

[In the ADAB News May-June 1986 issue, Page 22 starts here:]

## NGO Experience

# NGOs in Bangladesh – *How Far from the Thermodynamic Equilibrium?*

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*This paper uses insights of modern physics in the growth of systems driven by an outside source of energy to demonstrate how increasing foreign aid to Bangladesh has primed development action for ever more disadvantaged groups in society. As the influx of energy drives the system further off the thermodynamic equilibrium, the system is bifurcated into distinct behaviours. Here the Bangladeshi society is the system in point, foreign aid is the source of energy, and bifurcations take place as the redirecting of development action to specific groups of users. The basic argument of this article is that the bifurcation processes during the last thirty years have been initiated by local centres of excellence in the NGO community. Other NGOs have been able to follow and travel the path of evolution in a shorter time. The programme history of one NGO, namely RDRS, is analysed in correlation with the change in development action in society at large. The NGOs have not only involved groups formerly barred from assistance, but they have also increased their ability to relate to small groups and even individuals. If these trends continue, then NGOs are likely to see a massive growth of poor women becoming their partners.*

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## 1. The Boiling Pot

Over the last ten years, our understanding of complex systems in nature and society has been significantly advanced by new developments in physics, particularly by its branch called "non-equilibrium physics". Non-equilibrium physics deals with systems through which energy is dissipated from an external source to the extent that the system itself changes its structure<sup>2</sup>. Social organizations (and voluntary agencies as part of them) are the open systems through which

energies are pumped from the environment into the society changing its structure in the process.

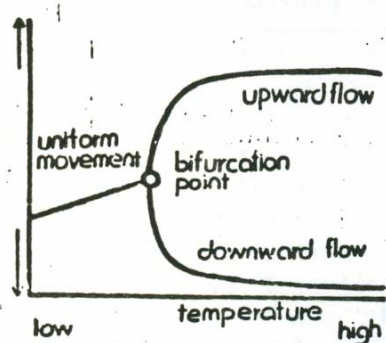
At first, let us take a simple example from the technical world to illustrate how increases in energy drive a system further away from the equilibrium to some higher states. Look at a pot of water that is being heated on a stove. As long as the heat received from the fire through the bottom-plate is small, a slow uniform movement of heat along a weak temperature gradient takes place, and not anything much

dramatic can be seen in what physics calls simple conduction. However, when the heat flow increases above a critical level, suddenly convection cells will form, with water flowing upwards and downward again in many narrow columns and with considerable temperature fluctuations within small distances. The uniformity has broken down, and the system has, as the physics textbooks put it, been *bifurcated* (or split into two levels) for important parameters such as temperature and the direction of the water flow. This is illustrated in Diagram 1. Perhaps the example is most trivial. But the conceptual aspects that it is meant to illustrate are the energy source that drives the system further away from thermodynamic equilibrium with its environment; critical levels above which the system changes its behaviour suddenly and dramatically; fluctuations-change of direction or intensity

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within small, yet distinctly macroscopic neighbourhoods.

**Diagram 1: The Flow of Water in a Heated Pot**



**Speed and direction of the water flow in a small neighbourhood above the heating plate**

## 2. Energy into Bangladesh

Bangladesh, being a highly rural society, may allow one to think that most of the energy it is using is harnessed locally through photosynthesis in plants. However, much of its economic and societal growth has been fuelled by foreign aid, i.e. by an external source of energy, which is why the boiling-pot analogy may particularly help us look at the dynamics of the development organizations, including the NGOs.

There is little doubt that foreign aid has become the primary energy source leading the NGOs to higher forms of organization through a series of bifurcations. Without foreign aid most of the larger NGOs would not have survived over time. Nevertheless, we must recognize that foreign aid overwhelmingly goes to the Government programmes (the NGOs currently receive 3 - 4 percent of all the aid disbursed to Bangladesh), and therefore the NGOs form only one small convection current in the boiling pot. Foreign aid to Bangladesh has been substantial only since 1969. The conversion of foreign aid to development action cannot be taken for granted. If some of the organizations had not been involved in this conversion before Bangladesh came into being, the process would have been much slower. Crucial foundations for subsequent activities were laid in the sixties, when the Comilla experiment, later known as 'BARD', pioneered rural development as a national priority (see Diagram 2). In Diagram 2 a series of bifurcations mark the

