

The Threshold of Intergenerational Transfer of Poverty

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One of the most evident intergenerational poverty transfers from older to younger generation is among those children who are forced to work to contribute for sustaining livelihoods, most times at the cost of formal education. Child work is perpetuated by social norms and structures that also sees them out of school. This paper examines why would poverty get transmitted in some households. We shall see in this paper that a very proportion of children is engaged in some work and not all belong to poor households. Some are out of school due to excessive work and it is mostly these children who transfer poverty.

Harper *et. al.* (2003) in their review of enduring poverty and poverty transmissions have identified three basic categories of poverty transmission, namely, financial, material and environmental assets, human capital and attitudes, culture and other knowledge and traditions. This study on work, education and society relates to these three categories. Harper *et.al.* realise the importance of child work paid or unpaid as a critical factor in their livelihoods to the extent that certain household may break the intergenerational poverty cycles while in others it may create poverty cycles. The long term impact of work is influenced by a number of factors including nature of work, local labour market opportunities, conditions of employment, health hazard, and social relation. Thus they conclude that a wide range of policies that reduce need to children to work are crucial.

A review of children's education shows that it is a powerful way of breaking poverty cycles. Accordingly, it is seen that formal education facilitates mobility, builds social networks, and promotes human development. There is also a direct and positive relationship between parent's and child's education. Educated women would in general also take care of their daughters' education. Harper *et.al.* identify the negative externalities of social norms and practices including implication for restrictive opportunities to access assets, social connection and political power. They conclude that:

“Transfer across generations, between individuals or throughout an individual's lifecourse, whether of tangible assets, such as land or debt, human capital such as nutritional care, education or disease, or attitudes and traditions, such as value systems and gender bias, are all cited in a context full of enabling or inhibiting mechanisms. It is only through understanding these contexts and prioritizing within them that poverty transfers can be halted”.

This study

This study, as stated earlier, identifies why in the specific context of Rajasthan does poverty get transmitted from younger to older generation and what is the relationship between work, education and society. We discuss in same detail why some children who are not so poor work more than the poor children but yet do not transfer poverty. While poor children face various forms of discrimination relating to work, education and social relations that ensure them life course poverty as well as intergenerational transfer of poverty.

The data used for the purpose covers 5600 households spread in seven districts of Rajasthan. A large sample of households enables us to draw meaningful and

significant inferences. Besides, a large number of other studies on Rajasthan based on primary data have been used to strengthen the arguments. In section I, we shall examine how children's work is influenced by the natural Resource Environment. Section II relates to work and occupation. This is followed by three cases of children in as many different environments. These are drawn from a larger study of Livelihood Adaptation in Rajasthan (a brief report of the same is given in Davies *et al*, 1996). Section III is on education and Section IV presents the conclusions.

I

The natural resource system and children

Rajasthan is characteristic of regions where the spatially spread resource bases have low *density* and *predictability* (Dyson-Hudson and Smith, 1978; E.A. Smith, 1987; both quoted in Dasgupta, 1993: 289). By density is meant the average value of the resource say per square mile; and predictability means the inverse of the value of the resource per unit of time per square mile, with the allied assumptions that the probability distributions are not overly correlated over spatial groupings of land and not overly correlated over time. Regions with low productivity and low density are vulnerable to the vagaries of rainfall, the monsoons in the case of Rajasthan.

Households in such regions with fragile survival base are exposed to uncertainties, risks and stress. The standard theory of resource allocation, according to Dasgupta (1993) would tend to institute private property rights where both density and predictability is high and will remain geographically stable. **Where both factors are low communities will be dispersed and mobile; and there will be greater incidence of common property resources.** Regions that show such characteristics are the semi arid tracts and the arid tracts as well as the hilly mountainous areas of Rajasthan. In these regions the poor with less assets face more uncertainties and would also be more mobile. Davies (1993) in the context of Mali maintains that increasing vulnerability in these regions is characterised by reducing resilience (the capacity to bounce back after a shock) and increased sensitivity (the intensity of an impact of a given shock). While density and predictability are the determining factors of a natural resource system, resilience and sensitivity show the impact on the system and the household.

In the arid and semi arid regions of Rajasthan, the main economic activities are livestock rearing and agriculture where rainfall is scarce and the region is often visited by drought. To cope with loss of fodder for livestock they live in dispersed settlements and are mobile, meaning pastoralists or migrating for wage labour.

