CHAPTER 1

BACKGROUND AND NEED

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1. The Process of Evaluation:

Although the term evaluation has been defined and used by various social scientists, there appears to be a wide divergence regarding its meaning and scope. Puttaswamiah defines and uses the term with the broadest possible scope. He says, "whatever may be the programme selected for evaluation, full scope of the study would include planning and formulation of the programme, its administration and execution, the functioning of supporting institutions, the effect on the beneficiaries, and their reaction." Bhattacharjee also gives very wide scope to the term when he says, "Evaluation... may generally be defined as operational research with a socio-economic orientation." ¹

2. Evaluation and Other Project Activities:

The approach of Puttaswamiah or Bhattacharjee emphasises the fact that in actual practice evaluation can not be isolated from project-designing or implementation. All these activities form one synergetic system. However, despite these interconnections, it is conceptually necessary to demarcate the process of evaluation from project-designing on one hand and
project-implementation on the other. One reason for doing so is that the persons responsible for these three activities are normally different. The designing of a project is generally done by technical experts and people's representatives. The evaluation is done by experts from funding agencies. Implementation is done by different organisations such as a government department, an autonomous corporation, or a voluntary agency.

Moreover, the evaluator is expected to take a second look at the project, which requires relative autonomy.

We may, therefore, schematically divide the entire set of project activities into sub-sets as shown in Chart 1.1, keeping in mind that these sub-sets are not water-tight compartments.

This schematic presentation outlines three types of evaluation, viz. ex-ante evaluation, concurrent evaluation and ex-post evaluation. It also separates these activities conceptually from project-identification, project-formulation, selection and implementation.

3. A Clarification Regarding Evaluation vs. Appraisal

At this juncture, it may be noted that though we are treating ex-ante, concurrent and ex-post studies as parts of evaluation, some authors prefer to restrict the word 'evaluation' to only
one of these activities. For instance, the UNIDO 'Guidelines for project Evaluation' states, "This 'guide' is concerned only with ex-ante appraisal." The author leaves to others the discussion of ex-post evaluations. On the other hand, Elsinga says, "Evaluation pertains to actually existing projects and programmes and enters the stage after (ex-post) such a programme or project is underway or has reached a certain stage in its development." Elsinga would prefer to keep the word evaluation reserved for 'concurrent' and 'ex-post' evaluations and use 'appraisal' for 'ex-ante' evaluation.

These semantic differences are not important as long as the meaning is clear. It is therefore, preferable to clarify the meaning, wherever the context so requires, by adding pre-scripts of ex-ante/concurrent/ex-post to the word 'evaluation'.

4. Content of Evaluation:

Having defined the scope of the term 'evaluation' in the context of other project-activities and the time-frame related to project-implementation, a somewhat more detailed definition of the content of evaluation is warranted. The process of evaluation, within the framework already outlined can be broadly described as: "a systematic appraisal by which we determine the worth, value or meaning of some activity and of collecting information as a means for making decisions, forming judgements, and drawing conclusions."
Although the techniques of carrying out such an analysis are many, they can generally be divided into the following major sub-groups:

(i) Evaluation of objectives of the project in a wider socio-economic context, like plans, national objectives, etc.
(ii) Technical feasibility
(iii) Market feasibility
(iv) Financial and economic evaluation
(v) Organisational capability
(vi) Social viability.

The present study is mainly concerned with sub-group four i.e. financial and economic evaluation. This is because technological, market and organisational evaluations have become separate disciplines by themselves with their own paradigms and algorithms, while evaluation of objectives and social viability are areas mainly left to subjective value judgements and political decision-making. For instance, Peacock says, "The 'legitimate' area of political control of such analysis is much wider than perhaps apparent to practitioners of cost benefit analysis in the field of public investment decisions".

The underdeveloped nature of the state of art in the field of assessing social viability is clear from the section titled 'Guidance on Social Soundness Analysis' in the 'Project Assistance Hand-book'.
It may be noted that financial and economic evaluations have been grouped together. Many authors use the term 'financial evaluation' for evaluation carried out from private investors' point of view and 'economic evaluation' for evaluation carried out from social point of view. However, it is felt that this separation is artificial. Whether the investment is through private exchequer or public exchequer, sound conventional financial evaluation is a pre condition for economic evaluation. Dandekar has very rightly observed that economic evaluation can be carried out only after the financial appraisal has been carried out carefully. He has indicated that for public investment decisions, with which we are concerned, financial evaluation is not sufficient; even economic evaluation needs to be carried out. Therefore, it is more appropriate to group them together. Hereafter, for the sake of brevity, we would use the term 'economic evaluation' to mean both financial and economic evaluation.

