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WOMEN AND HOUSEHOLD LIVELIHOOD SYSTEMS

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## INTRODUCTION

Poor rural households, particularly in the semi-arid areas of India, routinely plan for and manage uncertainty: both expected seasonal shortages and unpredictable, but recurring, drought-induced shortages. But, with a few notable exceptions (Jodha 1975, 1978; Gupta 1987, 1988; Caldwell et al 1986; Das Gupta 1985) there is little empirical evidence on the various strategies adopted by different types of households to cope with uncertainty. There is still less empirical evidence on women's roles in household strategies (Gulati 1978, 1981; Gupta 1987; Rangaswami 1985).<sup>1</sup> This paper will review the data from a village study in Gujarat designed to provide empirical evidence on these questions.

This discussion is based primarily, almost exclusively, on detailed field data collected over eighteen months in a single village in Dholka taluka, Ahmedabad district, Gujarat. Although the research was carried out during a drought (the 1985-87 drought which affected many parts of India), recall data was also collected on seasonal coping strategies during normal years. And, although the research was designed to gather data on a cross-section of households, this discussion will focus on those households in which women are engaged in family farm and/or wage labor: to the exclusion of the few dominant caste households whose women do not work outside the home.<sup>2</sup>

The plan of the paper is as follows. The first section presents the theoretical framework of the research: what is referred to throughout the discussion as household "livelihood systems." The second sections presents the research data on how, in generating livelihoods, households cope with seasonality with a special focus on women's roles and responsibilities. The final section presents the research data on how the 1985-87 drought affected the normal livelihood systems.

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<sup>1</sup>A series of studies on women and family strategies sponsored by the Centre for Women's Development Studies have recently been completed.

<sup>2</sup> In the study village, there are only 12 dominant caste households: 6 Brahmin and 6 Thakkar (a trading caste). The rest of the households are from a variety of Backward and Scheduled castes: 144 Koli Patels (the peasant caste), 51 Vaghris (vendors), 27 Harijans (wool weavers in the study village), 19 Bharwads (shepherds), 7 Prajapatis (potters), 6 Bhangis (scavengers), and a handful of other caste groups.

## I. THE HOUSEHOLD LIVELIHOOD SYSTEMS FRAMEWORK

As used in the current research, the term "livelihood system" refers to the process by which rural households rearrange over time their mix of resources and activities to cope with changing economic and social objectives or contingencies. The term system is chosen deliberately to convey a perspective in which the interactions or interdependence between different individuals, activities, and objectives within the household can be accounted for. With that perspective in mind, a livelihood system can be seen as the mix of strategies, both individual and collective, developed or drawn upon by a household in adjusting to changing requirements and conditions for production, income, power, or status objectives.

In terms primarily of economic objectives, the typology of livelihood systems in any specific area of rural India can be hypothesized to fall within the following broad continuum of household objectives. The poorest households, which fall at one end of the continuum, would be expected to pursue short-term survival objectives. Typical of such households would be, most likely, a significant multiplicity and diversity of activities, including wage labor. Encompassed within the survival objective would be the desire not only to meet daily subsistence needs but also to save for contingencies and to avoid risk or forced sale of assets. Status considerations would necessarily be sacrificed to income or survival concerns.

The richer households can be grouped at the opposite end of the objectives continuum. These households with stable resource bases would be expected to pursue longer-term mobility objectives: diversifying their assets and investing their resources. Encompassed within the mobility objective would probably be an explicit calculation of the trade-offs between income, power, or status increases and between investments in known or unknown areas of production.

Those households in the middle level of income and welfare, and which fall at the mid-point of the continuum, will probably pursue stability or security objectives: attempting to maintain or stabilize the household's resources (physical, human, and social). Encompassed within the stability objective would probably be the desire not only to stabilize assets and incomes but also to minimize risk while looking ahead to possible avenues of economic and social mobility. The key distinctions between these three points on the objectives continuum are the level of income or welfare of the household, the time-frame applied in

mobilizing and allocating resources (short- or long-term), and the mix of objectives being pursued.<sup>3</sup>

The component resources available to the mix of possible strategies are of several kinds. First, physical assets, including stock and savings. Second, human assets: notably the time, labor, and skills of individual household members, depending on the household composition at any given point in time. Third, social assets, including: family and kin networks; patron-client relationships; factional or political loyalties; and wider exchanges. And, fourthly, collective assets, inputs, or services derived from public sector entitlements, pooling or exchange, and common property resources.

In the design of this study, it was hypothesized that there are four major determinants of which households pursue which livelihood strategies: structural conditions; resource distribution; seasonal variations; and periodic calamities. These determinants were defined or qualified as follows. Structural conditions were thought to be of two broad types: general physical conditions (eg. climate, topography, and ecology) and the over-all pattern of income-earning opportunities (eg. farm and non-farm; local and migrant). Households were thought to be differentiated not only by relative access to resources (eg. land or other means of production) but also by the terms and conditions of access (eg. tenancy or labor contracts). The relative necessity and capacity to respond to seasonal peaks and troughs (eg. in the possibility of tilling the land or finding wage labor) were assumed to evoke different responses by different types of households. Finally, sudden shortages (eg. in food supply or labor demand) caused by periodic calamities, whether natural or man-made, were assumed to further exacerbate differences between households in their relative capacity to cope. In the analysis of the village data, a fifth determinant has emerged: the individual skills, capacities, and nature of individual household members, particularly of the household head.

This paper does not attempt to present the structural conditions of the study area or to explore the differences in resource-endowment and capacities between different classes or

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<sup>3</sup>In writing about hunger and public policy, Sen and Dreze (1988) make a useful distinction between "the promotion of incomes (changing persistently low incomes) and the protection of incomes (preventing sharp declines)" and between short-term and long-term objectives. Applying these distinctions to the survival-mobility continuum, households at the survival end of the continuum could be characterized as pursuing mostly protective strategies for short-term survival in contrast to households at the mobility end of the continuum which are able to pursue promotional strategies geared to longer-term objectives.

castes of households in the study village. Rather, the paper attempts to describe in more aggregate terms the strategies for coping with seasonality and drought developed by a broad section of the village, the poorer households from the Backward and Scheduled Castes. And to discuss these strategies in terms of gender roles and responses.

Most categories and concepts used in this paper are not new. One is indebted to, among others, Robert Chambers who popularized the concepts of seasonality and livelihoods; N.S. Jodha who pioneered empirical research using these concepts; Anil Gupta who has developed a socio-ecological model for studying risk adjustment in drought-prone areas; and Bina Agarwal, who in a recent paper on "Social Security and the Family", provides an extremely useful and insightful synthesis of the scanty and scattered data on family coping mechanisms, highlighting gender differences in roles and responses. This paper attempts to present data from a single village within a framework which draws heavily from, but also expands upon, these earlier studies.

## II. COPING WITH SEASONALITY

Seasonal coping strategies can be effectively categorized in either or both of two ways: by type of strategy and by level of strategy. The range of possible strategies include those associated with production or work; those associated with households inventories or assets; those which involve consumption adjustments; and those which involve social adjustments. Each type of coping strategy can be adopted by or mediated at the following levels of adjustment: intra-household; inter-household; communal; and public. We will start with those strategies which operated largely at the intra-household level, move to those which operate largely at the inter-household level, and end up discussing those which operate at the communal level.

### A. Diversifying Activities

Diversification of income sources - entering the labor and tenancy markets as needed, growing a variety or mix of crops, rearing a variety of livestock (cows, buffaloes, goats), petty vending and trading, manufacturing various artisan goods - are common ways of dealing with the risks and uncertainty associated with seasonality (Agarwal 1988; Longhurst 1986; Jiggins 1986). Seasonal difficulties are most easily weathered by those who have access to one or more secondary activities and effective management of multiple activities can help smooth out seasonal troughs or, even, promote new peaks. Diversification or multiplicity is, therefore, a key dimension of livelihood systems. Almost all households in the study village are engaged in multiple activities.

During the preliminary census in the current study, when asked to declare their primary and secondary occupations, only one-third of households declared one occupation, the other two-thirds declared two or more. Of the one-third who declared a single occupation, many overlooked secondary occupations in other seasons. And most households overlooked the various supplemental activities which do not generate income directly but help generate subsistence. In discussing the multiple activities of households, then, it is useful to draw a distinction between primary, secondary, and supplemental occupations or activities. As defined and used in this study, the primary occupation of any given household is that occupation which occupies the major portion of the total time and attention of all working household members; the secondary occupation being the other occupation/s that the household engages in either year-round or seasonally; and the supplemental being the routine subsistence-oriented activities (primarily the searching-gathering-collecting activities of women).<sup>4</sup>

In terms of secondary occupations, the majority of peasant households in the study village engage in wage labor for some part of the year. More than half of the shepherd households engage in agriculture. Almost all Harijan weavers engage in wage labor for specific agricultural operations, notably for paddy plantation and harvesting. And nearly half of the Vaghris, who are engaged primarily in wage labor and seasonally in vending, also engage in cultivation for one or two seasons of the year. And many of these households, from all caste groups, are involved in animal husbandry, largely the rearing of milch animals but also, in a smaller number of households, the rearing of draft animals. And many households are engaged, seasonally, in the manufacture of rope from a local wild grass and/or, more regularly, in cotton spinning (introduced by SEWA). In addition, virtually all households supplement their primary and secondary

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<sup>4</sup> The concept of household livelihoods encompasses activities geared both to generating income and to generating subsistence. Moreover, the concept encompasses not only economic activities but also activities geared to increasing power or status or to strengthening social relationships. Given that activities are not always carried out with a view to generating an income and given that the study year was a drought year in which normal activities were not carried out to the normal degree or with the normal results/yields, we have taken time spent in given activities, rather than income earned, as a measure of which are primary or secondary. The term occupation is used for those activities which command a significant amount of household time and attention. The term activity is used for those activities which are carried out intermittently or by only one member of the household and command, therefore, less of the household's time and attention.

occupations with a significant daily volume of primarily subsistence-oriented activities: notably the gathering and collection of fuel, fodder, and water generally carried out by women.<sup>5</sup> Intensive study of a sub-sample of households in the village indicate that households which are primarily engaged in agriculture or labor may be engaged in at least five other activities across a given year. A tabulation of these various secondary activities by primary source of income is presented below in Table 1.