emergence in the development process of new groups who have been on successively lower rungs of the social ladder. They are the rural society at large, the rural poor, the poor as organized small groups, poor women, and perhaps children. The work of Aktar Hameed Khan in BARD in the sixties demonstrated viable forms of rural investment. In the seventies, BRAC began to render its assistance to the rural poor. The success of the Grameen Bank in spurring self-reliance of their national programme (because of very high repayment of loans given to small organized groups of poor people) is evident in this decade. The next decade may further refine this process of addressing aid more accurately from broad social aggregates (the rural sector) to more specific users - individuals or even particular social roles within individuals. If Bangladesh can gain access to increasing resources, both the Government through administrative programmes and the NGOs through voluntary organizations may learn to relate, on a much larger scale than now, to some of the most dejected groups such as destitute single women and to specific individual status (social roles) such as fertile couples. The enhanced capacity of the NGOs to activate specific individuals and social roles will not eclipse the larger organized groups, which are so important for the mobilization and strength of the poor. Rather, these can be mutually reinforcing. Immunization is a good example. In poorly

organized populations, one-time mass campaigns are feasible. For recurrent provision intended to give each vaccinee the full number of doses required in the appropriate circumstances, reliance on organized groups, on health workers and/or volunteers to follow up is much more effective.

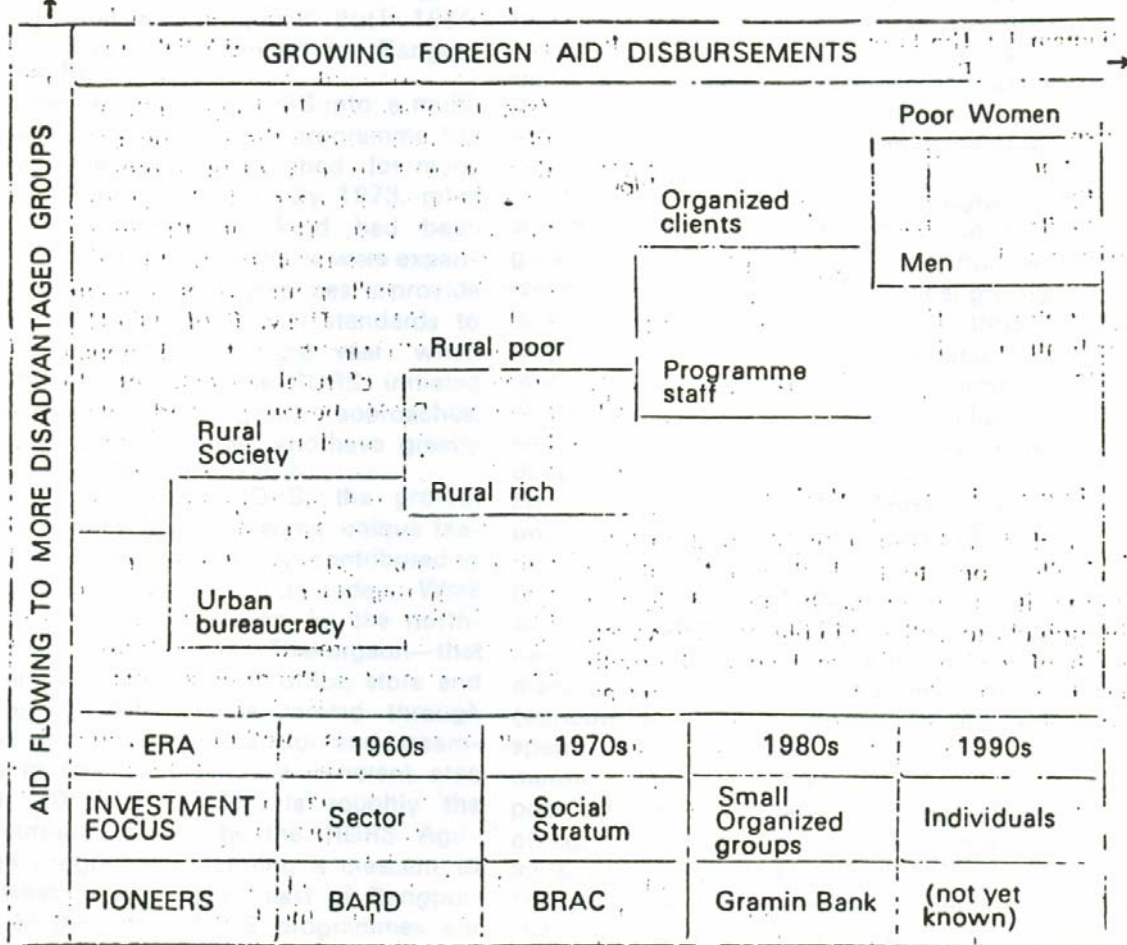
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### **3. A Closer Look at One NGO**

The series of bifurcations described above operate in society at large. Within each development organization, using external aid increasing over many years, programmes tend to be subject to sudden transitions to new states alternated by spells of more quiet elaboration. Thus, societal growth and organizational growth tend to become similar. There are differences, too, and this section explores the growth of one particular NGO in development to visualize the NGO growth system. The NGO selected for this purpose is the Rangpur Dinajpur Rural Service (RDRS).

