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Inadequate organization of irrigation water users is now recognized as the major constraint to improving on-farm water management in Pakistan. Previous studies carried out by Colorado State University and Pakistani sociologists have identified characteristics of local social organization that either inhibit or facilitate the introduction of programs for watercourse reconstruction and maintenance. This report, based on a detailed study of one village, including observations of a watercourse reconstruction project, supplements previous studies by describing a major theme in Punjabi culture, the concept of izzat ("honor", "reputation"). Much of Punjabi behavior, and especially the difficulty of organizing local level cooperative projects, can be understood in terms of the concept of izzat. The concern for preserving or increasing one's izzat, or reducing others' izzat, generates conflict and competition among people and discourages cooperation. The implications of the concept of izzat for organizing farmers to construct their watercourses and manage their irrigation water is discussed, and some general recommendations are presented.

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**IRRIGATION AND  
HONOR: CULTURAL  
IMPEDIMENTS TO THE  
IMPROVEMENT OF  
LOCAL LEVEL WATER  
MANAGEMENT IN  
PUNJAB, PAKISTAN**

**By Douglas J. Merrey**

Colorado State University  
Fort Collins, Colorado  
December 1979

**WATER MANAGEMENT  
TECHNICAL REPORT NO. 53**



IRRIGATION AND HONOR:  
CULTURAL IMPEDIMENTS TO THE IMPROVEMENT OF LOCAL  
LEVEL WATER MANAGEMENT IN PUNJAB, PAKISTAN

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Prepared by  
Douglas J. Merrey



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Fort Collins, Colorado

December 1979

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## ABSTRACT

Inadequate organization of irrigation water users is now recognized as the major constraint to improving on-farm water management in Pakistan. Previous studies carried out by Colorado State University and Pakistani sociologists have identified characteristics of local social organization that either inhibit or facilitate the introduction of programs for watercourse reconstruction and maintenance. This report, based on a detailed study of one village, including observations of a watercourse reconstruction project, supplements previous studies by describing a major theme in Punjabi culture, the concept of izzat ("honor", "reputation"). Much of Punjabi behavior, and especially the difficulty of organizing local level cooperative projects, can be understood in terms of the concept of izzat. The concern for preserving or increasing one's izzat, or reducing others' izzat, generates conflict and competition among people and discourages cooperation. The implications of the concept of izzat for organizing farmers to construct their watercourses and manage their irrigation water is discussed, and some general recommendations are presented.

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## TABLE OF CONTENTS

	<u>Page</u>
Abstract . . . . .	vi
Acknowledgements . . . . .	vii
 <u>SECTION 1</u>	
INTRODUCTION . . . . .	1
 <u>SECTION 2</u>	
SUMMARY OF SOCIOLOGICAL FINDINGS . . . . .	5
Terminology . . . . .	5
Sociological Conclusions . . . . .	7
 <u>SECTION 3</u>	
STRATEGIES, RULES, AND GOALS: THE CONCEPT OF CULTURE . . . . .	12
 <u>SECTION 4</u>	
WATERCOURSE RECONSTRUCTION: A CASE STUDY . . . . .	15
Canal Irrigation: Its Initial Impact on One Village . . . . .	15
Watercourse Social Organization . . . . .	18
Watercourse Conditions Before Improvement . . . . .	21
The Improvement Process . . . . .	23
 <u>SECTION 5</u>	
PUNJABI CULTURE: THE CONCEPT OF IZZAT . . . . .	29
 <u>SECTION 6</u>	
THE IMPLICATIONS OF IZZAT FOR ESTABLISHING LOCAL LEVEL ORGANIZATIONS . . . . .	37
 <u>SECTION 7</u>	
CONCLUSIONS . . . . .	44
REFERENCES . . . . .	50

IRRIGATION AND HONOR:  
CULTURAL IMPEDIMENTS TO THE IMPROVEMENT OF LOCAL  
LEVEL WATER MANAGEMENT IN PUNJAB, PAKISTAN

Douglas J. Merrey<sup>1</sup>

"Social organizations are the central vehicles through which water management technologies are delivered, utilized, improved, and maintained." (Freeman and Lowdermilk 1978:704)

SECTION I  
INTRODUCTION

In recent years the organization of irrigation systems has become an important research topic among social scientists. No adequate theoretical perspective either for understanding the structure and operation of single systems, or for making useful comparisons among systems, has yet been developed (Hunt and Hunt, 1976; Freeman and Lowdermilk, 1978). However, organization and management have come to be recognized as of central importance, not only in terms of their political implications (Wittfogel, 1957), but as major constraints on the productivity, stability and efficiency of irrigation systems.

Pakistan has one of the largest and most complex irrigation systems in the world, and the country is heavily dependent on its irrigated agriculture. This system is operating at a very low level of efficiency, whether measured in terms of world-wide agricultural production standards, or in terms

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<sup>1</sup>/Social Anthropologist, CSU Field Party and Assistant Professor, Dept. of Sociology, Colorado State University.

of world-wide agricultural production standards, or in terms of its potential productivity (Corey and Clyma, 1975; Government of Pakistan, Planning Commission, 1978). In addition to the large number of reports identifying the technological deficiencies in the system, there have been several recent sociological studies on organizational problems (cited below). Inadequate and inappropriate organization appears to be the major constraint retarding the efforts to improve Pakistan's irrigation system.

As useful as these recent studies are, they remain incomplete as explanations of the management of irrigation in Pakistan for two reasons:

1. All of these studies are focused on the village/watercourse level, that is, the primarily informal relationships among irrigators at the village and watercourse level. There are as yet no studies of the workings of the Provincial Irrigation Departments themselves, or how these departments relate in practice to the users of the water and to other related departments such as Agriculture and the Water and Power Development Authority (WAPDA)<sup>2</sup>.
2. All of the studies to date focus on social structural attributes of the local system. However, none has

<sup>2</sup>/Mirza (1975) and Lowdermilk, Freeman and Early (1978) do have some comments on the relationships between water users and the Irrigation Department bureaucracy, but neither are systematic studies of this issue. A partial exception, focusing on India, is Gustafson and Reidinger (1971).

discussed the culture of irrigation, that is, the rules, goals, assumptions, and beliefs of the actors in the system; nor have they discussed the strategies pursued by these actors.

If planners and policy makers wish to develop effective programs, they must have a thorough understanding of the culture of their clients. If it is assumed that farmers in rural Pakistan, for example, share with the planners the same set of values, goals, and assumptions, any program developed based on this assumption is likely to fail. Therefore, in this paper a brief summary of the recent sociological research on local level water management in Pakistan is presented. Then, after presenting a working definition of culture, and briefly describing what happened during the course of reconstruction of one watercourse, the fundamental theme or focus in rural Punjabi culture and its implications for improving water management in Pakistan is discussed. This is the concept of "izzat" which may be glossed as "honor," "prestige," or reputation". The discussion is based on detailed field work in one village, supplemented by experience with a broader study of watercourse organizational problems (Mirza and Merrey, 1978). The goal is to identify and discuss the implications of a major feature of Punjabi rural culture that must be considered if effective forms of social organization for water management as well as other productive purposes are to be developed. Throughout the paper Punjabi culture is

discussed specifically, as most of the research has been done in Punjab; but the major conclusions and their implications are relevant for the other provinces of Pakistan as well.

