indian society is still ridden with poverty; that there are people who do not have access to clean drinking water, two square meals a day, and other basic amenities like electricity, clothing, and houses. The answer to these problems according to them lie not in going back to some idyllic past but in more vigorous economic growth, technological progress, industrialization, and modernization. To the degree that the NBA program will jeopardize economic growth, they argue that it undercuts the very possibility of generating resources that are essential to effectively attack the problem. They therefore welcome India’s full fledged commitment to neoliberal reforms which aim at generating rapid economic and industrial growth.

Conclusion

To conclude, the goal of this chapter, as well as the previous one, was to undertake a theoretical application of the Logic of Policy Deliberation to the Narmada debate and examine the extent to which arguments in the debate were distributed across the four levels of the Logic. Both the chapters have illustrated that range of arguments that are made in the debate are spread widely across the various levels. Arguments range from empirical assessments of the project’s economic viability, to an assessment of the
social, cultural, geological and other features of the Narmada valley, broadening to an examination of the contribution dams make to Indian society and ultimately to an evaluation of modern industrial development that dams symbolize. The chapters show how the Logic can be used to systematically organize and analyze the arguments that arose in the debate; what initially seemed like disparate and disconnected arguments are shown to be parts of a complete or comprehensive evaluation (see box below). The remaining test of the Logic of Policy Deliberation was to undertake an empirical examination of the extent to which citizens themselves could identify, respond and relate to the different levels of the Logic in informal conversations. The next chapter in the study turns to the empirical examination of the Logic of Policy Deliberation.

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Chapter V Empirical Examination of the Logic of Policy Deliberation Through Citizens Discourses in the Narmada Debate

Introduction

The main goal of this study is to undertake an empirical examination of the Logic of Policy deliberation. As mentioned before, the Logic of Policy Deliberation is based upon ‘ordinary language philosophy’ of Toulmin and Taylor which is based on a reconstruction of how people actually think when they evaluate an action or event. In other words, it is an empirical approach to how people think about things. This study seeks to test the claim that the model represents the way ordinary citizens argue. The test is undertaken in a two step process: first the study undertakes a theoretical application to examine the distribution of the range of arguments in the Narmada debate across the various levels of the Logic. After this initial step, the study undertakes an empirical examination of the model through citizen discourses in the debate. The previous two chapters in the study comprised the theoretical application of the model. They show that the broad range of arguments in the debate were spread widely and extensively across the different levels of the model. It is to the empirical examination of the model that this chapter turns. It seeks to examine to what extent and how the various levels emerge when citizens deliberate and discuss the Narmada issue. Specifically, it examines how individuals identify, respond and relate to the different phases of the Logic. The main task is to show whether or not citizens argue across different levels; whether they are able to relate to missed or unperceived levels when prompted with arguments and scenarios.

The chapter includes actual conversations with citizens who are directly involved in the conflict like government officials and activists as well as with ordinary citizens.
who are not directly involved with the conflict like a housewife and a university professor. There are seven actual conversations that are shown and each conversation is preceded by an explanation that shows the trajectory of the arguments the particular citizen makes, what level they initially start deliberating at and how they extend their arguments to the other levels as the conversation proceeds.

Conversation with a senior official at the SSNNL

In this conversation, the official begins narrating the Narmada story with a brief historical background of the project, an explanation of its controversial nature and the growing opposition to it. In conversing about the opposition to the dam, he clarifies that he is willing to accept criticisms of the dam that are limited to recommendations about improving the effectiveness of the dam or enhancing the resettlement policy, making it more equitable, etc. In other words it is criticisms that are limited to implementation of the project that are most acceptable. However, opposition that questions the project itself, its rationale, and not just the way it is being implemented are those that are not acceptable. In explaining why such opposition cannot be accepted, he makes several arguments at different levels that strongly correspond to the levels of the logic of policy deliberation. The conversation shows that his arguments are first focused at the level of Societal Vindication: opposition to the SSP is seen as being opposed to larger common good or national interest. India has an alarming rise in population whose basic needs of food, water and energy have to be met. Dams like the SSP that can sustain self sufficiency and generate hydropower are indispensable in the face of India’s population explosion and pace of economic growth. As a developing country where large sections of people do not have basic amenities of drinking water, minimum food, and electricity,

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34 SSNNL administers the Sardar Sarovar Project for the government of Gujarat.
India cannot afford the cost of not building dams like the SSP. When concerns about the social and environmental costs that have to be paid to secure the benefits of dams come up in the conversation, and it is suggested that alternative means that are less socially and environmentally disruptive be considered to deliver the much needed power, irrigation and water benefits, the official questions their efficiency in comparison to large dams. Taking the SSP as an example, he points out that providing the same extent of benefits through other means would cost a lot more. In comparing the SSP’s efficiency to other alternatives, the official basically shifts his argument to the level of technical verification. Not only does he mention that alternatives would cost a lot more financially, he also points out that it is one of the best projects from the point of view of irrigation and power benefits to the unit of area submerged. Beyond that, he moves on to describing the submergence area as being devoid of any special or unique characteristics that would require it be preserved. His arguments therefore extend to the level of Situational Validation. The valley is depicted as being a denuded and degraded area upon which submergence will make no difference; the life of the tribal in the submergence area is portrayed as being deplorable, harsh, with no sustainable income. In such hopeless circumstances, displacement is seen not as a tragedy but an opportunity to improve their lot. However he notes that in spite of the miserable conditions in which tribal groups live and the excellent compensation package on offer, groups like the NBA still influence the tribals to reject compensation and oppose the dam. He therefore surmises that it is not the well being of the displaced tribals that the NBA is concerned about but in “blocking progress”. To substantiate his assumption he points out that rather than opting for resettlement if people are getting displaced on account of a project or choosing to plant
more trees in lieu of trees lost, the NBA and groups like it, always seeks to stop a developmental project altogether. In other words, he claims that beyond a concern for tribal interest, the NBA is concerned with opposing technological progress and in his words, “becoming a pre-industrial society with a subsistence economy”. When it is suggested that they believe modern industrial progress to be the cause of social and environmental problems and hence suggest reversing it and reverting back to a simpler society, he warns that in so believing, they are making a mistake. He points out that such a society was far from ideal and was marked by suffering. When asked if modern industrial society is ideal, he remarks that although there are problems, modern development has changed lives for the better. He posits that it is only with further technological progress and economic growth that problems that remain can be resolved.

In ultimately deliberating about NBA’s alternative vision of society and advocating a continuation of modern industrial society, he engages the level of Ideological Social Choice. Overall, the conversation makes explicit that the official’s support for the project is based on the contribution that large dams make to India’s common good, on the efficiency of the SSP, on the nature of the area to be submerged, and finally on the nature of the good society.

**What is the Narmada story about?**

*The Narmada is India’s fifth largest river and of course it is the largest river of western India. Its annual flow is more than the combined flow of the three rivers – Sutlej, Ravi and Beas that provided a granary to the nation. The Narmada story is about harnessing this huge potential that the river offers. Prior to independence, there was hardly any development of the Narmada waters. After independence when the issue of harnessing the river was raised, an interstate dispute arose between the various riparian states and several legal and logistical arguments came up. To resolve this interstate dispute, the NWDT was initiated in 1969 and after ten years of deliberations, the NWDT decided upon the allocation of water between the three states, the sharing of costs, benefits, and other infrastructure that was needed to get the project rolling. Construction began in the*
early eighties with the plan to build thirty large dams, more than a hundred medium
dams and three thousand small dams. The SSP is the terminal dam on this river, it is also
the largest. And of course, you know it has been so controversial from day one.

**Why has it been mired in controversy?**
Well, the thing is that this particular dam came under a lot of international attention. The
NBA joined hands with various environmental groups abroad and started opposing the
project from every angle. First they said you have to resettle the displaced and we did
that. We came out with the most progressive compensation policy ever as far as
infrastructural projects go in all of Asia I would say. In China, they just pack the
displaced off with some money and a few pigs to start a piggery. We have given the
displaced not only cash but land for cultivating, a house, a school, dispensary, etc.
However right after we announced our compensation policy, they started fighting the
project tooth and nail. They said resettlement was not possible, the benefits were not
realistic, the costs were too high, etc. and they started a campaign to stop the dam itself.

**How did you view their opposition to the dam?**
You see their initial opposition to the dam involved getting a better deal for the tribal and
I didn’t have any problem with that. But when they started questioning the project itself
then I became very disappointed. I mean it was a huge waste of time and money and I
think that did a disservice by delaying the construction of the dam not just to Gujarat but
to the entire nation altogether.

**Why do you say that?**
I mean the SSP or any other large dam project let’s say, has to be seen in a national
perspective. Such projects are in the national or public interest. When we gained
independence, we were a country of thirty five crore\(^{35}\) people and we had to import food
from outside to feed ourselves. Did you know that we would import Milo from America
which is something that Americans thought was not good even for their dogs, let alone
human consumption. Over time we were able to achieve self sufficiency only by
harvesting our major rivers with multipurpose projects like Bhakra, Hirakud and so on.
That is why Nehruji called dams the temples of modern India. It is because of these dams
that today we don’t have to stretch out our hands and ask for charity or alms. We can
feed almost a billion people on our own and have surplus to export as well. However, our
population continues to grow at an alarming rate, it is expected to almost double in the
coming decades. Building dams like the SSP will assure us of future food security and
keep hunger and poverty at bay in the face of India’s burgeoning population. Dams also
provide a cheap, reliable, and environmentally benign way of meeting our future energy
needs. I think currently the share of hydropower in the total installed capacity of
electricity generation is about 25%. In other European countries the share of
hydropower is more than 60%. It is in India’s interest to maximize hydropower
generation. Hydropower generation will reduce our dependence on fossil fuel and it will
reduce our vulnerability to petroleum exporting countries.

**But what about the social and environmental costs at which these benefits are secured?**
Opponents suggest that alternatives to big dams should be considered for delivering the
necessary irrigation, energy and drinking water supply.
Sure, there are other options that we can and are pursuing like rain water harvesting,
check dams, solar, wind power, etc. Small is beautiful is a very popular and frequently

\(^{35}\) 1 crore equals 10 million
used phrase among environmentalists. I am also very sensitive, rather sympathetic to small projects but they cannot be expected to substitute for a large dam.

Why not?
They are just not practical. Look, the SSP is going to generate 1450 MW of power, it is going to irrigate 2 million hectares of land and it is going to supply drinking water to over 8000 villages and towns. Now imagine how many windmills we would have to put up to generate the amount of energy that the SSP is going to. Not just that, the cost of generating the same amount of power through windmills would be six times as much. And of course we would get no irrigation or drinking water benefits.

But the SSP will submerge vast areas
Only 37000 hectares which is not much at all. The entire submergence is only 1.65% of the total culturable command area which is the lowest compared to other projects. And in terms of power benefits, only 24 hectares of land is suberged for every megawatt of power generated compared to other projects which submerge well over hundred acres for each megawatt.

But critics of the dam point out that regardless of how low the extent of submergence, the Narmada valley is a historically and ecologically rich area and should not be submerged.

Well, we have carried out extensive studies of the submergence area. Let me tell you, there are no protected cultural sites that are located in the submergence zone. There are a couple of temples and these we have managed to successfully relocate in the downstream area. There are no valuable flora and fauna. There is hardly any tree cover actually. At one time there used to be a lot of teak tress in this area but due to over grazing, shifting cultivation these forests are now degraded and denuded. Of course since there are no forests there are practically no wildlife of value. The only endangered species to be affected is the sloth bear for which we are building a wildlife reserve nearby. In fact you see with the creation of a reservoir and the afforestation measures that we are undertaking, there will be an all round improvement in the environment. There will be more moisture in the area, healthier forests, and a more productive eco system overall. You see if the project was going to adversely affect some endangered species or lead to some loss of gene pool we would of course have thought of alternatives. You remember in the case of the Silent Valley project, the project would have lead to the extinction of the lion tailed macaque so it was abandoned. But here there are no ecological issues as such that are significant for us to do that.

But what about tribal displacement?
Yes, submergence is going to lead to displacement which is going to impact the livelihoods and cultures of tribals who have been living there for centuries. However we have a very progressive and sensitive compensation policy. We give each oustee five acres of land, regardless of the amount they owned in the valley, plus we give them a house. I am not sure if you have visited any resettled villages but if you get a chance you must see our resettlement sites. Each has its own school, dispensary, water pump and other facilities. When you talk to them they say they would never go back to the life they had in the valley. You know the image of the tribals as living in harmony with nature, living a peaceful, serene life is a myth that has been created by the anti dam lobby. They raise emotional myths to arouse opposition to the dam. Let me tell you the ground reality is far from this. Tribals have very hard lives. They barely manage to grow some crop for
their own sustenance. They have no sustainable income generating capacity. Most of them migrate to nearby towns in search of employment as laborers. They have no amenities of roads or electricity, tap water, schools, etc. that we have. They themselves are aware that they have no future in the submergence area so they welcome the opportunity that we are providing through our R and R policy to improve their life. Rather than a tragedy, they see their displacement as an opportunity by which they can be integrated into mainstream society. But instead of telling the tribals to take the R and R package, the NBA tells them not to move, to reject compensation and oppose the dam altogether. If you ask me, it is totally irresponsible activism. By doing so, they are subjecting tribals to subhuman life and not allowing them a chance to share in our benefits of development. All they’re really doing is playing the tribal card to oppose the project.

So do you mean to say that the NBA doesn’t really care about those getting displaced or about tribal welfare?

I mean they do care about indigenous rights, forest, nature and all that stuff but the thing is such people are ready to push tribals off their land to make way for wild animals in nature reserves but not for progress and development So it’s ok to displace tribals for the sake of animals but not for the sake of progress? That makes me wonder whether these people really care about tribals or do they want to just block progress.

Are you implying that by supporting nature reserves and preserving wildlife, the NBA and others are against progress and development?

