CHAPTER IX

TOWARDS A SYSTEMS DESIGN FOR INTEGRATED DEVELOPMENT PLANNING OF FRINGE COMMUNITIES IN METROPOLITAN AREAS

- Towards a systems design
- Systemic Analysis
  - Needs Assessment
  - Defining Developmental Goals
    - The Felt Needs
    - Macro-Planner's Considerations
    - Facilitator's concerns and priorities.
  
- Defining Anticipated Terminal State of the System
  - Geographical Rehabilitation
  - Economic Development
  - Socialisation and Education
  - Women's Development
  - Gerontological Welfare

- Identification of Resources/Constraints
- Delineation of Resources Requirements of systems Design.
  - Selection of Approaches
  - A Tentative Action Plan
  - Systems Synthesis
  - Testing Systems Design

- Towards a self-regulating and self-sustaining Model of Development of Fringe Communities.
If one has to abandon the traditional concept of development focusing primarily upon economic growth in favour of an integrated development approach (Jayapal, 1985: 58), the deficiencies of various development models and theories become all the more conspicuous. Therefore, an inter-disciplinary social science approach to development becomes imperative for any development planning endeavour - micro or macro. Systems approach as we have observed earlier, has the potential of providing an operational paradigm which can facilitate generation of a relevant pedagogy of communication across disciplinary barriers to provide a model for integrated development of various social units.

In this chapter, we endeavour to illustrate the steps towards systems design for integrated development of an artisan community of Delhi. The system design focussing upon action from a micro-social perspective is only illustrative and tentative as the researcher neither had the complete multi-disciplinary competence nor the requisite resources and time essential for necessary formative research inputs into a task of this type. However, it is felt that a multi-disciplinary social science input in coordination with interested social action-groups along systemic
lines will go a long way in helping this community explore its fullest development potential, as also provide a valid theoretical and experiential basis for launching similar programmes among other urban communities in India and elsewhere.

TOWARDS A SYSTEMS DESIGN:

As outlined in Chapter II, design of any system involves essentially two sets of descriptive-analytical activities on part of the research team, viz. systems analysis and systems synthesis.

SYSTEMS ANALYSIS:

**Needs Assessment:** - The first step involved in analysis of any existing system is the specification of the problem, i.e. the discrepancy between the current status of the given system and the desired outcome. Such identified discrepancy in form of 'need assessment' of the given system should ideally involve an accurate valid description of the initial state of the system, and definition of objectives and the goals of the systems design keeping in view the absolute as well as relative constraints in the context of its supra-system (macro-environment).

In case of social systems, however, needs assessment in such rigid quantifiable measurable terms may not be strictly feasible or desirable at this stage of knowledge in social sciences.
DEVELOPING DEVELOPMENT GOALS:

In spite of relatively amateurish and academic
hedonistic state of our social science knowledge, in any
social science based endeavour of development planning of
a social unit, explication of development goals is essential.
The goals and objectives of development can be based upon:

(i) The felt needs of the community:— This perspective
enjoys considerable advantage over certain other prevalent
modes of defining goals of development process. But as
the felt needs are likely to be based upon the past experi­
ences of the people, which in case of social units that
are kept underdeveloped and oppressed in a systemic fashion,
the awareness of their environment and their cultural
experiences may be extremely restricted. They may not be
able to analyse their own position and causes of their
under-development in an objective manner. Moreover, in a
stratified social unit, the dominant value system guiding
felt needs might be supporting an exploitative social
structure, the blind support to which may inhibit develop­
ment of certain sections of the social unit.

(ii) Macro-planner’s considerations:— Generally, the
development goals are defined in terms of macro-level
policy makers’ objectives which at micro-level may be
contrary to the development needs of the social units.
The over-centralized planning process, as in case of India,
and a differentiated welfare administration to implement the macro-development objectives may fail to achieve expected results as the structured networks through which the development information (ideational and material) is to flow can absorb most of the vital resources. In fact, in a situation where there are no in-built mechanisms for reliable grassroots level feedback, the hidden plan in operational terms obscures the intended outcomes of social development. Such a course of development may support the emergence of a new class of entrepreneurs who have the skills to utilise most of government resources intended for the masses. The bureaucrat-politician-business nexus reigns supreme in such type of development processes.