SECTION 2  
SUMMARY OF SOCIOLOGICAL FINDINGS

Terminology

Before proceeding further, a few comments on terminology seem necessary. In general, Punjabi villagers recognize several ranked categories of people. The three major categories are sayid, zamindar, and kami. Sayids are believed to be descendents of the Prophet Muhammed, and are therefore supposed to be respected; when they own land, they may, for the purposes of this report, be included with zamindars. In Punjabi, "zamindar" is best translated as "agriculturalist", and includes "castes" such as "Jat" and "Rajput" who traditionally are farmers or at least land owners. Kamis are traditionally non-agriculturalist "castes" who may have a skill (carpenters, blacksmiths, potters) or be unskilled laborers (e.g. Masali). Their caste and their profession overlap and are hereditary both in theory and to a large extent in practice. Kamis traditionally work for particular farmers and are paid at harvest time and have certain ceremonial roles; these ties are however weakening and being replaced by purely cash relationships. Though kamis do sometimes play important roles, village politics and water management are mainly the concern of zamindars. Therefore, this report, like the other studies to be discussed, will not discuss the role of kamis.

Sociological studies of rural Pakistan tend to use "caste" (the usual translation for *zat* and *qaum*), "subcaste," and "brotherhood" (i.e., *biraderi*) rather loosely and interchangeably. In fact, certain "castes", such as Arains and Gujars, tend not to be further subdivided within villages, though there are exceptions; but the local group is still best referred to as a "biraderi". Jat and Rajput "castes" on the other hand, often, but not always, are further subdivided into local groups, also referred to as *biraderis* by the people themselves. "Caste" is in quotation marks because it is an open question as to whether this is even the appropriate term to use here.

Alavi (1972), who presented the best discussion of "biraderi," says that kinship, not caste, is the major basis for rural Punjabi social organization, and "biraderi" is the basic kinship institution. The term *biraderi* has several referents depending on context, but its most significant referent for the purpose of this report is what Alavi (1972) terms the "biraderi of participation," whose members generally reside in one village. Although common patrilineal descent is the premise of this group, horizontal (fraternal, including cousin) ties receive special emphasis; these are reinforced by marriage relationships and ritual exchanges (*vartan bhaji*) on certain ceremonial occasions. Brothers and cousins of all types exchange sisters and daughters in marriage, both ideally and in practice, leading to a high degree of *biraderi* endogamy. The terms "caste," "subcaste," and "biraderi," from the literature are all used in this

report as "biraderi" and mean the biraderi of participation. It is important to keep in mind that since "biraderi" has different referents in different contexts, they are not necessarily bounded groups (see Alavi, 1972).

### Sociological Conclusions

All of the studies reviewed here have been carried out under the auspices of the Colorado State University Water Management Research Project in Pakistan. All have focused specifically on the local level organizational factors enhancing or inhibiting the introduction of programs for watercourse reconstruction and maintenance. This issue is important as Pakistan has launched an On-Farm Water Management Pilot Project, whose key element is watercourse reconstruction. In this project, the government provides technical advice and materials (bricks, cement, and cement water-control structures); the shareholders on a watercourse are expected to provide all labor and keep the watercourse maintained after it has been rebuilt. If this project is successful millions of acre-feet of water, now wasted, can be saved and utilized to improve production at a relatively low cost (see Eckert, Dimick, and Clyma, 1975). However, its success depends on effectively organizing farmers to reconstruct, maintain, and manage their own watercourses.

The major conclusions of the sociological studies under review are:

1. The "central mobilizing social unit" at the village and watercourse level is the biraderi (Lowdermilk, Freeman, and Early, 1978 (Vol. IV):184-85; also see Lowdermilk, Clyma, and Early, 1975:32-42; Freeman and Lowdermilk, 1976:653-58; Mirza, 1975; Mirza and Merrey, 1978). Biraderis play an important role in mosque and school construction as well as traditional watercourse maintenance.
2. A high level of polarization and conflict in a village makes organizing such communities for watercourse improvement a risky business (Freeman and Lowdermilk, 1976:693-705; Lowdermilk, Freeman, and Early, 1978 (Vol. IV):199-201; Mirza and Merrey, 1978)<sup>3</sup>. Such conflict is generally between biraderis, or if within a biraderi, tends to split it into two biraderis.
3. Communities characterized by two (or more) biraderis of agriculturalists of about equal size and power will exhibit more tendency toward polarization and be more difficult to organize for collective projects (Mirza, 1975:96)<sup>4</sup>. Conversely, communities dominated by a single biraderi, or having a number of small

<sup>3</sup>/See Freeman and Lowdermilk (1976 and 1978) for a method of determining degree of polarization in terms of extent of overlapping versus cross-cutting of conflict structures.

<sup>4</sup>/But Mirza (1975:73) also says, "There is nothing conclusive about single and multiple castes..." in villages.

biraderis none of which are dominant, may be better candidates for collective projects (Mirza and Merrey, 1978). It is important to note here that the number of biraderis, and the degree of polarization of a community, are not permanent characteristics of a community; rather they are points on a longer development cycle. This has not been explicitly recognized by any of the studies under review except Mirza and Merrey (1978).

4. Communities with a relatively equal distribution of power and influence (and/or landholding) and a high percentage of people recognized as influential are better candidates for cooperative projects than those dominated by a few powerful people, or those having no influential people. This is still an hypothesis and not conclusively confirmed (Lowdermilk, Freeman, and Early, 1978 (Vol. IV):225-27; Mirza, 1975; Mirza and Merrey, 1978)<sup>5</sup>. However, preliminary analysis of the Water Users Association data supports this view (Mirza and Merrey, 1979).
5. Not only are large landlords generally less cooperative in cleaning and maintaining the watercourse and more prone to factionalism (Mirza, 1975), but also they tend more often to violate sanctions (such as for non-participation in watercourse cleaning)

<sup>5</sup>/See Freeman and Lowdermilk (1978) for a method of determining "centrality" and "concentration" of power and influence.

than smaller farmers (Lowdermilk, Freeman, and Early, 1978 (Vol. I):71. These observations are contrary to the assumptions often made by policy-makers.

6. Power and influence are significantly associated with size of landholdings, mass media exposure, and high adoption of improved technology (Freeman and Lowdermilk, 1976:706-709). Other factors such as personality and official contacts are also very important.
7. Previously existing forms of cooperation or a previous history of successful cooperation on community projects are important predictors of likely success in watercourse improvement projects (Mirza, 1975; Lowdermilk, Clyma, and Early, 1975:41-42; Mirza and Merrey, 1978)<sup>6</sup>.
8. Cooperation for watercourse improvement is more likely to be successful where there is a single government-sanctioned watercourse branch (sarkari khal) (Mirza and Merrey, 1978).
9. Cooperation for watercourse improvement is also more likely to be successful on watercourses with fewer shareholders (Mirza, 1975).
10. Farmers at the tail of a watercourse are more likely to support cooperative efforts at watercourse

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<sup>6</sup>/To qualify this: since there is variation over time in a community's ability to cooperate, it may be that communities which had cooperated previously later become conflict-ridden.

improvement since their potential gains are greater than those at the head (Mirza, 1975).

11. Equality of influence on all sections of the watercourse, or concentration of influence at the middle and tail, seem to be conducive to successful cooperation for watercourse improvement (Mirza and Merrey, 1978). That is, if the influential people stand to gain substantially they are more likely to support and get others to support the project.
12. A high level of "progressiveness" as measured by educational level, exposure to mass media, etc., seems to be an important predictor of cooperation on community projects (Mirza and Merrey, 1978).

SECTION 3  
STRATEGIES, RULES, AND GOALS:  
THE CONCEPT OF CULTURE

The sociological factors affecting the ability of Pakistani farmers to cooperate on a watercourse improvement program that have been summarized above seem likely to be confirmed in a study presently being conducted on water users associations (Mirza and Merrey, 1979). One could criticize the list of findings or at least add to it; nevertheless they provide very useful guides, especially in choosing communities where the likelihood of a successful watercourse program will be greater (Lowdermilk, Freeman, and Early, 1978; Freeman and Lowdermilk, 1976; 1978). However, they do not tell us why people behave as they do; that is, why are biraderis so competitive? Why do Pakistani farmers find it so difficult to cooperate on projects they themselves recognize as beneficial? Why is there such a dearth of "constructive" and effective civic-minded community leaders? The answers to these questions may be sought at several levels of abstraction; but since our purpose is to identify factors relevant to planning effective forms of farmer irrigation associations, given present social conditions, in rural Pakistan, I shall focus on specific cultural factors that underly the sociological ones described above.