I mean if they start preserving every minute piece of nature or every little animal then it does go against progress. Do you think there is any value of such kind of preservation? Don’t get me wrong, preservation of wildlife, environmental protection, etc. are important no doubt but in the name of environmental protection, we cannot slow down our growth and progress. Their answer to everything is to save the environment and stop technological progress, have nature friendly, environmentally friendly alternatives. You see if a dam is going to submerge some forests and dislocate some people and we ask them what should be done, their answer will not be to resettle these people in the best possible way or grow many more trees in lieu of the trees that are lost but their answer will be to stop the dam. They are basically against any technological advancement or modernization or industrialization. They want us to revert back to nature, to curtail our wants and needs and become some sort of preindustrial society with a subsistence economy.

Perhaps they believe that problems of environmental degradation, inequity and injustice have been created by modern industrial progress and so want to reverse it?

That is the mistake they make. I mean they have a romantic idea of preindustrial society being ideal. In fact, it was far from it. There were fatal illnesses, subjugation of women, lower caste people, children used to die, there was starvation, people didn’t have the basic needs of life. It was a struggle not some idyllic, pristine life that they make it out to be.

But is our modern industrial society ideal? They say it is far from it.

Well, at least we are better off today than we were then. We have been able to eradicate major illnesses, we live longer, we have progressed. Yes, we still have a long way to go in terms of achieving equality and justice and with more economic growth that will come.

Conversation with a retired official from the Ministry of Water Resources
The first point that the official makes concerns the specifics of the project. The official remarks that it is a techno-economically efficient dam and that it has met the stipulated criteria required for large scale projects. In bringing up the efficiency of the SSP the official starts out at the level of technical verification in the logic of policy deliberation which is concerned with empirical demonstration of the degree to which a program fulfills its objectives and the efficiency with which it does so. As the conversation proceeds the official’s deliberations shift to the social and environmental impacts that the dam will have on the Narmada valley. He emphasizes that the only way to minimize injustice and hardship was to institute the pari passu principle which meant that construction would not outpace environmental and rehabilitation work. However since there have been serious violations of the pari passu principle and construction work has continued without completing the required environmental and rehabilitation work, the official calls for a suspension of the project until rehabilitation and environmental measures are undertaken. Until this point his deliberations remain at the level of situational validation which is concerned with the situational circumstances in which a program takes place. However, when it is pointed out that a delay in the project will add to the costs of the project and be against the larger common good, his arguments shift to the level of Societal Vindication. He argues that although dams have been designated the temples of modern India, their actual contribution to India’s development in terms of food, water and energy security has never been assessed. In addition he points out that their benefits have come at great social and environmental costs and have gone to one set of people, while leaving another to bear the costs, tribal groups, in particular. Rather than not challenging the assumption that dams are in the larger national interest, he advises a
thorough evaluation of dams in India and the adoption of detailed criteria and guidelines for the future dam building. When it is brought up that pro dam lobby considers such guidelines to be cumbersome and in the way of India’s development and progress while the anti dam lobby considers such measures to not go far enough and get to the root of the problem, he begins to shift his arguments to the level of Ideological Social Choice. He points out that although the NBA does correctly assert that the problems of dams are a symptom of the failure of modern development and that until such a way of life is radically altered there is no hope of resolving social and environmental problems, they have not offered an appealing alternative; instead of coming up with a vision that is forward looking, their Gandhian, non modern alternative is backward looking. Until a more viable alternative to modern industrial society emerges, practical and limited solutions within the modern industrial framework will have to be found.

Could you tell me a little bit about your position on the Narmada dam, I find it particularly interesting because you first began by supporting it and formulating a large part of the R and R policy and then your position changed to the other extreme that even asked for suspending construction of the dam.

Yes, I am not exactly popular with the bureaucratic crowd anymore you see. However, I have gained a lot of new friends in other quarters. I did initially support the dam. I thought that overall it was a good project you know. I mean it was technically very sound and it had met the required cost-benefit criteria and all those other things. The problem with the project was the social and ecological costs of the dam. It was going to cause massive displacement of tribals and loss of forest, temples of religious significance and so on. Some of the NGOs involved then like the ARCH and others had done excellent work and won a very progressive compensation package that promised to mitigate these negative impacts of the dam. Our fear however was that environmental and rehabilitation work would just be put aside, that construction work would continue regardless of the stage that R and R was at. To ensure that construction work would not outpace environmental and rehabilitation work, we stipulated the pari passu principle.

This was in 1986-87?

Right, this was when the clearance of the project was being discussed. We had stated that in the event of failures on the rehabilitation front, construction work must stop. That is what pari passu means. It determines the order in which things are to be done—rehabilitate first, construct after. We believed that this would ensure the urgency of rehabilitation, and environmental measures would not be lost. Apart from this, the
NWDT award itself and the supreme court order of 2000 stated that land must be allotted a year before submergence and rehabilitation should be completed six months prior to submergence. The court also declared that the height of the dam can only be increased in five meter increments and that too only after the government can demonstrate that rehabilitation and environmental measures had been undertaken.

**What happened then?**
Serious deficiencies in conforming to the stipulated conditions have come to the fore. There is hardly any land available, oustees are being given cash compensation instead of land based rehabilitation; villages were supposed to be resettled as a cluster but are just being scattered far and wide. Basically construction is being allowed to proceed without any rehabilitation whatsoever and without any environmental measures in place. And all this is in glaring violation of court’s orders.

**What is the way out?**
Well, the matter has to be examined objectively and independently and until prescribed conditions on R and R have been fully met, until the failure has been rectified, construction work should be suspended.

**But won’t each day’s delay mean a huge sum added to the cost of the project?**
Yes it would but let me ask you to think what each day’s delay in rehabilitation means to a person who needs to be resettled.

**True, I agree that delay in rehabilitation would mean prolonged suffering for the displaced but isn’t delaying the project seen to be against the larger common good?**
This is the classic, dams are the modern temples of India argument. We started building dams when we gained our independence, when Nehru declared them to be the modern temples of India and we have been building them since. We built great dams like the Bhakra which gave us our self sufficiency. They enabled us to transfer water which was a big thing given that India has such a temporal and spatial distribution of water. You see there are areas that are rich in water resources and areas that have no water at all. We have seasons where we have plenty of rainfall and times when there are droughts. What dams do is they enable us to store water and use it in periods of scarcity and they allow us to transfer water through canals from water rich areas to water stressed areas. Apart from this of course dams provided us with a clean and cheap source of energy. However over time we realized that these things lead to massive social and environmental destruction. I believe dams have already submerged five million hectares of forest land and have displaced fifty six million people. And a majority of these are tribals, our most down trodden groups in society. Not only are they destructive but new studies are coming out that show that dams have contributed much less than what we have claimed to our foodgrain production.

**Yes, some reports say that only 10% of our increase in foodgrain production can be attributed to dams.**
Yes the WCD report puts it at 10% some others say it’s 20-30%. But the problem is that we have conducted no assessment of the true extent of the contribution of dams to India. We don’t know how much dams have contributed, how well they have done so and at what social, environmental and human costs. We need to conduct a thorough analyses of dams in India and we need to develop criteria and guidelines for dam building.

**What kind of criteria and guidelines do you propose?**
First of all, the decision to build a dam must be taken after going through all other options. A comprehensive assessment of options should be made in which social and environmental aspects are given as much importance as economic and technical aspects. People who are going to be affected should be informed from the earliest stages. They should be made part of the decision making process and everything must be done by their consent. They should be given the first claim on the benefits of the project for which they are displaced. Also, such projects should be put through stringent scrutiny. The environmental impact assessment should be made truly independent of project planners and approving officials you know and the benefit cost criteria which is already there should be supplemented with other kind of assessments.

But is it possible to really build a dam if all these measures are adopted? Some of your colleagues say that these measures are just another way to make us stop building dams. Well, the WCD recommendations did not sit very well with the India government. Somehow dams are conflated with our national development. They are seen as the means by which India can sustain its self sufficiency in the face of our growing population and fast paced economic growth. So any talk about improving dam building or putting a moratorium on dam building is seen as being anti India or against national interest.

So then what do they say should be done about the social and environmental impacts of dams?

Well, according to them India is a developing country that needs to modernize and industrialize. Concerns of equity and sustainability have to take a back seat to development. Why should India be expected to take care of social and environmental concerns when the western world ignored all of that when they were industrializing. Now that they have industrialized, they want to slow down India’s ascent to becoming a global economic power house by putting environmental restraints.

But you think that we can achieve equity, sustainability and justice alongside seeking to modernize and globalize?

I believe we have to try since we have no other alternative. You see we have to think about what we can do in a practical and limited context. We are committed to a modern industrial India and so we have to function within that framework. Priority will of course be given to scientific and technological progress, economic growth and so on. But we must keep pushing for sustainable, just, equitable development.

But there are groups like the NBA who believe that it is not possible to achieve equity, justice and sustainability within this modern industrial society that we are committed to. What do you think about that?

Let me tell you first of all that I have a great deal of regard for Ms. Patkar and the NBA. The NBA has done a great job of drawing attention to non compliance with conditions, violations of human rights, and the atrocities and hardships that the people of the narmada valley have had to face. Along with that they have raised very fundamental questions. They have raised questions about our very commitment to a modern way of life. According to them our social and environmental problems are a symptom of modern development itself and until we don’t radically alter our entire way of life itself there is no way that these problems will get resolved. I understand what they say completely. We do need to get to the root of these problems. However, at the moment, as a collective, we don’t seem interested in reconsidering our engagement with development. You know groups like the NBA and others do advocate a different vision but most of the time people
think of it as being outrageous. Unfortunately, I would say that they have not been able to come up with an alternative that has much appeal. If they had, maybe people would even discuss it but to put forward the same Gandhian ideal is not going to work. It did not and it will not. The entire world is moving towards modernization, globalization, privatization, a Gandhian way of life is seen as going back in time.

Conversation with an activist in the NBA

The conversation that follows is one with a senior activist in the NBA. In this conversation, unlike the ones with government officials, the focus is on the level of ideological social choice. The SSP and its problems, the situation in the Narmada valley, and the failure of dams to benefit India as a whole are discussed to ultimately call for a total transformation of society and to present their alternative vision of society. As the conversation proceeds and the arguments evolve, the various levels of the logic of policy deliberation clearly emerge. Arguments start out at the level of situational validation and then move to technical verification, reaching the level of societal vindication and finally culminating at the level of ideological social choice. The activist starts out by narrating her first involvement with the project as a student pursuing research regarding the villages to be submerged. Her initial concern, along with others at the time, was to get a better deal for the displaced. The focus was on securing a compensation policy that would be more inclusive. It was realized that the original compensation policy had left out a large number of tribals who had no formal ownership to their land. She recounts that although a new, improved and inclusive resettlement and rehabilitation policy was passed, it was fraught with problems. Although all those who were getting affected by submergence were now being given compensation, the policy did not include those who were going to face secondary displacement from the canal, from compensatory afforestation measures and so on. Apart from that, implementation of the improved policy itself was
problematic. In the time that she spent talking to the people facing submergence in the Narmada valley and several government officials and politicians, she recounts that there was no political will to implement the policy, the government had conducted no survey of the exact number of people getting displaced, and it had no idea where and how they were going to come up with land that was promised for each displaced person. Rather than continuing to focus their efforts on implementation like other non profit organizations and activist groups chose to do at the time, she explains that the NBA began raising questions about the project itself, whether it was going to actually produce the extent of benefits claimed and whether it was even appropriate to consider building a dam in the Narmada valley. In terms of the logic of policy deliberation, the activist first starts out at the level of situational validation since she explains that she started questioning whether it was appropriate to build a dam in the Narmada valley. According to her, she realized that the Narmada valley had many unique social, ecological, cultural, and historical characteristics that made it unsuitable for a dam. She describes in detail that submergence would destroy an entire culture and way of life of the tribals, that it would lead to loss of the most fertile lands in India, it would submerge ancient archeological treasure troves and temples of immense religious importance. When she is asked why the NBA did not work towards seeking to lower the height of the dam since it would reduce submergence and minimize the adverse impacts that the valley would otherwise face, her arguments shift to the level of technical verification. She points out that several proposals with alternative heights were suggested however dam promoters refused to consider any modifications citing reasons of reduction in benefits. She admits that a lowered height would result in reduced power benefits, however she argues that
this should not have been an issue since even at the original, planned height of 455 feet, it was doubtful that the SSP would deliver benefits to the extent claimed. She goes on to elaborating that a thorough examination by the NBA had revealed that benefits were based on incorrect data and optimistic assumptions; costs were underplayed and even omitted. In the end, the activist argues, the SSP would provide very meager benefits at a very high cost. Whatever benefits it would produce would go to the richer rural and urban areas of Gujarat since these areas were at the beginning of the canal while the tail enders for whom the benefits were really intended, would be left with very little. These arguments about the extent to which the SSP will deliver the benefits, at what costs it will do so, and its distribution correspond clearly to the level of technical verification in the logic of policy deliberation. It is when the NBA realized that the very rationale on which the project was based was questionable, they decided to oppose the project. In place of the SSP, the activist calls for alternatives that are sustainable and equitable but can also provide the required amount of irrigation, power and water to people who need it the most. Towards that she suggests rain water harvesting, small dams, etc. When asked what the point of pursuing such alternatives at this late stage were, her arguments leave the realm of the situational context of the Narmada valley and move to the larger social system of which the Narmada conflict is a part. With regard to the logic of policy deliberation, the level of societal vindication is identified in her deliberations. She emphasizes that keeping in mind the performance of large dams in India, it is important to pursue alternatives, regardless of the fact that they did not get adopted in Gujarat. Contrary to the myth that has been perpetuated about dams being the modern temples of India, dams have contributed very minimally to foodgrain production, they have instead
lead to massive negative impacts on society and the environment and their benefits and costs have been inequitably distributed in society. Rather than building more dams that will contribute very minimally to foodgrain production, water and energy security, and will lead to inequity, injustice and unsustainability, it is better to pursue non dam options. When asked about criteria and guidelines that can perhaps improve the performance of dams rather than putting a moratorium on dams altogether, she acknowledges that they are steps in the right direction but adds that they do not go far enough. This moves the deliberations on to the level of ideological social choice where the main focus of the NBA’s struggle lies. Such solutions according to her do not get to the root of the problem. Problems like inequity, displacement, pollution, etc are a symptom not of dam building but of modern industrial progress. Resolving such issues requires challenging the very social arrangements that made these things possible. She describes their movement as being not only about saving the Narmada Valley or about bringing a moratorium on dam building but about transforming the social, economic and political structures of society and developing a vision of an alternative society; a society that is committed to fulfilling basic needs as opposed to being committed to economic growth; that is non materialistic, where people’s needs and wants are limited; that is decentralized and that bestows the first rights over natural resources to communities that live near them and depend upon them.