Not only households as a unit, but also most adult members of most households are engaged in multiple activities: either sequentially or simultaneously. Time use data collected in six rounds over three seasons of the study year indicate that each day most women are engaged for longer hours in a wider range of activities than men.<sup>6</sup> A rough calculation of the female-to-male rates of participation (by number of cases X average number of hours) in various spheres and sub-spheres of activities indicates the following female-male ratios:<sup>7</sup>

#### I. Household Maintenance

Domestic Activities	- 95:05
Reproductive Activities	- 85:15

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<sup>5</sup> The few households, Brahmin and Thakkar, whose members do not themselves engage in these subsistence-oriented activities hire female labor to do so for them: most commonly, for fetching water (for drinking and domestic uses) which, unlike fuel and fodder, cannot be purchased commercially.

<sup>6</sup> On the average, women work 3.5 more hours per day than men or, conversely, spend 3.5 less hours per day in the social maintenance/leisure sphere.

<sup>7</sup> In designing the instruments for collecting and coding time-use data, an exhaustive list of all possible activities was coded under six different spheres: household maintenance; family enterprise; local market; wider market; social maintenance/leisure; and education. Each of these were further sub-divided into sub-spheres of activities. In more strictly economic terms, the sub-spheres under family enterprise, local market, and wider market might be referred to as "sectors". However, it should be noted that activities within each of these sectors are generally carried out for both market and non-market purposes.

## II. Family Enterprise

Animal Husbandry	- 55:45
Agriculture	- 25:75
Gathering and Collecting	- 90:10
Manufacturing	- 35:65
Food Processing	- 70:30
Construction	- 70:30

III. Local Market<sup>8</sup>

Wage Work <sup>9</sup>	- 65:35
Salaried Work	- 40:60
Trade	- 30:70
Caste Services	- 15:85

IV. Social Maintenance  
and Leisure - 40:60V. Education<sup>10</sup> - 0:100

## B. Seeking Employment

Demand for hired farm labor in and around the study village is limited by several factors, both technological and social. Rough estimates indicate that, in years of good rainfall, a male laborer could be hired as local farm labor for a maximum of 220 days in the year and a female laborer for a maximum of 180 days. It is likely, however, that most laborers average fewer days of

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<sup>8</sup> Time-use data for wider market participation was not available, as those participating in wider markets were not present in the village when time-use data was collected.

<sup>9</sup> During the summer season, when very little cultivation was possible and relief work was available, the female:male ratio for wage work participation was 45:55. However, during the winter season (when wheat and barley were being cultivated) and when no relief work was available, the female:male ratio of wage work participation was 90:10. Presumably, in peasant and tenant households, men remained busy with family farm production and mostly women were deployed for whatever wage work was available. And during the monsoon season (when attempts were made to grow the regular monsoon crops and, after the monsoon rains failed, some substitute crops) and relief work was available, the female-male ratio in wage work participation was 85:15.

<sup>10</sup> Among the sub-sample households during the study year, no girls were attending school.

local agricultural wage labor each year: 175 days for male laborers and 135 days for female laborers.<sup>11</sup>

Demand for non-farm labor is extremely low but varied. A few labor are hired locally for the following activities: women for fetching water, cleaning utensils, washing clothes, and stitching mattresses; young boys to graze animals and run errands; and men for constructing houses and to graze and care for animals.

Demand for attached labor (long-term farm servants) is low for men and virtually non-existent for women.<sup>12</sup> Further, as observed by Breman in south Gujarat, it is no longer taken for granted (although it does happen) that the wife of a farm servant works as maidservant for the same household as her husband. A few women do work as maidservants. But this service is contracted independently and unilaterally by the woman, most frequently by young widows and by young girls. Most contracts are short-term (4-6 months) and part-time. One young girl entered a year-long but part-time contract with her uncle to fetch water and fodder.

The most frequent tasks of the maidservants are to fetch water and clean utensils; occasionally washing clothes and helping in the kitchen or sweeping the house. The working hours vary - depending on the size and requirements of the household - from a couple of hours in the early morning or late afternoon to a longer day's work. In the past, as with farm servants, the maidservant might have been entitled to a sari annually, to chhas

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<sup>11</sup> Because of the prolonged drought throughout the study year, the normal crop-wise levels of labor input could not be observed or measured. The estimates used here were developed by asking laborers how many days they could expect to get employment in different operations for each crop in normal years. These estimates fall within the range of empirical findings from other studies. Breman (1985, p. 281) reports that from "various agro-economic studies it appears that, while farm servants are kept busy the whole year round, casual labourers find work on only 200 days". On the basis of a survey of 2,694 households of agricultural labourers from 27 villages in Gujarat, G. Shah (1978, Centre for Social Studies) calculated that casual labourers (chhuta majur) worked for 186 days per year and attached labourers (rojio) for 351 days per year. For Gujarat as a whole, the Rural Labor Enquiry (RLE) of 1974-75 recorded 206 full days of employment for men and 160 for women.

<sup>12</sup> During the study year, 15 regular farm servants, including 4 young boys, were working under (mostly) annual contracts for 11 households in the village. No long-term contracts for women were reported.

daily, to the protection of her employer, and to the occasional loan. Reporting from South Gujarat, Berman (1985) observes that there is "no longer a question of" credit for maidservants. However, in the study village, young widows reported that as maidservants they were able to negotiate small interest-free loans from their employers.

Although wages are not differentiated by gender for the same operations, the rural labor market does exhibit differential patterns of male-female recruitment and payment. Firstly, wages are generally lower for those operations "typed" as female operations (eg. pulse or sweet potato harvesting). Secondly, women are absent from certain segments of the labor market: notably, ploughing and long-term farm servant contracts. Thirdly, higher caste women, for caste-related taboos, do not perform field (or other manual) labor.<sup>13</sup> And, fourthly, women have access to contract work (paid on a piece rate basis) or temporary migration only through men, generally male members of their family or kinship group (Binswanger et al 1979).

### C. Migration

A significant number of laborers, both individually and as household units, migrate seasonally for rural labor opportunities to other areas.<sup>14</sup> A clear pattern of migration, with marked seasonality and geography and strict farm and non-farm segmentation by caste, has developed. Koli Patels (plus a few Prajapati's) migrate for 5-8 months to the nearest market town for rice mill work and the outskirts of Ahmedabad city for brick field work.<sup>15</sup> Vaghri's migrate for 5-8 months to Saurashtra for

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<sup>13</sup> In the study village, as noted earlier, higher caste groups are a small minority of the population. The vast majority of households are from Backward of Scheduled Castes which do not adhere to the caste-based taboos relating to women's work.

<sup>14</sup>As noted elsewhere in India, seasonal migration is "usually especially high from unirrigated semi-arid areas into more prosperous irrigated ones" (Agarwal 1988). Devdholera is a semi-arid, partially-irrigated village. Laborers migrate from Devdholera during the winter season, which is the one season in which the irrigation facilities of the village are operative. However, most operations, other than harvest, in cultivating winter crops are carried out almost exclusively by family labor. The laborers from Devdholera migrate, therefore, to irrigated cash-crop areas, where hired labor is required for labor-intensive cultivation and post-harvest processing.

<sup>15</sup>One Vaghri household report working at brick fields for a brief period between agricultural labor opportunities during winter 1936-87.

ground nut harvesting, sugar cane processing, and supplemental agricultural wage opportunities. Traditionally, some members of most Harijan households migrated to the nearby towns for 2-3 months of cotton-podding and to Khera district for 1-2 months of paddy plantation and harvesting. In recent years, a variety of cotton which does not require podding has been introduced, thereby reducing the demand for labor.

The season for migration is the dry season from Diwali (generally in October) to Holi (generally in March), after which some households extend until either Ekatrij (Farmers' New Year, which fell on May 2 in 1987) or the monsoon rains.<sup>16</sup> That is, the majority of migrant laborers migrate for the five months between the two major harvests: the monsoon crops are harvested around Diwali and the winter crops are harvested around Holi.

But not all migrants stay away for either the whole season or for only the one season. The study data indicate the following number of variants in terms of the duration of stay:

- a) workers who migrate for a single agricultural operation (eg. paddy harvesting or ground-nut harvesting) lasting 3-5 weeks
- b) workers who migrate for the entire winter season (five months) or the combined winter and summer seasons (eight months)
- c) workers who migrate to become farm servants for a year in the area of destination
- d) workers who migrate each year for five to eight months on, what Berman refers to as, a semi-permanent basis

A large number of factors, other than distance, seem to influence the duration of stay: whether the migrant group is composed mainly of young, single workers of husband-wife teams or of complete households; whether the migrants are landless; whether the migrants have seasonal work at the home village to return to.