By "culture" I mean all of the precepts, concepts, recipes, skills, values, standards, goals, etc. that people

learn and in terms of which they behave and interpret others' behavior. What has been learned must be clearly distinguished from its material manifestation: overt behavior, and statistical patterns of behavior that may be observed and counted. In these terms, the locus of culture, since it is learned, is within individuals; social and economic systems which we observe in operation "are created and maintained as products or by-products of culturally guided human action and, as such are artifacts of culture" (Goodenough, 1963: 271).

There are, then, two orders of phenomena here toward which a prediction is directed (Goodenough, 1963:269; 1971: 20-21). One is actual behavior, a statement of probabilities based on a sample of past events, such as "a watercourse whose members are divided into two opposing biraderis are prone to conflict". The other type of prediction is based on standards of behavior, that is culture: the rules and standards in terms of which people operate, judge others, and predict, the goals people pursue, and the strategies used to achieve their goals. A description of a culture is a predictive statement in the same sense as a grammar is for language: it does not tell us what people will do, necessarily, but what things are likely or regarded as appropriate under particular circumstances.

There is a complex feedback relationship between these two levels of phenomena (Goodenough, 1963; 1971) whose

ramifications are beyond the scope of this paper<sup>7</sup>. This relationship is an important consideration in understanding social and cultural change, and in planning innovations. Even if a new form of organization is introduced, people are likely to continue behaving within it in terms of their previous culture, and will assume others in their society will too. If these rules and standards are inappropriate for the successful operation of the new form, it will fail, or at least be transformed into something quite different from the original intentions of the initiator. On the other hand, if behavior in terms of the old rules proves disadvantageous (psychologically as well as materially) to the people involved, and behavior in terms of the new set perceived as advantageous, people can and often do change their culture.

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<sup>7</sup>/Goodenough (1971) has also distinguished several levels or senses of the term "culture" depending on the perspective of the observer which cannot be pursued here. Culture as defined here is not the traditional "superorganic" conceptualization of sociologists and anthropologists.

## SECTION 4

## WATERCOURSE RECONSTRUCTION: A CASE STUDY

Canal Irrigation: Its Initial Impact on One Village

As part of a larger study of the relationship between the introduction of canal irrigation and social organization<sup>8</sup>, the author had an opportunity to observe an experimental attempt at carrying out a watercourse improvement program. The village studied, "Gondalpur" (a pseudonym), is located in Central Punjab, on the Chaj "doab" (the area between the Jhelum and Chenab Rivers). This part of the doab has traditionally been called "Gondal Bar" because historically the Gondal "tribe" dominated the area.

Before 1901 there was no canal irrigation in this area. The ancestors of many of the present inhabitants of Gondalpur had herds of camels, sheep, goats, cows, and water buffalo; they also had one Persian well (chai) irrigating 18 acres of land as of 1857, and practiced some rainfed agriculture. As the accompanying table shows, during the 49 years between the first British land settlement (1857) and the arrival of the canal water in Gondalpur (1904/05), there was a substantial rise in population, much of it because of immigration, and a gradual extension and intensification of agriculture. There was also a fairly large-scale transfer of control over land to outsiders--and a concomitant increase

8/See acknowledgements at the front of this report.

Table 1. Changes in population and cultivated area in Gondalpur since 1857<sup>a</sup>.

Year	Population	Area sown once a year in acres			Total
		Rainfed	Irrigated		
			Well	Canal	
1857	67 <sup>b</sup>	46.5	18	0	64.5
1881 <sup>c</sup>	215	-	-	-	-
1888/89	-	125	44	0	169
1891 <sup>c</sup>	310	-	-	-	-
1901/02	568	186	47	0	233
1904/05	-	152	36	86	274
1909/10	-	1	0	605	606
1911 <sup>c</sup>	565	-	-	-	-
1921 <sup>c</sup>	767	-	-	-	-
1931 <sup>c</sup>	758	-	-	-	-
1936/37	-	374	0	492	866
1951 <sup>c</sup>	914	-	-	-	-
1955	1027	104	0	654	758
1961 <sup>c</sup>	1117	-	-	-	-
1968/69	-	87	0	668	755
1972 <sup>c</sup>	1246	-	-	-	-
1977 <sup>d</sup>	1444	-	-	-	-

<sup>a</sup> Source: unpublished village records.

<sup>b</sup> The 1857 settlement record gives the following population data:

Households	People	zat	
10	56	Gondals	
1	2	Mochi	(leatherworkers)
3	9	Cuhra	(non-Muslim, very low status, untouchables)
<u>14</u>	<u>76</u>	Total	

<sup>c</sup> Census figures taken from unpublished village records to 1951; 1961 and 1972 figures are from District Census Reports (Gujrat) for these years.

<sup>d</sup> Based on complete household census. The number of zats had increased to 24 in 1977.

in tenancy; and a large increase in the number of "castes" represented.

The Lower Jhelum Canal was officially opened in 1901, but its water did not reach Gondalpur until the 1904-05 rabi (winter) season. Its impact was immediate: hundreds of acres of land came under cultivation during both the summer (kharif) and rabi growing seasons. Former herders and part-time farmers became full-time farmers, either on their own land or as tenants on others' lands. The area available for grazing animals declined so that even a few years after the canal was introduced most farmers were devoting a substantial percentage of their land to growing fodder for their animals. Other changes since the introduction of canal irrigation include a further rise in population, increasing fragmentation of land holdings, and increasingly intensive agriculture. As is true elsewhere in Punjab, the water table has also risen 40 to 60 feet so that today nearly everywhere it is less than 20 feet below the surface. In some areas it is less than five feet, and a large low-lying tract in Gondalpur has become waterlogged and an adjacent previously productive area saline and unproductive.

Gondalpur land is irrigated by three watercourses, all of whose heads are located in other villages, and controlled by other farmers larger and more powerful than any Gondalpur farmer. On two of them, most of even the Gondalpur land is owned by outsiders and cultivated by Gondalpur tenants. The third watercourse, where the improvement project was

done, has several separate branches as the accompanying map shows. One branch passes through the center of "Chak Aziz" (a pseudonym). The main branch follows the line between Chak Aziz and yet another village into Gondalpur, then divides into three sub-branches which primarily irrigate the holdings of Gondalpur farmers.

#### Watercourse Social Organization

The Gondals are the dominant land owners in Gondalpur. As Table 2 shows they are divided into four major named biraderis, the Khudaya (branch D), Khizarane (branch B), Muradke (branch C), and "Miane". The first three named so dominate particular branches of the watercourse that these are known by their names. Members of other biraderis also have land on various branches. A few Awan have very small holdings on B and C; two Bhattis have some land on branch B, as do three Sayid refugee families; and some Muradke and Khudaya have land on branch B.<sup>9</sup> On branch D, aside from the Khudaya, a few Pindi farmers also have land, as do the religious leaders of Gondalpur, the "Miane". The Numberdar<sup>10</sup> and his family having relatively large holdings, (50-80 acres) are Khudaya; the Miane holdings are also relatively large (25 acres for each of three households) while the other two Gondal biraderis are mostly small farmers (5 to 20 acres).

<sup>9</sup>/Most of this latter is either waterlogged or saline, or not commanded because the land is high and on the other side of the low-lying waterlogged area (see map).