Social Cost-Benefit Analysis and Comprehensive Evaluation

It is also important to mention that we do not consider 'financial & economic evaluation' to be synonymous with the term 'Social Cost Benefit Analysis' as used in the 'Manual - Guidelines'.

The 'Manual Guidelines' approach is developed through the synthesis of methods proposed by Littl & Mischke in their 'Manual for Industrial Projects Analysis: Vol II - Social
Cost Benefit Analysis\textsuperscript{9} and proposed United Nations' "Guidelines for Project Evaluation\textsuperscript{10}. The results of the synthesis are to be found in writings of Squire & Vanier Tak\textsuperscript{11} and Hansen\textsuperscript{12} (This approach is referred to as SCBA hereafter)

In the current literature and text-books one finds a tendency to equate project evaluation with cost benefit analysis using the above approach. It would therefore, be worthwhile to briefly inquire into the reason for this importance of SCBA.

One possible reason for this is pointed out by Bishop as, "In a certain sense the economic factors appear to rank higher in the analytical hierarchy than the other two groups. This is because the technical and administrative aspects are, so to speak, summed up in the economic results of the project.\textsuperscript{13} However, there are other important reasons.

The second reason could be that during the last decade (1970-1980), most of the academic debate regarding project-evaluation has been monopolised by discussions regarding social cost-benefit analysis (SCBA). This started with the publication of the 'Manmual' by Little and Mirrlees\textsuperscript{14} in 1968. It raised a number of issues which were debated by Sen\textsuperscript{15}, Feldstein\textsuperscript{16}, Pearce\textsuperscript{17}, Harberger\textsuperscript{18}, Mansfield\textsuperscript{19}, Mishan\textsuperscript{20}, Lal\textsuperscript{21}, etc. The publication of UNIDO Guidelines\textsuperscript{22} added fuel to the fire. Simultaneously, the Roskill
commission's report and subsequent controversies gave the theoretical debate a practical urgency. During this period Lind and Arrow made important contributions to the theory of 'risk analysis'. The debate advanced further on publication by Little & Mirrlees of their second book in 1974 and UNIDO issuing 'revised' guide in 1973. As a consequence the academicians and the planners tended to give more importance to SCBA and ignore the other aspects of evaluation.

Yet another reason was, perhaps, the political economy of aid. The funding agencies in the developed countries were becoming more and more conscious of the need to evaluate the effects of aid. 'Manual' and 'Guideline' were an effort to provide such a tool to the funding agencies; and the funding agencies like OECD & World Bank gave support to research schemes aimed at developing SCBA methodology. In this context it is interesting to note that prior to 1965, the literature on cost benefit analysis mainly dealt with evaluation of public investment in developed countries. For instance, Mishan or Dasgupta, in their then standard text-books on cost benefit analysis do not discuss the problems of under development or specially address themselves to evaluation of projects in developing countries. Almost all the major literature after 1970s, deals mainly with project evaluation in developing countries.
We have analysed the reasons for omnipotence of SCBA in evaluation methodologies so as to bring to focus the fact that this omnipotence is a consequence of peculiar historical development. The strengths and weaknesses of SCBA would be analysed in subsequent chapters, but while understanding the process of evaluation it should be kept in mind that its scope is broader than that of SCBA.

**Evaluation is a Social Process**

Lastly, to understand what is evaluation, it is important to recognize that evaluation is a social process. It is practiced by human beings. The process involves the use of techniques like linear programming, discounted cash flow, decision tree analysis, etc. But evaluation itself is not a technique. The techniques can be relatively value free, but evaluation is not a value free process.

This needs to be emphasized because there is still a common misconception that evaluation should be, and can be 'objective' in the sense that findings of natural sciences are objective. For instance, Bhattacharjee says, "First, an evaluation study should be objective in its approach, and secondly, it should satisfy the requirements of 'scientific method'". This also leads to specifying stepwise algorithms for carrying out the 'evaluation'; the algorithms presumably contain 'the scientific method', within them and hence automatically lead to 'objective' findings. Almost all the modern textbooks, manuals, guides and guidelines contain such algorithms.
Though most of the authors, at least in passing, mention that these algorithms do not represent one and the only one 'scientific' technique of evaluation, many of the evaluators follow these algorithms as if they were the 'laid down' scientific method of evaluation. This is the reason why persons like Halterantz complain: "SCBA and related methodologies are sanctioned before us as scientific techniques, globally applicable - here, there, everywhere. Concepts and data are treated as if they possessed cross-cultural generality, as if they were politically and ideologically neutral and theoretically unambiguous".31

Evaluation and Science:

The reasons for impossibility of scientific objectivity in the process of evaluation are, we believe, twofold. Firstly, because evaluation is a social practice, which unlike scientific practice, is not relatively autonomous; and secondly, in practice, evaluation is a participative process. It would be worthwhile to analyse both these reasons in some detail since it would also clarify our understanding of the process of evaluation.