Children living in such dispersed and mobile communities have three important household chores to perform, namely, collection of fuel and fodder from commons, livestock rearing, and fetching water. Among households who have children in the age group 11-14, this is a major activity for these children especially among the poor households and that too girls. Table 1 shows the proportion of households engaging children in these chores. (The limitation of the data is that time disposition of child activities has not been collected in this data set, which would have given a more accurate account of child involvement). Time disposition varies seasonally and differs with the *density* (of natural resources). It is a common sight to see children collecting fuel wood from the commons while returning from school which are far from their

homes. Notable is the fact that the differences between non-poor and poor households are not significant.

Table 1: Per cent rural households engaging their children in collecting fuel, fodder and water from common property resources.

	Non-Poor	Poor
Fetching fuel		
Boys	59	56
Girls	66	64
Fetching fodder		
Boys	56	46
Girls	58	51
Fetching water		
Boys	61	57
Girls	75	72
Grazing livestock		
Boys	51	45
Girls	50	44

Note: The poor and non poor households are based on an official survey conducted by the Government of Rajasthan. The Survey is based on income of households including imputed value of home grown produce.

Source: Base Line Survey of DPIP Districts, IDS, Jaipur (The Survey includes districts in the arid, semi arid and mountainous regions of the state of Rajasthan)

Carrying capacity of the ecosystem in vulnerable regions of the kind described above is threatened by expanding economic activity, growing human and livestock populations leading to a fast degrading environment and loss in bio-diversity, depletion of soils and important aquifers. The decline in carrying capacity reduces resilience i.e. allowing the system to absorb and utilise from change (Holling 1978: 11). Along with a decline in resilience, the sensitivity of the system to respond to the uncertainties of monsoons is increasing, i.e. the impact of a monsoon failure is now more adverse. Vulnerability of the households increases as output from forests and common properties decline and they compete for their declining entitlements with each other. In such circumstances the most preferred option for the poor households is to migrate for wage labour, sometimes with their children.

One set of victims of the degrading environment are necessary the children whose time disposition in collecting from common properties increases. The oral evidences of deteriorating commons are many (See Jena, 1999). What gets transmitted is a fragile survival base, a lower *density* (of resources) and an ecosystem with declining carrying capacity. When a system becomes less resilient, children would draw incrementally less output from the commons per unit of time per square mile. Decreasing *density* and *predictability* of an environment spells doom for children as future inheritors of the degraded capital of the area, unless their dependence on natural resource systems for livelihood sustenance declines. The other recourse is, of course, making the physical resource environment more *dense* and *predictable* through external intervention. As households get further dispersed within the village children's access to social services further declines. If there is no effective public intervention to check these processes, children in the present are guaranteed a lifecourse transmission of poverty as well as of the future generations.

There are many government and non government efforts to increase the *density* of resource base through the watershed development programmes that ensure water retention in the soil, increase groundwater potential as well as rejuvenate the common

property resources (See Cecoedecon, 2002). Wherever, the implementation has been successful, production has increased between 40 to 100 per cent, groundwater table has come up and there is a controlled use of the common property resources. There is an overall increase in sustainability of the households. Even poor who have little or no assets benefit indirectly from the increased demand for wage labour and the increased yields from the commons. Despite this, when rains fail miserably, the watersheds provide only a little respite.

II

Work or occupation

Other than the work described in Table 1, children are also engaged in cooking, cleaning, infant care, child care at home and various agricultural operations. (See Table 2) Most of this work is undertaken before or after school hours or by absenting from school, which is very frequent for both boys and girls. In agriculture, animal husbandry, manufacturing and services, children are working both as unpaid wage labour as well as paid wage labour. However, the reported casual labour both within and outside villages is very small, 2.6 per cent among boys and 1.3 per cent among girls.

Expectation of parents from children to help in household chores and household based economic activities is high (See also Box 2). As education does not relate to the activities that children engage in, both work and education when seen together are burdensome for children.

Table 2: Occupational pattern of children

	Boys	Girls
Only Studying	84	66
Profile of out of school children		
Domestic work	21	39
Agriculture & animal husbandry	31	26
Manufacturing & Services	12	31
Non-workers	35	37

Source: See Table 1

In extensive agriculture and pastoral areas (See Box 1) there is plentiful of work with generally low returns forcing both girls and boys to work, girls more than the boys. Survival alone drives the poorest mothers to carry children with them on work site who also start earning Rs. 5 (\$ 0.05) per day. In the agricultural intensification area with small land holdings children get engaged in household activities necessary for survival. (See Box 2). Intensification of agriculture in peri-urban areas shows that it has resulted in increase in nutritional level of children but it has increased the work load of children (See Box 3).