<sup>10</sup>/"Numberdar" (nambardar, Lambardar) is hereditary position created by the British: he collects the land revenue and irrigation fees for the government, keeping a percentage for himself; and acts as the intermediary between the villagers and government officials.

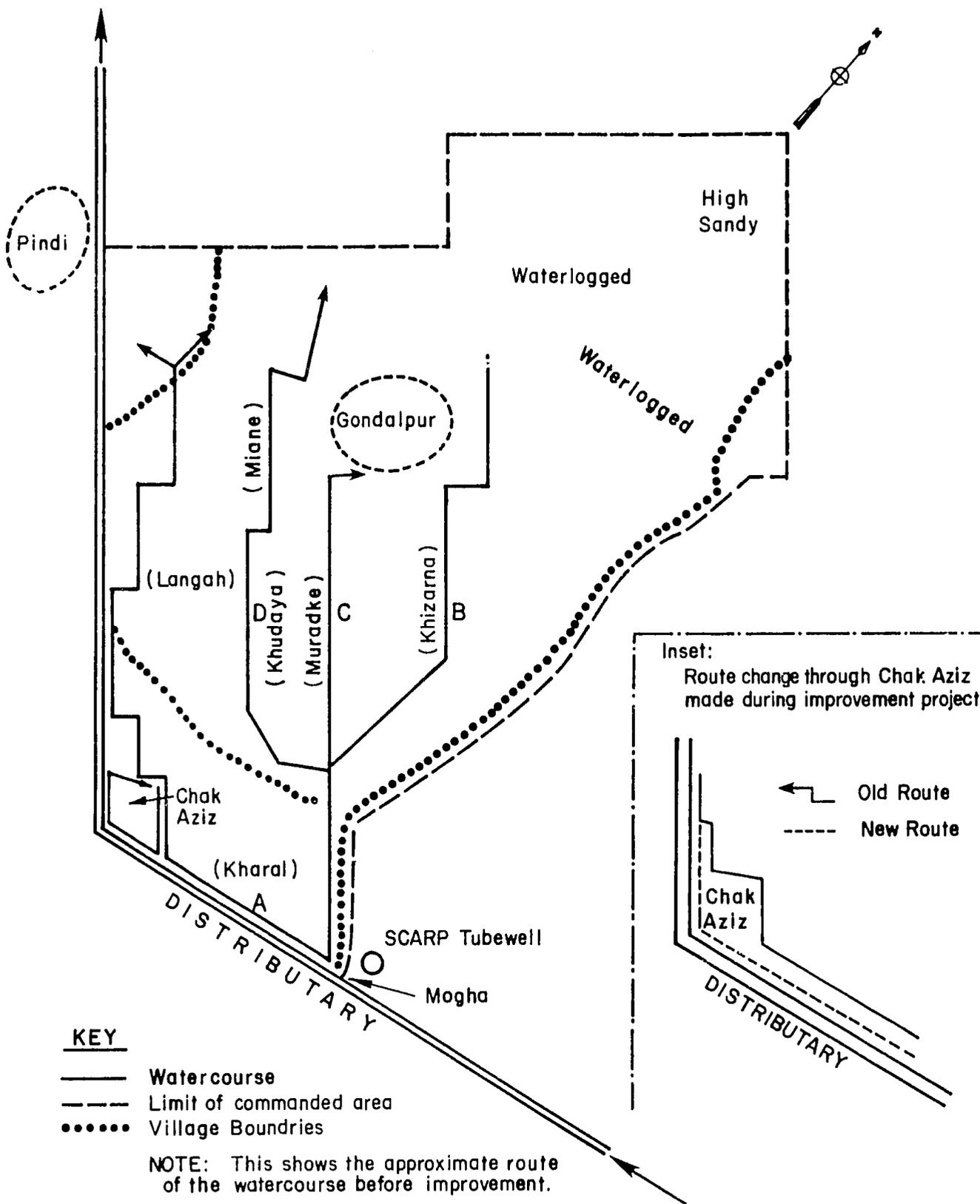


Figure 1. Sketch map of watercourse Gondalpur.

Table 2. Zamindar biradaris involved in watercourse reconstruction.<sup>a</sup>

Biradari	Number of		Watercourse <sup>b</sup> branch	Position on branch
	Households	People		
Gondal-Khudaya	11	70	mainly on D; a little on B.	Head; Middle; Tail
Gondal-Khizarane	21	105	B	Head; Middle; Tail
Gondal-Muradke	7	43	C; a little on B.	Head; Middle; Tail
Gondal-Miane	5	36	D; a little on A	Middle; Tail
Langah	5	36	A	Middle
Awan	11	47	B and C - very small holdings	Middle
Bhatti-Rajeane <sup>c</sup>	18	78	B (2 households)	Middle
Sayid	3	25	B	Head; Middle
non-Gondalpur biradaris:				
KharaI (Chak Aziz)	3	?	A (a little on B)	Head
Pindi Biradaris <sup>d</sup>	under 10	?	A & D	Tail on both

<sup>a</sup>This is not a complete list of all biradaris in Gondalpur; only those having land irrigated by the watercourse reconstructed are listed. Figures are based on 1977 complete household census.

<sup>b</sup>See sketch of watercourse.

<sup>c</sup>Only two households of this biradari have land on this watercourse. There are 7 Bhatti biradaris in Gondalpur with a total of 90 households and 416 people as of 1977.

<sup>d</sup>These biradaris did not play an important role in the improvement project--their major holdings are on other watercourses; they generally acted together on this project.

At the head of branch A are four related households of Kharal zat. One has become a very large landowner (about 300 acres), having bought much land elsewhere. He has about 50 acres on this watercourse. His brother also has about 50 acres on branch A and their half-brother's two sons have about 50 acres between them. Though these two half-brothers' sons often quarrel with each other they did not during the watercourse project; they are referred to here collectively as the "step-nephews". Following the Kharal, on Gondalpur land, branch A irrigates the land of several small Langah farmers (one to ten acres). The members of this biraderi, though poor, have marriage relations with the Khudaya, Muradke, Kharal, and a large Pindi landlord. Some land belonging to the Gondalpur Miane is irrigated after the Langahs', then at the tail branch A irrigates small portions of the relatively large holdings of several Pindi families.

#### Watercourse Conditions Before Improvement

Pakistan's irrigation system is a continuous flow system. Farmers have a right to water proportional to the size of their holdings. Usually they get water at a fixed time on a weekly basis. From the beginning, government policy has been to interfere as little as possible in local water management; the Irrigation Department directly manages the head-works, canals, and distributaries, but not the watercourses. When the system was built the government laid out the route of the watercourses, but their building and maintenance was

the responsibility of the shareholders. The government retains residual powers activated by appeals from farmers to set water rotations, settle disputes, or change the route (see Johnson, Early, and Lowdermilk, 1977:1237; Michel, 1967; Jahania, 1973).

At the time of the study (1976-77) the level of maintenance of all the branches on the watercourse studied was extremely poor. A Salinity Control and Reclamation Program (SCARP) tubewell had been installed at the head of the watercourse in the mid-1960's, doubling the amount of water flowing through the watercourse. As is generally the case in the SCARP areas, the intensity of cultivation increased substantially as a result of increased water supplies.<sup>11</sup>

However, the capacity of the watercourse was not increased; further, for some years after the installation of the tubewell, there was no perceived water shortage. According to informants this led to a decrease in maintenance efforts, atrophying the already weak sanctions enforcing participation in watercourse cleaning. Further, fragmentation of plots had led to increased numbers of "illegal" (i.e. not sanctioned by the Irrigation Department) cuts in the main water channels. The watercourse, on all branches, was choked with grass, bushes and trees; leaked through rat holes, thin banks, and at junctions; and water remained standing in many low sections after irrigation. On branch A, since the

<sup>11</sup>/Previously informants say there had been little double-cropping. Now most of the land--especially that of small farmers--is double-cropped.