*As an NBA activist, could you tell me what the Narmada movement has been about and how you came to assume a position of total opposition to the dam?*

Our saga began long back in the eighties, as students, researchers, and activists, a few of us had come to the valley to study the villages being submerged. In our travels within the submergence zone and talking to the people getting displaced, we became aware that the villagers had little knowledge of the fate that was going to befall them. Project authorities had not sought their consent neither had they informed them of the plans or their impending dislocation from their homes and their land. As more and more activists
became involved, we began to agitate and organize the people of the region to fight for their rights and for their just resettlement. That’s how our struggle began.

**So your initial cause was to resettle those getting displaced?**
Yes, earlier on in the mid eighties our demands were for rehabilitation. We realized that the resettlement policy was very inadequate, it left out the bulk of people getting displaced. We and other activists at the time were successful in getting the new R&R policy passed which of course was much more inclusive. It accorded two hectares of land in lieu of land lost not just to those who formally owned their land but also to encroachers who basically had been living and cultivating a piece of land for centuries but had no formal ownership of the land. Bulk of those getting displaced were in this category that the original R&R policy had left out. But we realized that this progressive policy announced by the government of Gujarat was not backed by the political will or the resources to settle these people. The government had no master plans for rehabilitation, they had no idea of how many people were going to get displaced, they had not checked their land records, or anything. People who had already been displaced much earlier due to the kevadia colony\(^{36}\) had received little or no compensation at all. It sort of indicated what was going to happen to the thousand others who were soon going to face displacement. Others who were going to be displaced on account of the canals, compensatory afforestation measures, sanctuaries, catchment area treatment schemes and so on also approached us for resettlement but the government refused to consider them project affected and decided to give them only cash compensation. For us there was no difference between a person killed with a gun you know and one killed with a sword, they were all affected by the same project. Gradually we began realizing that displacement was a huge problem, the scale of those getting displaced was mammoth, there wasn’t going to be enough land available so successful implementation of the rehabilitation policy was out of the question.

**Was that what spurred your opposition to the dam - the fact that R&R implementation was impossible?**
Implementation of R&R is only part of the problem, even if R&R went smoothly it could only replace homes, lands and livelihoods but it is not just homes and lands that are being destroyed in the Narmada valley. It is an entire way of life, culture and history that is going to be lost. How could we even begin to replace all that. Theirs is a very unique way of life. They have been living autonomously, cultivating the valley, coexisting with the forests, living on the basis of common natural resources, in a non monetized economy. They have their own social, political norms, their own language, rituals, gods and goddesses. They are one of the few groups of people left who live sustainably with respect for nature. But preservation of the environment or culture and history is not high on the list of the government. In Chikhalda that we just passed, lies one of the oldest archeological sites in India which shows evidence of the very first agricultural settlement. Like that there are so many archeological and cultural sites here, archeologists call it a treasure trove. This is the only valley where you can find archeological evidence from Indian prehistoric to historic times. There are so many archeological mounds that need to be excavated in the interest of Indian history. If these are submerged, the secrets of our great past will remain secrets only. But the government has no qualms about submerging it. They use religion to garner votes but don’t even

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\(^{36}\) Colony made for engineers who work on the project in Gujarat
think twice about the sacredness of this river. There are so many medieval temples and pilgrim places that are going to be submerged with impunity. Even the route of the centuries old tradition of parikrama that is observed only at the Narmada is going to be submerged. For dam supporters, these mean nothing, they carry no value.

But wouldn’t lowering the height of the dam decrease submergence and avoid all this social, ecological, historical loss? Why didn’t the NBA pursue that as an option rather than opposing the dam altogether?

Lowering the height of the dam would reduce submergence significantly and minimize social and environmental destruction of course. We have always considered this and have been fighting for the dam height to be lowered. There have been detailed suggestions of reducing the height of the dam from 455 feet to 210 or even 300 feet, yet our leaders and engineers refuse to consider any modifications. They argue that lowering the dam’s height would mean a serious reduction in benefits. The assumption that is made by them is that the benefits of the dam are going to be so huge that it will substantially outweigh these losses and costs. It is going to provide badly needed water, power and irrigation. Well, we have looked into the claim and gone in to detail and the truth is that even at a full height of 455 feet, it is doubtful that the dam will generate the amount of power, water and irrigation that is claimed. These benefits are overestimated, they are exaggerated. First of all the benefits are based on hydrological data that is incorrect. The water available in the Narmada is not 28MAF as assumed but actually only 23MAF. This of course means that there will be a reduction in the overall benefits.

Let us also examine each stated claim. Power- the SSP will not generate 1450MW of power, that is only the installed capacity, the average power from the SSP will only be 415MW. The most touted claim of drinking water to the water starved areas of Kutch and Saurashtra is also doubtful as we have searched hard and found no detailed information about water supply from the SSP. There is a lot of rhetoric about parched throats and quenching thirst but it is not backed up by any comprehensive planning effort. With regard to irrigation, the estimate of around 2 million hectares of land is once again based on the assumption that there will be 28MAF. The canal efficiency that they have assumed for the project is also based on an overly optimistic assumption of 60%. In actuality irrigation efficiency in India is about 25-30% only. If you calculate the flow in the narmada being 17% lower and you assume a more realistic irrigation efficiency, then the irrigation benefits of the SSP are going to be only half or even less than what is claimed. So overall we have grave doubts that the SSP will generate the amount of benefits that is claimed. Also bear in mind that whatever little benefits do get generated will go to baroda, ahmedabad and all other rich urban areas. Already there are five star hotels, water parks, golf courses coming up in these areas. Kutch and Suarshtra are at the end of the canal and we fear that it might ultimately get very meager amounts of water or even none at all. So to come back to your question, just lowering the height of the dam was not the solution since the dam itself was questionable. The very rationale on which it was justified was not true.

So what is the solution according to you?

According to us the solution has to be one that is equitable, just and sustainable but also provides the needed amount of water, power and irrigation and ensures that it goes to the people who need it most. According to this we have undertaken an active search for alternatives. Various engineers and researchers have suggested decentralized,
ecologically sound watershed development throughout Gujarat, optimum utilization of rain water and ground water in drought affected areas and so on. It is not that rain never falls in Kutch and Saurashtra. We have had ten consecutive good monsoons in these areas and yet we did not make any effort to conserve this water. The government has done nothing at all to hold rain water in small dams or in the form of ground water. On the other hand so many NGOs like the Agakhan rural program, Lokbharati and others have successfully carried out watershed development and other sustainable practices. But all such options are cast aside and the government continues to work on the SSP which consumes a huge chunk of Gujarat’s budget.

I guess work on the SSP continues since it is very much a standing reality now. Is there any point in pursuing these alternatives now?

Just because construction on the SSP proceeds does not mean that we give up on all other viable and sustainable alternatives. Such alternatives need to be pursued because large dams have been colossal failures. It is about time we recognize and accept the poor performance of dams. Unfortunately in India, a false impression has been created since independence that the food self sufficiency we have achieved has been due to large dams. Yes, it is a fact that our foodgrain production has gone up from 50 million tonnes to 200 million plus. But a simple back of the envelope calculation shows that less than 12% of the foodgrain production comes from area irrigated by large dams. There are many factors responsible for increase in foodgrain production today. Infact, groundwater has played a much bigger role than large dams in increasing the irrigated area and increasing the per hectare yields. We cannot keep perpetuating this myth about large dams. We have to undertake a comprehensive post evaluation of large dams. No one has done this exercise or even feels that it needs to be done. If we look at all the cost and benefits, and the distributive aspects, it will be difficult to escape the conclusion that large dams have not worked. They have delivered only a fraction of their claimed benefits, have had a devastating impact on the environment and displaced a disproportionate number of tribals whose entire livelihoods depend on rivers. No one knows or even cares about where these poor people end up. Most of them land up in the slums of Bombay and Delhi as beggars. They are the ones who are paying the price for India’s supposed development, not you, not me. For no dam in India can it be shown that successful rehabilitation has happened.

Does that mean you are against large dams in general?

Yes, we are against big dams because they are uneconomical, unsustainable, and disruptive.

What about the guidelines that the WCD has recommended, are you hopeful that it will help improve the performance of dams and bring about a change in the way India has been building dams?

The WCD was a great achievement because it brought together so many people with such diverse opinions who have been involved with dams. It conducted the very first independent and comprehensive review of dams worldwide, their impacts and their performance. They have managed to develop some good criteria and guidelines for future dam building based on equity, participatory decision making, transparency, equal importance given to social, environmental and technical aspects of the project, equal status to all stakeholders – all this is a great improvement. Their rights and risks approach where the rights of stakeholders are recognized and the risks to them are
assessed is a great advancement in the dam building exercise. These are all important recommendations and steps in the right direction but they just don’t go far enough. We endorse the report because of all these positive aspects, but there are more fundamental issues which the commission did not take into consideration.

**What kind of fundamental issues do you think needed consideration?**

To ultimately address these issues of inequity, injustice, degradation of the environment, displacement, livelihood, rights and so on which the WCD hopes to do, requires us to make fundamental changes to the way we live. Because these problems are not unique to dams, but are a symptom of the way we develop, the way we consume, the way we produce, the way we grow, the technologies we choose, the way we make our policies. Our society’s commitment to modernization, industrialization, urbanization and now globalization has lead to an unsustainable use of natural resources, extreme centralization, an undue emphasis on capital intensive technology, on accelerated economic growth at the expense of equality and justice, over consumption, materialism.

**So you’re suggesting that to resolve the problems that dams give rise to, we need to bring about an entire change to every aspect of our society?**

Yes, that is what we are fighting for. Although our struggle has been about the dam and the Narmada valley, we have sought to develop a discourse on alternative society, to transform our value system, our social, economic, political structures.

**But what kind alternative society are we talking about, what kind of goals and values?**

A society that is committed not to economic growth but to fulfilling the minimum basic needs of all, particularly the more underprivileged classes. In order for everyone to have basic needs fulfilled, there will obviously have to be a limit on consumption. This does not mean that everyone will have to deny themselves or live in poverty but it means enjoying what is available to the extent it is available for all. Instead of a materialistic definition of the good life, we strive for a simple, holistic, non consumerist life style. This would also lead to a sustainable use of our natural resources. Currently we just utilize and usurp nature as if it were an endless resource, we have to learn to respect nature, to live in harmony with it. At the same time we also have to consider the rights of communities which are based on natural resources. Such people are compelled to sacrifice their resources, the state takes away these resources from them and uses them for the benefit of urban communities without giving them any share of the benefits calling it development. People surviving on rivers, ponds or seas like fish workers, or those cultivating land, that is communities who are directly dependent on these resources should be the first beneficiaries of the utilization of these resources. Their rights have to be recognized and their needs have to be fulfilled.

**So are you saying that people should be in control of natural resources?**

Yes, they should be. They should be able to decide what they want to do. To take the Narmada case, the government should have come to the villages that were going to be affected, given the villagers the basic facts and figures, released study reports and given a clear picture to the people so that they could decide whether the project was beneficial or not and whether they should sacrifice their land, water and forests for it. Instead of the state making decisions for people, we call for complete decentralization and full participatory democracy that will ensure maximum economic and political power to the people and reduce the role of the state to a minimum.

**But is such a thing possible? Does such a vision of society have appeal? Is it realistic?**
People who are facing the backlash of this sort of development, are at the forefront of developing a wider ideological framework. It is realized that it is not about fighting one dam or one project, but about our basic value framework, you know the basic beliefs, and attitudes of society. As a peoples movement, if we say we are not for these dominant values then we have to show what values we are for and how they can be achieved. So we have to go into reconstruction and develop a comprehensive politico-economic, social ideology and show the alternate path. So many old and new groups are there in society like the Marxists, environmentalists, NAPM37 which comprises of over a hundred mass organizations that are in to discussing and debating an alternate society. Such discussions and debates may not be appealing to certain sections of society who do not have to make the sacrifices, but such people are in the minority. The majority are the downtrodden, the destitute and the deprived

Conversation with an activist from the ARCH-VAHINI group

In narrating the Narmada story, the activist first starts out by depicting the spatial and temporal water distribution in Gujarat and the resultant lack of socio-economic development and overall well being of the people. The SSP is introduced as the link that can make it possible to transfer water from South Central Gujarat all the way to the severely parched regions of North Gujarat, Kutch and Saurashtra. In beginning to explain their organization’s role in the Narmada conflict, the first point that the activist brings up is to clarify that they had no objections to the dam per se. Upon conducting detailed examinations, they had found the dam to be technically sound, with several novel features that were introduced to deal with the problems particular to the command area. They also found the project to be economically beneficial; in spite of the cost overruns, they still expected that the project would reap substantial benefits in the years to come. In clarifying that they were not opposed to the dam since it was a good project in technical and economic terms, the activist first starts out at the level of technical verification in the Logic of Policy Deliberation. From there, his narration moves on to the main concern that they had about the project which was to secure a better deal for the displaced tribal.

37 National Alliance of Peoples Movement
ARCH’s role had been pivotal in bringing to light a serious lacunae in the Tribunal’s decision regarding resettlement and rehabilitation – it had left out a majority of tribals who did not formally own their land from being able to avail of the resettlement benefits. They were considered to be “illegal encroachers” by the state. ARCH along with other groups was responsible for the new and improved resettlement and rehabilitation policy of 1987 that made it possible for these tribals to claim compensation, regardless of the fact that they had no formal ownership to the land. Until the improved policy had not been agreed upon and awarded, ARCH had adopted a “no land, no dam” position. For them, it was inappropriate to build a dam, no matter how good, if a large majority of tribals were left more deprived than ever. The conflict for ARCH therefore turns on the level of Situational Validation. The project itself was beneficial, however it was unacceptable that the rights of landless encroachers to their resources of livelihood in their ancestral land had not been acknowledged.; it was not acceptable since the outcome for tribals was not favorable. From examining the technical and economic aspects of the project, the activist’s concern move on to the unique circumstances of inhabitants in the Narmada valley and the impact the dam would have on them. This illustrates clearly the shift in arguments from the level of Technical verification to Situational Validation.

