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Irrigation Communities and the Organization of Power in Local Society

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It is a remarkable fact that English language research on China has neglected the subject of water control organizations even so long after the path-breaking, if provocative contributions of Wittfogel to the subject of hydraulic societies. Central to Wittfogel's conception was the "despotic" character of the imperial Chinese state which overwhelmed local communities. Indeed, it did so to the extent that what autonomy of action existed in these communities was merely accidental and acquired by default. Although this characterization may appear somewhat simplistic and ideological today, that is hardly a reason to regard irrigation communities and their organizations as unworthy of further study. Actually water-control organizations, and specifically irrigation communities, are not only interesting as communities in themselves, but also derive their importance from the fact that they are organizations which are inevitably involved in conflict and co-operation across communities.

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Far from being dominated by the state, these organizations display a robust independence in managing and manipulating the resources required in pursuing the twin goals of co-operation and competition for water. In doing so they bring into play various different organizing systems which determine the axes along which power is exercised in local society such as the village and the marketing hierarchy, the ritual hierarchy, the drainage basin and finally, the political system - in which the state is only one element. These complex interactions then, not only challenge the exclusive role of the state in shaping these communities, but by throwing light on how familiar organizational systems and principles are brought into play in unfamiliar ways, they tell us about the manner in which power is distributed and exercised in local society.

The time frame of the study is mostly the Qing and the Republican period. Although it has been difficult to study the historical evolution of these communities during the early period,

* The core of this study is based on a Japanese investigation of Xingtai and its neighbors conducted by scholars of the Research Bureau of the South Manchurian Railway Company during the early 1940s. These investigations include detailed interviews, descriptions of the environment, and whatever written records - registers of gate associations, steles and court cases - could be found in the area. All of these materials are collected in the sixth volume of Chugoku Nogon Kanko Chosa (Investigation of Customs in Chinese Villages) (Tokyo 1952), hereafter referred to as CN6. I have supplemented this source with information from the gazetteers and official materials from the Republican period.

we are in a somewhat better position to examine changes affecting them during the Republican period. The area of the study is not, as may be expected, in the well-irrigated and fertile river valleys of southern and central China, but in the more arid north where about 15% of all cultivable land was irrigated.¹ The specific region is Xingtai county and its neighbors in Hebei. Xingtai county is located in southern Hebei, bordering Shanxi province to the west. The foothills of the Taihang mountain range of Shanxi, which hugs the western boundary of the north China plain, extend into Xingtai, covering almost three-fourths of the county. The rivers that irrigate the eastern-most fourth of the county and its neighbors originate in these foothills and are fed by groundwater springs.² It is not unlikely that irrigation systems could be found all along the western border, where numerous rivers originated in the Taihang mountains and flowed northeast to merge finally with the Hai river near its delta around Tianjin. A sampling of gazetteers along this border shows that this was indeed the case in some of the areas. Their establishment was often associated with rice cultivation during the Yongzheng (1723-1736) period of the Qing dynasty. ³