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<sup>16</sup> Most labor prefer to return to the village at Holi, to celebrate the festival at home and to avail of winter harvest labor opportunities. Some return to their migrant work sites for an additional 6-8 weeks of work. If they extend their migration season, they then return either at Ekatrij, when most land-lease and land-mortgage contracts are finalized, or in time to prepare land for the monsoon season. Referring to the Hindu calendar, migrant labor report returning at the following months for the following reasons:

Chaitra - Holi festival + wheat/barley harvest  
 Jeth, Ashad - summer juwar harvesting + ploughing  
 Shraavan, Bhadarvo - paddy plantation

Several aspects of seasonal labor migration from the study village do not fit the conventional concepts about migration. First, most of the migration is seasonal rather than permanent.<sup>17</sup> Second, the season for migration is relatively long. Third, agricultural migrant labor circulate through several villages and countless employers during the migration season. Fourth, only half of the migration is to urbanized or industrialized areas; the other half is to other rural, mostly cash-crop, areas.<sup>18</sup> And, fifth, most migrants move and work as family units. A total of 104 members from 42 households migrated in the winter 1986-87 season: of these only 10 were single males, the remaining 32 households averaged nearly 3 migrants per household. Not all migrants work (e.g., young children and the elderly), but the majority do.<sup>19</sup>

The results of a survey<sup>20</sup> of migrants in the study village show that 50 percent of the migrant labourers belong to landless households. Small-peasant households (1-4 acres) provide virtually 25 percent of this mobile labor force. Another 15 percent come from middle-peasant households. And the remaining 10 per cent or so come from large-peasant households. These figures point to: an over-representation of landless households, which constitute just over 40 percent of total households; a very marked over-representation of small-peasant households, which constitute just over 10 percent of total households; and finally a definite under-representation of the 45 percent or so of

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<sup>17</sup> Over the past 15 years, some 36 households have migrated permanently from the village. The geographic, occupational, and caste distribution of permanent migration is not discussed in this paper.

<sup>18</sup> It should also be noted that the temporary migration was almost exclusively within Ahmedabad district: the only case of temporary migration outside the district, was actually outside the state (for utensil-vending in Delhi).

<sup>19</sup> It was reported that the number of migrants during the 1986-87 season was lower, due to the prolonged drought, than in normal years. Please refer to the section on "Coping with Drought" below for a discussion of how the drought of 1987 affected migration during the 1987-88 migration season.

<sup>20</sup>The survey conducted in November 1987 was of migrants for the dry season 1987-88. Following upon the drought, the distribution of migrants for that season might reflect a higher percent of middle- and large-peasant migrants than in normal years. Eight Bharwad households, which had migrated for fodder with their cattle, were not included. At the time of the survey, many households were still waiting to migrate.

households with more land. Refer to Table 2 for the distribution of total households and migrant households by land-strata.

According to widely-held notions for India as a whole, the percentage of women in the migrant labor force is disproportionately low. On the basis of our data, the proportion of women migrants is just over 45 percent. The proportion of women migrants was particularly high (50%) among agricultural migrant households. There is no single category of women migrants. The study data indicate that most commonly (over 60%), especially for the longer migration periods, one finds married women who migrate with their husbands and small children. Also frequently, especially for single-operation migration (eg. for paddy harvest), one finds girls and young women who form work teams together with boys and men of their own caste group. In this case, as Breman noted (1985, p. 209), "they usually work under the protection of a male member of the group - a brother, brother-in-law or husband...".<sup>21</sup>

Not only as local labor but also as migrant labor, women are reported to receive wages equal to those of men. Women laborers were questioned at length in regard to wages. The only labor market in which women were reported to receive differential wages was in the urban construction market: where women are said to be paid Rs. 18 per day whereas men are paid Rs. 20 per day.

#### D. Building Up and Drawing Down Inventories

In normal years, to ensure year-round availability of various goods, households build up inventories during surplus seasons and draw down these inventories during lean seasons. Many of the items in these inventories are free goods: dry grass for fodder; shrub grass for making rope; branches, brush, kindling for fuel; reeds for cleaning teeth; mud and clay for plastering houses; cow dung for fertilizer or for fuel. Most of the free goods are collected for subsistence purposes; a few for sale (as rope, reeds for cleaning teeth, medicinal herbs). Some of the items in these inventories are home-produced goods: notably, food grains. A few are purchased goods, bought when the price is reasonable and stored.

Running down or drawing upon stocked inventories is a recognized seasonal phenomenon.<sup>22</sup> In fact, these inventories are

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<sup>21</sup> Although not reported in our study village, one finds elsewhere in Gujarat, according to Breman, work teams composed entirely of women (Breman 1985).

<sup>22</sup> Several studies list body fat as one of the items stored up for lean seasons (Longhurst 1986). As was discussed in the section on consumption, households generally prefer to reduce

often built up specifically to fill in for seasonal troughs: for example, fuelwood and cow dung cakes are routinely stored during dry winter months for use during the monsoon rains, when these goods are more difficult to collect and store. Because they are routinely drawn upon, these inventories generally do not last long into more crisis conditions, such as drought. It should be noted that most of the searching for, collecting of, and storage of these goods is carried out by women. One free good, shrub grass, which is used and sold in processed form, rope, is processed largely by men. Another free good, cow dung, which is used and sold in processed form, either as dung cakes or manure, is processed largely by women.

#### E. Drawing upon Assets

In normal years, even in drought years if possible, people resist the mortgage or sale of productive assets. If forced to draw upon productive assets, households prefer to mortgage rather than sell. Over the past 15-20 years, the number of reported land sales in the study village have been far fewer than the number of reported land mortgage transactions: 19 sales compared to 62 mortgage transactions.

By contrast, even in normal years, non-productive assets are often pawned as security for loans. In the study village, as elsewhere in India, the most common items to be pawned are jewelry and household utensils. As Agarwal (1988) points out, the pawning (or sale) of such items has a "special significance when we note that usually these are the only assets possessed by women". Once these items are pawned, if they are not readily redeemed, women "would be left with nothing to fall back on if abandoned or in case of a drought...". More on this in the section on moneylending below.

#### F. Sharecropping

Although the market for buying and selling cultivable land is rather inactive in the village, the land-lease market is quite active. The land-lease market consists predominantly, almost exclusively, of share tenancy. During the monsoon and/or winter seasons, in normal years, an estimated 25-30% of households sharecrop in or out roughly 10-15% of the total cultivable land. Share tenancy corrects in part for the unequal distribution of land-ownership: landless farmers by definition operate more than they own; surplus farmers operate significantly less than they own; and small, medium, and large farmers all operate, on the average, slightly less than they own.

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food intake and lose body weight before they deplete other stocks or assets.

A few of the general norms and practices in share tenancy in the study village relate to the seasonal coping strategies of households. First, the tenancy contract is predominantly a short-term contract: generally for a specific crop in a specific season. Second, most sharecrop contracts are negotiated for the winter season, when irrigation facilities are required. Monsoon crops are grown entirely under rain-fed condition and summer crops are relatively few in number and volume. Third, a household will decide to sharecrop out land when it does not own or control one or more of the following factors of production (presented in a rough sequence of importance): labor; capital; bullocks; irrigation facilities (well and/or pump set); and farm equipment.

In the study village, it seems clear that share tenancy allows households to make better use of their specific endowments across the different agricultural seasons. For example, households which own land but do not own a pump set may choose to cultivate their land in the monsoon season, sharecrop out their land in winter, and migrate in winter to return in time for preparing their land for the next monsoon season. Or, for example, landless households can opt to sharecrop in land in winter or summer (if they own a pump set) or in monsoon (if they own bullocks).

Although in general share tenancy appears to be a flexible and, even, progressive institution in the study village, female-headed households are at a disadvantage in the tenancy market: particularly those households headed by young widows without grown sons. In the study village, young widows can and do claim their husband's share of land. But when it comes to those productive assets which cannot be divided and which are often held jointly by the husband's family (such as pump sets, bullock carts, and bullocks) the widow has no legal claim. Her use-rights to these assets are at the discretion of her in-laws. For instance, if a young widow wants to sharecrop out her share of land she cannot necessarily claim rights to her in-laws' pump set or bullocks when she negotiates the sharecropping contract. So although almost all young widows without grown sons sharecrop out their land, they operate at a disadvantage in the negotiation.<sup>23</sup>

The women's studies literature tends to focus on the fact that land is seldom registered in women's names and that, therefore, women (including female heads of households) have limited access to formal sources of credit. The current study

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<sup>23</sup> Their disadvantageous position in the tenancy market has contributed to women's alienation from the land. Households headed by widows have, as a group, entered the highest percentage of sale and mortgaging transactions. Out of 16 households headed by women, two have sold land (a total of 12.5 bighas) and five have mortgaged land (a total of 15.5 bighas).

data suggest that, atleast in the study village, the primary constraints faced by female heads of households are somewhat different. Most widows inherit a share of land and most villagers negotiate loans for working capital from the informal credit market: so that the lack of land as collateral is not the main constraint for widows engaged in agriculture. The main problem widows face, in their role as cultivators or producers, is that they often cannot gain access to or control over the indivisible means of production (eg. bullocks, well or pump, agricultural equipment) owned jointly with their husband's family: so that they are at a disadvantage in negotiating a sharecrop contract or they are forced to mortgage their land.

#### G. Borrowing and Lending

Seven types of loans from informal credit sources were reported in the study village: mortgage loans; credit sales; pawning; short-term, interest-free loans; high-interest loans without collateral; crop and credit advances; and several forms of reciprocal credit (small loans or exchanges in cash or kind). The following types were most commonly resorted to in managing consumption and contingencies across seasons: credit purchases from local shops; short-term, interest-free loans; credit advances to casual labor; and barter or exchanges between kin groups and caste groups.

Women are active negotiators of consumption and contingency loans: whether credit purchases from the shopkeepers (women and children are the most frequent shoppers at the local stores) or small, interest-free loans from kin and neighbors (the majority of small loans, barter, or exchanges in kind are negotiated woman-to-woman). Also, women frequently negotiate loans or gifts from their own parents or kin in their natal village: either at the request of their husband and his family or on their own. Several instances were reported of mothers and daughters making "secret" loans or gifts to each other (eg. bundles of fodder, food grains, a calf) without the knowledge of men in either the giving or receiving household.

Women are acutely aware of, if not actively involved in, negotiating loans taken against pawned items, as the items pawned are typically assets owned and controlled by women: household utensils and jewelry. As Agarwal (1988) points out, in analyzing the marked preference during droughts for disposing non-productive assets (such as jewelry or utensils) during droughts rather than productive assets (such as land or cattle), "in the case of jewellery this is perhaps not surprising in that apart from the household's desire to hold only productive assets such as land and cattle, jewellery is a much more liquid asset than land, and unlike cattle less prone to price plummeting" (Ibid., p.28). However, as Agarwal goes on to argue, the sale (or pawning) of such items has a "special significant when we note

that usually these are the only assets possessed by women". Once these items are pawned, if they are not readily redeemed, women "would be left with nothing to fall back on if abandoned or in case of a drought..." (Ibid., p. 29).