Evaluation as a 'Social Practice':

Our analysis is essentially an extension of Althusser's analysis of scientific and technological practices. Althusser's starting point is the Marxian understanding: "It is not the
consciousness of men that determines their being, but on the contrary, their social being that determines their consciousness". Althusser, for developing this theme further, chooses 'practice' as a basic category. He defines practice as: "any process of transformation of a determinate given raw material into a determinate product, a transformation effected by a determinate human labour, using determinate means." 

The meaning becomes clearer with two examples. (1) In technological practice materials (steel, etc.) are converted into products (cars, etc.) by use of labour and machines (means). (2) In scientific practice, scientists (human labour) transform pre-scientific or existing scientific concepts (raw materials) by use of scientific method and scientific instruments (means) and produce new conceptual systems (product).

Althusser argues that an important feature of scientific practice is that it is relatively autonomous. Chalmers explains this as follows:

"The aim of science is understood in a way that is internal to scientific practice (the aim is the production of certain kind of knowledge) and the criteria of adequacy are also internal to the practice. By contrast, the aims and criteria of adequacy of technological practice arise from outside of technological practice. For instance, technology may be called on to develop a solar cell to answer a need caused by
fuel shortage and the criteria of adequacy will be "external" ones of economy, efficiency, etc. 34

We may extend this approach to analyse the 'practice of evaluation. Evaluation is a socio-technological practice. For instance, in ex-ante evaluation the evaluator (human labour) operates on a given project design (raw material) using techniques of evaluation (means) to produce recommendations to the decision-maker (product). Here again, as in the technological practice, the aims (to find the likelihood that returns would be above an acceptable level) and the criteria of adequacy (e.g. time taken, costs incurred, comprehensiveness of the analysis, etc.) are external to the practice of evaluation.

The universality and objectivity of scientific findings are a consequence of the relative autonomy of scientific practice. The practice of evaluation is not autonomous in this sense. Consequently, it would be wrong to expect similar objectivity and universality in its findings.

Evaluation as a Participative Practice:

While delineating the scope of evaluation we mentioned that this is essentially a conceptual separation. In practice, project-designing and implementation activities are linked to evaluation. These activities do not observe a strict time sequence. There is substantial back and forth movement
CHART 1.1: EVALUATION AND OTHER PROJECT ACTIVITIES

BEFORE THE PROJECT

- Project Identification: Imaginative scanning environment to assess the threats and opportunities.

DURING THE PROJECT

- Implementation: Expenditures completion within the resources and budgets, carrying out necessary modifications in project design in light of experience gained and unforeseen circumstances.

- Concurrent Evaluation: Developing integrated information system. Carrying out quantitative and/or impressionistic analysis of project performance to improve project efficiency by giving feedback.

AFTER THE PROJECT

- Ex-ante Evaluation: Assessing achievement of the objectives by the project after the project is over. Identifying the factors leading to success or failure. Separating these factors into project-specific factors and factors of general importance. Drawing conclusions which may be useful for future projects.

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The fact that the evaluator's findings and recommendations (in ex-ante and concurrent evaluations) often lead to changes in project-design and project implementation is well appreciated. What is perhaps less appreciated is that this is not only a one way process. The willingness and ability of the project-designers and project-implémenters to incorporate the recommendations of the evaluator, in turn, affects the scope and methods of the evaluator. At one extreme, as Irvin points out, "he (evaluator) is used merely to provide elaborate justification for a set of decisions already taken at technical design stage".35 However, more often, the evaluator's practice varies according to what he visualises to be the parameters within his control. Sen rightly points out: "In a very broad sense, taxes, tariffs, quotas, licences, prices and outputs of the public sector are all control variables for the Government as a whole. But they are each constrained within certain ranges by administrative, political and social considerations. For a project evaluator, therefore, it is important to know which variables are within his control and to what extent".36