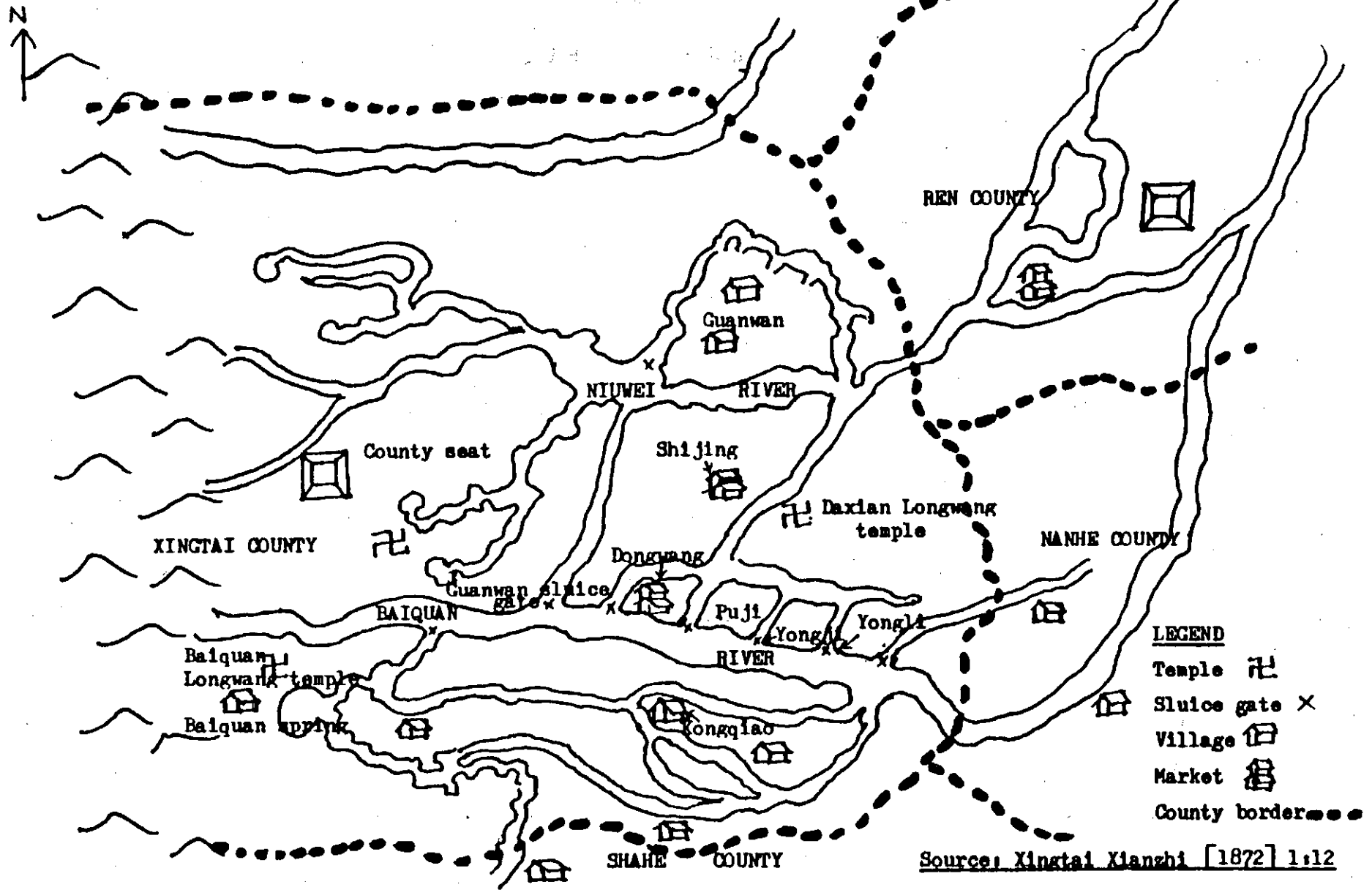
The rivers that irrigated the eastern part of Xingtai county and the neighboring counties of Ren, Nanhe, Pingxiang and Shahe were called Niuwei and Baiquan (also called Qili further upstream). Several groundwater springs fed into these rivers, the most important of which, for our purposes, was the Baiquan spring which is to be distinguished from the river of the same name. Peasants built dykes and sluices from these rivers and springs to irrigate their fields for the cultivation of rice and other crops. The gazetteer of Xingtai records that most of these irrigation canals were established in the Jiaping (1522-1567) and the Wanli (1573-1620) reign periods of the Ming dynasty. Another spurt of rebuilding took place in the Yongzheng period when the large-scale cultivation of rice begins to be mentioned.⁴

The Internal Organization of the Gate Association

Basic to the entire irrigation system were the sluice gates called zha which also gave the name to the organization which shared the waters that flowed in the canals through the gates. These organizations, which I shall call "gate associations", could have anywhere from two or three, to over ten villages. Of course, not everybody in the village belonged to a gate association. Membership was restricted to those whose lands lay in the irrigation service area of the canal. The gate association managed the periodic dredging of canals to prevent silting, and the upkeep of the sluice gates and the dykes. If these were not properly maintained, flooding by the river could destroy the canals and the villages. Finally, the association possessed an elaborate body of rules governing the allocation of water among its members.⁵

The basis of the system of allocation was an entitlement called lian which was divisible into smaller units. The holder of an entitlement not only had the right to use water, but also the