Women are less actively involved in credit advances. Firstly, they are not hired as attached labor for which, as noted above, half the contracted wage is typically paid in advance. Secondly, as women in nuclear or extended families they are not usually involved in negotiating crop advances and as female heads of households they have less access than men to production loans, even less so to crop advances. However, women are able to negotiate very small credit advances, to be deducted from their wages, if they work in other households: for instance, two young widows who fetch water for dominant caste households have been able to negotiate Rs. 50-100 credit advances against their labor services.

In the study village, women were found to be engaged in several types of lending. As mentioned above, women are often involved in several forms of small-scale lending, exchanges, or charity, usually in kind: mother-to-daughter or woman-to-woman (primarily within kinship groups but also within caste groups). Two or three wives of known moneylenders themselves engage in moneylending, often in extending small-scale loans but also in extending medium-size loans against pawned items. Further, the wives of shopkeepers often take turns at running the shops and are engaged, therefore, in credit sales.<sup>24</sup>

#### H. Drawing Upon Common Property Resources

Common property resources (hereafter referred to as CPR's) are an important form of natural resources endowment and of

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<sup>24</sup> Loans are seldom taken from the formal credit market to meet seasonal contingences; but are taken, rather, as capital for major investments. But a word on women's access to formal credit is in order at this time. Whereas there is limited segmentation of the informal credit market by gender, there is marked segmentation of the formal credit market by gender. In the arena of formal credit, the issue of land ownership (i.e., formal, legal, registered land ownership) as collateral becomes critical. The only reported cases of institutional loans to women were those brokered by SEWA (for milch animals) and by the Harijan leader (for looms). In both contexts, the women beneficiaries were members of the two cooperatives in the village (one a dairy cooperative, the other a weaver's cooperative). Not only was the actual presence of these two cooperatives in the study village due to the advocacy and intervention of SEWA, but also the fact that both cooperatives were all-women cooperatives.

collective subsistence, especially for the poor, in Devdholera. Broadly defined, common property resources are those used by an entire community without any exclusive individual ownership or access. In more positive terms, CPR's represent resources to which all citizens of the village are entitled to exercise inalienable rights. In addition to these resources owned by the community or village there are certain private property resources (hereafter referred to as PPR's) to which the public is granted use rights or concessions under certain conditions at certain times.

The number and volume of CPR's in the study village are not insignificant: 157 acres of permanent pastures; 49 acres of groves; 7 water tanks; 1 village well; 4 caste wells; 1 river; 1 main and 2 branch roads; and an unknown number of village trees. In addition, the following PPR's operate as community resources at certain times (eg. post-harvest) or under certain conditions (eg. for watering animals): 177 private wells; 2400 acres of private fields; and 1 SEWA well. These resources are drawn upon for grazing; for collecting wood and fuel, raw materials, cow dung, weeds and leaves; for collecting drinking water and domestic water supplies; for washing clothes; for watering animals; for shade.

In normal years, grass from the verges along field boundaries and stubble in fallow fields (both current and long fallows) are open to the public for the free collection of fuel and fodder and for grazing. And, in normal years, there is free and open access to cow dung dropped in public spaces and at the fields (cow dung dropped within the homestead area remains the private property of the individual home-owner). In the post-crop period of any given season, freshly-harvested fields are also open to the public for grazing: the only condition being that if the owner of the fields has a large herd of animals, he/she has the first rights to grazing. And, at harvest, the poor are entitled to a bundle of crop residues from each cultivator.

The benefits derived from CPR's, and PPR's when available to the public, are numerous and can be grouped under various categories: including, physical products, supplemental income and employment, and certain community gains (eg. drainage/recharge of ground water, renewable resource supply, stability of farming systems). In the study village, some 35-40 physical products are collected or harvested from CPR's. The largest number of products contribute to subsistence needs. Another set of products contribute to subsistence-oriented or locally-marketed artisan production. And a final set are collected or harvested for strictly commercial purposes. The benefits flow largely to the daily subsistence requirements for fodder and fuel. And the benefits are tapped largely by women. In summary, the CPR's not only act as a buffer against seasonal shortages but also contribute to rural equity (Dasgupta 1987, Jodha 1983, and 1985).

## I. Drawing Upon Social Relationships

Several forms of traditional social security or informal insurance in rural India have been widely commented on: notably, patron-client relationships; inter-caste jajmani relationships; kinship support mechanisms; and common property resources.<sup>25</sup> Much of the recent literature indicates a gradual erosion of these systems and relationships over time, attributable in large measure to several trends: increasing pressures of poverty on traditional relationships; increasing pressures of population on common property resources; and increasing commercialization of labor and product markets.<sup>26</sup> Some of the recent literature also points to differences in the operation of these systems between "peak" and "slack" seasons and between "normal" and "bad" years. Data from the current study confirms that seasonality and drought impact differently on the three forms of traditional social security systems listed above.

In the current study, a distinction is drawn between patron-client relationships, which are negotiated bilaterally on the basis of economic or political interrelationships, and jajmani relationships, which are negotiated multilaterally on the basis of caste-defined relationships. This distinction is emphasized because these two types of relationships are affected differently both by long-term changes and by short-term crises. The patron-client relationships which operate in the study village are of two basic types, familiar from other village studies: economic patron-client relationships (those between employers and laborers, landowners and tenants, land mortgagors and mortgagees, shopkeepers and customers, moneylenders and borrowers, and political patron-client relationships (politicians and their supporters; factional leaders and their followers). What differs from region to region and over time in India are the characteristics and intensity, more than the variety, of these relationships.

### Patron-Client Relationships -

In the study village, two patterns in employer-laborer relationships emerged: one, that casual labor is rarely "tied" to

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<sup>25</sup> To name a few, Wiser (1936), Epstein (1967), Breman (1985), Vatuk (1981), and Dasgupta (1987) on patron-client and jajmani relationships; Dasgupta (1987) and Caldwell et al (1986) on kinship support mechanisms; and Jodha (1985, 1986, 1987), Iyengar (1988), and Gupta (1986) on common property resources.

<sup>26</sup> For example, the competition between migrant labor and local labor for limited wage labor employment and the sale of goods which were earlier distributed free to laborers or clients.

patrons by credit or other transactions: and, two, that attached labor is rarely "tied" to patrons for longer than a year at a time and does not necessarily receive credit from patrons. Whereas the fixed annual payment in kind to attached labor is supposed to guarantee a minimum subsistence, the annual renewal of the contract is not guaranteed and the interim credit needs of labor are not necessarily recognized.

Casual laborers are at a particular disadvantage in that their minimum subsistence is not guaranteed<sup>27</sup> and that they must often resort to mortgaging their land, if any, to meet social obligations. In exchange for their freedom (in that there are fewer attached or bonded labor now than in the past), casual labor have lost the guaranteed subsistence that patronage was supposed to have provided. In the past, some laborers "bonded" their labor in return for a guaranteed subsistence; at present, casual laborers often "bond" their land in return for a fixed sum of money but a more vulnerable subsistence (in that they have been alienated, at least temporarily, from part of their means of subsistence).

The data from the current study indicate that the terms and conditions of tenancy contracts in the study village are not enmeshed in other economic relations between the two parties: tenants are free to lease in land from more than one landlord; tenants do not generally render (paid or unpaid) labor services to the landlord; and the landlords are not the principal marketing channel for the tenant's share of the crop. Moreover, the data suggest a fair amount of "reverse" tenancy, whereby the landowner owns less land than the tenant in the contract, and cost-sharing, whereby the landowner and tenant share some, if not all, input costs. Given these characteristics, the current labor and land-lease markets in study village do not appear to incorporate many of the features, both positive (i.e., principle of guaranteed subsistence) and negative (i.e., exploitation), of the patron-client system as it operates elsewhere in India.

#### Jajmani Relationships -

Under what in North India is referred to as the jajmani system (Wiser 1936) and in the study village is referred to as the vasvayas system, certain caste groups render regular, specified services to a designated group of patrons throughout the year, in return for a fixed payment in kind at harvest time

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<sup>27</sup> Even in "normal" years, male labor can expect employment for 175-220 days and female labor for 135-180 days.

and other "concessions".<sup>28</sup> Although in the past this arrangement presumably covered a wider range of services, at present in the study village this system applies to barbers, genealogists, priests, and one carpenter. Over the years, certain of the service and artisan caste groups have opted out or been pushed out of their caste-based jajmani occupations because, in large measure, of the gradual erosion of the economic basis of the system attributable to several forces, including: the gradual impoverishment and related inability to pay of many of the patrons; the outright loss of certain patrons; the substitution of the various goods and services provided under the system by commercial goods and services (eg. metal pots and utensils in place of clay pots and utensils); technological changes replacing artisan work; and/or the commercialization of agriculture.<sup>29</sup>

#### Caste and Kinship Relationships -

In rural India, several forms of traditional support systems exist along caste and kinship lines. The relative strength of these support systems depends on the region and on the "times" (i.e., whether it is a period of seasonal shortages or more acute stress). In the study village, each caste group is comprised of two or three kinship groups and each neighborhood consists of one or two kinship groups.<sup>30</sup> Traditional support systems operate largely along kinship lines, whereby the poor generally draw upon help from richer kin in their own neighborhood before turning to others within the larger caste group.<sup>31</sup> Each neighborhood of

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<sup>28</sup> In Gujarat, according to Niru-bhai Desai, (personal communique) the term jajmani is used to refer to the relationship between a priest and the community he serves and the term vasvayas is used to refer to the relationship between other service and caste groups and the clientele they serve.

<sup>29</sup> According to Dasgupta (1987), writing about a village in Haryana, the "direct sources of income based on hereditary service relationships have become largely defunct because they have ceased to be valuable for the landowners" (p. 104).