(iii) Institutional/Facilitator's concerns and philosophies:
Most of development efforts by voluntary agencies define their goals in terms of ultimate concerns and the social philosophies governing their endeavours. For example, work done by Christian missionaries in the field of health and education is a by-product of their evangelical concerns. The Khadi movement, Sarvodaya, Wardha experiment and many other micro-level development movements were guided by the concern of their practitioners to uphold the supremacy of Gandhian value-movement. Similarly definition of development goals and objectives by various applied social sciences are guided by their specific scientific
(or pseudo-scientific) philosophies. The inherent differences between them can generate contradictory sets of goals and objectives.

For the purpose of systems design for valid micro-level integrated planning of a social unit, it is suggested that a syncretic combination of three above indicated sources of value-loads behind definition of development goals and objectives (implies making use of shared experience-pool of people, practitioners/action-workers and the specialists) will result into a more holistic integrated development with minimal inputs of scarce resources.

The definition of development goals and objectives should better be left to be done in a participatory manner by people, facilitators and specialists after the necessary formative research process has made available necessary information vital for a valid developmental system design.

Defining Anticipated Terminal State of the System (Goal State)

Due to the exploratory nature of the study made of the initial state of the system and its empirical linkages with macro-level reality (supra system), it is difficult to postulate/define the goal state of the systems design.

Nevertheless, one may suggest some of the areas of development which should be incorporated into the integrated development systems design:
(i) Geographical rehabilitation (a felt need)

The rehabilitation of Gaduliya Lohars of Delhi in accordance with their economic and cultural needs is essential for any development programme. Two possible approaches are suggested: (a) Retention of present work-places, provision of electric power to facilitate upgradation of technology and provision of housing sites in the vicinity; or (b) the concept of ARTISAN PARKS may be tried combining work-places and residence in a culturally organised and planned use of space that can provide diversification of skills’ base as also shall be convenient for focused development activities.

(ii) Economic development (elements suggested to meet the felt need to improve earnings and quality of life)

(a) Upgradation of technology: Provision of electric hammer, power driven air blower, design of a fuel efficient hearth, (researcher’s perception of their requirements)

(b) Efficient marketing strategies: Cooperative marketing institutions to forge links with bulk consumers of their products so as to eliminate middlemen (system need)

(c) Skills diversification: Some suggested new skills - casting, heat treatment of metals, welding, metal sheet fabrication, turning (Lathe work). The
concept of skills' centres in cooperative owned
organised production units whereby Lohars could
learn these crafts under guidance of skilled
workmen. (researcher's perception of systems need)

(iii) Socialisation and education

(a) Universal primary education upto Vth standard
   (felt need in respect of male children)
(b) Non-formal education for working children (12+)
   (felt need in respect of male children)
(c) Adult education for literacy skills and information
   needs of the adult members of the community.
   (Systems' need to effectively adapt to urban
    environment)
(d) Vocational and technical education for all. Skills
   and information to be given simultaneously in an
   integrated manner. (Mainly a felt need, but also
   of utmost systemic importance)

(iv) Women's development (Mainly a systems' need - also
researcher's explicit value bias)

(a) _____ Reduction of drudgery by introducing
   appropriate technology for their liberation.
(b) Improving their socio-cultural status by aware-
   ness programmes, giving them joint jural owner-
   ship of the fruits of their labour, equal owner-
   ship in cooperative economic enterprises to
   reduce their eco-cultural dependency on male sex
   in an otherwise patriarchal social system.
(v) **Gerontological Welfare** (felt need)

Appropriate medicinal cure for respiratory disorders to extend their working life, using them as resource persons for skills training and encouraging them for active promotion of community cultural life.

(vi) **Health improvement and demographic stability** (felt systems need)

(vii) facilitating/strengthening appropriate community-level decision making bodies for promoting relevant socio-economic development (systems need).

(viii) Generating economic, political and cultural adaptive strategies for sustained development (systems need).