Rough Map of Irrigated Regions in Xingtai and Neighboring Counties



Source: Xingtai Xianzhi [1872] 1:12

responsibility for the maintenance of the system. The specific character of the entitlement differed from association to association, and a gate association could have anywhere between 10 and 350 entitlements. The principles upon which the entitlement was devised appear to be of two sorts. The first was one where an entitlement corresponded to a certain time period during which its holder had the right to use water.⁶ The second was one where the holder of the entitlement possessed the right to use any amount of water on a given plot of land, say 10 mu per entitlement.⁷ In this system, the order in which the water was utilized was important because, since there was no limit on the water used, the persons receiving it last may have found that the water was not adequate for their needs. In general most gate associations followed a locational principle whereby those closest to the sluice gates received water first, and the further the user was located from it, the later he received the water.⁸

Each gate association was organized under the leadership of a managerial stratum called the xiapiao. Periodically, this stratum elected from among themselves the headman of the organization known traditionally as the shanglaoren or helao.⁹ Like many other informal titles found in rural areas in this period, the title of helao was also changed by the state to the more formal sounding hezhen in the early Republic,¹⁰ symbolizing the intent of the state to make it part of a nominally unified system under the aegis of the state. Below the leadership stratum was another group of functionaries called the bangban (later gongzhi) whose principal duty was to assist the former. Later in the republic, however, it was claimed that the gongzhi were expected to supervise the activities and financial practices of the leadership.¹¹ The actual status of this group, their social background and the extent of their independence from the leadership stratum is unclear. Nonetheless, given that in one case they were actually appointed by the hezhen, and in another by the village headman, it is unlikely that they were anything more than ordinary functionaries.¹²

The tasks of the leadership consisted first in checking for blockages in the canals, and supervising the periodic dredging and the repair of dykes and sluice gates. Except in one gate-association, the leadership stratum did not engage in the physical work itself which was done by shareholders according to the number of shares they held.¹³ Their other functions included managing the finances and collecting dues for repairs, for temple ceremonies, for the payment of the salaries of the headman, and for their own periodic feasting. Where the gate association owned landed property the leadership also paid tax (tankuan) dues to the village.¹⁴ Every year they updated the records of water rights and landownership and whenever a dispute occurred, they were called in to arbitrate.¹⁵ It is important to note that they did not just mediate disputes, but had the power to arbitrate and mete out punishments. Whereas the leadership stratum arbitrated conflicts within the gate association, the headmen of the associations conferred and negotiated over conflicts between associations.¹⁶

The relationship of the leadership to their constituency,

especially the manner in which they were recruited, was not the same in every gate association. Table 1 presents some data concerning this question.¹⁷

What conclusions can we draw from this table? one interesting piece of information is that certain villages dominated the organization, as is to be seen from the fact that the headmen of the association were chosen only from some villages. Further on in the discussion I hope to shed some light on the basis of the power of particular villages in the gate associations. The fact that the headman was selected every year from the leadership stratum is not particularly significant because he appears to be primus inter pares among the leadership stratum. Data on this stratum show that half were elected and the other half were hereditary. How do we characterize the situation? Is control exercised over generations by a small group, or is decision-making spread more evenly through the community? Is the cup half full or half empty?

Clearly more evidence is needed before any general statements can be made. I am inclined to believe that there was a tendency for the relatively rich to dominate these organizations, even though managerial competence was cited as a precondition for becoming a leader. This is because of the following reasons: there is qualitative evidence from many of the gate associations that no matter whether the principle of recruitment was hereditary or not, it was the relatively wealthier landowner who tended to hold office.¹⁸ Certainly, no tenant ever became a part of the leadership.¹⁹ In Shijing market town, the largest shareholder was always appointed by the outgoing headman of the association to be part of the leadership stratum.²⁰ Moreover, even when the selection took place every year the same man was sometimes returned to office for thirty or forty years.²¹ In some cases, a shareholder holding office in one of the gate associations may appear not to hold an unusually large number of shares, but then he held shares in other gate associations as well.²² Thus, it would appear that the wealthier landowners managed to sustain their dominance over these organizations, sometimes even for several generations. Both these facts are borne out in this little story cited in the gazetteer about the Kong family of Baiquanzha.²³

"In 1736, the scholar Kong of Wangkuai village, who was the seventh descendant of the founder of the gate association, Kong Zicai of the Wanli period, led the reconstruction efforts. He prepared wine and food and invited the influential (youlizhe) people of Kongqiao and five other villages to confer on the matter of dredging the canals and rebuilding the sluice gate (which had been abandoned) to irrigate the land. Everybody thought it was a splendid idea and so they petitioned the county authorities".