<sup>30</sup> The Koli Patels live in four neighborhoods or vas, each of which is comprised almost exclusively of one kinship group. The Harijan vas is divided into two sections, each of which is comprised of one kinship group. The Bhangis and Rawals are comprised of one kinship group each. And the Vagris live in three sub-neighborhoods, each of which is comprised of one kinship group.

<sup>31</sup> One caste-based support mechanism should be noted at this point. The Harijans operate a contribution system as a means of raising money to cover marriage expenses, in which one household makes a gift of cash to another with the expectation that it will

related kin serves as a means of support to its residents in various ways: women turn to other women to borrow small amounts of food stuffs, fuel, fodder, etc.; households loan or exchange labor, irrigation facilities, agricultural implements, or bullocks as needed and, in times of seasonal shortages, richer kin often extend charity to poorer kin.

Although village exogamy and patrilocality are the norm in marriages, women seldom marry at great distances from their natal homes<sup>32</sup> and are free to make annual, often more frequent, visits to their natal homes. During those visits, especially in times of crisis, they are known to seek support of their natal kin. During the study year, several cases of support from the women's family or kin were reported. Several women reported that their mothers gift them small amounts of foodstuffs, fodder, and fuel; often this is done woman-to-woman without the menfolk of either household being informed. Several households reported taking loans from the wife's kin. And, interestingly, several households reported migrating for large parts of a year to the wife's home village for casual labor opportunities. And two or three cases reported migrating to the wife's home village for attached labor opportunities.

Several forms of traditional social security exist within families. Elderly parents are expected to live with and be supported by the youngest son. Young widows are allowed to remarry; among the Bharwad (Shepherd) community, they are expected (but not forced) to marry the younger brother or cousin of the husband. If widows choose not to remarry, the husband's kin are expected to help support them until such time as the widow's own sons, if any, can support her. Should the husband's family and kin not provide support, young widows may return to their natal village and seek support from their brothers or parents.

These family or kinship support systems are, however, on the decline. Many widows complain of no longer receiving the support of their husband's kin. And some elderly widows complain of no longer receiving the support of their own sons. In one case, an elderly widow lives with her daughter-in-law, widow of her younger son, and two grandchildren. They live in one room adjacent to the elder son and his family. The elder son has denied his mother her share of the family property and has

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be returned in double at the time of marriage in the donor household.

<sup>32</sup> Most caste groups in the village have a designated set of villages within which they are supposed to marry. These villages fall largely within Dholka or neighboring talukas; only one caste, the Thakkars, occasionally marry outside Ahmedabad district.

appropriated his sister-in-law's share. In return, the two women are given a meagre share of grain at harvest and no other support throughout the year. The younger widow pieces together their meagre joint livelihood from a variety of sources: the mother-in-law is too old to do much more than gather fuelwood. For a certain stretch of the 1985-87 drought, the younger widow reluctantly insisted that her mother-in-law manage on her own and cook separate meals as she was simply not able to support her. At a later point during the drought, the daughter-in-law was able to invite her mother-in-law to rejoin her and the children for meals. Of course, throughout, they shared the one room and the one mud stove.

#### IV. COPING WITH DROUGHT

In response to drought conditions, households adopt various coping mechanisms. A growing body of literature on these coping mechanisms, particularly for the African context, focuses on the distinctions between seasonal and crisis coping mechanisms, the sequence and timing of these mechanisms, and the ultimate objective which influences the choice of mechanisms. In the Indian context, in a now well-known debate with Morris (1974, 1975), Jodha asserts that the primary concern of rural families when faced with drought conditions is the protection of productive assets (to guarantee future streams of income) not, as Morris asserted, the protection of a certain standard of consumption.

The study data confirms the stand taken by Jodha: namely, that households reduce their consumption before they deplete their productive assets. The study data also confirm the general types and broad sequencing of drought responses described by Jodha. These types of responses are presented below in the rough order in which they are resorted to, although in fact they are often resorted to simultaneously:

##### 1. Diversification or Intensification of Current Activities

Even in normal years, most households in the study village are accustomed to diversifying activities or sources of income according to seasonal fluctuations in labor, land, and factor markets. In a drought year, the pattern of diversification often differs or intensifies.<sup>33</sup> For example, in normal years some 50-

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<sup>33</sup> In his study of the 1963-64 famine in Rajasthan, Jodha describes how households restructure current farm activities to maximize effective availability of products and to include a variety of salvage operations. He lists the following supplementary operations to core crop and animal enterprise: collection of cleared fodder or fuel material, collection of rough fodder from field, discriminating grazing and feeding,

60 households regularly migrate for 5-8 months during the winter and summer seasons, when the local demand for labor is low: a form of "spatial diversification" (Agarwal 1988). As the drought conditions intensified from 1985 to 1987, the demand for migrant labor dropped and the migrant households were forced to search for other labor opportunities. Fortunately, for them and other labor households, the state government offered relief work employment in the study area more-or-less continuously through the migration season of 1987-88.

The ways in which different occupation groups diversified or intensified their regular activities is best summarized as follows:

Farmers -

- repeat plantation of monsoon crops
- substitute plantation of juwar (sorghum) for paddy
- investment in new or improved ground water resources:
  - 3-4 new oil engines
  - 26 new tube-wells
- intensified plantation of winter crops, particularly rajko (lucerne) for fodder

Shepherds -

- discrimination in feeding and grazing between:
  - dry vs. lactating animals
  - poor quality vs. good quality animals
- increased stall feeding involving increased purchase of fodder
- migration with selected animals

Laborers -

- participation in government relief work
- search for alternative migration opportunities

Weavers -

- search for alternative markets
- interim closure of weaving operations
- participation in relief work
- alternative production: e.g., rope-making
- search for alternative migrant labor opportunities

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collecting and converting every piece of dung. In the study village, these supplementary operations were part of the diversification effort to smooth out seasonal peaks and troughs in normal years, but became increasingly difficult to operationalize during the drought as the competition for free goods intensified and owners began monopolizing the free goods (Jodha 1975, p. 1620).

## Potters -

- participation in relief work
- interim closure of pottery production

## Service Castes -

- participation in relief work
- search for migrant labor opportunities

## Women -

- increased time spent in foraging and gathering fuel and fodder
- alternative source of drinking and domestic water supplies (SEWA well)

## 2. Reduction or Minimization of Current Consumption

In his careful and thorough review of empirical literature on recent droughts in India, Dreze (1988) summarizes three repeatedly-observed patterns in consumption behavior during drought conditions. First, that "reducing food intake (including cereal consumption) seems to be an integral part of typical 'reponses to drought' in India not only on the part of landless labourers and poor artisans but also on the part of cultivators over a very wide range of landholding size groups" (p. 79). Second, that in atleast two situations where landless laborers could maximize the employment offered by government relief works, the Gujarat drought of 1974-75 and the Maharashtra drought of 1972-73, "the proportion of households who experienced a reduction in cereal intake during the drought was significantly lower for labourers and artisans than for cultivators in any landholding size class". And, third, as the study by Jodha of the 1963-64 drought in Rajasthan clearly shows, "frugality in consumption set in largely before the process of asset depletion, mortgaging and migration" (Dreze 1988, p. 79).<sup>34</sup> The data from Devdholera reflects, with some variation or specificity, each of these patterns.

The empirical studies from elsewhere in India suggest two broad types of consumption adjustment, which during the 1985-87 drought took the following forms in the study village:

## Changes in the content of the diet -

- shift to coarse grains
- turning to "famine" or "indicator" foods:

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<sup>34</sup> Dreze reviews the data from several empirical studies, all of which documented similar patterns: including, Jodha's study of the 1963-64 famine in Rajasthan; the Desai et al study of the 1974-75 drought in Gujarat; Choudhary and Bapat's study of the 1969-70 droughts in Gujarat and Rajasthan; and the Caldwell et al study of the 1983 drought in Karnataka.

- dhal cooked with pieces of left-over rotla  
kandh, a bitter root boiled and mixed into rotla  
 dough<sup>35</sup>
- and bid, a wild water-chestnut (initially fed to animals  
 eventually eaten by humans)
- jitela, a type of lotus flower
- eating only rotla with a garlic-chilli paste
  - eating only kitchari (rice and salt gruel)

Reduction of Total Intake -

- eating left-overs for breakfast
- having only tea for breakfast
- reduced consumption of "luxury" or "protective" foods,  
 such as: milk, oil, tea, sugar, and vegetables<sup>36</sup>
- eating only one meal, rather than two or three, per day

A survey of household consumption in the study village indicates that most land-holding and occupational groups reduced their consumption of food-grains, milk, and vegetables between early- and mid-1987.<sup>37</sup> Interestingly, the laborers reduced their consumption of food-grains the least (by 13.5%) and were able to increase their consumption of vegetables (by 20.3%). The only other occupational group to increase consumption of items were the traders, who increased their consumption of vegetables (by 79.6%). In terms of land-holding categories, only the small landholders increased consumption of any item: they increased their consumption of food-grains (by 24.3%). And, interestingly, the landless as a category made rather average reductions in consumption, slightly less than the average for milk and vegetables and slightly more than the average reduction in food-grains.

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<sup>35</sup> Rangaswami (1985) reports that tribals in Gujarat eat kandh to kill the appetite.

<sup>36</sup> Meat and fruit are not regular items on the diet even in normal years.

<sup>37</sup> The data on household consumption was gathered from 31 households in six rounds (2 rounds for each of 3 seasons: winter 86-87, summer 87, and monsoon 87). The survey was not designed to collect data on the intra-household distribution of available food but on the inter-household pattern of consumption across the study year. In order to confirm that the pattern of consumption reflects the drought conditions prevailing in 1987, the data will need to be compared with consumption data for the same region, ideally for the same village, in normal years. Vegetables are grown locally during the summer months; this fact is assumed to explain at least in part the increase in vegetable consumption between winter and monsoon seasons in normal years.