**IDENTIFICATION OF CONSTRAINTS/RESOURCES:**

Due to complex nature of relationships existing between micro-level social system and their macro-contextual supra-systems, a simple mechanistic analysis and quantification of requisite resources and description of absolute or relative constraints as boundaries of a simulated cybernetic model may not accurately reflect the dynamics of a social system.
Even our simple two-locus model of a social system and its macro-societal supra-system requires four rubrics of descriptions of respective loci and a minimum of twelve processes to analytically describe the simplest two-level system. More complex, as most social systems tend to be in various analytical frameworks, will require specification of a much larger number of such processes and loci. Valid assessment of various constraints/resources potentially associated with any narrowly defined analytico-empirical locus (requiring modification in a specified direction) will require assessment of impact of injected process (to achieve the desired goals) has on other elements and processes mapping the system. Clearly such a task appears to be beyond the analytic vision of the researcher at present state of his knowledge.

Notwithstanding such realization of our extremely limited knowledge of our system-supersystem linkages as also the restricted knowledge of the nature of structure-cognition dynamics inbuilt into both our micro as well as macro levels of social reality (indicating a weaker formative-research base than the one necessary for accomplishing such a task), we may attempt some crude assessment of such constraints as also the identification of resources which could possibly be systematically channelised to our micro-system to set in a process of systems' transformation towards its desired goals.
Maintaining our adherence to the simple analytical framework followed in our descriptive analysis of the initial state of our system (supra system; see chapters IV, V and VI), let us try to see such constraints in terms of macro-level loci.

In macro-cultural-institutional terms, the Indian Government's avowed policies (emanating from its 'welfare state' orientation) to provide adequate shelter, health, education and some mode of livelihood to all its citizens provides fairly adequate macro-level value-premises to rationalise such developmental goals. In terms of resources, allocated for achieving these objectives and utilised by concerned government agencies/institutions can be legitimately channelised into the micro-system of our development effort to provide the resources necessary for such desired transformation of our micro-system.

The obstacles created by bureaucratic red tape, and associated corruption therein, however, tend to strongly impede channelisation of such state welfare inputs into its identified target groups thereby retarding the macro-state induced social development objectives for micro-level development. An organised integrated project approach to micro-level development of selected pockets can help bypass the usual bureaucratic problems. The propagandist advantage accruing to the existing polity in projecting development of some such micro-societal units to their
political advantage (in a structural-institutional environment of negative development environment for most micro-level rural and urban socio-cultural matrices) can also be used to induce concentrated input of state welfare resources to a few such small-scale social systems. It may, however, be clearly borne in mind that the total available resources allocated by the state for such micro-level development is actually not adequate enough even to partially offset the anti-development structural trends at micro-level generated by specific modes of raising such developmental resources by the state. The limits for the success of such macro-institutional developmental policies of the state are being increasingly becoming visible - such development usually tends to be merely redistributive at horizontal levels and can not generate real total societal development due to state's own structural constraints of its external and internal dependency. (see section on 'The Nature of Indian State' in Chapter V).

In terms of macro-structural attributes of G1's proximate suprasystem, viz. urban Delhi, we find that their informal unrecognized mode of participation in urban economic and exchange cycles tends to severely affect their structural position in Urban-industrial Delhi. The reduction in surplus expropriated by the urban merchants marketing their manufactured products will considerably improve their standards of living. But due to highly asymmetric choice structures and extreme dependency of
small-scale producers (like Gaduliya Lohars) participating in unorganised sectors of urban economy makes such a reduction of such expropriation and/or even slightly tilting the market forces to their (QL manufacturers) advantage highly improbable. Removing such constraint to their development by providing necessary capital and appropriate technology to modernise their production for such a transformation towards a little more monopolistic production may make them move towards the core of micro-urban production and exchange relations. Such strategy will definitely impart them a capacity to manipulate market mechanisms to their relative advantage. But such an approach will also be merely redistributive and will not be in the direction of real total development of system-supra-system configuration.

The structural constraints to real total development at micro-levels being so severe, some alternative micro-level adaptive strategies are essential that could possibly generate a process of a non-redistributive total development at micro-levels without perpetual inputs of external resources to achieve such development in temporally sustainable ways - an issue we intend to take up in another section of this chapter.

DELINEATION OF RESOURCES' REQUIREMENTS OF SYSTEM DESIGN.