Three case studies of children and livelihood adaptation

Three case studies of children in as many different environments are presented in Box 1, Box 2 and Box 3 from a study on Livelihood Adaptation (Davies, 1999) as mentioned earlier. Three kinds of households are described in the study. First are the 'successful adapters' or 'positive adapters' who have accumulated wealth and invested in their assets. They have also taken advantage of various government programmes and services. The worst are the 'getting by' or 'negative adapters'

households who are just able to manage their livelihoods and have to migrate for casual wage labour and make little use of services provided by the state. In the middle are those households who live on the fringe of getting by and migrate for wage labour only to accumulate.

Total output, technology and share of child work

The relationship between the total output Q of a household, technology, child and adult labour is given by the following relationship

$$Q = G[\beta, (z_a a_a + z_c a_c)]$$

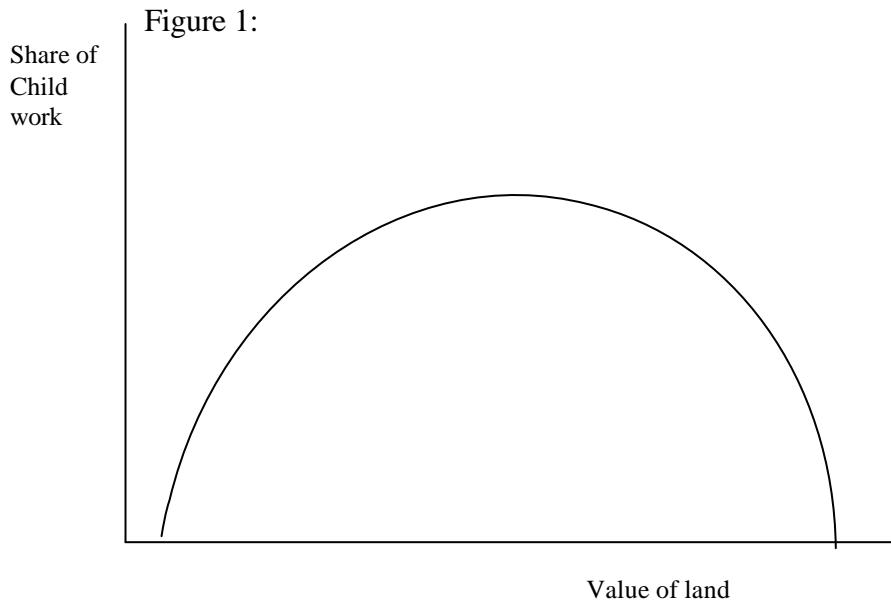
Where

- β = assets owned by the household
- β = technological parameters that catches the relation advantage of different modes of production
- a_a and a_c = Share of adult and child labour respectively in home production, such that $a_a + a_c = 1$
- z_a and z_c = Marginal gain for an additional unit of labour for adult and child respectively

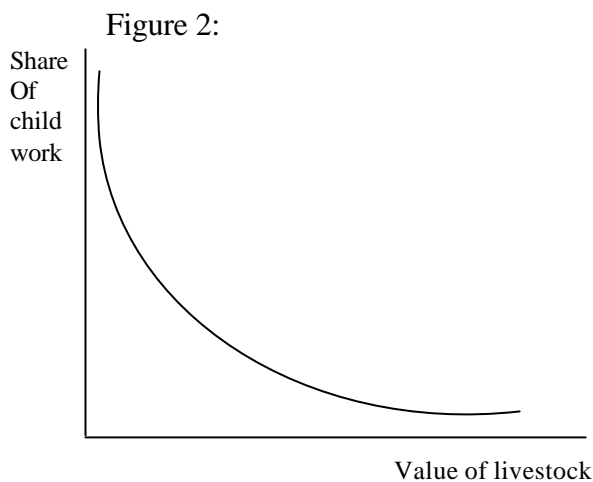
With G diminishing.

Let us first take the case of output from agricultural land holdings, Q representing agricultural output. It is evident from the above formulation that Q will be higher if β and β are large, which is obvious. However, the relationship of these variables with share of child labour in total labour is less obvious. As the study on children in agriculturally intensifying areas (Box 2 and 3) shows a_c in relation to β can be seen in Fig. 1. Agricultural intensification increases work load of children. However, when a landed household has land large enough requiring hired labour in most operations, the work load of children declines.

If value of assets owned by the farmers is very high two things happen: β , the technological parameter is high for rich farmers whose agricultural operations become more capital intensive, farm labour is hired, freeing children from agricultural activities. In the case of medium farmers, the share of β may be almost equal to a_a . For small and marginal farmers $a_c < a_a$ because agricultural output is small and can be handled mostly by adults.



