

THERE has been a great deal of discussion as to whether technological development based on models in western countries is relevant to socio-economic conditions in third world countries like India. This discussion has given rise to experiments in evolving appropriate technology. "Appropriate technology" claims not just to confer benefits on people but also to involve them as participants in decision making.

Some of the earliest experiments with appropriate technology were carried out in the villages of Uttar Pradesh, under pilot development schemes. These projects have failed to involve women in the development process, because of the planners' inadequate understanding of women's economic roles. This case study of the functioning of a gobar gas plant in village Fateh Singh Ka Purva, Etawah district, Uttar Pradesh, tries to explore how far the appropriate technology programme has succeeded in achieving its stated aim of people's participation, particularly women's participation.

The gobar gas plant, financed by UNICEF, was installed in this village about three years ago, as an experiment in decentralized village energy system. This village was chosen because it was a small unit of 27 households, most of them belonging to the gadariya caste, who are traditionally shepherds and cattle raisers. Five households in the village own more than five acres each; 20 households own between three to five acres each; and two households own below three acres each.

In Fateh Singh Ka Purva there are two gobar gas plants which have the capacity to provide gas within a radius of 80 cubic metres. These two plants require 1,524 kilos of dung daily, but the village produces only 400 to 800 kilos a day. The plant has been designed on the much too ambitious assumption that each household in the village owns three cattle and three cattle yield 40 kilos of dung. Whereas we observed that some families in the village own only one cow or buffalo each. Even where there are three cattle, they do not yield more than 25 kilos of dung. We met one family which did not own any cattle but had taken one cow on *batai* (share).

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Appropriate For Women, Appropriated By Men

Experiment With A Gobar Gas Plant

This household was not contributing any dung to the gobar gas plant, and the woman of the house repeatedly asserted that she had brought this cow only to provide milk for her ailing child. She refused to contribute dung to the plant, in exchange for a gas burner and a supply of cooking gas, because she did not think she would get any major benefit from such an arrangement.

To ensure systematic running of the plant and to promote participation of the villagers, a cooperative has been formed in Fateh Singh Ka Purva. While each household is a member of the society, there are seven active members who constitute the executive body. The president of the society is also the largest landholder in the village. We found that this domination of the project by the rural elite perpetuates the neglect of small cultivators, and of women.

It is also paradoxical that women, who are supposed to be the main beneficiaries of the gobar gas plant which is claimed to "revolutionize" their cooking schedule, are entirely excluded from the decision making levels of the cooperative society.

Though the main emphasis of the plant is on the provision of cooking fuel, which supposedly falls in women's domain, it was men who took it upon themselves to tell us how their wives had or had not, benefited from it. The anti-women bias of foreign and local experts was evident from the fact that knowledge of technology of the plant had been given to men alone. We felt that inclusion of women in the executive body of the cooperative would have gone a long way in making the plant

socially and economically more functional.

Bad planning, a total disregard of women's role as economic producers, and the way this technology caters to the rural rich have led not only to its failure but also rejection by the common people. The way the timings for provision of gas have been planned is an example of the planners' indifference to the living and working conditions of women. Gas for cooking is provided from 8 to 10 am. and from 6 to 8 pm. A bell is rung 15 minutes before each of the fixed hours, to enable women to prepare for cooking. The morning hours did not suit the women who, by 8 am. were well advanced in their day's work in the fields and found it very difficult now to reorganize their agricultural activities in accordance with the gas provision timings. Several women said that to avail of the gas provision, they were compelled to leave their young daughters at home, while they went to work. "We are constantly worried about the security of our young girls left at home" one woman said. Though we could not fully explore the implications of these young girls being forced to stay at home, it is likely that it has serious repercussions on their school education.

Secondly, the timings were insufficient. Three meals are cooked in a day but no gas provision had been made for the third meal. The Women said that within these limited hours, all they could cook was a vegetable and wheat chapatis. Dais took too long to cook and maize or bajra chapati did not roast well on a gas burner. The gas also proved unsuitable for boiling milk, since in this village milk is kept heating on

a slow fire all day long, so that it is preserved. Therefore the women needed some other fuel to boil milk and cook dal but they were now hindered from making dung cakes, so they were forced to rely increasingly on wood which is expensive and difficult to procure. Thus gobar gas failed to reduce the working time or the drudgery of the cooking process for the women of Fateh Singh Ka Purva.

The women were very vocal in denouncing the gobar gas plant. They said that on the one hand, if they did not provide the quota of dung to the plant, they had to pay a fine. On the other hand, the amount of gobar gas provided took care of not even 25 per cent of the day's cooking, so they had to look for wood as a substitute for dung cakes. Few households can afford to buy wood in the market. The result is an increase in the work burden for most women.

They have to spend time gathering fuel wood in the forests and groves. Thus introduction of gobar gas seems to have increased the dependence of these villagers on the market. Cash relations have gained importance. They need cash to purchase bulbs, spare parts of burners, get gas pipes repaired and buy extra fuel. This may provide an impetus to money

lending.

Gobar gas technology has also enhanced women's dependence on the men of their families. Through experience, these women had become adept at dealing with operational problems in the traditional organization of food production. Now, since they have been given burners but have not been given access to understanding the technology involved, they have to depend on men even for routine cleaning of the valves of the gas burners. Technological penetration seems to have weighted the traditional sex-defined division of labour further in favour of men.

It was clear that the planners had tried to impose the urban middle class housewife role on these rural women, even though the majority of the women are involved in agricultural production. The planners had assumed that the woman, being at home all day, could adjust her schedule to that of the gas plant, thus completely ignoring her involvement in agricultural labour. Even the food producing and processing role of women had been ignored. The result was that though the programme was supposed to increase production, it only made the family production unit more inefficient.