Having wrested the improved compensation policy in 1987 for Gujarat, ARCH threw itself into implementation work and was hopeful that the NBA would follow suit in the other two states of Maharashtra and Madhya Pradesh. However, in a surprise move, the NBA claimed that resettlement and rehabilitation were impossible and began to raise questions about the viability of the dam which ultimately lead to their announcement of opposing the dam altogether. Up until this point in the conversation, the activist’s
deliberations remains focused at the first order discourse of the Logic of Policy Deliberation. However, in discussing the NBA’s position of total opposition, his arguments move to the second order of discourse in the Logic of Policy Deliberation. The activist points out that not only did the NBA start questioning the dam itself but broadened the debate beyond the SSP and the Narmada valley to an assessment of large dams in general and their impacts on India as a whole. At this point in the conversation, his arguments move to the level of societal vindication. Although dams have had adverse impacts on Indian society, they have to be built to meet the future demands of the population and the economy. Social and environmental problems will have to be mitigated and avoided through policy changes at the national level as well as the local level through responsible activism. He specifically mentions the adoption of a national resettlement policy and more stringent environmental impact assessments. According to him activism in India should focus on bringing about such policy reforms rather than adopting a revolutionary stance like that of the NBA. This point turns out to be a segue into the level of ideological social choice. When asked why NBA’s activism is revolutionary, he responds at the ideological level noting that the NBA seeks a total restructuring of society, questioning the viability of growth and technological progress itself. ARCH on the other hand, he points out believes in the basic promise of modern development but calls for piecemeal reforms to make constant improvements upon existing structures itself.

**What is the Narmada story about?**

For us it is a simple story, about how water is distributed in this state. The southern and central parts of the state have perennial rivers and receive a lot of rainfall while the other parts of North Gujarat, Kutch and Saurashtra have no major rivers, receive very scanty rainfall and suffer from consecutive droughts. These areas suffer from great hardships because of the lack of drinking water. There is a desperate need to carry this
surplus water from south central Gujarat to North Gujarat and other areas. The SSP provides the first link for doing that. It establishes an infrastructure whereby this water can be imported to these areas. But unfortunately the project has been portrayed as a conspiracy of industrialists, rich farmers, politicians and bureaucrats. A fear has been created that water will be hijacked by the rich Baroda command, that there will be very little water that finally reaches needy areas, there will be water logging and so on. We have thoroughly examined the project and found that all these claims are unfounded. The project itself is a good one that has been designed with very innovative features to remove the old problems of land degradation in the command areas and the inefficient use of water that dams in the past have had. The particular problems of the area have been kept in mind and novel features have been undertaken in the design and planning of the canal system and delivery system. We are not saying that everything will go smoothly, there will be problems but the dam per se is good, technically. It is a very viable project unlike what the critics say.

Do you consider the project to be economically viable as well?
Economically also we say the project is good. It’s benefit cost ratio is much better than similar projects. There have been delays and the costs of the project has increased but it is because of the political movement against the dam, not because of the problems with the project itself. Overall, we don’t think that the project will lead to losses but will generate a lot of economic benefits for the area.

So unlike the NBA, you think the project itself is a good one.
We do have concerns about the project but we don’t question the dam itself, we think that more or less it will work out.

What are your concerns about the project then?
Our main concern has always been about acquiring a decent deal for the tribals that are going to be displaced by the dam. That is the key issue that needed to be addressed about the project, not whether it is economically sound or technically viable. These concerns have been brought out later by the anti dam movement. At first, no one questioned the dam itself. In the 1980s, we all worked together, various groups, to implement the resettlement and rehabilitation policy that was decided upon by the Narmada Water Dispute Tribunal. Their decision regarding R and R was path breaking since it provided for allotment of land to a land holding family in lieu of land lost. This was a break from the past when landlords only got cash for the land they lost. So at the time, we all endorsed the compensation policy and worked towards securing its implementation side by side. When we began our work in the first group of tribal villages that were going to be affected, we realized that a majority of tribals did not formally own their land. They eked out a living by cultivating their ancestral land but were considered to be illegal encroachers by the state because they did not have formal titles of ownership to their land. So we realized that the R and R policy, progressive as it was, had failed to take into account the rights of these tribals to have access to the resources of livelihood in their ancestral land. It was deeply repressive in fact and kept out a majority of the tribals. It was then that we started mounting our efforts to seek an improvement in the R and R policy. We adopted a “no land, no dam” position and after a long and arduous struggle with the government and in part through international support, we managed to secure the improved R and R policy of 1987. This policy provides for five acres of land for all adult oustees whether they previously owned land or not. It was an inclusive policy and made
sure that no tribal was left out. It was hailed as a revolutionary policy by all concerned even the NBA. Until this point there was no difference among the Narmada valley activists, except that different activist groups worked in different states. We had secured this deal for Gujarat oustees and the were hopeful that the NBA would do the same in the other two states of Maharashtra and Madhya Pradesh. But soon after the 1987 improved policy was declared, the NBA stopped looking for ways to achieve similar policies in their states. Without even giving it a chance, they denounced it and judged it to be non-implementable and in 1988 they initiated total opposition to the dam. But the NBA were very critical of the way the policy was being implemented in Gujarat itself where the number of those getting displaced was very minimal compared to the other two states, where I believe the number of those getting displaced is five to six times larger than Gujarat. They argue that there was no point in pursuing a policy that was fraught with implementation problems in the other two states as well.

We have a different view about this. They criticized every aspect of implementation, from there not being enough land, to the land purchasing committee being corrupt. According to them there were only a handful of relocated villages that were prospering and those villages were functioning as showcases to show people like you how well rehabilitation was going. They also said that the land that was given to oustees was very poor and many of them were returning back to their original land in the hills. They anticipated that this trickle would gradually turn into a flood. Well, let me tell you, the facts were very different. Out of 4,500 families, 3500 were given land that they had chosen themselves. And their prediction of the trickle of return turning into a flood of oustees heading back to their original homes just didn’t turn out to be true. In Gujarat, they argued that land would not be available, that turned out to be untrue; in Madhya Pradesh, they brought out the problem of the size of displacement that out of 245 villages being submerged, 193 were in Madhya Pradesh. If the government of Gujarat had difficulty in finding land for 10% of the oustees, was there any hope of finding land for 80% of the oustees, this is the question they raised. The thing though is that there is a mistaken impression that everyone getting displaced in Madhya Pradesh will need land to be resettled. Actually the shape of the reservoir is very long and narrow as opposed to wide due to the river running through a deep gorge with a steep slope. Because of this some families will only lose their houses which are typically built closer to the banks of the river and not their land. Resettling them only means shifting their house to a higher level on their land. Some of course will lose their land as well and will have to be uprooted completely and will have to be resettled at a distant place. But one needs to be clear about this difference to understand the problems of resettlement in Madhya Pradesh.

So what you’re saying is that the problem of displacement was not such a big issue in the other two states as the NBA made it out to be?

We think that this apprehension that they had that displacement was too big and implementation was problematic had no merit at all. When they realized that, they began shifting attention to the project itself, questioning it. It’s funny but up until this point they hadn’t raised any issue about the viability or desirability of the project itself on technical or economic grounds. All along our prime objective was to get a better resettlement and rehabilitation policy even when it was extremely doubtful that such rights would be

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38 Government sanctioned committee for the purchase of private land for resettlement and rehabilitation.
conceded. But suddenly after the major policy breakthrough in Gujarat, they took a complete U turn, they abandoned their focus on policy reforms in the other states and called for a total opposition to the dam

**Had you anticipated this?**

We were completely taken aback. We had heard a lot of rumblings against the project in the metro’s. But we could not believe that they would just abandon their activism for the tribals to whom they had made so many promises of getting R and R similar to that given to Gujarat tribals and join the battle cry that the dam itself was a disaster. They however had spread the idea that the tribals themselves were opposed to the project in spite of the quality of the R and R package. They in fact started making a new argument that R and R was not good in principle, that the poor tribes and their culture was being sacrificed so that a few rich farmers and industrialists in the central plains of Gujarat might reap the benefits. This found them a lot of support from environmental and human rights groups in America, Japan and Europe. And soon a multisided, comprehensive case was built up against the dam.

**How did ARCH position itself after this? Were you seen as being the pro dam group then?**

We were the pro tribal group. Our struggle was always about improving the life of the tribals, not about fighting the dam. That doesn’t mean we explicitly endorsed the dam, we examined issues in detail for ourselves and realized it was a good project overall. It’s a real pity that the anti dam movement chose the SSP to be the paradigmatic case of what is wrong with large dams. The anti dam criticism of the SSP has clearly been along the lines of a general critique built up against large dams by Goldsmith and Hildyard in their book. But such a general theory that all large dams are bad cannot be invoked in the case of the SSP. The SSP has been different from other projects from the start. The new R and R policy of 1987 with its subsequent improvements was a historic breakthrough and has been unprecedented in India. Also unprecedented is the novel and innovative design features. To place it into the same category as other dams is a mistake.

*I agree that this project itself is technically and economically good. I also agree that the unique characteristics of the tribal groups that are getting displaced have been addressed through breakthrough policy measures. But dam opponents worry about the high social and environmental costs of large dams. Do you consider that to be a valid concern?*

Of course we are concerned about the impacts that dams have on India in terms of the environment and our society. But is the solution to put a blanket opposition on all dams like the NBA demands? I agree that dams have major impacts, the apprehension of anti dam groups that large dams have been destructive does have strong merit. But our conviction is that as bad as these problems are, they must be solved. Bear in mind that India has a massive population problem, we have an expanding economy, urbanization, rising standards of living, all this will continue to generate great demands for food, water and energy. Dams will have to be built. At the same time, we cannot build dams the way we have been building them. We have to make some major policy changes and improvements. We have to have a national resettlement policy that is coherent. Right now different states have different policies regarding displacement. We have to ensure that what has happened in the case of the SSP becomes a precedent for all other dams. We need to have thorough environmental impact assessments that are not just done for the
sake of granting clearance. These are things we as activists need to take up. We believe in this kind of activism, in bringing about concrete changes not the revolutionary activism of the NBA.

**Why do you say their activism is revolutionary?**

They are more interested in a total restructuring of society. They talk about a society that is free of oppression, poverty, pollution. But rather than talking about that we need to first aim to make a decent square meal possible. We don’t have any grandiose vision, our vision has realistic grounding. We can atleast state what we want concretely and never relinquish our goal. We seek to replace theoretical constructs of society with practical day to day piecemeal reforms. We strive to make constant changes upon existing structures itself. We don’t think that curtailing growth will lead to a society free of pollution or poverty. Need we remind ourselves what the condition of society and mankind was in the preindustrial era?

Conversation with a professor of Physics at the Maharaja Sayajirao University

The Narmada story is described as being a bitter conflict over many issues. He starts out by noting that what started with concerns about the impacts of submergence in the Narmada valley has escalated into differences about more fundamental and complex issues. In other words, he identifies that the conflict started out at the level of situational validation but then moved beyond the Narmada valley to include other issues and spaces which basically reflect the various levels of the Logic of Policy Deliberation. According to him the conflict began over submergence in the Narmada valley since it was going to lead to uprootment of tribals, and loss of ancient and religious monuments. Groups like the NBA and others brought national and international attention to the plight of the tribals while the government responded with progressive policy measures that had never been undertaken with dam projects in the past. In spite of these breakthroughs however, the conflict could not be resolved. Both sides according to him adopted very extreme positions. The NBA decided to oppose the dam altogether even though compensation and resettlement for the displaced were announced because they thought that resettlement was practically impossible given how large the extent of displacement was going to be. The
government on the other hand was enraged that after eliciting all the compensatory measures they took an about turn and started opposing the dam altogether. They began selling the SSP as the lifeline of Gujarat and any opposition to it was considered to be an assault on the pride of Gujarat. Such extreme positions he points out, left no room for negotiation or a middle ground to emerge. When asked what kind of negotiation he would have liked to see between these different groups he mentions that restructuring the dam to a lower height would have resulted in bringing both sides together and not having to make a choice between the rights of Gujarat and the rights of those facing displacement. A restructured SSP according to him would have reduced submergence and hence the number of those getting displaced and still retained the benefits. In talking about the advantages of a lowered dam height, he brings up the SSP’s economic viability. Concerned about the spiraling costs of the SSP dam, he points out that lowering the height would have also saved millions since it would have cut down the number of families that would need to be resettled. Making sure that a lowered SSP would still be able to retain the extent of benefits that the SSP would provide at its original height, and pointing out the savings in cost that would result from a smaller dam, shows that the level of Technical Verification is included in his analysis of the project. Until this point in the conversation his arguments remain in the realm of the first order of discourse in the Logic of Policy Deliberation concerned with the program or project, its outcomes, its efficiency and the circumstances in which it occurs. Soon however, his focus shifts out of the Narmada valley and expands to India as a whole. When it is pointed out that a big dam might not have been in the interest of the Narmada valley but surely is in the interest of India, he immediately accepts that a larger perspective needs to be brought to conflict, it
cannot just be evaluated in terms of what is happening in the Narmada valley. It is then that his deliberations shift to the level of Societal Vindication. He acknowledges that dams have advanced the greater common good; they have made India self-reliant. But the government rhetoric that dams are in our national interest tends to overlook the inequity and injustice that large dams bring. On the other hand he says he also does not agree with the position dam opponents take that dams have contributed minimally to India while causing large scale social and environmental destruction. For him, dams have contributed to India’s progress and development but their benefits have come at huge social and environmental costs. When asked about the WCD report that seeks to mitigate such costs, he urges that its guidelines should be adopted in the best possible manner but adds that the government of India considers the report to be neglectful of India’s need to develop and catch up with the West. Such measures are perceived to be efforts to thwart India’s modernization and trajectory to becoming a world power. When questioned whether this is the same reason the NBA is seen to be anti India, he responds that the NBA dared to question modern industrial development; who had benefited from it and who had paid the cost. Valid as it is to raise these issues, he points out that he does not go as far as the NBA in seeking the undoing of modern industrial society altogether. The NBA alternative to existing society is a more or less Gandhian system based on subsistence living. Rejecting such a society as being unviable and impractical, he suggests that until a more appealing non modern alternative is constructed, efforts should be focused on making development more sustainable and equitable. In his opinion, the key to a good society would lie in the simultaneous pursuit of wealth generation and wealth distribution. The conversation therefore culminates at the level of Ideological Social
Choice with a critical discussion about the very normative values of the social system and the possibility of an alternative order.