In case of livestock rearing as the population becomes mobile the share of child work in livestock rearing can be seen in Fig. 2. The shift in livestock composition towards small ruminants results in more work for children but as the herd size increases, the share of child work declines, as it becomes beyond their capacity to handle large herds.



Since children (and at times the same children) are engaged in both agricultural operations and livestock rearing and given the fact that agricultural activity is seasonal, a weighted sum of the two activities may not give us a uniform pattern.

Let us now consider the total output of the household from various activities. While non-poor rural households may engage in one or two major economic activities, the poor households tend to diversify their economic activities, which may include a combination of farming, rearing a few small or a big ruminant, handcrafts and casual wage labour. Each of these are low productive, low income kind of activities. While the adults would engage in activities where z_a is highest, in activities where marginal returns lower, a_c would be high. A schematic representation of various parameters is given in Table 3, which also gives the threshold at which it is valuable to the

household to have children working. As long as there is net intergenerational transfer flows from children to parents, the value of children would be higher than the costs.

Table 3: Schematic representation of parameters in diversified economic activities

Parameters	Non Poor	Poor
β	High	Low
z_a	High	Low
a_a	High	High in some and low in others
z_c	Low from the perspective of the household	High from the perspective of the household
a_c	Varies with β	High in some and low in others
Q	High and based on one or two economic activities; with higher productivity	Low and based on diverse set of activities; low productive and low income forms

The relationship of adult wages with a_c is very intricate in any particular activity. z_a will be high if β is high and also β is high. When z_a tends to be small and far less than opportunity price of labour elsewhere, a_a tends to zero and a_c tends to 1. It is at this juncture that child work becomes child labour, within the home production system. As children their share of work in a particular activity, they would drop out from school and tend to engage in full time activity. Of course, when β tends to zero, especially in a drought situation, in most valuable households home production is zero and children may also be forced to work as casual labour in return for wages.

Distribution of assets, increasing or diminishing value of assets, technology and exogenous factors such as drought thus determine the share of children's work in total home production and consequently continuation of their education in environments characterized by less *density* (of resources) and *predictability*.

Box 1: Children in Agriculture extensification area

Childhood in Akhadhana is short-lived and as highly gendered as adult life. In this part of Western Rajasthan female infanticide was very common till a decade ago. Even now it is practised in secret. Girls are perceived as liabilities and as burdens because dowries have to be paid and any investment in a girl child is regarded as benefiting her marital rather than her natal home. When girls are born, it is considered a curse and there is commiseration rather celebration for the mother, and the birth is not declared. She and her daughter are discriminated against in terms of good food and new clothes to wear. There is no naming ceremony celebrated. Again, there are inter-caste differences. All girls are made to feel inferior, but less so in lower caste household. Lower castes pay less dowry than Rajputs (a high caste) and can send girl children out to work. Boys, on the other hand, are regarded as assets from birth and what investment in human capital that is made is conferred on boys.

Within the household all children begin working by the age of seven, for girls it can be from a younger age. Gendered divisions of labour are clear from an early age. Girls help their mothers, taking care of younger siblings, cooking, cleaning, collecting water and fuel, gathering wild fruits, weeding and harvesting and grazing livestock. Often married at the age of ten or twelve, there is a premium on encouraging girls to acquire as many skills as possible in the household. Boys are not expected to participate in domestic chores but they too must care for livestock and assist their father's in agricultural work. Boys at a young age are taught how to hold a plough and sit next to the driver of the tractors, by way of apprenticeship,

By the age of twelve, boys migrate with their father in order to earn half the pay, sometimes less. A Meghwal woman (aged 40) has three boys and two girls all younger than fifteen working with her at the salt mine, for Rs. 5 to 10 a day. Another Meghwal woman takes her seven and ten year old daughters when she works as a agricultural labourer. They are paid Rs. 5 each, but are fed and can gather wild fruits and vegetables. Their mother's view is that they must learn to work. The distinction between child work and child labour is thus hard to draw: whatever parents are doing, children will tend to work alongside them. Children in families that migrate grow up with an especially acute sense of insecurity, always on the move and in search of work, in the full knowledge that there are inadequate resources at home for this, let alone the next, generation. Alternatively, from a young age (about twelve) they are left behind caring for siblings and the household. Even though the children of successful adapters work, they do not have the same sense of insecurity.