There were also sufficient rewards in the office to motivate the relatively well-to-do to seek these jobs. The headman of the association received payments of grain from each shareholder.²⁴ The leadership stratum was compensated by being allowed to use extra

Table 1

Information on Leadership of Gate Associations

<u>Gate Association</u>	<u>Constituent Villages</u>	<u>Villages from which Hezheng are Chosen</u>	<u>Mode of Selection</u>	<u>Numbers of Xiao.jia</u>	<u>Mode of Selection</u>
<u>3rd Ward</u>					
Guanwan	18	9	Elected every year by <u>xiao.jia</u>	36	Chosen every year
<u>5th Ward</u>					
Dongwang	6	3	"	12	Hereditary
Puji	4	3	"	5	Chosen every year
Yongji	6	1	"	3	"
Yongli	4	1	"	14	"
Longxing	6	1	"	24	Hereditary
Jimin	8	1	"	11	"
Guangrun	2	1	"	8	"

water and to feast several times a year with public monies.²⁵ There were, of course, also advantages in the allocation of water and dues for an unscrupulous type because the accounts were never very strictly maintained.²⁶

But even when we say that the leaders were influential and wealthy, by the 20th century at least, the term wealthy must be construed relatively. Of the two leaders for whom we have specific statistical information, one owned 20 mu and cultivated another 10, while the second owned 30 mu. The first man was in the top 38% of all landowners, and his landholding, in the top 14.5% of all land cultivated in his ward.²⁷ These were not powerful landlords. Even in the petty-holding landscape of north China, they were at best rich peasants.

What about relations between the ordinary shareholders and the wealthy within the gate association? There are very few indications of the existence of class tensions within the community. A stray reference suggests that the larger landowners evaded their responsibility in the physical work of maintaining the gates and sent their tenants instead.²⁸ In another instance the gazetteer refers to tension within the community during droughts when "the strong oppress the weak, the rich cheat the poor, and there is much fighting". Unfortunately, no further details are available.²⁹ I am inclined to believe that in normal times class contradictions were neither highly developed, and nor, from our observation of the pattern of conflict in Xingtai, did they appear as a dominant tension in the consciousness of the communities.

Conflict within the Association

I distinguish between two types of conflicts: those occurring within a gate association, and those occurring on a higher scale of organization. The basis of the distinction lies in the factors shaping the arena of the conflict and the political resources available in each one of these arenas. Here I will discuss conflicts within the association.

A great number of these conflicts occurred in irrigation systems which used the method of allocating water according to time. This was the case in Guanwan gate association, the large association in the third ward. Here, if it was determined that X village would use the water from the fifth to the tenth day of the month, all sluice gates upstream from X village would remain shut so that X could receive its full share. Of course, the temptation for upstream villages to steal some water at night was ever present and thefts occurred frequently. While there was no evidence that there was any class conflict involved here, this kind of theft often led to fierce and bloody clashes.³⁰ It took an association headman of exceptional prestige and ability to contain these disputes. For twenty years, from 1919 till about 1940, Guanwan association had this kind of man in Chen Jishan, a failed examinee of the imperial examination system, who had plaques granted to him from supporters across three counties.³¹ We shall have further occasion to discuss him later.

Another class of conflicts arose where a market in water rights had developed. This market could only occur where water rights were divorced from the land which was typically a characteristic of time sharing arrangements. In this system, the volume of water used in a period of time corresponds to the entitlements owned, and had no connection with the land the shareholder cultivates. Consequently, when a shareholder sells some land or acquires some more he would need to either dispose of or acquire extra entitlements. However, buyers and sellers could not always be found within the association, and many irregularities crept into the system which tended to destabilize existing arrangements. Powerful individuals and groups could, often in defiance of community interests and norms, divert water from the canals and rivers and sell them to lands outside the gate association. In turn, the presence of outsiders in the association could strain the cohesion of the community as the outsiders were all too often outside the customary ambit of control of the association.

It is for these reasons that most gate associations in Xingtai had moved from a system where the entitlement corresponded to a unit of time to one where it corresponded to a unit of land. Ishida Hiroshi argues that this transition is related to the process of commercialization of agriculture whereby rich peasants shifted to cash crops requiring the use of more water than their share entitled them to.³² While this may indeed be the case, the evidence for it is not particularly conclusive. At any rate, the transition to land shares was almost certainly also a response to the problems of management and control that we have outlined above.