What is the Narmada story about?
The Narmada story is about Gujarat’s biggest, most sacred and most controversial river. The temptation to use this river has been great since Gujarat happens to be a very dry state with severe water problems. A number of leaders have dreamt about tapping this water that has been flowing into the sea wasted and to use it for domestic and industrial purposes, irrigation and the generation of power. The problem however is that wherever you build a dam, you land up with a lake that balloons out in the upstream areas. This leads to submergence which is followed by loss of some kind. Typically, hardly any attention has been paid in the past with projects like Ukai and others. In the Narmada case however, this has become a huge issue and it has escalated into a very bitter conflict over many issues.

Why do you think that it is in this particular case that submergence has become such a big issue?
Medha Patkar has to be credited with bringing a lot of attention to this case, international as well. She has raised a lot of concerns about the impact submergence is going to have in the Narmada valley. The dam is going to lead to large scale displacement of tribals which is problematic. It is also going to lead to loss of forests, cultural and historical loss by way of temples, monuments and so on. She has been right in raising these issues and her efforts have been very appreciated. Government has also responded to a large extent in terms of very progressive policy measures. Certainly a lot has been done here than was ever done with earlier dams. However the conflict has not been resolved.

Why do you think the conflict has not been resolved in spite of these path breaking measures?
The NBA actually worked towards resettlement to begin with. That was their main issue. However after that they took a position of total opposition. Considering the history of resettlement with dams, and how mammoth the number of people getting displaced was, they decided that this was not going to work and so decided to oppose the dam altogether and started building up a case against the dam. This turned the people of Gujarat against Medha. The situation is so bad that she cannot even set foot in the state without being concerned for her safety. The government on the other hand believes that there is no alternative to provide water to Kutch and Saurashtra and from their side they have provided maximum relief for the displaced. They have sold the SSP as a panacea for all our problems and the belief is that if harnessed, Gujarat will develop very fast. Politicians have turned the dam into a symbol of Gujarat’s pride, there are such strong feelings about it that for any party to say anything against it is like committing political harikiri. So both sides have adopted very extreme positions that has left very little room for negotiation.

What kind of negotiation would you have liked to see between these anti and pro dam forces?
I think I would have liked to see them work together towards restructuring the dam so that submergence could be reduced. Displacement would not be such a huge problem
then. Of course rehabilitation, even for a small amount of submergence is complicated but the problem at least would become easier to grasp. There was a very good proposal that was put up by Paranjpye and Joy that calls for a reduction of the dam’s height which would effectively reduce the submergence zone and save a large number of people who are threatened with displacement. These researchers were trying to fill the middle ground between the two extremes of glorifying the dam as being a panacea and life line on the one hand and denouncing it as being a planned disaster on the other. This proposal would have made it possible for these differing groups to come together and not have to choose between the dam and Gujarat’s development and the human rights of those being displaced. Somehow, it didn’t lead to the more acceptable, and lasting solution that was hoped for.

**But wouldn’t a reduced height have affected the benefits of the dam?**

Even at its planned height there is uncertainty actually about the extent to which the SSP will be able to deliver power, water and irrigation. There are those who say that the dam will ultimately deliver much less than its stated claims. There is fear that rich farmers will develop sugarcane because it is a very paying proposition, there are golf courses, five star hotels, etc coming up all along the canal route and there is a real possibility that they will suck away all the water which will completely negate the whole purpose of the Narmada. A modified SSP would not have meant a reduction in benefits, in fact it would have meant a more equitable distribution of benefits since the proposal sought to redesign the entire delivery system to give water on a priority basis to Kutch and Saurashtra, the critically dry areas. An important point to mention is the savings in financial cost. Since fewer families would have been displaced, the savings in financial cost of rehabilitation alone would have been thousands of crores of rupees.

**So a reduction in height would have been beneficial from the economic point of view as well.**

The costs of the project are soaring day by day. Every time the height of the dam increases it puts a burden on the exchequer of the state. Although the project was economically viable to begin with, the costs have gone way beyond what was originally planned for. At some point we all begin to wonder whether it is worth spending billions of dollars on a project that could have provided the same amount of benefits at a much lesser height.

**A big dam might not have been in the best interest of the Narmada valley and Gujarat but it is in the interest of India, don’t you think?**

If you take the larger picture and really, one should because this conflict cannot just be evaluated in terms of what is happening in this situation. There is little doubt that dams have made us food secure. The last great famine that struck Bengal where millions perished was decades ago. Since the last fifty five years of our freedom we have not faced such a famine. We have a tendency in this country to run down our achievements but we have done very positive things. The very fact that this large country can feed itself and have a surplus speaks volumes. However we must not forget that in India developing dams has so many other problems which are not present in other countries. Particularly most of our tribal population lives in the hilly areas which is exactly where we build dams. So once again the negative fallout goes on the poor people. This was not the case when they built the Hoover dam in America. Since there weren’t too many people living

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39 Eastern state of India
in the upstream, that angle did not appear at all. The government argument that dams are in our national interest overlooks this aspect of social inequity and injustice. But on the other side, the argument of dam opponents that dams have caused only social and environmental destruction and not contributed to our common good, our progress and development is also not right. I would say that dams have contributed to our progress and development but this has come at a cost, at a high human and environmental cost to India.

**What do you think of the WCD recommendations that seek to mitigate such costs?**

I think we need adopt these in the best manner that we can. I don’t think we can build dams the way we used to. If Patkar and her group have not been able to stop the SSP, they have forever changed the way we look at dams. They have brought the huge costs of dams to the forefront and we can no longer turn a blind eye to this. WCD recommendations I believe have been endorsed by their group. But it has not been received well by India.

**Why is that so?**

WCD measures for undertaking dam building are considered to be too stringent and ignoring the developmental imperative that India has. India is a developing country that needs to catch up with the West with modernization, industrialization and economic growth. Any such measures are considered to be a way holding India back from becoming a world power.

**That is the same reason why the NBA is seen as being anti India or against India’s progress and development?**

Yes, because they raise the issue of development. They have forced into open the cost of modern development, who has benefited from this and who in reality is being asked to pay the price. They rightly bring up this issue but their answer is to give up on modern industrial progress. I have nothing against that, but their alternative to that is not a very viable one. The Gandhian system of subsistence living for lack of a better term, fails to see that the world is changing very rapidly. It is illogical to ask people in the cities to give up and go back to the villages or even visualize the village as an ideal. In a way they have failed to have a clear vision of a non modern, non capitalist future that has appeal.

**So what is the solution?**

Until we come up with a more viable alternative, we have to strive to make development more sustainable and fair. We have to make sure that the most poorest and most powerless can make their voices heard. If wealth generation and wealth distribution are pursued together we might be able to create a god society provided government is on the right track of being honest and efficient.

Conversation with a homemaker

The first issue she brings up is that of displacement. She identifies two key issues with resettlement, firstly whether it is going according to plan and secondly but more importantly whether it is appropriate to displace anyone, in particular, the tribals. In doing so, her deliberations first begin at the level of Situation validation concerned with
an evaluation of the circumstances in which the program occurs. She emphasizes that there is something characteristic about them that makes displacement undesirable. In contrast to regular citizens who are used to migrating to different places and assimilating, the tribals are forest dwellers who cannot be expected to assimilate into mainstream society. Keeping the special circumstances of the tribal groups facing displacement, she wonders why alternatives that would have had fewer impacts were not given consideration. When asked whether an alternative would have managed to provide the extent of benefits the SSP can, she agrees that an alternative might not have been able to match the extent of SSP’s benefits but then goes on to questioning the claims of the SSP. When her arguments shift from describing the problems associated with tribal displacement to assessing the benefits and costs of the SSP, they move from the level of Situational validation to the level of Technical verification in the Logic of Policy Deliberation. Unlike others who are more familiar or involved with the project, she does not go into technical details or calculations about the final estimation of power that will be produced, or the actual amount of water available in the river. Rather she assesses the claims on the basis of her personal and everyday experience with the government. If we cannot depend on the government to provide basic amenities and services, she questions, how can we believe governmental claims that the dam it is constructing will be able to make Gujarat green and take water up to Kutch. It is interesting to note that she does not quantify the benefits but describes the benefits in terms of Gujarat becoming greener and water reaching Kutch. Not only does she raise concerns about the benefits regarding the dam, she also mentions that she is troubled by its costs. Acceding that she is limited in her capacity to assess benefit-cost calculations, she nevertheless says her “gut feeling”
tells her that the benefits might be exaggerated. Rather than knowing what costs are omitted or underplayed like dam opponents who are more well versed with the project do, she surmises that the true costs of the project will never be known. Even though she is not aware of the typical arguments in the debate about the dam’s economic performance, she is able to raise the same concern that other critics of the dam have at this level of Technical Verification, albeit in a less technical and quantitative manner. Realizing that lay citizens like her are handicapped when it comes to making assessments about technical and economic matters, she is thankful that groups like the NBA are there on behalf of the citizens to dissect such claims and keep a watchful eye. Along with the project’s techno-economic performance she broaches a concern about the safety of the dam. While the government describes the dam as an engineering marvel and boasts about the largest volume of chilled concrete poured in or the spillway’s radial gates, she asks “what if there is a crack in the dam”? For her it is not just how the dam performs but also its unanticipated consequences that are worrisome. The turning point in the conversation occurs when she is asked whether she would still have reservations about the project if submerging the Narmada valley was not problematic or if there was no doubt about the SSP’s performance. In other words, when a question is posed to her at the level of Situational validation, she shifts her argument to the next level, the level of Societal vindication. It is then that she submits that even then she would feel uncomfortable about the project since she is against large dams in general. Worried that they are dangerous and there are too many problems associated with big dams, she suggests that like Canada and other countries, India too should give up on dam building. She admits that dams have provided India with developmental benefits and reminisces about India’s first Prime
minister, Nehru, referring to them as the “modern temples” of India. However, she adds that at that time India had just become an independent country and so it was acceptable to build dams, but over time, it had become clear that the social and environmental costs of dams were too high and it was mainly the tribals who had borne the costs of displacement. When asked if mitigation of social and environmental costs would make dams more permissible, she continues to state her opposition to dams. However, her reasoning changes from the costs at which dams provide developmental benefits, to questioning how appropriate it is to intervene in nature in such a big way. This question proves to be the segue into the level of Ideological Social choice concerned with a normative evaluation of the principles and values that underlie the extant social system. She professes that it is wrong to exploit nature but clarifies that she is not a “radical environmentalist”. For the sake of development, she concedes, nature will have to be utilized but urges that it should be done within limits. When asked if she is satisfied with the way modern industrial development has worked out for India, she admits that development has benefited the rich and powerful but bypassed the poor. However, when the idea of a society based on subsistence is proffered as an alternative to modern industrial India, she suggests being more pragmatic and working within the existing system since it already had the mechanisms in place to make India a society that is developed as well as just and sustainable.

What is the Narmada story about?
To me the story is obviously about the building of a large dam and taking water all the way up to Kutch. A lot of people who support the dam say that you don’t know how acute the water problem is and how good this dam is since it is going to provide water to these dry areas. Then there are also feminist supporters who say that this is going to relieve the pressure that women are put under to fetch water everyday by walking with pots on their heads for three or four miles. So these are the arguments for the dam. The arguments against the dam have basically been about many things, but rehabilitation is one of the
big problems. There is a lot of hue and cry over R and R. Generally, the anti dam keeps talking about resettlement. I keep hearing a lot about it.

**Do you think it is a valid concern that has been brought up by the anti dam groups?**

I think it is. I worry first of all about all whether it is being done properly or not. And secondly, that even if it is done as on paper, do we have a right to play with people’s lives and emotions? It is not a question of giving them a house, what happens to their livelihood, what happens to their emotional needs, their support of their kin group. If we are forced to leave our homes forever on account of some benefits that are needed for someone else, how will we feel? Will we be satisfied with another home somewhere far off in new surroundings? It is a different matter that we all migrate to different places, but that is of our own accord. Plus we have the capability to assimilate. These people are different. They have been forest dwellers for centuries. So these are the two major issues in my mind.

**So the problem is that these people who are going to be displaced are different. They are special and so resettling them is problematic.**

Yes that is what I am saying. They should have looked at other alternatives instead of going in for this big dam straight away. I wonder why they just went ahead for a big dam? I saw a picture of the dam the other day and it frightened me. People tell me all the time that I should go and see the reservoir it is so beautiful, but honestly, it scares me. Supposing there’s a crack in the dam, or an earthquake, what are they going to do?

**An alternative would surely have had fewer social and environmental impacts but do you think it would have been able to provide the extent of benefits the SSP can?**

May be not as much but then the big issue for me is will this dam really provide water to Kutch or irrigate the millions of hectares of land that they claim it will? All this talk about so much water, greenery in Gujarat, etc, is that going to be a reality? The outcomes that they claim are very debatable. After all, has the government ever managed to live up to its promises? You cannot even depend on the government for your local street being cleaned, how can we expect them to meet such tall and grand claims? Not only do I wonder about how many of these claims will materialize, I also worry about the costs. I am not sure about the calculations and figures of the benefit cost ratio but my gut feeling tells me that the benefits are all inflated and the true costs of the dam we will never come to know. It is good that groups like the NBA are there to be watchdogs on behalf of the public but I doubt the extent to which they can get all the real figures. You know how the government works. These are the issues that come up.

**What if submerging the Narmada valley was not problematic and what if the SSP is actually able to deliver the benefits, would you be ok with it?**

No I just do not like big dams. I think there’s a lot of danger in building these enormous dams. It entails too many adjustments and too many problems. Canada used to be a big dam country I heard but they gave it up because it was not really viable and they went on to building small dams. If Canada can do it why shouldn’t we?