Due to lack of a reliable, valid and adequate information base on the initial state of the system,
relatively undefined goals and undefined goal state of the system, it is not possible at this stage to accurately assess the needs of various subsystems for their transformation towards the goal state.

However, as our discussion of macro-level constraints/resources indicates, and furthermore, in view of specific supra-systemic structural and institutional limitations to provide adequate resources for a total development of multitude of micro-systems, any exclusive reliance upon such macro-resources will be antithetical to the objective of achieving non-redistributive total development within system supra-system configuration. Therefore, our attempt will be to rely more upon micro-level resources (ideational, material as well as cultural-relational) to achieve such integrated development rather than attempt extraction of such resources from the macro-institutional channels, the increasing demand of which at micro-levels may further accentuate the conditions of underdevelopment of micro-level social formations at macro-structural levels. However, initial provision of appropriate physical and infrastructural facilities like house-site, electric power, loans etc to meet financial requirements for modernising production at individual levels on affordable terms may be necessary to be sought only from macro-developmental and civic institutions, which enjoy virtual monopoly over such resources in urban Delhi.
It is felt that an action programme need not necessarily wait for availability of such detailed data as demographic processes and a detailed description of all the analytic interactive processes operating at micro and micro-levels of a concrete socio-cultural reality. Such data generation activity can be more appropriately incorporated into an action-research plan which may systematically involve generation of such data on the initial state, pragmatic assessment of resources (internal + external) which could possibly be channelised into such action-programmes in a continuing manner thereby identifying a feasible goal state in view of such relative and absolute resources constraints albeit in line with identified objectives. Furthermore the need for ongoing monitoring and evaluation in such systemic action-programmes, as envisaged, makes a technique of combining formative and evaluative data collection activities into a single design a useful and economical research strategy by avoiding possible resource wastage.

A strategy combining assessment of constraints, potential resources and systems performance in achieving its desired objects will possibly be more useful in micro-level integrated societal development endeavours rather than a copy book systemic approach, as identified in chapter II.
As the system needs have not still been rigorously assessed, the delineation of various approaches and the analysis of their associated systemic processes cannot be made in strictly valid fashion at this stage.

However, on the basis of supra-system analysis (chapters IV, V and VI) and the Micro-content of Gaduliya Lohars (Chapter VII), the following broad considerations behind the integrated micro-level development planning of a fringe community, like Gaduliya Lohars, should be kept in mind while deciding strategies:

(i) Need of adequate economic and cultural integration of the community with the metropolitan eco-cultural system and imparting choices symmetry to their relationship with urban structural and cultural institutions.

(ii) As some of the objectives of the development processes are likely to be opposed to some cultural values of the community (e.g. women's development), generation of calculated dependency relations in the interest of achieving the development goals may be necessary.

(iii) In order that the development is sustained without perpetual input of resources, the community must build up adequate capacity for generating adaptive mechanisms so as
to integrate development mechanisms into its socio-cultural information system. This may necessitate promoting new organisational structures in the community.

A TENTATIVE ACTION PLAN

As the success of any participatory action-programme in this community is most likely to be largely determined by the community response to elements constituting such a programme, a syncretic combination of felt needs and systems needs must be carefully planned to achieve the final goal state of building adequate capacity for generation of appropriate adaptive mechanisms into its socio-cultural information systems. A multi-sectoral approach without systemically integrating various systemic transformation processes (intended) may only result in contradictory and inconsistent influences on various subsystems if such processes are not carefully selected and designed to achieve an integrated development.

It is cognised, even at our relatively weak stage of knowledge and analysis, that the action-plan must be able to work within the cognitive framework of micro-societal unit’s members. Therefore, meeting of various-extra-cognitive systems needs (like women’s upliftment, adult education etc.) at micro-level could be tacitly achieved by combining these with the felt needs at a processual level, which could form the first stage of
implementation of such an action plan. The next stage should involve building-up processes, by way of provision of suitable learning situations, generating relevant adaptive strategies to accurately reflect upon and effectively interact with their respective structural and institutional environments at micro-cultural levels. Co-ordinated and guided participatory dialogues (a technique suggested by Paulo Freire) may be used by the facilitator agency for building a feeling of empowerment in the community which alone could provide necessary cognitive-cultural conditions for taking the development process to the final stage, viz., reduction of community's dependency upon the facilitator agency and independently pursue the path of sustained development without perpetual external inputs or external dependency.