Chak Aziz lands are relatively high, the Kharal owners actively sabotaged efforts to clean the head of the watercourse. Silting raised the water level, and thus their ability to irrigate their high land; but it blocked a large percentage of the water from reaching the middle and tail farmers.

This lack of maintenance, combined with increasing pressure to raise production (limited by water) had created considerable dissatisfaction with the condition of the watercourse by 1976.

#### The Improvement Process

In response to this dissatisfaction the author was instrumental in arranging for the Mona Reclamation Experimental Project to choose this watercourse for an experimental improvement program;<sup>12</sup> in this program the Government supplies technical advice and supervision, and materials such as concrete outlets (nakkas); the farmers are responsible for supplying all labor for the earthen improvements, masons for installing nakkas, etc., and for subsequent maintenance. Some Gondalpur farmers had heard about the success of the improvement program in other villages; a survey by the author indicated that the farmers were actually aware that the losses from their watercourse were high and were eager to improve it.

<sup>12</sup>The arrangement was that the author would observe, but not participate in, the process; in fact, people often sought the author's intervention to influence the engineers and upon occasion suggestions were offered to the Mona personnel--which were never followed.

The improvement program on this watercourse undoubtedly faced more problems than is usually the case on a single watercourse; but this makes it an important case to study as all of the problems encountered characterize other watercourse reconstruction efforts to various degrees. A description of all that happened during the six months of active improvement work would constitute a book in itself; a brief summary will show the kinds of problems faced by the project. At a farmer meeting in June 1977 two committees were set up; one for branch A, included a Kharal representative from Chak Aziz (the youngest of the two "step nephews"), a Gondalpur Langah, and the Pindi numberdar. For the "main branch" and branches B, C, and D, one Khudaya, one Khizanrane, and an Awan were chosen. The branch C Muradke refused to take part in the improvement program on their branch and therefore had no committee member. There were several reasons for their refusal: they did not perceive much of a water shortage; they preferred to continue cutting the watercourse freely; and they were angry at the Awan over unrelated issues and opposed any program the Awan supported.

Work began on branch A--but on the same day as an announcement of land allotment under the land consolidation program in Gondalpur; therefore only Chak Aziz shareholders were present at the work site and they successfully pressured the government engineer to start work on a new route for the watercourse, parallel to the distributary around their village (see insert on map). This route had been discussed

previously and opposed by the middle shareholders, but now it became a fait accompli and they could not oppose it. Since the old route had passed through the step nephews' land and another Kharal's courtyard, while the new one is on government land and higher than the old one, the Kharal benefitted substantially from this change.

Over the next few months work continued, fitfully, on branch A, and the engineer had branch D and B work begun even though he had not yet done a survey to indicate the route, width, and depth. The farmers on B and D discovered their water supply was reduced as a result, leading to considerable tension between them and the engineer. At a meeting with the farmers the engineer accused the farmers of not cooperating with him and gave them an ultimatum--to follow his instructions without argument or he would abandon the project; the farmers were angry but agreed to his demands. These branches were then surveyed and the work redone.<sup>13</sup>

A number of disputes broke out among the farmers (aside from a series of continuing disputes between the farmers and Government officials):

<sup>13</sup>/There were significant differences among the branches in the labor organization for improvement and the efficiency of the work. Except for a few portions of branch D done collectively, the work on each portion of all the branches was divided among the shareholders proportional to the amount of land irrigated. The large farmers at the head and tail of branch A had their tenants and servants do the work, while the small farmers in the middle did their own share--and did it more quickly. Most of branch D was done by tenants, Kamis, and hired laborers--and more time was spent smoking and gossiping that working, significantly slowing the work. All but a few of the branch B shareholders did their own work, and theirs was completed very quickly.

1. On branch D, two Khudaya, the numbardar (supported by the Miane), whose land was at the head and middle, and his paternal cousin, a watercourse committee member most of whose land is at the tail, disputed over how far towards the tail the improvement work should go. The numbardar and Miane wanted the work to stop about 1,000 feet short of the cousin's land, so that no improvement work would be done on the section through their land. When the tail cousin refused to cooperate unless his demands were met the numbardar agreed, though the Miane continued to protest and refused to cooperate on the work.
2. The Miane, near the middle and tail of D, continued to dispute with the Khudaya over how far the improvement should go, and over the route of the watercourse. The engineer, based on his survey, wished to straighten it. Since it skirted the edge of the Mianes' land and over the years had been shifted, increasing their land, moving it would reduce their land slightly. It was straightened, finally, but over their continuing protest.
3. On branch B, the Khizarane leader frequently argued with Muradke, Khudaya, and Sayid shareholders over division of the work.
4. On branch A the Pindi shareholders and the Miane were lax about doing their share of the work, leading to conflict with the others and long delays in completing each section.

5. The Langah committee member and the Kharal member disputed over route changes demanded by the Kharal and division of work shares; because of his weak position, the Langah pursued these issues more with the engineer than the Kharal directly. In every case, the Kharal won, because both the government officials and other farmers feared the consequences of the Kharal not cooperating, given their strategic position on the watercourse.
6. The Kharal "step nephews", who had traditionally taken "unauthorized" water from the main branch, successfully sabotaged the work on that branch, including preventing the removal of trees and straightening the route. There seemed to be three reasons for their obstructionism: they realized taking illegal water from the main branch would be more difficult; they would lose a little of the land they occupied if the watercourse were straightened; and they were jealous. They opposed any program that would benefit the weaker Gondalpur people, perhaps fearing it would lead to their becoming more independent of them.
7. The Kharal demanded, and by threatening to sabotage the project, obtained extra nakkas and double-sized culverts for their land; but even after getting these the two "step nephews" in particular continued to sabotage the work.

A project that was expected to be completed in less than two months was not finished in December 1977, the sixth month. In fact, in May 1978 some sections still had not been reconstructed, especially in the middle and tail sections of A and B; some of the sanctioned nakkas had not been installed, and several of the installed ones had been damaged; and there had been no cleaning and maintenance done. All the branches were choked with weeds and silt and leaked from new "unauthorized" cuts in the rebuilt banks. Even in October 1978, the normal watercourse cleaning in preparation for the rabi season had only been haphazardly done.

The sections completed up to December 1977, immediately after reconstruction, did not leak, and farmers enthusiastically reported up to five times as much water reaching their fields as before. However, by November 1978 the water delivery had drastically declined though farmers said not quite to pre-improvement rates. I observed that the sides, because of both poor construction and very poor maintenance had deteriorated considerably and were leaking badly; much water remained standing in the ditch after irrigation; and many farmers felt discouraged about the prospects of maintaining even the present levels of efficiency.