### 3. Reduction of Current Commitments

In a study of nine villages in Karnataka during the 1980-83 South Indian drought, Caldwell and Reddy (1986) reported that "most families still regard their ability to weather droughts as being based on savage cutbacks to their living standards, dominated by reducing food to the minimum...The next largest saving, which filled many with deep guilt, was that on festivals, clothing, and entertainment and visiting" (p. 688). Similarly, in Devdholera in 1987, religious ceremonies or festivals were celebrated with less expenditure and less fervor: for instance, few households spent money on new clothes, special foods, or white-washing homes for Diwali 1987. New clothes are most often purchased when a festival is to be celebrated. One laborer reported that he had been saving for two years to buy a new shirt at Diwali but, because of the drought, could not afford to buy one.

In the case of the Karnataka, the efforts to curtail expenditures had, a "dramatic impact on marriages"; so much so that "few marriages took place" (Campbell and Reddy 1986, p. 683). The issue of marriages played itself out slightly differently in the study village. Immediately after the 1987 monsoon rains failed in the study village, villagers predicted that marriages would be postponed as the normal brideprice or dowry could not be managed during a time of stress. On August 16, 1987, for example, a Vaghri girl's engagement was postponed by the groom's family who were supposed to pay a brideprice of Rs. 8000. The bride's father predicted the marriage would be postponed until after the next year's monsoon. As matters turned out, the girl was eventually married in December 1987 after the groom's family managed to pay the Rs. 8000.<sup>38</sup>

In response to caste community pressure, the inter-village caste councils of at least two caste groups met at different times during the year to adjust the level of brideprice or dowry norms to reflect the prevailing drought conditions. The first caste council to take such a decision was that of the Harijans. By early 1988, the inter-village Koli Patel council (covering some 25-30 villages) met and decided to reduce the brideprice for the Koli Patel community. Previously, the brideprice and associated costs paid by the groom's family averaged around Rs. 5-6000; it was expected that the bride's family would spend at least 75% of this amount on wedding expenses. The council decided that the following norms should be followed so long as the drought conditions continued:

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<sup>38</sup> From this amount, the bride's family was expected to and did expend Rs. 4000 on the wedding festivities. The bride's father planned to use the remaining Rs. 4000 to redeem some mortgaged land owned jointly by his family.

Brideprice	- Rs. 1500 only
Groom's party	- 35 people only
Drummer	- Rs. 7 only
Priest	- Rs. 31 only <sup>39</sup>

The Koli Patel caste council also ruled that if any household did not follow these norms, the household would be fined Rs. 6000 and boycotted socially by others in the community until the fine was paid. Soon after these decisions were reached, the sarpanch in a neighboring village violated the norms and was fined Rs. 6000. Until he paid the penalty, he was to be boycotted by the other Koli Patels. Since these decisions were taken, the number of marriages in the village has been significant: some 25 marriages in the first half of 1988.

#### 4. Participation in Relief Work

In their study of the 1974-75 drought in Gujarat, Desai et al (1979) reported that participation in relief work is strongly and inversely correlated with land-holding size.<sup>40</sup> During 1987, participation in relief work in the study village was strongly correlated with caste but not land-holding. Households from all land-holding size groups were found participating in relief work, even before the monsoon rains of that year had failed. But certain caste groups did not participate: notably, the dominant social castes (Brahmins and Thakkars) and the dominant economic caste (Bharwads).<sup>41</sup> By late 1987, however, after the failure of the monsoon rains in that year had added its toll to the accumulated effects of the previous two drought years, even some shepherd households, who traditionally do not hire themselves out as labor, began participating.

This participation pattern in relief works illustrates an importance difference between prolonged droughts (when droughts

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<sup>39</sup> It should be noted that these new drought norms reduced not just the marriage costs of the Koli Patels but also the income of two service caste groups, the Bhanghi drummers and the Gosai priests.

<sup>40</sup> Because most cultivators chose not to join in relief works and because of their decreased yields, Desai et al (1979) observed an impressive "reversal" of the normal income scale during that drought year. In a study of the Employment Guarantee Scheme in Maharashtra, Dandekar reports 90% of participants are from households owning less than 3 acres of land.

<sup>41</sup> In addition to these three caste groups, the two priest households, the two Muslim barber households, and the three Rawal (camel carter) households did not participate in relief work.

recur for several years in succession) and single-year droughts (when a single year of drought follows several "good" years). As Dreze observed in his careful study of the Maharashtra drought of 1972-73, "when droughts recur for several years in succession, cultivators gradually lose their resilience and start flocking to the relief works in increasing numbers" (p. 85). This difference could help explain why in the 1974-75 drought in Gujarat, which followed a "good" year, participation in relief work was positively and inversely correlated with land-holding, whereas in the 1987-88 drought, which followed two bad years, households of all land-holding groups participated in relief works.

The drought conditions affected attached labor in an ambivalent way: one attached laborer did not have his contract renewed, presumably because his employer did not want to expend extra money in a year of low yields; one attached laborer had his fixed annual payment lowered, until his employers could determine the volume of crop yields; and one laborer chose not to renew his contract because of opportunities for steady employment at government relief work sites.

The drought conditions of 1985-87 served to highlight the vulnerability of casual labor. During 1987, if government relief works had not been operated, male casual labor would have found only 50-60 days of local employment and female casual labor only 30-40 days of local employment throughout the year.<sup>42</sup> In normal years, roughly 100 villagers from 40 households migrate for three to five months of employment during the winter season. During winter 1987-88, most migrant labor found employment for only four to six weeks.

## 5. Moneylending

During the study year, only seventeen cases of drought-induced loans were reported averaging about Rs. 750 each. Of these, only half were taken from known moneylenders in the village. Two or three were taken from outside the village, from both moneylenders and relatives.<sup>43</sup> The rest were taken from kin

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<sup>42</sup>From Diwali 1986 to Diwali 1987, because of the drought, one laborer household reported that the husband found 35 days of employment and his wife 32 days. In another household, the mother and a daughter found 25 days in winter harvest and 15 days in summer harvest.

<sup>43</sup> During the 1985-87 drought, some households were able to take help from the wife's parental family, in the form either of loans or employment. For example, several households obtained wage labor, either seasonal or more permanent, in the wife's natal village. Whether the wife's parental family was able to assist appeared to depend on whether their village was as badly

within the villages. A high demand for consumption credit is assumed in most discussions of drought and famine. Perhaps because of the active relief works, the earnings from which helped over 150 households meet day-to-day consumption needs, less than one-third of the drought-time loans were reported to have been taken to meet consumption needs. Over one-third, significantly, were taken to purchase seeds.<sup>44</sup> And one or two each were taken to purchase fodder, to transport animals (when the shepherds migrated to South Gujarat), or to invest in utensil trade: all productive purposes. A few were taken to cover the costs of social obligations (marriage and funeral costs). Finally, it should be noted that no loans were reported to have been taken from banks during the drought.

During the 1985-87 drought, given their increased wariness of extending loans during a period of high risk, the village moneylenders introduced several changes in the normal terms and conditions of loans. First, the credit line on credit sales was reduced from several months to one month by some shopkeepers. Second, against a standard amount of pawned jewellery, less credit was extended than in "normal" years. Third, a personal guarantee by a third-party was requested against small loans by some moneylenders. On the other hand, due to the increased impoverishment of many households in the village, two or three moneylenders decided to extend interest-free, so called "charity", loans.

## 6. Migration

In many studies on famine, the sight of large numbers of people on the move is taken as a major indicator that a famine is occurring. This migratory movement can range from an intensification of normal migration for economic returns (Longhurst, 1986), to moving to places where free food might be distributed, or to aimless wandering, as reported for nineteenth century famines in Western India (McAlpin, 1983). The two major benefits from migration, other than of the latter type, are the income earned or the food received at the point of destination and the decreased claims on available food in the home area (Caldwell, 1981). However, "the effectiveness of migration as a

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affected as the study village by the drought (some of the villages fell within the irrigated belt of Dholka where guava and other cash crops are grown) and whether their overall economic position was better or worse than that of the sister or daughter requesting assistance.

<sup>44</sup> It should be noted that, during the entire drought period from 1985-87, most local government personnel became totally absorbed in managing relief works and no government loans for production purposes appear to have been extended.

famine strategy depends on the spread and extent of famine...and the effectiveness of relief efforts" (Longhurst, 1986, p.33).

In the study village, drought-induced migration took two broad forms: diversification, rather than intensification, of normal migration for economic returns and migration with animals in search of fodder. In normal years, an estimated 55-60 (or 20%) households migrate from the study village (mostly in family units) for a long period each year.<sup>45</sup> In 1987, by late-November (the month when normally most migrants leave the village) only 38 households (or 13%) had migrated. The main reason for the decline in the migration rate was the prolonged and wide-spread nature of the 1985-87 drought (which led to a decline in the demand for migrant labor).

It could be argued that another reason for the decline was the presence of relief works in and around the study village. However, at the peak period of normal migration, just after Diwali, the local relief works had already been suspended for over a month and, despite repeated appeals to the government, there was no indication that relief works would be resumed. In fact, given the number of households which participated in relief work (140 before the failed monsoon rains and 160 after), it was predicted that more households would migrate than usual. As one informant observed in early-November, "If the relief work is not resumed soon, half of the village will migrate".

As the situation developed in November 1987, neither event took place. The demand for migrant labor dropped. And the relief work was not resumed until early December. In normal years, the sugar cane factories in Saurashtra recruit labor for five months, beginning in November. In 1986, the factories recruited labor for only two months. And in October 1987, the factories sent messages that they would remain closed because most of the sugar cane crop had been sold green as fodder, according to the directives of a Government Regulation (GR) promulgated in mid-1987. In the case of groundnut harvesting, another major source of demand for agricultural migrant labor, the crop had, simply, failed. A few households migrated for paddy harvesting instead: a poor substitute as they were able to get work for only 2-3 weeks, not 2-5 months.