Such plan of social action could be briefly summarised as follows:

**Stage I:** Meet Felt Needs and Integrate with systems needs

- Education for children - Integrate with women and adult education.
- Curative Health measure - Integrate with women improved habitat and hygienic measures.
- Income Generation - Integrate with co-operative development, direct institutional marketing and improving status of women.
- Housing/habitat - Integrate with suitable structural compensation for loss of locational advantage available at present road-side dwellings.

(For achieving non-cognitive systems needs, which may even be opposed to their cultural values, the community's dependence upon the project can be used as an effective mechanism by way of using such dependency relations in a tactful and calculated manner).

STAGE-II: In processes of stage II, efforts for imbuing capacity for generating adaptive mechanisms could be associated with such activities as used to meet the felt needs. A well designed andragogic program, as a part of the systems design, constituted by structured learning situations in combination with participatory dialogical processes may help the community achieve a feeling of empowerment - a necessary precondition for effectively and independently coping with its macro-level supra-systems. This stage is vital as the lack of such capacity to generate valid adaptive mechanisms may eventually lead to collapse of development after the external resources are withheld. This stage will require careful monitoring and evaluation. It may require continued andragogic inputs over a considerable time till such a capacity is achieved.
STAGE III: After stage II is successfully completed, one may choose to take the final step, viz. regulated reduction of community's dependency on the external inputs and sustain developmental processes at its own level. Such reduction of dependency could be achieved in two possible ways, viz. (i) integration of development facilitators with the community and (ii) build community leadership to gradually assume such facilitator roles.

These considerations indicate that a TRIANGULATION STRATEGY in terms of a PROJECT APPROACH to development may prove to be useful.

Macro-Institutions

Community

Facilitator Agency

The facilitator agency managing the project in stages I and II should have the capacity for effective liaison with macro level institutions for channelising requisite resources into the project. A voluntary agency, university department of extension or a well established social research institute with experience of conducting social action programmes can effectively serve as a facilitator for implementing the integrated development plan.
Although such stages are specifically delineated to adapt to a specific structural and cultural-institutional situation, the same framework could also possibly be employed for micro-level development of other urban and rural communities also.

**SYSTEMS SYNTHESIS**

In view of incomplete systems analysis, synthesis of various approaches in an Integrated Plan of Action is not possible at this stage.

**TESTING SYSTEMS DESIGN**

After the system design has been synthesised, it needs to be tested on a small representative sample in a controlled manner and feedback provided for modification/redesign of the plan of Action.

For pragmatic considerations, one can always conduct pure formative research and action-research to test various approaches simultaneously and the systems design be based upon combined research outcomes, thereby facilitating speedy formulation of a valid systems design.
towards a self-regulating and self-sustaining model of
development of fringe communities:

On the basis of experience gained from implementation
of systemic micro-level integrated development plans, it
may be possible to generate a model of fringe communities' development that is self-regulating and self-sustaining due to its in-built control mechanisms. Institutionalised structures at macro-level regulating macro-micro flow of development resources in accordance with a valid systems design will go a long way in ameliorating the conditions of fringe communities as also retard the further growth of shanty towns and slums in Third World Countries who are increasingly feeling the stress of unprecedented chaotic urbanisation phenomena.

We think that on the basis of a comprehensive and reliable data base in terms of a micro-macro structure-cognition homologous model, as the one outlined in this report, it shall be possible to delineate the developmental needs, assessment of requisite inputs and programme pragmatic strategies for effectively producing capacity in a community to generate functionally adaptive strategies to forge meaningful linkages with the complex urban economic and cultural milieu. Such capacity will help the community towards achieving sustained development without perpetual external inputs.
Specific Action Programmes relating to effective assimilation of developmental inputs towards desired consequences can also be systematically designed by anthropologists for the benefit of agencies interested to undertake these tasks.

But the type of anthropology which can successfully accomplish such tasks in the context of post-colonial third world's micro-societal systems must have a more holistic and integrated analytical vision that the one possessed by it at present.