The alternative that Xingtai water control groups found to the problems of time sharing and sale of water was the system where the entitlement was based on a plot of land which could use all the water it needed. Thus, in this system water was tied to the land and the independent sale of this water was forbidden.³³ Whereas in the earlier period there is evidence of the sale of water rights which was repeatedly censured by these organizations, by the 19th century at least, the system of water rights being tied to the land (shuididai) seems to have become quite firmly rooted in Xingtai.³⁴ Clearly, the gate associations in Xingtai county had developed into powerful organizations which individual members were scarcely in a position to defy.

Such was not the case with many of Xingtai's neighbors. In Ren county, for instance, where water control organizations appeared to be too weak to restrain offenders, the sale of water rights was rampant. Many villages in this and the neighboring counties had bought their water from "powerful individuals" who had diverted water and created new canals from the river, or from existing canals.³⁵ Even before the Japanese invasion in 1937, local bully types retained a long term interest in these diversionary canals by charging a rent on every mu of irrigated land.³⁶ Of course, this reduced the flow of water to villages downstream, causing great discontent. The state of affairs was deplored by the authorities who made arrests but did not appear to change the

situation noticeably. 37 This kind of activity accelerated particularly after the Japanese invasion in 1937 because the Japanese encouraged the construction of new canals -- however they were to be achieved. 38

It is evident that the organizational strength of the leadership was critical to community relations and stability within the associations. The evolution of strong leadership institutions in Xingtai contrasts sharply with the weaker structure of community control in several of its neighboring counties. While some of these counties may once have had stronger leadership structures at some point, they had clearly not been strong enough to withstand the impact of the turbulent circumstances of the 20th century.39 In the remaining sections we will try and understand the exceptional vigor and strength of irrigation communities in Xingtai - how these communities articulated with wider organizations and networks to further their interests and develop into powerful community institutions.

The Gate Association, the Village and the Market

No doubt, gate associations derived their strength by drawing on resources from wider organizational systems in local society. The most obvious of these is the village and it is one that has preoccupied a generation of Japanese scholars. Working on the presumption that the village community and the irrigation community are identical (also an idea of Wittfogel), some of these scholars have argued for a strong corporate structure within the village (kyodotai).40 If this is the case, then from our point of view, these corporate structures can be seen to reinforce community control of the water control organizations.

The study of Xingtai challenges the presumption that the association and the village were co-extensive simply on the basis of the fact that the association was larger than the village. It is also rather doubtful that any kind of corporate community structure existed in the village. Nonetheless, this is not to deny that there were certain interesting and important structural connections between the gate association and the village which keeps alive the issue of the extent to which the power structure of the village influenced the association.

In the first place, despite the claim that the xiaojia was a representative of all the cultivators on a section of irrigated territory,41 in practice, in many gate associations he was sent out from a specific village. Of course, this was related to the fact that most peasants cultivating lands adjacent to each other were probably from the same village. For instance in Zhang village of Puji association, a xiaojia was sent out from one of the eight sections of the village by rotation.42 There were also villages that were so small that they had to combine to send out a representative.43 Still, the fact that there was a rough co-extensivity between a rural settlement and some level of the association meant that the political resources of the settlement could be mobilized within the association.

This is particularly to be observed in the case of certain villages within the association which were more influential than the others. Sometimes a locational advantage may have initially caused these villages to become dominant, but once dominant, they invariably used the organizational resources in the villages to preserve this domination over other villages. In the southeast section of the fifth ward, there were nine villages of Baiquan association which were very loosely organized. One of these villages called Kongqiao, was located at the fork of three canals which gave it a position of great strategic importance vis-a-vis the villages dependent on these canals further downstream. Under the pretext that water rights had become extremely confused, Kongqiao set up its more or less independent organization, the hekoushe.⁴⁴ This organization owned corporate property and engaged in land transactions. It also had an elaborate structure consisting of 17 officials. Many of these were leaders of village government and its office was located in the office of the village government itself. Only villagers of Kongqiao could become its members, and the organization dealt with all their relations to the Baiquan association.⁴⁵ Maeda Shotaro, who has studied the records of this organization in great detail,⁴⁶ believes that it was in order to exercise their power more effectively that the hekoushe was established. Indeed, the frequent references in the records and plaques to conflicts between Kongqiao and other villages suggest that Kongqiao certainly had the power to bully its less fortunate neighbors.⁴⁷