Finally, we may quote Mr. P.K. Dhar, formerly Joint Secretary, Programme Evaluation Organisation, Planning Commission, Government of India: "Evaluation, devoid of fancy trappings, is not merely a job of an specialist, but is a part of a general environment in which science, rationality, hope and social action are to be found".37
The Need for the Present Study

The Importance of Evaluating the Cost Effectiveness in India:

The importance of ascertaining the cost effectiveness has been well recognised. It has been given due importance since the conception of systematic planning in India. The First Five Year Plan states: "with every important programme, provision should always be made for achievement of results. Systematic evaluation should become a normal administrative practice in all branches of economic activity." The Sixth Five Year Plan also states, "Evaluation has thus to be done... to see whether the benefits, both quantitatively and qualitatively, have been achieved as planned... With the new priorities of the plan focusing attention on rural development, this kind of evaluation has acquired a critical importance."

However, it is not enough to appreciate the need; it must be followed by action. To quote an eminent author: "Evaluation... is the proper methodological accompaniment of rational action... the theme has always been with us, it is the performance that is difficult." The performance, difficult as it may be, has also been voluminous. The Central Programme Evaluation Organisation (CPEO) was set up in 1962, and the state level evaluation organisation exists in all States. The CPEO has brought out over 112 reports, and the state level organisations have completed about 1,000 evaluations.
In addition, (a) academic institutions like Indian Institute(s) of Management, Gokhale Institute of Politics & Economics, (b) banks and other institutional funding agencies, and (c) foreign funding agencies, have carried out a number of evaluation studies. Ex-ante, concurrent and ex-post evaluations have been carried out.

These studies cover a broad canvass of projects like fertiliser and cement plants, irrigation schemes, rural electrification programmes, urban housing, child development, cow cross-breeding, etc.

We can, therefore, conclude that during the last thirty years, evaluation has received enough attention at policy level as well as in practice.

Consequently, today, in India, we have a small but cognisable community of professional evaluators. Even in one city of Pune one can name three to four institutions whose major job is to carry out evaluation studies.

Lack of Paradox:

However, despite the voluminous work done in the field of evaluation, there is no basic consensus regarding the evaluation methodologies. Kuhn\(^1,3\) has pointed out that the point of demarcation between science and pre-science is that with the rise of science the community of scientists accepts
a common paradigm. This common paradigm includes symbolic generalizations, a problem set, instruments used to tackle the problems (methodology), and exemplary pieces of work. Though Kuhn is concerned with natural sciences, it would not be incorrect to presume that development in social sciences also requires acceptance of a common paradigm by social scientists. However, evaluators are at present far from accepting any common paradigm. Every evaluator starts by defining the basic concepts and designing his own tools. This is clear if we analyse in detail the state of art in evaluating irrigation projects.

The economic evaluation of public investments came into being with efforts for evaluating benefits of water works in U.S. The earliest manuals for economic evaluation were published for evaluating water works. In India, Planning Commission, "with a view to assessing the benefits of irrigation projects and finding more comprehensive criteria than direct financial returns" initiated studies of five major established irrigation projects in 1953. These studies were carried out by a committee headed by Prof. D.R. Gadgil. The committee in its report (published in 1965) claimed: "These investigations have helped to provide a framework of reference and a set of indices for the economic appraisal of major irrigation projects and for verification of some of the assumptions regarding their potential benefits." However, this claim is subject to certain limitations. These limitations have been pointed out by the authors
Although some of the concepts and assumptions adopted in these studies have been closely examined in an attempt to bring about general comparability of findings of the studies, it has not always been possible to ensure comparability .... It has also not been possible to evaluate the adverse effects arising from irrigation or what are popularly termed as "social costs".¹⁷

These limitations are so severe that it is difficult to accept the claim that these investigations provide a framework for reference. This also clear from the recent writings regarding the viability of major irrigation schemes: it is worthwhile to note that the basic approach is being challenged in these writings, particularly the neglect of social costs.

Even in one small field of public investment, namely irrigation, there is a lack of paradigm, though this is perhaps the most developed field. When we look at the field of public investment in general, there is an absolute lack of any generally accepted structure. In early seventies, it was hoped that the SCBA discussions would lead to the evolution of a common paradigm. However, these hopes have not materialised. It is in this context that Bishop, while carrying out stock taking of project evaluation methodologies, reaches the conclusion: "there is no yardstick by which to measure the effectiveness of the method of a project analysis in directing the choice to the right projects. For this
purpose one would like to know, as a basis of comparison what would happen if another method of project choice was adopted. It is this lack of a commonly accepted paradigm, which makes a professional practitioner like Dhar to remark "Evaluation is more of an Art".