Akhadhana has a primary school since 1983 where many more boys than girls attend. Total number of children attending school are 102, from class 1st to 5th ranging in age about 4 to 11 years. There are 20 girls enrolled and about 10 are regular. There are no girls studying in class 4th and 5th. Girls often discontinue their education as they have to look after younger children and livestock. Girls attendance is thin during harvesting of crop. All children are generally absent from school during the monsoon, helping with cultivation. Children who migrate with their parent cannot attend at any time. Parents value boys education more because they know demand for education is growing, with the possibility of formal sector employment, shop keeping and so on. Many believe it is a waste to educate girls, who will soon be married and who may find marriage more difficult if she is too educated. But not all adults believe in education for boys either and there is no consistent pattern as to attitudes towards investment in children's human capital in general. Three cases illustrate the point: a Rajput, (aged 35) has enough land and livestock and family of two sons and three daughters. In response to the school teacher's complaint that his son did not study, the father's response was that his son had enough land not to need to study. Conversely a poor Beldar (aged 28) with one hectare of land and three sons, argues that his children must go to school to learn some skills, but has to nevertheless take his children out of school due to poverty. A poor Bhil (aged 35) says I have two sons of school going age but they have to work with me to supplement the family income. Even if I wish to educate him I can never afford. I know that his life will be a repetition of my own.

There is a marked difference between boys and girls. Girls are more withdrawn and learn at an early age to fit in at the bottom of the household hierarchy. They mature early, understanding for example that at the age of 5 or 6 they are unable to play or go the school like their brothers. Even if they do get to school these gender roles are reinforced and played out in the classrooms and in play grounds. The children of successful adapters certainly have easier and more secure childhood than those of getting by adapters. Nevertheless, the gendered nature of childhood reinforces the argument that girl children in successfully adapting households will reap only marginal benefits from this process.

Source: (Jena, 1999)

Box 2: Children in Agricultural Intensification areas

The social construction of the images of the boy child and the girl child are reflected in the institutions adopted by tribal communities. The birth of a boy child is celebrated with much fanfare, that of a girl is not. There have been considerable changes in the livelihood of children with the process of agricultural intensification. Migration of children to Udaipur has almost stopped, but agricultural intensification has meant more work for both boys and girls. Particularly, during the peak season most of the children are out of school. Even after coming from school they have to undertake various small jobs like grazing cattle, fetching water and so on. Girls work loads are heavier than those of boys.

In spite of heavy work loads, boys manage to play for longer durations than girls. In the course of a year's fieldwork, no girls above the age of eight were observed playing at any time. The differences between boys and girls in their life perceptions are set at a young age. Their exposures are also different. This became clear, more by their free hand drawings on sheets of paper. Boys chose to draw motors and trucks, electric poles, musical instruments, animals, khajur [translation] trees. Their lines were bold and used bright colours. Girls on the other hand drew utensils of daily use, brooms, sickles, plants yielding fuel wood and flowers and boundaries of cattle sheds. The girls drew hesitantly, their drawings were comparatively small with light lines and diffused colours.

Attitudes towards education are mixed. There has been a primary school in Talai since 1967, with relatively high enrolment rates. Of a total of [375] children in the village aged 6 to 14 years, 264 were enrolled in 1997, of which 55 per cent were boys. In terms of attendance, however, the rate drops to only 47 per cent of those enrolled. Drop-out rates are higher amongst girls than boys (33 per cent of girls attend as compared to 58 per cent of boys). Enrolment and attendance for both sexes drops off sharply from the age of twelve, due to demands of household labour. There are, however, a number of boys studying in hostels at Chandwas or Jhadol. There is also one girl who is doing her high school from Jhadol. But these options are only available to positive adapters, who appear to be making a conscious decision to invest in the human capital of their children, presumably in recognition of the fact that the next generation will have insufficient land to make a livelihood from agriculture. The total literacy campaign of Sewa Mandir (a NGO) has also helped in a lot. But investment in girls' education is seen as investment in the property of some other male wherein household chores and labour command higher value.

There is no age limit for marrying girls. But marriage after the age of 13 years is preferred as it draws a higher bride price. Parents prefer their daughters to elope, as the bride price then rises and the girl's parents do not have to spend so much on the marriage ceremony. Girls are visualized as a commodity who will bring in money when they are married.

Source: Upma, 1999

Box 3: Children in Peri Urban Areas with agricultural intensification

There is a significant change that has taken place in the life of children with the increase in security of livelihood, consequent upon agricultural intensification and peri urban integration. The incidence of child labour which was high even fifteen years ago, is virtually non-existent at present. Only exception is a twelve years old boy of Balai family who accompanies his widow mother as domestic servant in Bahadur Singh's house. It is evident from oral histories of a section of young men that they had to work as wage labour since their childhood. There are a number of reasons for this. Sudden death of father, high indebtedness of family, Lack of employment of adults are most common among them. Wage labour was also common among Bawaria and Bairwa children when their parents used to migrate in cities in search of work for longer periods. They were given very low wage and food against their labour. With the agricultural and economic development they are not being exploited by peri urban labour market characterised by low wage, excessive work and frequent accidental death. The children mostly are enrolled in school and help their parents in their family farms and household works. The significant decline in number of children migrants as wage labour is also closely associated with the decline in number of long term distant migrations of adults which is a result of agricultural intensification within village and availability of employment for the adults in peri urban labour market.