The gobar gas plant at Singh Ka Purva also claimed to provide facilities of flour grinding chaff cutting, oil pressing, threshing house and street lighting, irrigation. If village women could have availed of these facilities, their work burden could have been lightened. However, most of the women are too poor to pay even the nominal charges for these services.

A majority of these women grind five to seven kilos of grain a day. The charges for mechanized processing of grain vary from 5 to 10 paise per kilo. This would add up to Rs 9 per household per month, which is an exorbitant sum for the poorer villagers to pay. In fact, such facilities provided by government in other villages of Uttar Pradesh have also proved non-viable because of the poorer villagers' inability to pay. In course of our trip through some villages of Uttar Pradesh, we covered that even in those households which could afford to have their grain ground at the mill, the women continued to grind it at home. Why did these families consider it unnecessary to save women from such tedious and time-consuming toil? Though these women are overworked at home, their work is not seen as economically productive, therefore most men and several women feel that grinding grain is one way a woman can save some money and thus be "useful" to her family. For most of these rural women the day begins at 4 am. It takes on an average, three hours for a woman of an average-sized family seven members, to grind corn or pound rice for the day's consumption.

For appropriate technology to be absorbed into village life, the social environment has to change. In Fateh Singh Ka Purva, no attempt has been made to provide handpumps, drainage, sanitation, health facilities or even primary education. The plan management personnel say that installation of handpumps has been withheld because the village women would congregate round the pumps and sit there bathing and washing, all day long. The management says that there is a continuous stream of foreign visitors to this "model" village, and the women



bathing in the open would be “adverse to values of decency, propriety and modesty attributed to Indian village women.”

Thus the conception, implementation and organization of the “development” programmes in Fateh Singh Ka Purva are marked by a blatant disregard of women’s roles, activities and needs. If the purpose of development and appropriate technology is to involve people as participants in a process leading towards increased productivity, more equitable distribution of resources and greater control by individuals over their own lives, then surely rural development must orient itself towards involving women as active participants rather than patronizing them as passive recipients of benefits designed and conferred from above. □

Torn Apart

*When I first fell in love
with books,
fell madly, passionately
in love,
you didn't tell me that
I was already married-
married long ago
when I was a child.
You didn't tell me,
when you made the introductions,
that I was committed
to the little kitchen set
in my toy trunk,
that it was on ly
a matter of us
growing up.
Not that I blame you
but it's just that
bookcases don't fit in kitchens
and
it's a long walk to the library.
Besides,
who doesn't know that
love and loyalty can be tiring,
tearing,
when they are different.
Not that I blame you.
Not at all.
It's only the law
that's the problem, you see.
Bigamy is not allowed.*

—Joy Desbmukh

Report From Iran

Iranian women were active participants in the popular movement against the Shah in 1978-79. They played a major role in the overthrow of the Shah’s regime. Iranian women aspired to attain equal rights after the Shah’s downfall, but the Khomeini regime has not only refused to recognize these rights, it has also snatched away the few rights which women previously enjoyed. Immediately after coming to power, Khomeini ordered his gangs to attack women’s meetings. The attackers raised the slogan : “Take the veil or go to hell.” Women were dismissed from jobs merely on the charge of being women, and the majority of them were forced to return to the role of housekeepers.

At present, many women are militant in the resistance movement. Hundreds of women have been imprisoned, tortured, executed by the Khomeini regime. On April 21, 1981, a meeting of women supporters of the Mojahedin (opposition movement) in Quaemshahr was attacked by armed guards. Many women were injured and two were killed. On April 21, the Muslim Mothers’ Society held a demonstration in Teheran, to protest against these murders. About 200,000 people, mostly women, took part in the demonstration.

According to the latest figures, there are more than 45,000 political prisoners in Iran. The number of executions had reached 8,000 by the beginning of 1982. Between 1 and 11 February, 1982, 800 people were executed. Prisoners are systematically and brutally tortured. Rape is a routine form of torture. Khomeini has issued a decree saying that arrested women are the “spoils of war.” Many pregnant women have also been tortured and killed. Moussavi Tabrizi, the regime’s chief prosecutor, has recently declared that the minimum age for execution of boys is 16 but girls can be executed at the age of 10, when they are supposed to attain puberty. Many children, even younger than these ages, have been executed. Little children are held as hostages and tortured, as a means of forcing their parents to

surrender themselves to the police.

An atmosphere of fear and violence pervades the country, affecting, millions who have not been involved in any political activity. The unemployment figure stands at five million. The workers live in sub-human conditions. Strikes are illegal and punishable by death. There are also two million refugees in the country, because of the war with Iraq, which has a death toll of over 130,000 and has devastated the fertile province of Khuzestan.

Universities have been closed for two years, and Khomeini’s quotations decorate the walls : “All our troubles come from universities.” The hostility of the ruling regime to education and scientific enquiry has forced many to flee.

One can be arrested for such “suspicious activities” as having lights on at unusual hours, or having frequent visitors. There are many instances of such persecution. A young girl from a middle class family went swimming in her family’s backyard pool. A man in an adjacent building saw the girl in her bathing suit, and told the so-called revolutionary committee that “he had been sexually aroused.” The girl was arrested and sentenced to 60 lashes for her crime. She died after 30. In another case, a 28 year old school teacher was arrested because she was the friend of a woman who refused to wear the required head covering known as chador. The teacher was taken to prison and her home was searched. Copies of books by Flaubert, Zola and Rousseau were found. The teacher was executed.

Iranian young people who go abroad to study, have organized to arouse international opinion against these atrocities. These students live under the ever present threat of deportation to Iran, where they are sure to be executed for their activities. Yet the Iranian people’s spirit has not been broken. They continue the struggle both inside and outside the country.

—Iranian Students in India