The RDRS is an international development organization operated by the Lutheran World Federation, based in Geneva, Switzerland. It operates development programmes in the north-western part of Bangladesh, in the old districts of Rangpur and Dinajpur, where it is the largest NGO involved with rural development.

Diagram 2: Progressive Bifurcations in Development Action



[The diagram appear on page 24 of the ADAB News print edition]

Currently the RDRS has approximately 1,800 employees. The RDRS began its activities by extending the necessary assistance to Bangladeshi refugees who had taken shelter in India during the War of Independence in 1971. After liberation, a Norwegian missionary in Coach Bihar followed the refugees

‘Rangpur Dinajpur Rehabilitation Service’. But in 1986, the name has been changed to ‘Rangpur Dinajpur Rural Service’<sup>3</sup>.

The evolution of the RDRS into a multi-sectoral rural development programme has followed the pattern described for many NGOs in Bangladesh<sup>4</sup>. By 1973, relief activities of the initial kind had been greatly reduced, and the NGOs were experimenting with sectoral programmes to provide services of high professional standards to the rural poor. 1976 is

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to their devastated communities; the name of the organisation was

the year when many NGOs, including the RDRS, initiated more selective target group approaches. These have proved viable, and have greatly been expanding since 1980.

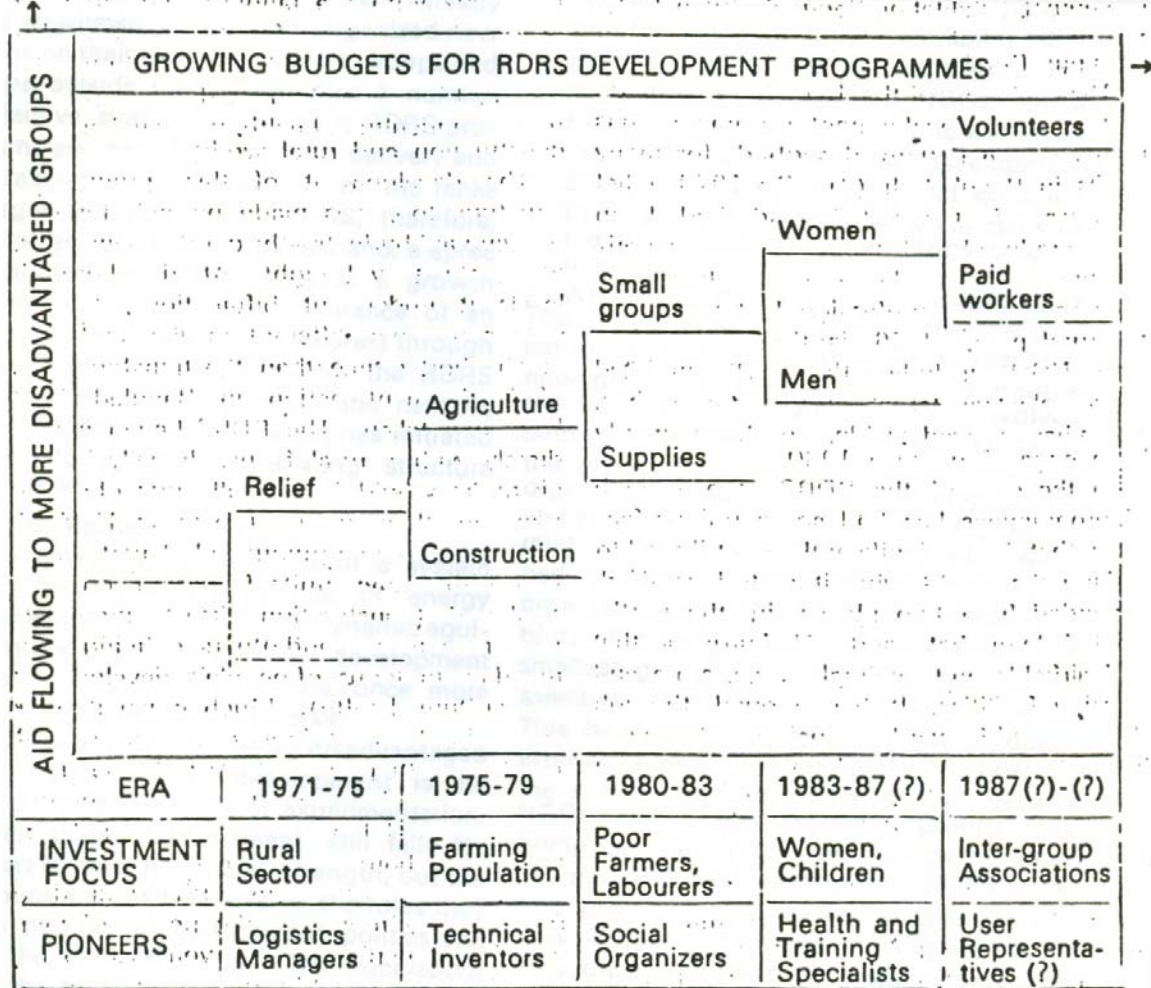
In the case of the RDRS, the growth of programmes has had some unique features that have significantly contributed to making the RDRS what it is today. Work expanded from two places in the northwest - Lalmonirhat and Thakurgaon - that had airfields and minimal office, store and housing facilities. It has moved through waves of forward expansion and streamlining to form eventually a coherent area of ca. 20 Upazilas. This is roughly the area currently served by the RDRS Agriculture programme, forming a crescent to the west, north and east of Rangpur. Most of the other RDRS programmes are inscribed in that belt of neglected, remote communities. This arrangement, leaving no isolated and distant project islands, has great logistic advantages.