Agricultural intensification has brought in some significant change in children's life. The most important among these is increase in nutritional level of children due to increase in food security. Now there is various type of grains and other food items are available in the food baskets of household. In addition to earlier staple foods i.e millet and barley, the stock of wheat and pulses have been increased and ground nuts provide additional minerals and vitamin which are essential for growing children. In primary school record only six percent children were found under weight. In Anganwari (centre for health and educational development of children below six years) the nutritional and health register shows only three percent children are underweight. All these children are from the poor Bairwa community. Parents opined that it is not because of under nutrition only, the repeated illness and absence of cleanliness are reasons behind it. The high fluoride content of water also affects adversely on children's health.

Although intensification of agriculture has a positive impact on availability of food, it has resulted in the increase in workload of children particularly in those household where surplus stock is being produced in order to fulfill the cash needs. During harvesting period different tasks are assigned to the children. These include collection of ground nuts, cleaning of grains and different household works. Although intensification of agriculture has positive impact on availability of food, it has resulted in the increase in workload of children particularly in those household where surplus stock is being produced in order to fulfill the cash needs. During harvesting period different tasks are assigned to the children. These include collection of ground nuts, cleaning of grains and different household works. (With the advent of commercial animal husbandry, the combination of livestock in households of all type of adapters are being changed. The shift in preference for keeping small animals results in the increase in workload of children as mostly the children are assigned by the task of grazing of small ruminants.)

Inequality in gender relations has significant impacts on life of children. Girls' needs are accorded lower priority than those of boys from birth. In one case where two children from one family became ill after DPT (Diphtheria, Pneumonia, Typhoid) vaccination, the girl was not taken for further treatment until seriously ill, whereas the boy was rushed to hospital immediately. Another one year old girl died due to lack of any treatment. Parents only feel secure in their family once two sons have been born, irrespective of the number of daughters. Women who give birth to daughters are looked down upon. Child marriage persists among all castes except Rajput.

Although the life of children in Mohanpura is more secure now than twenty years ago, children nevertheless start working at the age of five to seven years, accompanying their parents to the fields and helping with domestic chores. Children start working independently at the age of ten, caring for younger siblings, cooking, collecting firewood, grazing small animals, cleaning the house and homestead. Most children work as family labour in their own farms and houses. Most of the boys only work after their school hours while girls work continuously from early in the morning. Boys are allowed to continue their school but the majority of girls are withdrawn from school when the workloads increase during periods of peak agricultural labour demand. About forty one per cent of girls in five to fifteen years age group are not enrolled in school while only eighteen per cent of boys of same age group are out of school. The gender disparity in enrollment varies considerably among different castes. Among Jats, twenty per cent of boys were not enrolled compared to forty per cent of

girls. Around twenty five per cent boys and seventy five per cent girls of prajapat (potters) caste do not attend school. Most boys go to school from Bairwa community while only seventy three per cent of their girls are going to school . In the case of Bawarias, thirty per cent of boys and forty per cent of girls are not enrolled in school. The attitude of parents varies considerably because some of them do not consider the importance of education. The existence of inconsistencies in curriculum led to the non acceptance of education to these parents. The Jats can not get any use of reservation policy so they do not consider education is important for their children to secure any job in peri urban area while Bairwas are looking forward to use the reservation policy and enrollment of Bairwa children became high. A large number of children in Bairwa and Bawaria communities attend non-formal education center, run by Vishakha and CECOEDECON (the 2 NGOs working in the village) , set up to enable children to attend school at night. There are obvious inconsistencies in attitudes towards girls' security: they are not allowed to travel 2 km to Renwal to attend secondary school, often on the grounds that it is unsafe for them to do so, but can travel much further distances to graze livestock.

The interest shown by the Bairwa community in sending their children to school is a major shift in livelihood strategy. The Bairwa community which has the worst quality of land and can hardly sustain from agriculture are investing in the human capital of children. The expected returns for the same value of education are higher for the community as it expects to be benefitted from the Reservation Policy which secures them jobs in the government sector. As opposed to the Bairwa community, the Jats are not investing as much in human capital of children as reflected in the per cent children from this community not going to school. The shift in gender relations in the Bairwa community in favour of women is also reflected in the importance they are giving to the education of the girl child as opposed, again, to the Jats. In fact, in one household, the Bairwa woman negotiated to go for wage labour only if her daughter would be sent to school. This, however is not true for the entire Bairwa community. Those among them who are not negative adaptors, are not investing as much in the human capital of the girl child.