**I agree there can be danger in building such large dams but don’t you think it is ok to take the risk considering the developmental benefits that dams can provide India?**

I don’t know. I remember Panditji[40] (who he is) saying when I was a young girl that these are the temples of India. At that time we were freshly independent and dams like the

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[40] Nehru, India’s first prime minister is also referred to as Panditji in India
Bhakra and others had given us our food security and contributed to our energy development. But what I want to say is that at that time we were a new country so it was alright, I can understand that. But not now. Now we know what the effects of dams can be. We know that those benefits came at great costs. We know one thing for sure that those benefits went to the rich and the poor, especially the tribals have had to bear the costs. There is no doubt about that. Have you ever heard of a Patel or Shah getting displaced? They would be up in arms if that happened. It is always the tribals that get displaced. That is why dams are made so easily in our country. They are the most vulnerable section of society who have no voice so let us boot them out of their homes. It is only now that they have found a voice in Medha and the NBA you know.

**But if the social and environmental costs of dams could be mitigated and it could be ensured that the benefits are equitably distributed, would you be ok with dams?**

No I don’t think so. I am just not comfortable with altering the course of rivers like that. It is just too dangerous. It’s manipulating nature in a really big way. I don’t know if that is such a good idea.

**Do you think it’s wrong to tamper with nature?**

No, no, I am not one of those radical environmentalists. I am against exploitation of nature for our purposes. I am not saying that we should not use nature at all. I mean we do have to if we want to develop. But there should be limits you know.

**So for the sake of development, it is ok to use nature but it should be within limits?**

Yes, we have to think about our earth and how much it can sustain but at the same time we have to move forward.

**But do you wonder about this kind of development, I mean industrial development. We’ve had fifty years of such development and who has it benefited?**

Correct, I agree we have had we have had a very skewed development in this country. It is always the poor who have had to pay the costs of development and development has just passed them by.

**Why do you think that is?**

This is the nature of our society, it has been like that forever. Our entire society is unfair and unjust.

**So would you say that perhaps if we didn’t pursue a modern industrial India but one that is more subsistence oriented, based on simple living, the poor and oppressed in our society would be better off?**

Perhaps but this is more of fanciful thinking and not grounded in reality. This is like an intellectual pursuit. We have to focus on what is possible. We have to make changes within our existing system. We need to make sure we balance development with justice and this is possible without making the kind of changes that you are talking about. We already have mechanisms in place for it like reservation, progressive taxation, etc. If we enforce it, make it work well, we can ensure that our current society can become fair.

Conversation with a member of a non profit organization

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41 Affluent communities in Gujarat
42 Reservation in India is a form of affirmative action whereby a percentage of seats are reserved in the public sector units and in all public and private educational institutions for the socially and educationally backward classes of citizens
The conversation begins by the individual distinguishing two narratives about the Narmada – the one about the dam and its capabilities and the other about the Narmada valley and its inhabitants who the dam will impact. The two storytellers according to him are the government and the NBA and he expresses his reservations about both when he says that the government narrative is too “authoritative” while the NBA narrative is too “shrill”. Neither, he claims, have allowed the tribal to speak what he or she truly wants. Being involved with preserving tribal language, he understandably starts out at the level of Situational Validation in terms of the Logic of Policy Deliberation. He draws attention to how unique and rich the tribal way of life is and how the dam is forever going to erode their art and dance forms, their language and their collective way of governance from which we can draw lessons. It is the erosion of this unique culture and civilization and its merging with a standardized form of life that is unacceptable to him. When asked if he would feel differently about the dam if the tribal way of life was not unique or if the dam was being built in an area that did not have inhabitants with unique characteristics, his arguments shift to the level of Technical Verification. He immediately recognizes that it is not just the nature of the people who are being impacted or the particular characteristics of the area being submerged that is the problem but that there are issues that he has with the project itself. He points out that the very rationale for the project is suspect; it makes no economic sense, it is expensive and has been chosen over other means that would not only be less expensive but that would avoid submergence as well. However when it is pointed out that government officials cite the conclusions of various independent agencies that show the project to still be very economically viable, his focus moves away from the economics of the dam. At first he says the state has its own vested
interests to serve and that he does not trust their conclusions. When asked which agency’s benefit cost analyses he would trust, he argues that it is not about trust, but even if the dam is after all economically viable, one cannot ignore or overlook the huge social and environmental costs at which the benefits are secured. It is then that his arguments shift to the level of Societal Vindication. He points out that precious forests have been lost due to multipurpose projects, but more importantly for him, dams have evicted over fifty million people from their homes. Most of those who are displaced are scheduled caste and tribes who then are subsequently alienated from their natural resource base and their culture. In the process of securing the benefits that dams provide, India has failed to take care of its most oppressed and poor sections of society and in the process exacerbated the existing inequities present in society. When asked if he is reassured by the efforts of groups like the NBA who are concerned and fighting for the rights and well being of tribal groups that are displaced, he brings up the level of Ideological Social Choice. He remarks that the Save Narmada movement is not as concerned about preserving the tribal way of life as it is about questioning development and creating an alternative society based on a rejection of modern industrial values and the adoption of Gandhian values like subsistence, equity and justice. When questioned about whether he approves of their vision of society, he says that rather than imposing a modern conception of society or a Gandhian one, it is better for the tribals to be able to decide for themselves what idea of India appeals to them.

What is the Narmada about?

The Narmada stories are two – one is of the SSP and the series of dams and policy making that is bogged down in power play. The other is about the Narmada basin which has been home for the growth of a culture and civilization which still survives today and is very different from the civilization developed in the rest of India. It is a story about the silent genocide of this civilization. So please tell me which story we should talk about?
I would like to hear both the stories. The government narrative is too authoritarian and I am highly suspicious of it. On the other hand the narrative of the NBA and Medha Patkar is too shrill which I find very questionable. I am not moved by either the authoritarian voice of the government nor the shrillness of Medha. Both have failed to understand what it is that the tribals want. The government wants to integrate them into mainstream society while the NBA is more about questioning development and what the state’s role in people’s life should be. But this is a story about a culture based on an oral transmission of knowledge, about a cooperative, collective concept of governance, without any ownership. It is a completely different civilization. And that civilization has no space anywhere in the world. Yet it is managing to survive somehow. The Narmada is a civilizational pole of India, it is the cradle of an entire culture and way of life that will be eroded forever. And that culture is being forced to merge with a standardized form life. All their dance forms, their art forms, their language, is being wiped out. This should not be acceptable to us. I feel very strongly about this and I feel sad that we fail to understand what these people are and therefore we do not know what they want.

But some don’t see the tribal way of life as unique. They think that tribals live a miserable life in extreme poverty and need to be integrated with mainstream India. I am not denying that they do live in poverty. But my concern is more about how unique their way of life is and how it should be preserved as a different way of living. From their way of life, we can learn different ways of governing, a different relationship with nature, with each other.

So if their way of life was not unique or if the SSP was being built elsewhere in an area that did not involve inhabitants with unique characteristics, you would be ok with the SSP?

It is not just this area that the SSP should not be built, I think the SSP should not be built period. Let us forget about the Narmada basin for a while and the impact that it is going to have there and let us look at the dam by itself. Why do we need it? Yes, there is an urgent need for water, I don’t deny that, but the dam is a completely needless thing. It has been justified by the state because of the large economic benefits that it will reap. But the project makes no economic sense at all. It has become one of the most expensive projects ever. Other alternatives would have been much less expensive not just in terms of submergence but also in economic terms.

But government officials point out that economic appraisals of the SSP have been updated by various independent agencies and they have found that the SSP is still very economically viable, that the scale of benefits is large relative to any other feasible alternative and with substantial multiplier effects as well. This is a decision of the state which is a set of people with vested interests, the state has its own interests to serve. These are not neutral decisions. I don’t trust these conclusions. What agency would you trust to conduct a benefit cost analysis of the SSP then?

It’s not like that. It’s not about agency or trust. If we ourselves conducted or studied the benefit cost analysis of the dam and found it to be economically viable, we would still be ignoring or overlooking the huge social and environmental costs of dams. India has lost rich fertile forests and more than fifty million of its people, most of whom are tribals, have been uprooted. How do we account for that? In building dams to secure these benefits, we have failed to ensure the well being of our local communities and protect
them. And have dispossessed them of their livelihood, and of course their culture, history and civilization.

**But what about the efforts of groups like the NBA who are fighting for the rights of the tribals? They’ve come a long way, don’t you think?**

The NBA is not so much concerned about the tribal way of life as much as they are about questioning development and seeking an alternative society. Their struggle is more ideological and political than anything else.

**Do you approve of that?**

Of what?

**Of their alternative vision of a society based on equity, justice and sustainability and a rejection of modern industrial values.**

I am not against modern development, neither am I for a Gandhian way of living. I have nothing against this new trend of globalization either. These are not new ideas. It has been there for ages. Caesar used to wear silk imported from India. We cannot say whether Gandhian values will be better for the underprivileged tribal or modernity. It is for them to decide what idea of society appeals to them rather than imposing our conceptions of society on them.

**Conclusion**

To conclude, the purpose of this chapter was to undertake an empirical examination of the Logic of Policy Deliberation through citizens discourses in the Narmada conflict. The goal was to demonstrate the extent to which the different levels of the Logic come up in informal conversations with citizens about the Narmada issue. The objective of this was to verify the claim that the Logic of Policy Deliberation actually represents the way citizens argue about issues. Actual conversations with a range of citizens directly involved and not directly involved in the Narmada conflict were shown. The result has been the illustration that citizens in the Narmada debate are to a greater or lesser extent attuned to the different levels of the Logic. It is to the levels of Technical Verification and Situational Validation that citizens typically turn when they first begin to deliberate and argue either for or against the dam. But as the conversation proceeds and they are faced with counter arguments or scenarios, they turn to the levels of Societal Vindication and Ideological Social Choice to defend their original judgment about the dam. Conversations reveal that there are certain levels at which citizens will make more
extensive arguments and other levels at which their deliberations will be brief, however it is not to an explanation of differences in the way people relate to the levels that this work is devoted but to simply show that the different levels of the Logic emerge when informal conversations about the Narmada issue occurs. Having undertaken both, a theoretical application of the Logic of Policy Deliberation and subsequently an empirical examination of the Logic through citizens discourses in the Narmada conflict, the next chapter turns to a detailed discussion of the findings of these tests and their implications for the field of policy analysis.
Chapter VI Findings and Conclusion

The main goal of this study was to undertake an empirical examination of the Logic of Policy Deliberation introduced in detail in chapter one. Tested through the Narmada conflict in India, the study first undertook a theoretical application of the Logic to examine how well the arguments in the Narmada debate were distributed across the four levels of the Logic. Having found the range of arguments to be widely spread across the phases of the Logic, the study turned to examining the level to which citizens themselves were attuned to the levels of the Logic. The previous chapter demonstrated that the four levels of the Logic emerge in varying degrees in actual conversations with citizens about the Sardar Sarovar dam. In other words to a greater or lesser extent citizens are attuned to the different levels of the Logic of Policy Deliberation. The purpose of this chapter is to discuss in further detail the findings that emerge from the theoretical application of the Logic to the debate as well as the empirical test of the Logic through actual conversations with citizens. Towards that, the chapter first begins with a discussion of the findings from the theoretical application of the Logic, after which the findings from the empirical examination of the Logic through citizens discourses is discussed and finally the chapter ends with a discussion on conclusion and implications of the study.

Findings from the theoretical application of the Logic to the Narmada debate

The theoretical analysis of the study found that the arguments in the Narmada conflict are widely and extensively distributed across the logic of policy deliberation. The model as discussed in the introductory chapter is a deliberative scheme that allows the simultaneous investigation of empirical and normative policy judgments (Fischer, 95). In the first two phases of the logic of policy deliberation, the focus is on the specific action
setting of a policy initiative. It involves the evaluation of specific program outcomes and the situational context in which they occur. In the second two discursive phases of the logic, evaluation shifts to the larger social system. The focus here is on evaluating the instrumental impact of the policy goals on the system as a whole and an evaluation of the normative values underlying the social order. What emerges from the theoretical study of the Narmada conflict is that the issue is so contentious that there is no one specific level at which the dispute arises. Rather, arguments emerge at all the levels simultaneously. The labyrinth of claims and counter claims, and a whirlpool of arguments that at first seemed so very vague, ambiguous, and disjointed became systematically organized and emerged visible as parts of a comprehensive evaluation when the logic of policy deliberation was applied to it. The logic offered specific “locations” so to speak, for the disparate arguments in the case to be arranged or organized.