With hindsight, the waxing of the RDRS has been surprisingly smooth. It has been free from major breaks with authorities and communities or with segments of staff. Continuity has been secured chiefly by the consistent professional orientations maintained during the growth of programmes. While addressing various priority needs of the poor, the RDRS has maintained a programme structure with units that have clear professional

competence and leadership. It has created strong positions of programme administrators, and those RDRS has been fortunate to man with good professionals. The increasing interdisciplinary approaches that work with the landless and with poor women have not so far significantly blurred the professional discipline. Currently, the RDRS is operating six different programmes - agriculture, health, women, landless, construction and rural works.

The development of this programme structure, too was made possible through growing aid budgets - the goods, manpower, ideas, etc. they bought. At critical growth levels, it underwent bifurcations, though with somewhat different results and in a much shorter time than the transformation of development action in Bangladesh at large had taken. The RDRS began immediately with a rural focus. Initially, administrators would handle all sorts of operations in their units. The years 1974-76 brought a more pronounced departmentation with some units focussing on physical work (construction, disaster preparedness resources), and others defining their mandate in terms of people's development (agriculture, health). Much ingenuity was spent in the next four years, on experimenting with policies to assist the rural poor effectively. Organized small groups of agricultural labourers and marginal farmers started proliferating in 1980-83. Since .

**Diagram 3: Progressive Bifurcations in RDRS Programme Development**



[The diagram appear on page 26 of the ADAB News print edition]

1983, programmes were further refined to relate to the more specific needs of individuals. Examples include women's groups, who have appreciably grown, and management systems which ensure each participant in immunization programmes receives the full number of doses.

The evolution of the RDRS (Diagram 3) is, however, connected with the overall time-scale and behaviours of

development action in Bangladesh, and with progress made in the earlier evolutionary layers in RDRS's history. Both the RDRS women's programme and the small farmer group programme evidence this point. As early as 1976, a special Women's Activity Programme was set up by RDRS. Poor women, in significant numbers, were not, however, assisted until about 1983. Earlier, the social

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environment (e. g., women working in farms) and the RDRS experience in working with special groups had been too restrictive to support a strong move towards women. Similarly, the change from an individualistic contact farmer extension approach to a small farmers' group approach in 1980 was greatly facilitated by the treadle pump, which happened to be ready for mass production by that time after years of experimentation with appropriate irrigation equipment.

Thus, the RDRS has benefited from the new challenges put forth by centres of excellence in national development and by the growing stock of experience within its own body. These factors have helped direct its programmes to higher states in terms of reaching the poorest and the specific needs of individuals within groups.