One consequence of this situation could be a tendency to either avoid evaluation altogether or to convert evaluation into a white-washing exercise. This would be unfortunate, since however imperfect the evaluation methods may be, they are the only analytical approach available to ensure and improve the viability of the projects. The course open to us, therefore, is to improve the evaluation methodologies.

"What needs to be done to improve evaluation methodologies?" is therefore, a question of great theoretical and practical relevance today.

What Needs to be Done ?

Development of a 'scientific Law' generally occurs through the sequence of : problem identification - hypothesis formulation - evolving a methodology to test the hypothesis - experimentation - analysis of experimental findings - modification of methodology (if required) - re-experimentation - rejection/acceptance/modification of the hypothesis.

In social sciences, this framework undergoes some changes since controlled experimentation is generally impossible.
Nonetheless, the basic framework is still valid. It would be worthwhile to analyse the progress made in the field of 'evaluation research' using this framework. For our analysis, we would concentrate on social cost benefit analysis (SCBA) since that is relatively the most developed field in evaluation research.

SCBA takes the neo-classical economics as its basic paradigm. It addresses itself to the problem of measuring all costs and benefits of a project in terms of a common 'numeraire' and proposes an analytically consistent methodology to do this.

Substantial work has been done upto this stage of 'scientific enquiry'. The problem has been identified with sufficient clarity. Though various authors differ regarding the exact definition of the problem, these are mainly questions of details and terminology. It is very apparent that all the main schools in SCBA are discussing essentially the same problem, and it is sufficiently clear to them.

The hypotheses are not very clearly stated. They are contained within the methodology proposed to tackle the problem. This is not a very happy situation and does lead to some difficulties. Nonetheless, in social sciences, it is difficult to state a complex proposition in terms of simple statements which can be either accepted or rejected. The hypothesis and methodology are to be verified together, and accepted or rejected together. In evaluating SCBA we have adopted
the same approach. It may be noted in this context that SCBA methodologies have been clarified in sufficient details by working out illustrative examples (ie exemplary pieces of work to use Kuhn's terminology)\(^5\).

At this stage of scientific enquiry, the methodologies generally differ from each other. And therefore, differences in SCBA methodologies proposed by different schools are to be expected. Some of these differences can be resolved by a closer analysis of the methodologies. Efforts have been made in this direction with some fruitful results. The work of Squire and Van der Tak\(^5\) is most notable in this context.

The next stage is experimentation and verification. In the context of SCBA this means carrying out social cost benefit analysis of a number of projects, and analysing and evaluating the results and the process of evaluation, to judge the adequacy of the proposed methodologies.

Till recently, such an analysis was impossible. Despite the voluminous theoretical debate regarding SCBA not many studies were available. In 1974, in an annotated bibliography, Little & Mirloes\(^5\) report only six studies carried out all over the world using their methodology.

In as late as 1980, Candiho mentions that "Use of SCBA in India is almost negligible; only few studies are known to have been done so far."\(^53\) He then mentions only three SCBA studies
carried out in India and remarks that all of them are of "exploratory" nature.

However, today the situation is not so bad. It has been possible to locate twelve studies (A list is enclosed as Annexure'A') carried out in India, which can be properly called SCBA studies. Even more studies must have been carried out mainly for financing institutions. However, these studies are submitted in the form of confidential reports by the evaluator to the funding agencies and are not published. It would be a good contribution by the funding agencies to the field of evaluation research, if these studies that have been located, I feel, are sufficient to enable an evaluation of the process of evaluation in a meaningful way, with the help of empirical data. The need for such a study has been felt by a number of evaluators. Bishop points out that: "It would be desirable to formulate, not as a matter of theory, but on the basis of empirical evidence, from past experience exactly what one might expect to achieve by project analysis."

The objective of this study is to arrive at such a 'formulation'. This may perhaps be the first attempt in this direction.
REFERENCES FOR CHAPTER 1


For a Brief Outline of the Monitoring and Evaluation system in India, see Planning Commission, (1973), op.cit. pp 124–125.


ibid. pp 7
ibid. pp 67
Bishop, (1932), op.cit., pp 35
Dor, (1930), op.cit. pp 5
Squire Van der Tak, (1975), op.cit.