Moreover, the demand for non-agricultural migrant labor, notably in brickfields and rice mills, had also dropped. The volume of rice mill operation was greatly reduced due to the partial failure of the paddy crop in 1986 and the greater failure

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<sup>45</sup> In 1986, 42 households were reported to have migrated for 5-8 months over the winter and summer seasons. This figure was allegedly lower than that of normal years, because of the drought.

of the paddy crop in 1987. As of early November 1987, 24 households, which had migrated either for rice mill or brickfield work in November 1986, were waiting for recruitment messages from their previous employers. What data from a small-scale survey of migrant labor in early November indicate was that a) the majority of those who migrated for non-agricultural wage labor in 1987 were still waiting to be recruited and/or waiting to see if relief work was resumed in the study villages; and b) an additional 10 households, which did not migrate in 1986, had done so in 1987. Five of these ten households were Harijans who went for paddy harvesting; three were households who migrated for agricultural wage labor; and two were households which deployed family members to Ahmedabad city.<sup>46</sup>

#### Migrant Shepherds -

For the first time in living memory, due to the acute shortage of fodder, local shepherd families migrated with their animals in search, literally, of greener pastures. During August, about 40 people from 10 shepherd households migrated with roughly 300 animals (9 truck-loads and 4 herds on foot) to a single village, Umarpara, in Rajpipla area of Baruch district in south Gujarat.<sup>47</sup>

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<sup>46</sup> The pattern of recruitment during the drought was more-or-less the same as during normal years, as described in the section on Labor above. McAlpin (1983) reports that whereas in the 19th. century famines, "migration took the form of aimless wandering...in the 20th. century a few men were typically sent out from each village to scout for work as soon as the failure of early rains made harvest losses inevitable. Accounts of later famines, however, do not suggest such communal cooperation" (quoted by Agarwal 1988, p. 24). The data from Devdholera suggests, however, that as with normal-year migration, men were sent by caste-related groups of laborers to search for work or contacts were made through caste-based networks.

<sup>47</sup> The total number of animals owned by shepherds in the study village is 521. Nearly 60% of these (306 in all) were moved out of the village. Some four to five generations ago, according to local Bharwad lore, ancestors of the local shepherds had migrated first to Dhanduka taluka and then to Umarpara. The study village shepherds inter-married with their distant relations in Umarpara, whom they refer to as their own clan or kutumb. More recently, after a conflict with the titular head of the Bharwads, four to five Bharwad cousins migrated from Devdholera to Umarpara. The study village shepherds maintain regular contact with these relatives, some of whom make annual pilgrimages to the study village to worship at the ancestral shrine.

The migrant shepherds found the situation in Umarpara better than they had anticipated. Firstly, from July to November, monsoon grasses were readily available for cutting and grazing.<sup>48</sup> Secondly, they were able to graze their animals not only in the forest but also on fallow private fields (for a fee of Rs. 7 per bigha).<sup>49</sup> Thirdly, they were able to buy cattle feed (called "Amul Daan") from the local dairy depot. And, fourthly, they were able to sell milk, both to the local dairy (at higher prices than they were paid in the study village) and locally (on a rotation basis @ Rs. 5 per kg.).<sup>50</sup>

By November 1987, when the research team visited Umarpara, the study village migrants seemed reasonably well settled although fodder was less readily available and disease had broken out in their herds. The monsoon grasses had, by November, dried up so that the shepherds were grazing their animals deeper in the forest and others had migrated with their dry animals to a another tract of dense forest (Belimora). They reported that an outbreak of cattle pox in the area had resulted in a number of animal deaths. However, the initial anxiety and uncertainty of the migrants had eased given the welcome afforded them by their distant kin and given the availability of fodder.

But the arrival of so many migrants and their cattle (the migrants from the study village represented only a small part of

<sup>48</sup> In normal years in Umarpara, grass sold at Rs. 6 per 100 bundles: but in 1987 was selling at Rs. 40 per 100 bundles. Similarly, juwar normally sold for Rs. 25 per 100 bundles but in 1987 was selling for Rs. 70 per 100 bundles. The sale of grass had stepped up due to the drought. Every day 4-5 truckfulls of grass were reported sold from the Umarpara area. But despite its commercial value, grass was readily available for cutting and grazing from July to November.

<sup>49</sup> In the study village, a grazing fee is not levied for grazing private fields. It is not known whether the grazing fee charged in Umarpara was a regular feature of normal-year grazing or a new feature introduced because of the drought-induced high demand for grass and fodder.

<sup>50</sup> A wealthy Bharwad reported he averaged Rs.100 per month per buffalo from the sale of milk, whereas in the study village he averages only Rs. 80 per month. Others reported earning Rs. 100-120 per month per buffalo and Rs. 60-80 per month per cow in Umarapara. The following prices for milk were cited:

Buffalo	- Rs. 120 per <u>maund</u>	(one <u>maund</u> equals 20 kilograms)
Cow	- Rs. 90 per <u>maund</u>	
Goat	- Rs. 60 per <u>maund</u>	

a mass movement of people and animals to South Gujarat from other parts of the state) was not without its problems, particularly in the eyes of local residents.<sup>51</sup> According to one report, at first the local tribals (Bhil) tried to stop some of the trucks carrying animals to the area. But once the son of a Bharwad politician, an ex-Member of the Legislative Assembly, arrived with his animals, some on foot and some in trucks, the resistance stopped. An underlying tension between the migrants and the Bhils and between the various neighborhoods of Bharwads persisted but did not erupt into open conflict.

Almost half the Bharwad shepherd households, all those owning more than 20 heads of cattle, migrated with most of their herd. Those with some land or crops divided their families, leaving some members behind to care for the farm. The landless shepherds migrated as a whole family. Of the Bharwads who owe large herds, only one remained in the village: a large landowner who planted more than 18 bighas of his land, much of it with juwar for fodder, and who sank a new tube-well during the monsoon season. This is the first time in living memory that the local Bharwad shepherds had been forced to migrate from the study village in search of fodder for their cattle.

It should be noted that the forced migration with their cattle did not entail a loss of cattle or income for all the shepherds. One study village shepherd migrated with his animals to Umarpara in early August, where he sharecropped out his cattle to his son who had migrated to Umarpara some 5-6 years before. He then set off to return home, taking one buffalo with him. En route, he sold the buffalo for Rs. 5000 in Kheda district. From there, he went to Surendranagar district and bought two cows for Rs. 800 each from a cattle camp (punjrapole). When he reached Dholka, he sold these cows for Rs. 1500 each and, then, returned to the Surendranagar cattle camp and bought two other cows for Rs. 800 each. After this second purchase, the cattle camp administrators realized he was trading cattle and banned him from purchasing any more animals. By then, however, he had already made Rs. 4800 from trading cattle, less the purchase price of the original buffalo plus the selling price of the last two cows.

When they left the study village in August 1987, the migrant shepherds planned to return to Devdholera when the monsoon rains, if any, of 1988 arrived. By June 1988 they had all returned.

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<sup>51</sup> According to one informant, who visited Umarpara, in 1987 a total of 500 Bharwad households from all over Gujarat were living in and around Umarpara, of whom only 150 were permanent residents.

## 7. Mortgage or Sale of Assets

According to conventional wisdom, drought victims (but, more so, famine victims) are often forced into distress sale of assets. According to a growing body of current literature on seasonal and crisis coping mechanisms, however, the picture in regard to asset management is more complicated than conventional wisdom would lead one to believe: for example, there are preference hierarchies not only for the assets themselves but also for the modes of drawing upon or disposing assets (Jodha 1975; Agarwal 1988; Corbett 1988). Data from the study village confirm that the picture in regard to assets is not straightforward.

To begin with, the study data suggest that it is important to note the difference between inventories of free goods (either home-produced or collected) and purchased goods which are stocked for planned use (notably for seasonal lean periods); non-productive assets such as household utensils and jewellery; productive assets such as agricultural implements and, of course, land and livestock; and frequently-overlooked assets, such as trees. Jodha (1975) lists a range of goods (home-produced, owner-collected, and purchased) which he found, in his study of Rajasthan villages, were stocked for some planned use such as marriage or for seasonal lean periods: fuel wood, dung cakes, timbers, ropes and mats, spun wool, wild flowers, pickles, dried vegetables, provisions, and clothing. Most of these goods were stocked in the study village as well.

The investment in jewelry as a store of value to draw upon in planned and crisis situations has a long and wide-spread tradition in India (Agarwal 1988). Similarly, household utensils are invested in as a sign of wealth and as a store of value. Another store of value which are generally overlooked are trees, which provide a variety of commercial and subsistence products and which can be pledged, mortgaged, or sold to raise money to deal with contingencies. Chambers has popularized the concept of trees as "savings banks" and insurance for poor rural people (Chambers and Longhurst 1986). During the 1987 drought in the study village, people were known to sell trees to raise capital to purchase seeds and other inputs and to meet other contingencies. Between 150 and 250 trees were sold. To handle the sales and transport of the trees, three or four study village residents became middle-men between the households forced to sell trees and the lumber yards in the nearest market town.

Jewelry and utensils are regularly pawned as security for loans. During crisis periods, their leverage value as pawned items may be reduced by the moneylender, as was the case during the 1987 drought in Devdholera, and/or their owners may be forced into selling these assets. Given the choice, households

generally prefer to pawn rather than to sell jewelry or utensils. If forced to sell, households generally prefer to sell jewelry or utensils before they sell productive assets, such as agricultural implements, trees, or, especially, livestock and land.

The Devdholera data confirm what Jodha found in this study of the Rajasthan drought of 1963-64: namely, that households will respond initially by tightening their belts and consuming less food and will attempt to preserve their holdings of key productive assets intact for as long as they can.<sup>52</sup> Then they will deplete, as necessary, those inventories which they have built up for contingencies. Only then will non-productive assets such as utensils or jewellery or other household items be disposed of. And only, in the very end, will households take the decision to dispose of key productive assets. And even in the end, households will attempt to mortgage, rather than sell, their land. As noted by Jodha (1975), the "sale or mortgage of assets or recourse to out-migration becomes operative at a late stage when other devices have by and large already been exhausted and should be regarded as true indicators of distress in a given scarcity period" (p.1613). In the case of the drought in the study village, no cases of land sale or mortgage were reported. A few animals were sold, but not by households whose major source of income was from livestock.