## SECTION 5

## PUNJABI CULTURE: THE CONCEPT OF IZZAT

There is no doubt that one source of the problems faced by this watercourse improvement project was the relationship that developed between the farmers and the government officials supervising the program.<sup>14</sup> Another factor was that the potential benefits of the program were not perceived as equally distributed (Doherty and Jodha, 1977). Indeed equal distribution of benefits in a watercourse reconstruction program is impossible to achieve because of differences in size of landholdings, differences between owners and tenants, and most crucial the relatively greater benefits accruing to farmers with land at the tail than to those with land at the head of the watercourse. However, the active attempts by the step nephews to sabotage the program in order to prevent others from benefitting, and the disputes that developed among persons whose benefits

14/Although some of these engineers and extension workers have rural backgrounds, their education has seemingly made them unfit for rural work; possessing a degree, and a respectable position in the government bureaucracy, they are "officers". They create barriers between themselves and their clients by wearing western clothes, speaking an urban dialect, and doing all they can to create the impression they possess a superior knowledge and position which ought to be respected. When the clients assert themselves, and refuse the "officer" the "respect" (read "obedience") he claims, conflict arises, and the officer's low opinion of his clients is confirmed in his mind. This kind of relationship between government and farmers is not confined to Pakistan.

were about equal, suggests these factors are insufficient as explanations of the problems encountered. In fact, the major source is to be sought within the socio-cultural organization of rural society. Punjabi rural society is characterized by a set of values and mechanisms which encourage conflict, make conflict endemic and unavoidable, and thus tend to discourage cooperation on a long term basis.<sup>15</sup>

The most fundamental concept, or theme, in rural Punjabi culture, in terms of which much of Punjabi behavior can be understood is the concept of izzat.<sup>16</sup> Izzat may be glossed as "honor," "esteem," "reputation," "status" or "face". It is a "limited good" (Foster, 1965): one acquires more izzat only at others' expense. As in a zero-sum game, the success of one person is a threat to all the other players, a characteristic that generates competition and jealousy. For example, when Government officials agreed to a very reasonable request for a double-width culvert for truck access to one of the Kharal's brick kiln, his step nephew demanded a double sized culvert for himself. Informants

<sup>15</sup>/The author is not arguing that there is no cooperation; Lowdermilk, Clyma, and Early, (1975:41-47), for example, discuss several forms of cooperation. But the patterns they discuss are among a few individuals, usually relatives, and tend to be on a short term basis. These authors (p. 47) minimize the importance of the factors discussed here as major impediments to organization.

<sup>16</sup>/This is the most common and broadest term; there are others but they tend to have more restricted meanings. The term has obvious affinities, conceptual and historical, with the Middle Eastern and Mediterranean concept of "honor". This report does not pretend to be a complete discussion of izzat, which has important ramifications in many areas of Punjabi life.

said his izzat was at stake: if he got less than his step uncle he would lose izzat. Government personnel, not accepting the rules of the local izzat game, rejected his demand, which led to further problems with the man.

All men wish to avoid losing izzat, but many men also attempt to increase their own izzat, or reduce others'. One acquires and increases one's izzat by several different strategies. First, one must have the ability and more important the willingness, to use force. There is a famous Punjabi saying: "Whoever holds the stick owns the buffalo." This does not mean force is necessarily frequently resorted to; it is enough to create the impression that one is willing and able to do so, and in times of tension, much calculation and speculation revolves around this issue. The Kharal step nephews were feared because they had demonstrated their willingness to use force in previous fights. The Bhattis of Gondalpur, mostly tenants and poor, in the past had also had a lot of izzat for the same reason. On the other hand, the Khudaya numberdar, despite land holdings, his government contacts, and several adult brothers, had less izzat than he might have had because it was known that he feared violence (this was not an unreasonable fear since his father has been murdered).

A second means of acquiring izzat is possession of influence with government officials, and willingness to use it for one's supporters and against one's "enemies". The numberdar had some izzat from this source but was not

willing to use it against "enemies"; the Kharal step nephews, some Pindi landlords, and a recently deceased poor and landless Bhatti leader before his death, all had a substantial amount of izzat from this source (as did the author). A third source is willingness to entertain guests lavishly, whether they are government officials or relatives at a wedding--even if one bankrupts himself in the process. The deceased Bhatti leader mentioned above, kept himself bankrupt but high in izzat by this means.

Success in competition, whether organized games such as kabadi or a stick fight, is another source of izzat. Winning, not a valiant loss, is the key. Another source is generosity, not to the general public, but toward individuals (who are obliged then to render support).<sup>17</sup> Finally, successful one-upmanship, including getting revenge for a previous defeat, or insult, is important. For example, disputes are often taken to the police; and the person or group that can avoid jail or beating by the police, while getting the opponent punished, and spend the least money on the case, "wins". Such cases often become very long, involved, and expensive; but they continue even when people are aware that after so much trouble and expense they will have nothing tangible to show.

In order to improve one's izzat one must have taqat (strength, power), but taqat alone is insufficient; one must

<sup>17</sup>/Religious generosity such as building a mosque earns one "respect" (abad) for piety, but is not itself a source of izzat; pious acts score points in a different game.

use this power to help one's clients or defeat one's enemies. The richest of the Kharals has less izzat than one would predict from his wealth and government contacts because he was unwilling to use his position in this way. A person whose taqat and izzat are increasing attracts followers and allies who hope to benefit; but he also attracts the jealousy and fear of others who are likely to band together behind the scenes to plot strategies to limit or reduce him. If it is a group (such as a biraderi) or several brothers who are getting too powerful, efforts will be made to sow dissention and thus weaken their unity; because individuals' primary loyalties are to themselves and each one assumes this to be true of others, efforts to divide groups, even two brothers, often succeed.

People recognized as "leaders" are supposed to work for the benefit of their followers as a group; but more often than not, such persons keep their own interests in mind first and attract clients by aiding individuals (against the police or an enemy for example) who are then obliged to them. Only infrequently do leaders work for the benefit of a group or community as a whole--and even when they do, others may accuse them of seeking only their own benefit.

Opposition is often expressed verbally in terms of issues, but in fact the issue is nearly always a pretext: men oppose or support decisions and programs based on their perceptions of their competitors' position. For example, even though all farmers were suffering the exactions of a

corrupt tubewell operator, they did nothing because, informants explained, if one man or group proposes petitioning for his removal, others will oppose, not out of love for the tubewell operator, but to prevent the others from utilizing the issue to gain some advantage, or to pursue some long-standing grudge. This can be carried further: the non-cooperative behavior of several Kharal on branch A during the watercourse reconstruction was interpreted by informants as based on a desire to prevent others from benefitting--even if it meant foregoing their own benefits.<sup>18</sup> Opposition is also not "legitimate" in the western parliamentary sense: opposition is always personal (or interpreted by others as personal), and aimed at weakening others or strengthening one's own position.

There is a strong ethic of loyalty to one's kinsmen; one ought to be prepared to make sacrifices for their benefit--and on occasion people do. Marriage within the biraderi--siblings and cousins exchanging children--is intended to cement their affections and relationships. Divisions within the community, in Gondalpur and other villages, are usually between biraderis; this was the case for most disputes over the watercourse improvement program. There is a feeling of a biraderi's izzat, which must be protected from others' attacks; and if a man's izzat suffers at the hands of a member of a different biraderi, all of his close kinsmen will unite in opposition to the "enemy" (dushman).

<sup>18</sup>/There is a Punjabi saying, "If my neighbor's wall falls it is good--even if it falls on me".

Nevertheless, despite the emphasis on loyalty to one's kinsmen, tensions among biraderi members are always present; patrilineal cousins and brothers often have tense and competitive relationships and do not completely trust each other. One's brother's or cousin's personal izzat is not necessarily one's own; hence a man is apt to be jealous of and feel threatened by a brother's success. Tension is also generated among biraderi members by joint potential rights in land. One of the worst cases of conflict in Gondalpur history, resulting in two murders and three executions, occurred within the Khudaya biraderi over land; one branch attempted to deprive another branch of rights to some land; tensions built up and the latter finally took action, by murdering the numberdar and his brother. The amount of land involved was in fact not great; the real issue was izzat. If the second group had allowed themselves to be deprived of the land, their izzat would have been severely damaged.<sup>19</sup>

During the improvement process there was much petty conflict among biraderi members over work shares and the like; the Kharal are seriously divided, and the Khudaya only slightly less so; the Awan and Muradke, though separate

<sup>19</sup>/The numberdar and the cousin with whom he argued over the extent of work on the watercourse are the sons of the two murdered men; their relations are tense in part because of jealousy and dissatisfaction over the subsequent partitioning of their fathers' land; and in part because each fears the other will gain an advantage. An exchange of sisters would seem to be called for here, but each branch is marrying matrilineally (outside the village), accentuating the division.

biraderis in many senses, are closely intermarried--yet at the time of this study were involved in conflict over several issues. These data suggest that the sociologists discussed above have overemphasized the unity of biraderis.