Source: Bandopadhyay, 1999

III

Education and children

Education is seen as a powerful way of breaking poverty cycles. It is now widely accepted that formal education facilitates upward social and economic mobility and build social networks. Not all children are able to develop such life skills through formal education. The extent to which children have opportunities to participate in educational processes is affected by household material assets, social connectedness of a child's family, social and cultural traditions and the kind of education available to them. Table 2 showed the relationship between work and education. After accounting for those non worker children who also did not attend school, we find that about 10 per cent boys and 30 per cent girls do not go to school. Tables 4 and 5 give some evidence of the relationship between asset ownership and school attendance from the household data set discussed earlier.

Table 4: Per cent children going to school by land ownership

	Boys	Girls
Landless	78	60
With unirrigated land only	83	69
With irrigated land	92	68

Source: See Table 1

Table 5: Per cent children going to school by quartiles of value of livestock owned by households per capita.

Quartiles	Boys	Girls
First (poorest)	79	63
Second	83	69
Third	86	65
Fourth (richest)	89	66

Source: See Table 1

Using the household data set, we have used a multivariate logistic regression to estimate the probability of a child going to school. The dependent variable "study" acquires value 0 if the child does not go to school and 1 if child goes to school. The model has the following independent variables :

- AGE : Age of the child
- MARITAL: Marital status of the child
- IRRIPC : Irrigated area owned by the household per capita
- DIFF : The difference between incomes in a drought year and a normal Year
- SEX : Acquires value 0 if female and 1 if male
- SC : SC is an index of social capital based on questions relating to peoples networks. The variable acquires value between 0 and 30
- PLINE : Pline differentiates households by the official poverty line. It acquires value 0 if below poverty line and 1 if above the poverty line

Findings:

The model has a Nagelkerke R^2 of 0.134 showing its robustness. The model Chi-square is significant and 76 per cent of the predicted values match the observed results. All co-efficients are found to be significant. The probability of a child going to school declines with age and if married. The probability of going to school increases from girls to boys by an exponential of 2.8. The irrigated area owned per capita also increases the probability by a factor 1.1. It is interesting to note that social capital and difference in income between drought and normal years do not increase or decrease the probability of going to school. As expected the probability increases by a high exponential value of 1.8 if the child belongs to a household above the poverty line.

It is evident from the model that ownership of assets affects the probability of a child going to school more than the short fall in income. This shows that structural factors need to be addressed for long term gains and human development policies. The households are able to send their children to school despite short fall in income. It may be noted that public education is almost free. Social factors such as child marriage drastically reduce the probability of going to school.

Results of the Logistic Regression using the SPSS.

-2 Log Likelihood	7960.228					
Goodness of Fit	7845.656					
Nagelkerke - R ²	.134					
Chi-Square value	76.73%					
Variable	B	S.E.	Wald	df	Sig	R
AGE	-.0795	.0112	50.0681	1	.0000	-.0744
MARITAL	-1.5289	.1431	114.1227	1	.0000	-.1136
IRRIPC	.1009	.0299	11.4221	1	.0007	.0329
DIFF	3.57E-05	9.577E-06	13.8715	1	.0002	.0369
SEX	1.0164	.0563	326.2585	1	.0000	.1931
SC	.0099	.0039	6.5328	1	.0106	.0228
PLINE	.5916	.0616	92.2585	1	.0000	.1019
Constant	.8493	.1543	30.2839	1	.0000	
Variable	Exp(B)	95% CI for Exp(B)				
		Lower	Upper			
AGE	.9235	.9034	.9441			
MARITAL	.2168	.1637	.2870			
IRRIPC	1.1062	1.0433	1.1728			
DIFF	1.0000	1.0000	1.0001			
SEX	2.7631	2.4746	3.0853			
SC	1.0099	1.0023	1.0176			
PLINE	1.8069	1.6015	2.0388			

IV

Discrimination in Education

There are many attitudes and perceptions that do not render themselves to a quantitative analysis. One of these is social discrimination, which in the Indian case has a long historical antecedent. Discrimination takes hidden forms. Most higher caste teachers continue to consider children “uneducable”, refuse to teach them, make them feel unintelligent and inferior, target them for physical and verbal abuse, use them for menial chores (PROBE: 1999). When a scheduled caste teacher tried to change the social order in a school, he faced resistance and was forced to give up. (See Box 4).