What does the future hold for the RDRS? At present, the poor, though organized in groups and assisted in various ways, are controlling relatively little of the organization's resources. The returns to the investment of group savings and revolving loans are not yet paying for their supervision,

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and client representation in RDRS policy-making and in staff evaluation currently is minimal. Yet, the growth of self-asserting women

and fine-tuned management adumbrates another bifurcation to come. Already by now, women groups have organized new groups on their own, even men's groups and groups outside the village. Also a number of effective strategies from each RDRS programme are ready for integrated delivery and for training of volunteers from the ranks of organized poor. The RDRS, therefore, anticipates, as its activities expand, a spree of voluntary services as well as a growth of client influences. The assurance of an adequate livelihood for the poorest through their actively taking charge of the RDRS has been elected its goal for the next era of growth, and the organization has initiated its steps to adjust its operating structure to the goal.

#### **4. Final Remarks**

The characteristic features of a system driven by an outside source of energy further away from the thermodynamic equilibrium are clearly present in development action in Bangladesh; and are once more underlined in these final remarks:

- The emergence of new disadvantaged groups in national development is the result of thirty years of experimentation. Their share of investment still falls far short of their numerical strength, but the groups are clearly visible in the roles they are playing in

development politics and in the lives of NGOs. The *fluctuations* in the body politic are *local but macroscopic*.

- These fluctuations are driven by *an outside source of energy*, i.e. increasing foreign aid, and are organizationally spear-headed by local centres of excellence such as BARD, BRAC, and Grameen Bank. Foreign aid pays for the action; the pioneering ideas and leadership are Bangladeshi. Many other organizations, including foreign ones, follow to practise and elaborate them and in turn come forward to add to the pool of ideas. Recently, some NGOs have built elements of self-reliance in their financing.
- The centres of excellence are NGOs or semi-NGOs. They are effective for their flexibility in relating to poor people and for the kind of accountability that attracts foreign donors. As a result, foreign aid is available to NGOs on a steadily *increasing scale*. This will result in further *bifurcations* of development action. Fresh innovations will continue to come from the NGOs while many of the older NGOs have the means to continue set programmes.

Where will this expansion process lead? The progression of development programmes over

the last decade to reaching new groups of people has been a double process. It has successively involved people who were less and less likely, in the given social system, to receive any organized assistance. Also, it created the ability, particularly among the NGOs, to relate to increasingly specifically defined groups of people. With sharpened organizational tools and field worker mobility, the NGOs have opened even the smallest group in society - the family - for selective client recruitment and assistance.

This has brought women to the foreground. Women already constitute the majority of the service users in some NGOs. Several NGOs report that women's groups are going out to form new groups of poor people. Has the 'heat' of the NGOs assisting poor women reached a level where new fluctuations appear, driving women to take on unexpected leadership roles? Will the number of vocal women multiply sharply? How localized will this outbreak remain? When the organized women go on multiplying, a critical level may be reached to advance the progression of changes towards finer-grained units by another step. From the total person, special behaviours may develop to protect particular social roles and life-stages. More women, as an example, may insist on regulating their fertility by initiating family-planning decisions in their families. A stronger role of volunteers is another development to be



expected.

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This paper has attempted to apply insights from physics, which are not normally seen in social sciences, to explain and predict changes in development action in Bangladesh. Non-equilibrium physics is helpful in reminding NGOs that they work in open systems creating their own progressive orders. There is no development in equilibrium. The NGOs can only ever go on.

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Experimental Process: Focus on 50 million poor in Bangladesh. Proceedings of the National Seminar Organized by the Association of Development Agencies in Bangladesh (ADAB) 1984.

## **Bibliography and Endnotes**

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<sup>1</sup> [The author was the RDRS Programme Coordinator 1983 – 86. Since 1997, he has been one of RDRS's Strategic Advisors. – This version, of June 2007, was processed from a photocopy of the 1986 original. Text was retrieved using OCR; some orthographic mistakes in the original were corrected. Diagrams appear as in the original ADAB News print edition. None of the organizations mentioned in this article is responsible for any of its formal or substantive aspects, neither then or now. - AB]

<sup>2</sup> A good introduction to the basic concepts of non-equilibrium physics may be found in Prigogine, Ilya: *New Perspectives on Complexity*, in: *The Science and Praxis of Complexity*, Tokyo, The United Nations University, 1985, pp. 107-117.

<sup>3</sup> [In 1997, RDRS became a legally independent Bangladeshi NGO, "RDRS Bangladesh". It retains an "affiliated programme" status with the Lutheran World Federation. Its Web site is [www.rdrsbanqla.net](http://www.rdrsbanqla.net) - AB]

<sup>4</sup> F. H. Abed, R. U. Ahmed, Wit Treygo: *NGO Efforts and Plans: Development as an*