As mentioned before there is no particular order in which the arguments arise, but in the interest of clarity the discussion will begin with the specific action setting in which the policy initiative takes place. One array of arguments that are exchanged in the debate is about the performance of the dam in terms of the efficiency with which it meets its objectives. The two primary concerns are the extent to which the dam will meet its stated objectives and the cost at which it will do so. Proponents of the dam emphasize the enormous benefits the dam is going to generate and the favorable benefit cost ratios that demonstrate its great economic value. Benefit cost ratios and internal rate of returns are cited to show that the benefits of the SSP far outweigh its costs. They underscore that several independent agencies have examined the economic performance of the SSP and have confirmed repeatedly, that the scale of benefits is very large compared to any other
alternative. In addition they point out that it is one of the most technically efficient projects and all measures have been taken in advance to ensure that it will meet its stated claims. Opponents of the dam however worry that the dam will not be able to ultimately deliver drinking water, irrigation and power to the extent claimed. They raise several technical issues like the actual extent of water available in the river, the irrigation efficiency assumed, the loss from water evaporation, etc. to examine the true extent of benefits. They point out that benefits have been systematically overstated and exaggerated. They also question the cost at which the dam will provide its claimed benefits. Their examination of the benefit cost ratio reveals that several important costs have been omitted or understated. In addition, they warn of the alarming rise in the costs of the dam due to the long gestation period. Attention is also drawn to the unanticipated consequences that might result from the benefits of the dam such as water logging, salinity of the soil coming to the surface, and sugar factories in the command areas usurping the waters meant for Kutch and Saurashtra. These arguments that are concerned with getting a true estimate of the extent to which the dam will meet its objectives, how efficiently it will do so, and its unanticipated consequences correspond unmistakably to the level of technical verification in the logic. In fact these are the three main components that comprise the assessment of a policy at the level of verification. At this level, evaluation is concerned with technical analytic questions that are typical of empirical policy analysis. Deliberations at this level focus on empirical assessments of the degree to which a program fulfills its stated objectives, how efficiently is does so, and if there are unanticipated consequences that offset the program objectives.
Another assemblage of arguments discernable in the debate concerns the evaluation of the situational circumstances under which the dam will generate its benefits. The Narmada valley and its inhabitants become the focus of deliberation here. Anti dam activists argue that large scale submergence in the Narmada valley on account of the dam will lead to massive social and environmental destruction. The valley is a place where millions of tribal groups who are forest dwellers have been residing for centuries. They are a self sustained community whose livelihood depends on the river, the forests, and their land. Dislocating them would inevitably lead to deprivation and destitution. The governmental plans for resettlement and rehabilitation are deemed to be unfeasible due to the large extent of displacement, the lack of resources, and the absence of political will. Although the main focus of the opposition to the dam in the circumstances, centers around tribal displacement, anti dam activists also raise concerns about the environmental loss, cultural loss in terms of ancient monuments and sacred sites, and the threat of earthquakes. While the activists focus their arguments on the plight of the tribals, the government draws attention to the sufferings and miseries of the people in the water starved areas of Gujarat. Denied access to a basic necessity like water, these people are forced to drink and use nitrate and fluoride affected water. Not only has the lack of water wreaked havoc on their lives but it has impeded the entire socio-economic development of the state. Under these circumstances the Narmada waters are “liquid gold” and the SSP becomes the “lifeline” of Gujarat. The submergence in the valley is seen to be a furor created by the dam opponents. Unlike the activists, they portray the life of the tribal to be wretched, and displacement, as an opportunity to integrate them into mainstream society. Aside from the tribals, the valley is seen as denuded and degraded
and not worthy of preservation, more so when water is so urgently required in other parts of the state. Above all, it is believed that the resettlement and rehabilitation policy will not just regain the standard of living of the displaced, but improve it considerably. These arguments reflect that evaluating the circumstances under which the benefits will occur is an important part of the debate. For activists, the social and environmental disturbance in the valley and the inadequate nature of the resettlement and rehabilitation policy are inappropriate circumstances under which the benefits of the dam should be realized. The government on the other hand argues that these circumstances are not as acute as the activists make it out to be and that they will be adequately addressed through compensation and mitigation measures. These arguments clearly address the basic questions of the situational validation. At this level in the first order of evaluation, deliberations turn to a normative assessment of the program objectives and the situation to which they are applied.

A third type of argument that is apparent in the Narmada conflict is made about the societal system as a whole and how large dams in general, address a valuable function for it. The focus of deliberations turn to the contribution that large dams have made to larger societal goals of development and modernization. Dam advocates remind that dams have been the “temples” of modern India. They have provided India with food and energy security that have made India a self reliant society. Dams are hence indispensable and essential to the very development and progress of society. The developmental needs of India’s growing populace in terms of food, water and energy can only be provided through large dams. Critics of dams argue that dams are not the temples of India’s modernization but “tombs” of its destruction. The official machinery they argue has
created a myth about the contribution of large dams to food security. In reality, dams have contributed very minimally to food grain production. More importantly, their benefits have gone to rich farmers and urban consumers while the tribals have had to bear the costs. While they call for a stoppage of all dam construction, there are groups who argue that stringent criteria and guidelines need to be developed so that its adverse impacts on society and the ecosystem can be mitigated or compensated. Such arguments that are made, not about the situational context but about the societal system within which the programmatic action takes place, is related to the level of societal vindication. At this level discussions seek to assess how policy goals function to facilitate or realize larger societal goals and values.

Dominant developmental requirements of the social system on the one hand and adverse social and environmental implications of large dams on the other, triggered a different kind of argument in the debate, one that concerned the societal system itself. Radical activists argued that inequity, injustice and other symptoms of dams were manifestations of the dominant ideal of development and modernity. Rather than participating in the call for improving the performance of dams and mitigating their adverse consequences, they call for a comprehensive restructuring of the social system itself. They advocate a change in economic, social and political structures to bring about a non modern society based on equity, justice, sustainability and a rejection of economic growth. Dam believers respond to the call with outright rejection, criticizing such a society as being regressive and unfeasible and emphasize the desirability of a society that is modern, technologically advanced, and developed. Normative arguments about the ideals and values of the social system and reflections about an alternate society and a
different way of life can be located at the level of ideological choice in the logic of policy
deliberation. The final discursive phase of the logic is addressed to establishing a
reasoned basis for the selection of principles that should govern the development of
society or the way of life.

Arguments in the debate that range from technical issues all the way up to the
kind of society that one should like to live in, can be systematically organized and
interpreted with the assistance of the logic. The logic can be used to elucidate and
evaluate both the empirical and normative arguments that come up in the Narmada
debate. The application of the logic of policy deliberation to the Narmada case shows that
competing perspectives that appear to have little in common with one another are only
different components of a complete evaluation. The theoretical application of the logic to
the Narmada case shows that clear and ideal type arguments are made in the debate. The
remaining test of the model was to empirically examine the degree to which people
themselves could argue across the levels of the logic.

Findings from the empirical examination of the Logic of Policy Deliberation

The study finds that different levels of the Logic of Policy Deliberation emerge in
‘every day’ type conversations with citizens regarding the Narmada conflict. Conversations show that all four discourses of the Logic of Policy deliberation have a
role to play in their assessment of the dam. When citizens favor or oppose the dam, their
judgment is driven by specific economic and technical concerns, by the social and
environmental context of the Narmada valley, by what consequences dams will have for
India and by assessment of the modern industrial worldview of which dams are an
instance. Citizens typically focus on one particular discourse at first but inevitably
broaden their arguments to the other discourses as the argument progresses. Conversations show that in the Narmada debate, individuals typically start out at the level of Situational validation or Technical verification but as they are faced with counter arguments or scenarios, they expand their arguments to the Second order of discourse and the levels of Societal vindication and Ideological social choice.

Government officials will typically start out at the level of technical verification emphasizing the benefit cost ratio that demonstrates the economic viability of the dam. When faced with counter arguments that the benefits might be overstated and costs omitted and underplayed, and that the SSP will ultimately only deliver a fraction of the benefits and instead cause large scale destruction in the Narmada valley, their arguments begin to shift to the level of Situational Validation. They argue that there is a dire and urgent need for water in the parched and drought stricken areas of Kutch, Suarashtra and North Gujarat, that the SSP is the only alternative given Gujarat’s unfortunate lack of water resources, and that there are excellent compensatory measures in place that will mitigate and reverse the losses. When alternatives like check dams or lowering the height of the SSP that could provide the same benefits with fewer impacts are pointed out, or when it is argued that there are certain losses that are impossible to mitigate, they take the argument to the level of Societal Vindication. They will admit that there are certain costs that cannot be reversed but argue that building dams will yield a larger social good. Dams they point out are the engines of India’s development; they have enabled India to become self reliant, provided a clean and cheap source of power and contributed to India’s water security. In the face of India’s alarming rise in population and fast growing economy, the only way to sustain India’s self sufficiency, keep hunger, thirst, poverty at bay, and
provide electricity for rural homes and cottage industries is by building more dams like the SSP. When it is argued that it is time to acknowledge that dams have contributed very minimally to India’s development, and to address the grave social and environmental impacts they have had by adopting stringent criteria and guidelines and examining alternatives, they take the argument to the level of Ideological social choice. They agree that human and environmental concerns are important and should not be overlooked, however, they emphasize that putting too much emphasis on concerns of equity, sustainability and justice will only perpetuate poverty and keep India backward. Such concerns they contend, cannot be allowed to obstruct India’s basic aim which is to become a modern, industrial nation. It is only with more techno-industrial progress they aver, that India will be able to resolve its social and environmental problems.

The initial deliberations of activists like the NBA who are opposed to the dam are focused at the level of Situational validation. Their concern about the dam, they point out is that it is going to cause large scale destruction in the Narmada valley. It will submerge thousands of acres of rich, fertile forests, agricultural lands, ancient and sacred temples, and archeological sites. It will displace over half a million tribals who have lived there for centuries and who depend on the forests and the river for their existence. When the sufferings of the people of Kutch and Saurashtra are brought up and the urgent and dire need for water is reiterated, their arguments shift to the level of Technical verification. They admit that the sufferings of the people of water starved regions of Gujarat are real and that the benefits are important and urgently needed, however, they point out that unfortunately, the SSP will deliver only a fraction of the claimed benefits at very high costs. They go into details to demonstrate how the benefits of the dam are exaggerated,
while costs are underplayed or even omitted to meet the stipulated benefit-cost ratio
criteria. When faced with the argument that the SSP might not be the best way to
generate power, but is the only alternative for Gujarat, or when asked whether they would
have been supportive of the dam had the BCR shown it to be economically beneficial,
they will shift their argument to the level of Societal Vindication. They warn that there
are grave and massive social and environmental costs associated with dam building.
Dams have displaced over fifty million citizens, majority of whom are from tribal groups
and submerged over five million hectares of forest land; against this, dams have
contributed very minimally to India’s food grain production. It is time they urge to
recognize and accept the frequent failure of dams to provide their claimed benefits and
the massive social and environmental destruction they have caused. They contend that it
is better to put an end to all dam building and focus instead on alternatives. When the
feasibility of improving the poor performance of dams and adopting criteria and
guidelines that will mitigate their impacts is brought up, they shift to the level of
Ideological social choice. They explain that such measures are good but do not go far
enough. The problems of dams such as displacement, loss of livelihood, environmental
degradation, etc. are a symptom of modern development. Ultimately it therefore becomes
imperative to question modern industrial development itself, who it has benefited and
who has paid the price for it. Not only do they critique modern development but call for a
fundamental restructuring of social, political and economic values and try to offer an
alternative vision of society based loosely on Gandhian lines.

ARCH activists start out at the level of technical verification to clarify that they
did not question the SSP on grounds of economic and technical viability. Benefit cost
ratio of the SSP they say demonstrated that it was a viable project and even though there have been time and cost overruns, they believe that overall, the dam will still be economically beneficial. The main problem with the project they advance was that it was going to lead to large scale displacement in the Narmada valley. A majority of those facing displacement were tribal groups. With projects in the past, landholders who faced displacement were given monetary compensation. However with the SSP, the NWDT provided for allotment of two hectares of agricultural land for every landholding family getting displaced. This was a path breaking policy according to ARCH activists. However, they realized that progressive as this policy was, it had left out a large number of tribals from receiving compensation since a majority of tribals did not formally own their land. They were tribal groups who eked out a living by cultivating forest land and were considered to be illegal encroachers by the state. ARCH began focusing on seeking a new and improved resettlement and rehabilitation policy that would acknowledge the rights of these tribal groups to their ancestral land and provide them with the two hectare of land regardless of the fact that they had no formal ownership to it. Towards this, ARCH adopted a ‘no land, no dam’ position. By 1987, the government of Gujarat announced its new R and R policy and the excluded tribal groups were awarded the same benefits as landholding tribal groups. ARCH activists explain that all that was left to do was to work towards implementation. In terms of the Logic of Policy Deliberation, ARCH’s activism was focused at the level of Situational Validation. However when questions are raised about the impossibility of R and R and ultimately, whether it was appropriate in the first place to displace tribal groups no matter how good the compensation, they start making arguments at the level of Societal Vindication. They
point out that the tribal groups themselves wanted to get the new policy implemented; they saw it as an asset and were interested in improving their life rather than opposing the dam, like the NBA claimed. Tribal groups in India had borne the major brunt of displacement from dams. It was the logic that a few had to sacrifice and suffer so that the rest could benefit or that India could progress and develop that they were against and wanted to challenge. They wanted to ensure that tribal rights and welfare was not sacrificed for the sake of economic development. When it is brought up that the NBA claims that tribals would rather not leave the valley, they shift to the Ideological level of the framework. They mention that the NBA is interested in preserving tribal culture and their way of life but more than that they are basically opposed to the modern industrial way of life. Their ultimate aim is to restructure society, and bring about a society based on alternate values. ARCH activists warn about the difficulties associated with preindustrial values that they claim the NBA espouses. They remind that such a society was far from ideal and in fact plagued by oppression, starvation, illnesses, etc. They contend that although modern industrial development has lead to problems, rather than undoing it, we must seek to undertake gradual reforms.

Ordinary citizens who are not involved with the conflict start out at the level of situational validation. The common concern amongst those who support and those who oppose the dam is the displacement of tribals. However those who support the dam justify displacement by arguing that there is no other alternative and shift arguments to the level of technical verification. Unlike officials and activists who are directly involved with the conflict, they do not state the actual extent of benefits or the costs at which these will be achieved but marvel at the engineering feat and aver that no other alternative can
provide Gujarat with the benefits that the SSP can. Those who oppose the dam argue that considering the impact it is going to have on tribal life, alternatives to the SSP should have been considered. They shift to the technical verification level and admit that alternatives might not have been able to provide the extent of benefits the SSP can, but then worry that they have grave doubts whether the SSP itself will really be able to make good on all its claims. They are unable to discuss the technical details of the benefit-cost analyses and are aware that they lack the expertise in economic and technical matters regarding the dam. Nevertheless, they express concerns that the benefit-cost analyses may be deceptive. The deliberations of lay citizens tend to remain focused at the first order of discourse initially but when faced with counter arguments or scenarios, they begin to make arguments that correspond to the second order of the Logic of policy deliberation. When those who support the dam are faced with opposing arguments about the dam not being viable or about it benefiting only the rich and urban communities of Gujarat, their arguments begin to change. They reassure that the dam will deliver and that the benefits will be equitably distributed but beyond that they point out that such fears are spread by anti-dam groups like the NBA whose sole aim is to oppose a project that is clearly for the larger good of the country. Dams, they observe have played a vital role in achieving India’s food security, in domestic and industrial water supply and cheap and renewable hydropower generation. Opposing the dam is being opposed to the progress and development of India. With citizens who are against the dam, the shift in argument to the level of societal vindication occurs when they argue that not only is the SSP going to have adverse consequences in the Narmada valley and fail to achieve its stated objectives but the main justification, that it will confer a larger social good turns out to be
unsubstantiated as well. Although dams had contributed greatly to India’s self sufficiency, water and energy security after India achieved independence, a great price had been paid by India’s indigenous communities to secure those benefits. Although they are not able to come up with the exact number of tribals displaced by dams or the amount of forests large dams have submerged unlike activists who oppose the dam do, they point out that they have never heard of a person from a higher caste getting displaced on account of any project. Since the great costs of dams had come to the fore, they advise that it is better to stop building dams and start exploring alternatives. When citizens who support the SSP are faced with the argument that dam opponents make about the high social and environmental costs at which dams provide developmental benefits and the need to look into alternatives, their arguments move to the realm of Ideological social choice. They invariably argue that it is not really dams that they are against, but dams are used by groups like the NBA to oppose modern industrial growth. They accuse the NBA and other anti dam forces of wanting to overthrow modern industrial society and usher in a non industrial, traditional, and idyllic society. Citizens who are opposed to the dam will shift to the level of Ideological social choice when it is suggested that detailed criteria and guidelines could be adopted to improve the dam building process and mitigate the social and environmental costs of dams. They agree that it would be good if that could happen but then move on to suggesting that it is better if options that manipulate nature in such a massive way are avoided. Aware that the NBA challenges modern development itself, they distance themselves from them and clarify that they do not go so far as to reject the modern industrial project altogether. NBA’s objection to modern society and their creation of an alternative vision is seen as being more of an intellectual pursuit, not
grounded in reality. They acknowledge that development in India has worked only for a few and left the vast majority out, however they believe that it is important to be pragmatic and work within the framework of modern development to bring about more equity and justice.