The sense of community within the village is real, but also intertwined with izzat. In opposition to outsiders villagers will act together in a stick fight or a competitive game (such as kabadi), to preserve the izzat of their village. However, cooperation within a community to achieve a mutually beneficial goal is very difficult as people fear others may benefit more than they, or the leaders will gain undue influence. In some villages there are leaders who are sufficiently trusted (or feared) to insure that farmers cooperate to maintain their watercourse (Mirza and Merrey, 1978), but this is not true of most communities, and is not a permanent characteristics of any community.<sup>20</sup>

<sup>20</sup>/One commentator on an early draft of this paper, as well as one of the Gondalpur informants with whom the conceptualization of izzat was discussed, suggested a confusion with what he calls "false izzat" with "true izzat". True izzat refers to the more "positive" characteristics included in the concept, while "false izzat" includes more "negative" behaviors such as undercutting others, and creating fear in others. It is important to note that my informant here is a Langah, who are not active participants in the main game of izzat. Other Gondalpur informants, while understanding the distinction, insist nevertheless that obstructionists like the step nephew do have izzat in most peoples' eyes; men who are feared and referred to as "badmash" ("bad character," trouble-maker, bully) are also respected (even admired) and regarded as having izzat; and the "badmash" themselves believe they are increasing their izzat by their behavior.

SECTION 6  
THE IMPLICATIONS OF IZZAT FOR ESTABLISHING  
LOCAL LEVEL ORGANIZATIONS

Punjabi villages exhibit considerable variety in observable social organization: single, double, multicasite villages; villages with strong leaders and villages with no leaders; villages with no recent history of serious conflict, and villages where murders occur yearly; villages inhabited by descendents of the original (pre-canal system) inhabitants; colonists who came at the time of the building of the canals; and recent refugees from India. However, in contrast to the variation at this level, there is relatively less cultural variation: the concept of izzat described here is shared to a very large extent by rural Punjabis. However, it leads to somewhat different sociological patterns under different circumstances.

For one thing, people pursue different strategies depending (aside from personality differences) on the larger social context in which they find themselves. Pindi village for example is dominated by a number of very large landlords; they are all Gondal, but are subdivided into several biraderis. Tension among several of these has led to a number of murders over the years. Members of other Gondal biraderis attempt to remain neutral, or temporarily ally themselves with one or another side, or try to stir up incidents among others in order to weaken them. Many Gondalpur farmers are clients

of the Pindi landlords; they work as tenants for the landlords, or help them when a show of force, or in the past at least, votes, are needed; in return they expect their patrons to help them against their enemies when needed. Normally the Gondalpur people do not compete directly with the Pindi landlords; they may be said to be operating in different political "arenas".

Everyone is concerned about his izzat; but not all men play the game of izzat actively. Many are content to avoid losing izzat by not initiating confrontations. If they retreat when someone forces an issue, they lose izzat, but avoidance of confrontations does not always mean weakness. The Langah, for example, being a small biraderi with relatively few resources, are rarely involved in conflict, but when another group attempted to grab some of their land during the land consolidation program they faced the issue squarely. The grabbers backed down, losing considerable izzat, and the Langah gained. Nevertheless, since the Langah do not initiate confrontations, the extent of their izzat is limited.<sup>21</sup>

In contrast, the Awan, with a slightly larger number of men but less land than the Langah, have closely allied themselves with the Kharal step nephew, and exhibit a willingness

<sup>21</sup>/The Langah illustrate another strategy for maintaining their izzat: as noted above they have marriage relations with the Khudaya, Muradke, Kharal, and a large Pindi landlord. None of these other groups have direct marriage relations with each other. The Langah are proud of these connections. These marriages strengthened their position and were a source of more izzat than their small size and lack of involvement in politics would lead one to expect. However, this strategy has a double edge: since they were mostly women-givers in these transactions, they were also affirming a certain inferiority.

to use force to achieve their ends. People are therefore reluctant to annoy them and their leaders have more influence and izzat in the community than one would predict from the size of their landholdings or numbers.

The process of collective decision-making is also conditioned by concern for izzat. Several paryons (panchayats, i.e., informal "councils" of men) have been observed attempting to settle disputes, as well as meetings at which decisions regarding the watercourse improvement program were made. At all of these meetings, discussion seems interminable to the outside observer; people usually "shout" (by American standards), often get excited, and often drag in seemingly extraneous issues. At paryons, after the disputing parties have had their say, and there has been considerable public discussion, the few men who are to make the decision withdraw to discuss the case privately; their decisions are always presented as unanimous, and one suspects they are influenced by the trends in the public discussions.

Similarly, at the meetings on watercourse improvement, a "consensus" was arrived at on each issue (sometimes meaning those opposed kept quiet--though they did not always accept the decision), on some issues, such as selection of the members of the "executive committee" the more important men, representing the various biraderis, withdrew to discuss the issue privately. Their decision was then announced to the group and extension officer, and accepted with little further discussion.

An important function of this "consensus" form of decision-making is to preserve the izzat of all the participants. If a consensus, or at least the appearance of consensus, is not achieved, decisions are often postponed, even when a large majority are agreed. To press for a decision when some remain opposed is to attack the izzat of the opposition. This may lead to an escalation of the conflict. If a formal process such as voting or an election is used, someone must suffer a public defeat and thus lose izzat, creating bitterness and potential obstructionism. Since one's izzat is at stake, aside from the office or decision in dispute, people are likely to resort to "unfair" means to avoid losing. Given this orientation it would be folly to insist on formal voting and majority rule as the mechanism for decision-making in any institutions established on watercourses.

Of course people may make decisions by consensus, then "ratify" it by formally voting; but the voting rule is also apt to be utilized by persons bent on increasing their izzat by forcing votes and thus causing opponents to lose publicly: this would ultimately subvert the organization.<sup>22</sup> Secret balloting does not completely solve the problem either: someone still loses izzat in a public way; and in a small community it is not difficult to figure out how particular people voted

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<sup>22</sup>/Something like this may have happened in many cooperatives.

When villagers and government officials interact, both are concerned about their izzat. In villages with several competing leaders, they often compete for the "privilege" of entertaining visiting officials--especially potentially important ones. Part of the reason is an ethic of the importance of honoring a "guest" of the village; it is "beizzati", i.e. a loss of izzat, for the village not to treat a guest properly. Another aspect is the person who (publicly) treats a guest well gains points in the game of izzat over his opponents. If he is able to translate this into influence, or even the impression of influence, with the official then his izzat is further improved.

Officials are also concerned with their own izzat both in the villagers' and their colleagues' eyes. This often leads them to avoid delegating authority (especially to villagers but including such people as extension workers) and to try to give an inflated impression of their own authority. Although they often flatter and cater to big landlords, they also try to maintain social distance between themselves and ordinary villagers by wearing western clothes, and by using speech that is sprinkled with English terms, authoritarian, and sometimes rude. This includes use of familiar verbal and pronoun forms of address towards villagers. Villagers on the other hand are expected to be polite, to accommodate themselves to an official's needs, and to accept his point of view without argument. Publicly villagers are often obsequious, but behind the official's

back, they may ridicule him. Some officials seem to be aware of this; at any rate they are very insecure and vulnerable, and several very strong outbursts by officials when villagers have criticized them publicly have been observed. These factors obviously inhibit government workers' abilities to work effectively with rural people.<sup>23</sup>

Perhaps because of this social distance, and the concomitant lack of awareness of the divisions and competing concerns of the people they work with, government officials sometimes make decisions that seem "fair" to them, but are seen as izzat-threatening by some of the community people. The example of the conflict over the double-sized culverts discussed above illustrates this point. It is important for officials to make themselves aware of these factors and consider the likely consequences of decisions; this can only be done if they understand the relationships among the people involved, and the culture in terms of which they operate. It should be a cardinal rule that no one should lose izzat as a result of a seemingly reasonable decision. In the above case, either both should have been given a double culvert, or the person needing it should have been asked to pay for the extra width.