By and large, however, as Skinner has instructed us, the ordinary village in north China was scarcely a focal center for all of the organizations and networks of local society, and few such villages could dominate in the manner of Kongqiao. As we may expect, the market town was much better equipped for the role, and by identifying themselves with the organizational core of the association, these towns were able to exercise a dominating influence upon other villages. In table 1 it is seen how the headmen of the associations were chosen only from certain villages. They are from the two market towns of the region, Dongwang in Dongwang association and Shijing in Puji association. In Dongwang, the headman of the gate association was, in actual fact, appointed by the village headman.⁴⁸ In both places, the relatively powerful governments of the market towns played an important role in the finances of the association. In Dongwang, when the association ran a deficit, the town government made it up and levied a tax on the residents.⁴⁹ In Shijing, members of the association paid their dues through the town government.⁵⁰

Thus, although there was no strict isomorphism between the power structure of the village and the irrigation community, strong villages and market towns, in particular, were able to bring to bear the organizational resources of their community to dominate the associations. By the same token, the leadership structure of the irrigation communities were able to exercise a fairly tight control to ensure stability within and protection against outsiders. It is important to point out, however, that even while the market town

exercised an important influence upon the distribution of power within the association, as we shall see, the marketing area and the principles of the marketing system were not particularly relevant to the ways in which gate associations dealt with each other.

Part II: Co-operation and Conflict among Gate Associations

Both co-operation and conflict are basic to water control organizations. Co-operation is required because it is not possible for a single farm family to manage a river-based irrigation system, and conflict is inevitable because water is a collective resource the supply of which is highly variable and unpredictable. Nonetheless, the particular patterns of co-operation and conflicts among the water control organizations of north China are extremely interesting because they throw new light on the way in which various familiar organizing systems combine in new ways to structure the exercise of power in the countryside.

Although the gate association was a unit of everyday activities, it was not necessarily the only unit of co-operation and conflict. The previous section has shown that in some associations there were smaller units, like the village which represented a distinct grouping of interests, and segmentation could take place down to this level. Alternatively, one can find combinations and coalitions of gate associations at scales much higher than the association itself. Sometimes they may even be forged at the county level in order to mobilize political and economic resources at that level in a conflict with water systems of other counties.

Gate Associations and the Ritual Hierarchy

No matter what material and political factors shaped the scale of the co-operating or competitive units, the sphere of control of these units and the strategies of segmentation and recombination were expressed through a religious idiom. Every village in the irrigation system had a Longwang (Dragon god) temple. 51 Although the following exchange was reported from another part of north China, it is a simple and clear cosmological statement of the relationship of man, the gods and natural resources, that could be heard anywhere. 52

Q: How was heaven created?

A: I am not sure, but they say it was created by the Jade emperor.

Q: What about the earth and man?

A: I do not know.

Q: Why does man live?

A: Because he eats.

Q: But then why does he die when he gets old?

A: The years of a man's life are predetermined by the Jade emperor. One cannot live beyond that.

Q: What about plants?

A: They exist because of the earth and rain water.

Q: How so?

A: Because they can borrow their power.
 Q: Does rain water have power?
 A: Yes.
 Q: Who gives it power?
 A: Rain is created by the Jade emperor's subordinate, Longwang (Dragon god). The rain contains Longwang's power.
 Q: Why does Longwang make it rain?
 A: Rain is the source of ten thousand things. Without it man cannot live. Ultimately water is what saves man.
 Q: When rain water has not yet touched the earth who does it belong to?
 A: Even though it was created at the command of the Jade emperor, since it was actually made by Longwang, it belongs to him.
 Q: Once it touches the earth, I suppose it no longer belongs to Longwang?
 A: Earth and water are public resources (wei gong)
 Q: Is rainfall caused by Longwang given by him as a gift to the nation, to the county or village, or to the individual?
 A: He gives it to everybody.
 Q: Does everybody mean the nation?
 A: Since people get together and make the nation, the two are much the same.
 Q: So does Longwang generally grant rain to the nation?
 A: I do not know.
 Q: But since rain water belongs to everybody, one has to use it carefully, no?
 A: That's right. You can't waste it.
 Q: When it rains on private land, who does it belong to?
 A: To the owner. He can use it as he likes.
 Q: But rain water belongs to the nation.
 A: Even so, if it falls on private land, the owner can do what he likes.
 Q: Whom does land belong to?
 A: That too belongs to the nation. People borrow it and pay land tax on it.