Box 4: The Scheduled Caste teacher and the social order

The school is a site where social change can be mediated and differences on the basis of gender and caste can be ironed out. The lone SC teacher in Akhadhana tried to change the relationships between children. One of the most important one was to make children drink water from the same pot. This was strongly resisted by the Rajputs (the high caste). Mainly those who have accumulated wealth and invested in households assets send their children regularly to school and are the main beneficiaries of school education. This is not to deny that children from other groups also come to school but their relative number is small. The informal civil society wants their own caste values and norms to be reinforced in the school so that children are able to adapt and continue the same pattern of social relationships in their life and take advantage of the dominating institutions nurtured by the successful adapters. In fact, the school curriculum to a great extent reinforces the existing social relationships.

Source: (Jena, 1999)

In an attempt to explain why working class kids get working class jobs, Paul Willis (1977) argues that in England 'lads' acquire a certain subjective sense of labour power. The process of 'self-induction' into manual labour relies upon two main arguments:

First, the lads evaluate and reject the pedagogical exchange offered by the school: knowledge for respect, guidance for control, success for obedience. Because of their belief that they know the real world they refuse to participate in the exchange and give up their mental labour. They believe that they have to give up too much autonomy if they opt for conformity; too much masculinity for mental work and too much self-direction for empty and illusionary promises for credentials. On the other hand the 'Ear'oles' making a different evaluation of the costs and benefits involved, opt for as strategy of conformity, accommodation and mental work.

The second argument of Willis is that the working-class culture is carried back into the home by parents and is absorbed by the lads as a criteria by which they will judge the world. As they encounter the outside society, they gradually construct a picture of the world in which schooling steadily assumes the status of a working class work environment. They feel that the school is a workplace where young people work to extract surplus from labour power. Mental labour is treated as effeminate and just 'theory' divorced from understanding of the real world. And so begins the process of cultural conflict, production and reproduction.

The India situation is far more complex. Based on our observations during field work for an evaluation of the Non-Formal Education Programme in the state of Rajasthan (See Bhargava, 1995) some of the facts emerged were as follows:

- (i) The discrimination against the lower castes especially the Scheduled Castes is explicit in most of the rural areas and more subtle in the urban areas; this discrimination is deep in the consciousness of both the children and the teachers and gets reflected in pedagogical exchanges in the school;
- (ii) The working children acquire a world view of their own in which they perceive mental work as important but beyond their reach;
- (iii) The general teacher being part of the hierarchical society of the village carries the same to school and rarely makes an attempt change the social order;
- (iv) The parents among the poor have a stereo-type answer to the question: why they do not send children to school? The answer is what will he do by reading and writing, he has to be a *majdoor* (a casual labour) when he grows up. This reflects a world view where moving out of social exclusion trap seems impossible. The children also yield to the hidden oppression and withdraw. The process ensures an intergenerational transfer of discrimination.

In the Indian situation, in rural areas, where there is a high level of caste discrimination and dependency, there is no rejection of the pedagogical exchange if the child goes to school. The child by virtue of his caste is forced to submit to respect, control and obedience. In spite of this he does not get any knowledge, the content of education being such (For review of content, see Bhargava 1996); he does not get guidance for he is not considered worthy of; and success is only a dream. The inter-

generational cultural continuity is maintained as the culture of looking down upon manual labour is carried in and out of the school without any perceivable change. Some parents realising what happens to their children in school, show rejection of the pedagogical exchange by not sending their children to school. This then is an example of weak resistance to the oppressive environment.

V

Conclusions

This paper examines the inter-relationship between work, education, society, and environment characterised by risks and uncertainties, where children contribute to the survival of the household. If the environment deteriorates, children may be forced to work more. Interventions for sustainable environments can push up the threshold for poverty transmission. The threshold can be pushed further up if children no more engage in low productivity, low income forms of economic activities, which may require acquiring new assets, physical or human, or adopting an advanced technology. In agriculture, technology, output markets and prices can make the difference.

A number of social considerations such as gender bias and discrimination in education if dealt with can improve participation in schools. The threshold also goes up where parents make an extra effort for their children's education and well being. The widow woman who negotiated in her joint family for her daughter's education as a pre-condition for going out of the village for wage labour; and the Scheduled Caste teacher's efforts to build a new social order are case worth taking note of. Such individual attempts represent the emerging social forces (The former is a case of a long interaction of the women in the village with civil society organisation and the second can be seen as an educated individual's self-realisation.of caste based exclusion).

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