Finally, a major consequence of the concern for izzat is that a "civic" sense is very rare. The step nephews from Chak Aziz are not unique in Punjab: there are many

<sup>23</sup>/The On-Farm Water Management Project workers are a notable exception to this, which may be one factor in their generally good reputation among villagers.

individuals who will actively sabotage a program to keep others from benefitting, even if it means foregoing benefits for themselves. Other people have no mechanism to neutralize or control determined obstructionists, even when a large majority favor a particular program. It may be possible to solve this problem by strong government intervention, but this creates other, perhaps more serious, problems.

SECTION 7  
CONCLUSION

This report is by no means a complete discussion of the role of izzat in Punjabi social life; nor is the concept of izzat the only characteristic of Punjabi culture relevant to understanding why conflict is so endemic and cooperation so rare. A complete discussion would have to dissect the social and economic structure of rural Punjab, the dynamics of family and kinship, and the profound changes that have occurred in Punjabi society during the last one hundred years. All these would have to be related to the historical and general cultural context of South and Southwest Asia. The discussion would have to include an analysis of the assumption of hierarchy and inequality in social relations that is only superficially overlaid by the Muslim ideology of equality; and it would have to include a discussion of attitudes toward land. This brings the discussion full circle back to izzat: hierarchy is expressed in the idiom of izzat, and possession of land and cattle are perceived as primary sources of izzat.

To reiterate, not all men actively "play" the game of izzat; but all those involved in "politics" in its broadest sense do. This includes a large number of men who are not "leaders" by any definition of the term. All Punjabi communities exhibit these same characteristics, but some more than others, and some are able to overcome them temporarily

in order to accomplish community-wide projects; but these latter are a small minority.<sup>24</sup> The game may not have been unadaptive under pre-canal social conditions. During the period immediately preceding the building of the canal, population pressure seems to have been building--perhaps explaining why canal irrigation was adopted so quickly (Boserup, 1965). After the canal there was no shortage of land, no severe population pressure, and no pressure from the larger system to "develop": hence the minimal level of cooperation required to operate the system at a low level of efficiency was sufficient.

Now the pressure is again increasing: the demands of the larger system require increased production; the local sub-system too is under increasing local pressure as productivity on a per capita basis is probably not even being maintained. Water and its mismanagement is a key constraint. Large-scale capital-intensive projects such as dams, canals, and tubewell schemes will continue to be constructed and operated in order to maintain and improve the productivity of Pakistan's irrigation system; but it is now recognized that many of the major problems--low productivity, water-logging, and salinity, among others--are the result of local-level mismanagement. Increasing attention and investment

<sup>24</sup>/See Pettigrew (1978) for a discussion of the role of izzat in East Punjab. Many of the characteristics of Punjabi rural society are found to varying degrees throughout north India and Pakistan; many of the implications of this report for organizing farmers apply to these areas too; see also Sharma (1978).

are therefore being focused on improving local water management practices, by involving local water users in projects to improve the efficiency of their watercourses, as well as their cultivation practices.

There are two possible strategies: either the government can intervene directly and rebuild or enforce the reconstruction of watercourses and use of better cultivation practices; or it can encourage local initiatives. The former strategy, in which the government itself would line all watercourses with brick and mortar for example, has been considered. Many farmers find it attractive. In theory at least it would require less maintenance. However, aside from the prohibitively high cost (Eckert, Dimick, and Clyma, 1975), such a strategy would constitute further centralization, reducing the responsiveness of the system to local-level problems, and ultimately risking its viability.<sup>25</sup> Its effective administration would also be problematical.

The administrative and social impediments to the strategy being pursued are also substantial. Nevertheless, from an ecological perspective, a decentralized approach is most viable. In fact, paradoxical as it may seem, it should be argued that the current program has not gone far enough toward encouraging local organization and initiative: not only should the Government encourage the organization and

<sup>25</sup>/See Rappaport (1971); Flannery (1972); Lees (1974); this perspective is being developed in another paper presently being written by this author, and is discussed briefly in Reuss, Skogerboe and Merrey (1979).

initiative: not only should the Government encourage the organization of local water users to manage their own local sub-systems, but these local organizations ought to be integrated into the operation of the system at higher levels (as in Spain, for example; see Radosevich, 1975). This decentralization would increase the responsiveness of the larger system to local needs and perturbations.

Given the sociocultural characteristics summed up in the concept of izzat that seem to prevent rural Punjabis from organizing and cooperating, how can local organizations succeed? In the discussion of "culture" and its relationship to behavior the complexity of this relationship was emphasized. It is not a fixed, one-to-one or one-directional relationship. Since patterns of behavior are "generated" by a mixture of material and cultural constraints and rewards; changes in these constraints and rewards should generate changes in behavior patterns (Barth, 1966; 1967; Goodenough, 1963). It cannot be assumed that people will alter their customary behavior patterns and cultural values in the absence of compelling constraints and/or rewards to do so. Mere exhortation will not suffice.<sup>26</sup>

<sup>26</sup>/Although the emphasis in this report has been on cultural factors as the independent variables "explaining" particular forms of behavior, this is an oversimplification. In fact, at a more abstract level than patterns of individual behavior, culture--including the set of values and strategies summarized by the term izzat--should be seen as a product of a particular social structural, economic and ecological context. Attempts to change only cultural values (by "education", "preaching", etc.), without changing the basic social structure and the constraints and rewards built into it, are not likely to succeed (see Silverman, 1968).

The solution is to create such constraints and rewards, designed with the specific cultural characteristics and material resources of the population in mind. A three-pronged strategy is suggested here:

1. Legal and administrative mechanisms are required to facilitate organization (such as an enabling law for local watercourse organizations, and their federation into a larger organization). These organizations ought to be given real responsibilities.<sup>27</sup>
2. Sufficient rewards need to be built in to attract farmers to organize, and continued rewards held out to maintain the organization over the long run (for example free materials for watercourse reconstruction, credit and agronomic inputs at special rates for members of successful organizations, special public recognition for communities with effective organizations).
3. Sanctions are needed to be applied initially to individuals and groups who sabotage organizational efforts and local improvement projects, and eventually to be applied to local communities who lag behind in organizational efforts or do not fulfill their responsibilities (such as watercourse maintenance). Such sanctions will have to be applied by an external authority, to avoid their becoming another weapon

<sup>27</sup>Gustafson and Reidinger (1971) seem to be among the first advocates of establishing water users associations; see also Water Management Research Project Staff (1976); and Reuss, Skogerboe, and Merrey (1979).

in the game of izzat, and will have to be swift, certain, severe, and just. This "external authority" should not be another arm of the Government bureaucracy; rather, it should be a body deriving its authority from local communities, but above any particular community.<sup>28</sup>

The facilitating mechanisms, rewards, and sanctions must be designed to fit the local milieu; what works in the Philippines may not work in Pakistan. For example, formal voting and elections ought not to be overemphasized at least initially in the operation of an association as this requirement may lead to its being sabotaged in the game of izzat. Communities that organize themselves effectively ought to receive public recognition aside from the material benefits that will hopefully accrue. In time such a strategy may encourage, if not a redefinition of izzat, at least a recognition of more constructive behaviors as sources of increased izzat.

<sup>28</sup>/Federation of local organizations into larger bodies is probably a necessary component of a successful decentralized water management organization; settling disputes and imposing sanctions would be only one of the higher-level functions.

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