What matters to households in calculating which type of asset must be disposed of and in what way is the issue of which action can be reversed. Inventories of home-produced, purchased, and free goods can eventually be built up again. Pawned or mortgaged items can, it is hoped, eventually be redeemed. Even if jewelry and utensils are sold, their loss will not impinge immediately or directly on the livelihood of the household as a whole.<sup>53</sup> But if land or cattle are sold the productive base of subsistence or livelihoods is jeopardized.<sup>54</sup> No cases of land

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<sup>52</sup>This pattern was also reported for Africa by Corbett 1988.

<sup>53</sup> But it must be remembered that sales of jewelry and utensils do have a "special significance for women when we note that usually these are the only assets possessed by women" (Agarwal 1988, p. 28).

<sup>54</sup> "Once mortgaged or sold the chances of these assets being redeemed in full in the post-calamity period are often slim, especially for the small farmers and landless agricultural labourers. Jodha's (1978) comparison of the asset position of farmers in the pre-drought, drought and post-drought years in three States shows only a partial recovery in productive assets, and a further depletion in non-productive assets in virtually all cases in the post-drought years, suggesting lagged effects of the calamity" (Agarwal 1988, p.27).

mortgage for sale were reported during the drought years.

#### 8. Drastic Measures -

If the drought or famine conditions should reach extreme proportions, households are sometimes forced to take drastic measures. Several studies suggest that two common responses to extreme food crises are distress migration of the whole household in search of relief (Corbett 1988) and the striking fragmentation or disintegration of families (Agarwal 1988, Greenough 1982).

In many contexts, "the sight of large numbers of people on the move is the major indicator that a famine is occurring" (Longhurst 1986). But, as mentioned in the discussion on migration above, it is important to distinguish between different types of migration, all of which might be associated with drought or famine conditions: the intensification of normal migration in search of employment opportunities; migration to places where free food or other relief measures might be available; and aimless wandering in search of food. In the study village in 1987, migration took two broad forms: diversification of normal migration in search of employment opportunities and migration with animals in search of fodder. Neither of these took on the extreme proportions or aspects of distress migration associated with famine.

Several studies have presented evidence on the disintegration of families and abandonment of women and children under severe famine conditions: for instance, Greenough's (1982) study of the 1943 Bengal famine; Alamgir's (1980) study of the 1974 Bangladesh famine; and Vaughan's (1987) study of the 1949 Malawi famine. In their study of 300 women who participated in food-for-work during and after the 1974 Bangladesh famine, Chen and Ghuznavi (1979) present data on and life-histories of married women who had been abandoned by their husbands; widows who were no longer supported by their sons; women who had been forced into begging or prostitution; mothers who no longer could feed their children and had to hand them over to orphanages or to relatives; and women of all ages who had broken social barriers to work in the fields and at food-for-work sites.<sup>55</sup>

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<sup>55</sup> In Bangladesh, prior to 1974, very few women, even among the poorest, engaged in field work or construction work, either as family labor or wage labor. As expressed by a young woman, deserted by her husband: "When I first started working to support myself people had much to say against it. I knew that no one would give me a meal, so why should I care about their opinions? They said the world had become a hell, with women working in the fields and roads. I paid no need to them. People with empty stomachs do not have to worry about social norms. If begging does not hamper my self-respect, why should hard work

During the 1985-87 drought in the study village, there was little evidence of family disintegration. Although some of the reciprocal arrangements between kin broke down (more on this phenomenon below), the sharing of work and responsibilities within the family did not appear to be unduly strained.<sup>56</sup> When asked whether anyone would consider abandoning their spouse or children, the response was uniformly in the negative. One outside visitor reported the case of a young widow in Saurashtra forced to abandon her children but, as he noted, the drought in Saurashtra had been longer and more severe than in the study area and, even in Saurashtra, that type of incident is very rare.

One type of atypical social behavior surfaced during 1987 in the study village: that of three reported cases of prostitution. One case was that of a young widow forced into prostitution in order to maintain her family. The two other cases were the wives of laborers, who at the time the cases were reported were waiting to be recruited for migrant labor opportunities.

F. Communal Resources: Intensified Use and Conflicts  
Concessions for Jajmani Services -

During the 1985-87 drought, none of these regular, caste-defined relationships were broken. However, the priests reported a drop in the volume of grain payments, both those given every day and those given at harvest, and the genealogists reported a reduced demand for their services, so much so that some decided not to embark on their annual round of patron villages. Moreover, the genealogists reported having been paid in cash, not kind, because of the failed monsoon harvest; which represented to them a drop in real earning. One genealogist, albeit a not particularly industrious one, resorted to two rather drastic measures affecting the women of his household. First, he sent his young, second wife (he already had three children from a first wife) for a tubectomy in order to collect the Rs. 290 incentive payment from the government. And, second, he delayed sending his newly-wed daughter to her husband's home as she was earning a stipend while working for SEWA in the study village.

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erode my dignity?".

<sup>56</sup> This is not to say that age and/or gender biases did not operate within families in response to the drought. In deploying family labor to relief work sites, for example, large joint households sent married sons and their wives before men and women of the older generation. When asked why he sent his daughters-in-law to the relief work before he sent some of his sons, one household patriarch (a rich landlord and caste leader) replied: "They are not of our blood. And they are expected to work".

In the past, one artisan caste, the potters, provided a regular, specified number of pottery items to designated groups of patrons throughout the year, in return for a fixed payment in kind at harvest. Over the past 15-20 years, all but one of the seven potter households have transferred from kind payments to cash payments. During the drought, the potter households were affected by a drop in demand for pots and a shortage and subsequent rise in price of fuel (straw and grass) and raw materials (clay).

The failure of patrons under the jajmani or vasvayas system to meet obligations to clients was attributed by the clients to the patron's inability to do so in a period of overall shortage, not to an irreversible erosion in the jajmani relationships (Agarwal 1988, p. 22). And the drop in demand or payments did not result in a break in the system, only a temporary setback.

#### Rights to Common Property Resources -

During severe food shortage situations, dependence on common property resources increases significantly: people shift to "famine" foods which are collected from CPR's; cattle are grazed more intensively and extensively in search of fodder; people turn to common water resources when private water resources dry up. However, common property resources, which are "already strained in their ability to cushion seasonal fluctuations" (Agarwal 1988, p.20), often are strained to their limits or simply dry up during droughts. During the 1987 drought year, for instance, the grasses which normal grow from July to November in years of good monsoon rains, simply did not sprout. This fact shifted the pressure for grazing from the common pasture land to the private fields, both fallow fields (which in normal times are treated as common property resources) and standing fields, albeit illegally.

Given the strong pressures which are put to bear on all the various forms of traditional social security during droughts or other severe food shortage situations, areas of traditional reciprocity or cooperation become areas of conflict. A variety of conflicts were reported in Devdholera. The most common type of conflict related to grazing. The conflicts over grazing became, predictably, most violent when cattle were grazed, often at night, on standing fields. But conflicts also broke out when animals were grazed on fallow fields, which in normal years are open to all. Conflicts over the rights to collect weeds, grass, or leaves from fields and field boundaries were reported. In one case, a widow was denied the right to collect fodder from the boundaries of his fields by her brother-in-law. Conflicts over the rights to collect cow dung also broke out. Normally, cow dung dropped on public spaces can be collected freely by anyone. During 1987, however, people began claiming exclusive rights to cow dung dropped by their own animals, by marking the fresh droppings (until they dried and could be collected) with a small

twig. Conflicts over water did not break out because the ground water table remained adequate for irrigation in most private wells and for drinking in two public wells (the gram panchayat well and the SEWA well).

#### G. Social Relationships: Decreasing Reliability

As noted above, family or kinship support systems have been eroding over time. During periods of drought, these family or kinship support systems are often further eroded, at least for the duration of the drought. During the 1985-87 drought in the study village, for example, small gifts or loans of food items (vegetables, grain, buttermilk), fuel and fodder between kin virtually dried up. The drought-induced erosion of these kin-based support systems appears to have gone through four phases: below-normal levels of reciprocity or support; occasional evasions of reciprocity or support; denial of reciprocity and support; to outright competition over resources. Once any lagged effects of the drought have played themselves out, it is assumed the kin-based support systems will revert to nearly the level they operated at before the drought.

During the 1985-1987 drought, however, support systems within households continued to operate at near-normal levels. This is not to say that at normal or near-normal levels of intra-family support internal conflicts do not operate, particularly conflicts articulated along gender lines. But it is to say that, during the 1985-87 drought, the breaking point, when areas of reciprocity became areas of competition, was reached at the inter-household level but not at the intra-household level. Predictably, outright competition and conflict would have operated at the intra-household level as well if the government had not offered local relief work employment for the better part of a year.

### III. CONCLUSION

Individual families or households, particularly those which are poor or disadvantaged, cannot be expected to substitute for, or even adequately adjust to, the declining traditional arrangements for social security: whether based on feudal patronage and exploitation; on common village properties and resources; on patron-client or jajmani relationships; or on kinship. Further, poor or disadvantaged households cannot be expected to adequately adjust to seasonal and long-term changes in the terms and conditions of markets that are critical to their livelihoods: notably, the labor, tenancy, and credit markets.

In designing initiatives to provide direct relief against seasonality or droughts, planners (both government and non-government) should systematically analyze the operations of traditional social security arrangements and local markets to

address specific areas of decline or change. In so doing, the roles, responsibilities, and vulnerabilities specific to women should be explicitly analyzed and addressed. The full-length study, of which this paper is only one part, will attempt to draw out implications from the research for future research, programs, and policies.