Overall, the study shows that all four discourses of the Logic of Policy deliberation appear in ‘every day’ type conversations about the Sardar Sarovar Project with citizens ranging from engineers to housewives, to activists, professionals, bureaucrats, academics and others. Arguments typically start at the level of Technical verification or Situational validation, inevitably broadening to the levels of Societal vindication and Ideological social choice. All four discourses play a part in their assessment of the dam. Certain citizens are able to make more elaborate arguments at different levels than others. Nevertheless, to a greater or lesser extent, citizens are attuned to all four discourses of the Logic of policy deliberation. Government officials, engineers, and bureaucrats for instance make more detailed arguments at the level of Technical verification and Societal vindication. Their arguments are more empirical and factual in the form of benefit cost analyses, percentages, data about the amount of power generated, extent of irrigation, etc. NBA activists make more extensive arguments at the level of Situational validation and Ideological social choice. Although they do raise concerns that are factual and empirical, their arguments are more cultural, normative and philosophical in comparison to others. ARCH activists make expansive arguments at the Situational validation level, are more focused on policy improvements and implementation and are less critical than the NBA. Lay citizens make less detailed arguments in comparison to individuals who are directly involved with the project. However, the academics or
intellectuals among lay citizens are able to make more detailed arguments than the others. Although lay citizens raise concerns about the dam’s technical efficiency and its economic viability, they are unable to provide empirical, factual or technical data to support their arguments. Most citizens admit that given their lack of technical expertise and their lack of time, they are less able to analyze the empirical dimension of the conflict; they find it hard, they acknowledge, to address issues of benefit-cost calculations or understand engineering and technical justifications. When they raise concerns about the impact the dam will have on the Narmada valley, their arguments tend to be the most detailed. Given that they reside close to the submergence zone and given the media attention to the massive issue of displacement, that is understandable. At the level of Societal vindication, lay citizens draw on collective experience of India’s iconic dams like the Bhakra and Nehru’s famous ‘dams are the temples of modern India’ speech, to make general arguments about dams as opposed to the more specific arguments made by individuals who are directly involved in the conflict. At the level of Ideological social choice, the arguments that most lay citizens make about modern development is sketchy and uncritical. Although they raise questions about development and engage in discussions about it, they reject the idea of an alternate vision of society as being “too fanciful” or “intellectual” and not “practical”. Intellectuals, however make more philosophical and critical arguments at this stage. They reflect upon the alternative to techno industrial society that are suggested by anti dam groups like the NBA but then advise that they need to come up with an alternative that is more viable and that has more appeal.
The differences in the nature, depth, and extent of arguments that citizens make seems to be the result of either their area of expertise, the nature of their job, their access to relevant information and their educational backgrounds.

Conclusion and Implications

This study was an empirical examination of the Logic of Policy Deliberation, a multimethodological framework for policy analysis advanced by Frank Fischer (1980). The framework is a widely acknowledged contribution to the postpositivist approach which seeks to reconstruct the positivist understanding of social science by extending analysis beyond empirical concerns to integrate the normative assumptions upon which such concerns are founded. There have been few attempts however, to translate postpositivism’s theoretical critique into practice. Fischer’s Logic of Policy Deliberation is a comprehensive attempt at methodological reconstruction. As elaborated upon earlier, it is built around four interrelated discourses that constitute an evaluative deliberation. Incorporating both, empirical rigor and normative exploration, the logic extends from concrete empirical questions to abstract normative issues concerning the way of life.

According to Fischer, the Logic of Policy Deliberation is based upon ‘ordinary language philosophy’ of Toulmin and Taylor, which is based on a reconstruction of how people actually think when they evaluate an action or an event. The framework is therefore more than simply Fischer’s conception of how we should talk about issues, rather it seeks to represent the way people in fact argue about issues. In that, the model is rooted in empirical reality and is subject to empirical confirmation. This study sought to verify the claim that the framework represents the way ordinary citizens argue. Although the Logic of Policy Deliberation has been applied to several policy cases, there has been no
empirical test of how citizens actually relate to it; more specifically how citizens respond to the different phases of the framework in general as well as in specific cases.

The model was tested through a discursive analysis of the Narmada debate in India. This particular conflict was chosen for the study since it was concerned with the full range of technical as well as social issues. The study undertook a two step process to test the framework. First was a theoretical application of the Logic of Policy Deliberation; the framework was used to organize and analyze the arguments in the Narmada debate that are carried out in textual materials like journals, reports, brochures, policy statements, web sites, etc. After the initial step, the study conducted an empirical examination of the Logic through citizens discourses in the debate; specifically the study conducted informal conversations with citizens to examine how they identified, responded and related to the different phases of the Logic. More specifically, the study examined:

1) How well the range of arguments in the Narmada case could be distributed across the levels of the Logic of Policy Deliberation

2) Do citizens argue across different levels? If there are missed or unperceived levels, are they able to relate to it when prompted with arguments and scenarios?

The theoretical application of the model found that the arguments in the Narmada debate are widely and extensively distributed across the four levels of the Logic. One of the first arguments to emerge in the debate concerned the adverse social and environmental impacts of the dam would have on the Narmada valley. The debate was about whether or not there was anything unique or special about the tribal way of life, the forests, temples, ancient monuments and wildlife that required the Narmada valley be
preserved. It was also about whether and to what extent compensatory measures could mitigate the losses and be implemented smoothly. These arguments correspond to the level of Situational validation. Another type of argument focused on empirical considerations. It raised questions concerning the technical and economic performance of the SSP. The focus was on factual data in the form of benefit-cost analyses, economic rate of return, etc. and on technical specifications. The debate was about whether the benefit cost ratio had validly demonstrated the economic viability of the project. These arguments conform to the level of Technical verification in the framework. A third type of argument broadened the focus from the SSP and the Narmada valley to the consequences that building dams have for India as a whole. The focus was on the need for dams to sustain India’s self sufficiency, and increase water and energy security in the face of India’s alarming rise in population and fast growing economy and the massive social and environmental costs at which these benefits could be achieved. These arguments relate to the level of Societal vindication. Ultimately, arguments widen into a debate about modern industrial development that dams exemplify. An alternative vision of a non modern society based on subsistence, decentralization, limited use of nature, labor intensive technology, etc. proffered by anti dam group, the NBA, is counterpoised against the modern state. Such political-ideological concerns are the stuff of the level of Ideological Social Choice in the Logic of Policy Deliberation.

The empirical examination of the Logic of Policy Deliberation conducted through conversations with citizens found that the various discourses of the Logic of Policy Deliberation emerge when ‘everyday type’ conversations regarding the Narmada conflict occurs with citizens. Conversations show that citizens start arguing at the level of
Technical Verification or Situational validation and inevitably expand their argument to the levels of Societal Vindication and Ideological Social Choice. The shift from one level to the next is typically driven by counter arguments or scenarios. There are differences in the nature and extent of arguments that citizens make at different levels. Certain individuals are able to make more extensive and detailed arguments at particular levels than others. This might have to do with their area of expertise, the nature of their job, their educational background, their access to relevant information, and how well they are informed. However, to a greater or lesser extent, citizens are attuned to all the various phases of the Logic of Policy Deliberation. Individuals who are directly involved in the conflict, like government officials, activists, engineers, and bureaucrats make more extensive and detailed arguments compared to lay citizens who are not directly involved with the conflict. However, amongst lay citizens, academicians are able to make more well reasoned and well informed arguments than the others. Although lay citizens who are not academicians make less extensive, less technical, less pedantic arguments than others, they make pertinent arguments at different levels by drawing on their personal and social experiences, cultural mores and their common and practical sense.

Findings suggest that the Narmada conflict cannot be settled by factual claims or empirical proof about the dam’s efficiency. For citizens, it is important that the dam be economically beneficial, but beyond that, they are more concerned about the impact the dam will have, about what dams do, and about the values and meanings they express. In fact, not only do consequences, circumstances and values matter more, they determine what they believe about the economic benefits of the dam. In other words, their empirical judgment of the dam is derived from the values they hold; facts and values in the
Narmada debate, aren’t independent of one another- values, norms, culture determine what citizens believe about the economic and technical aspects of the dam. Considering the clashing worldviews in the debate – the modern and non modern, this has lead to a certain intractability, however, it has increased clarification and mutual understanding between various groups at the very least. It has shed light on what the points of consensus and what the points of disagreement are. It may not lead to a resolution in this case but certainly such knowledge will help evolve policy proposals that will address the key issues of conflict.

More broadly this indicates that highly contentious policy conflicts cannot be resolved or settled by empirical methods. Failure to address normative or cultural concerns will not only not resolve the conflict, but will also exacerbate it. The only way to make progress in intractable debates is to attend not just to the empirical demonstration of the policy’s viability but to the values that it expresses and to openly address what “kind of society we prefer to live in” (Douglas and Wildavsky,1982). This raises questions about the value of the positivist modes of analysis in resolving complex policy matters. In so far as the positivist model emphasizes empirical analysis, it misses the point; it emphasizes the empirical and fails to address the normative foundation upon which the former is built. This helps to explain its persistent ineffectiveness in solving social and economic problems. This does not mean that such modes of analysis have no value and should be given up. To be sure, there are policy issues where questions about values may not arise. But even in complex problems, empirical analysis has its place, however the mistake that positivists make is to assume that empirical investigation is what it is all about. Postpositivism emerged to address the limitations of neopositivist
analysis and extends analysis beyond empirical concerns to integrate the normative assumptions upon which it is founded. In doing so it opens the way to a richer and more productive approach to policy inquiry (Fischer, 1992).

Fischer’s Logic of Policy Deliberation which the study tested offers a concrete postpositivist methodological framework that allows the simultaneous exploration and investigation of both normative and empirical issues. The appeal of this model lies in the fact that is grounded in empirical reality; it is based on how people actually argue about an issue or a policy in the practical world of the public realm. Indeed, this study confirms that to a greater or lesser extent, citizens are attuned to the four levels of the Logic of Policy Deliberation. As such this model is better suited to policy making than positivist models that only focus on narrow technical concerns at the expense of normative investigation. This study advances that where positivist methods fail to resolve complex policy issues, the Logic of policy deliberation offers hope of generating new ways of thinking and seeing that can open up new possibilities for problem solving; where positivist methods can lead to a deadlock, the Logic of Policy Deliberation can offer hope of reaching a consensus and short of that, clarification and increased mutual understanding. The findings also call attention to what the goals of policy analysis should be and what kind of work analysts should do. Given that citizens use the Logic to support or oppose a policy, the task should be to improve policy argumentation, communication and general deliberative capacities. Analysts should seek to move beyond the separation of the rational and the political. They should aim to facilitate open discussion and should try and serve as a facilitator and direct attention to any missed or unperceived
dimensions, provide data, and help citizens to come to their conclusions and make their own decisions.
## ACRONYMS

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<tr>
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<th>Full Form</th>
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<tr>
<td>ARCH</td>
<td>Action Research Community Health</td>
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<tr>
<td>NBA</td>
<td>Narmada Bachao Andolan (Save Narmada Movement)</td>
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<tr>
<td>SSP</td>
<td>Sardar Sarovar Project</td>
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<td>SSNNL</td>
<td>Sardar Sarovar Narmada Nigam Limited</td>
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<td>NCA</td>
<td>Narmada Control Authority</td>
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<td>SSPA</td>
<td>Sardar Sarovar Purnavasahat Agency (Sardar Sarovar Resettlement Agency)</td>
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<td>NWDT</td>
<td>Narmada Water Disputes Tribunal</td>
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<td>R and R</td>
<td>Rehabilitation and Resettlement</td>
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<td>NAPM</td>
<td>National Alliance of People’s Movement</td>
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<td>NDS</td>
<td>Narmada Dharangast Samiti</td>
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<td>NGNS</td>
<td>Narmada Ghati Navnirman Samiti</td>
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<td>NVDA</td>
<td>Narmada Valley Development Authority</td>
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<td>MP</td>
<td>Madhya Pradesh</td>
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<td>MoEF</td>
<td>Ministry of Environment and Forests</td>
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Figure 1: Map of India showing location of Gujarat
Figure 2: Map showing regions of Gujarat
(http://agri.gujarat.gov.in/department/overview31.html)
Figure 3: Map showing the Narmada main canal, branch canals, and command area of the SSP. (Sardar Sarovar Project on River Narmada: Meeting the Challenges of Development: SNNL).
Figure 4: Map showing areas in Gujarat that are fluoride affected (Sardar Sarovar Project on the River Narmada: SSNNL.)

Figure 5: Map showing areas affected by salinity (Sardar Sarovar Project on River Narmada: SSNNL.)


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