It has already been said that each village had a Longwang temple. As may be expected, each gate association also had its Longwang temple, or else had its own Longwang deity in a Longwang temple. On several occasions, like the fifteenth day of the second lunar month when the new leadership of the association was selected, the birthday of Longwang, the end of the year, and during periods of drought, the leadership of the association worshipped the deity. They provided offerings, burnt incense, and subsequently, feasted together.⁵³

In Baiquan association, probably the most loosely formed of all the gate associations, the nine villages made their offerings at the Longwang temple of the association. This temple was located by the Baiquan spring which was said to house Longwang's mother.⁵⁴ All nine villages of this association met together on the day of Longwang's birthday but performed their ceremonies in units of two

villages. Later, when the leadership feasted, they separated out into the respective villages they came from.⁵⁵ This was the association to which Kongqiao belonged and it will be recalled that the village level was very strong here. What the ceremony expressed is the flexible nature of the organization with its nested identities of village, the sub-group, and the association. While the entire association was a unit of co-operation in managing water, historically, all three levels had been operative in the competition for water: single villages had fought with their neighbors, small groups with other small groups, and associations with associations. The temple and the ceremony, thus, embodied within themselves the principles of co-operation, segmentation and recombination -- the strategies employed in the competition for water.

The same feature was to be found at the level of the association itself. For instance, there was a large temple to Longwang at Daxian village. On the fifteenth day of the second lunar month, the leadership of the three gate associations in the neighborhood, Yongli, Yongji and Puji made their offerings and burnt incense. Subsequently, the leadership of each association ate separately. Around New Year they also got together to confer on their work.⁵⁶ Now, in the earlier period when the associations had just been constructed, there were endless conflicts between them and their common enemy, Dongwang further upstream.⁵⁷ The Dongwang association was centered in a market town, was powerful and claimed superior rights to these waters because it was constructed before any of the others.⁵⁸ It did not perform its regular ceremonies at the Daxian Longwang temple. An informant (from Dongwang ?) said that this was because the "Daxian Longwang's jurisdiction extends over the waters of the gate associations in the downstream area. Even if one of our villages worships there it will be inefficacious. Moreover, this village has no connection with their Longwang". Incidentally, the Dongwang association which also shared the waters of another system, patronized three Longwang temples including its own.⁵⁹

Thus, the ceremony of the three associations in the Daxian Longwang temple, I believe, symbolized both their autonomy as individual units as well their coalitions formed to combat their superior competitors, like the Dongwang association. The close relationship of these three associations is evident even in the 20th century. The water registers of 1901 suggest that they co-operated with each other in the maintenance of the dykes of the area. Inevitably, they also fought on several occasions with each other.⁶⁰

The Daxian Longwang temple served as the ritual center not only for the three gate associations, but on another occasion, for a much larger area encompassing the drainage basin of the Baiquan river. On the first day of the seventh lunar month, the leaders of the eight associations which shared the drainage basin and engaged in co-operative dredging, got together and made their offerings to the Longwang temple at Daxian.⁶¹ The significant fact about this mass ceremony is that it included associations located outside the county in neighboring Nanhe county. The repair of the temple in

1853 registered contributions from a very wide area including Nanhe and Shahe counties.⁶² In these instances, of course, the temple serving as the ceremonial center of the gate associations over such a wide area cannot be understood as a focal point of coalition strategies. Rather, here it functioned to bring together potentially competitive groups to co-operate for their collective survival.

The nested hierarchy of ritual centers which define the territorial jurisdiction of each unit and each level of the system ritually, is of course, a familiar Chinese idiom establishing authority beyond the formal administrative reach of the imperial bureaucracy. In this sense, the temples to the dragon god at one level perform much the same role as do the temples to the earth god in every village. However, even while the earth god symbolizes the village as a territorial entity, he is at the same time, part of a supernatural bureaucracy which mirrors the imperial bureaucracy. It is as if, by co-opting the hierarchical symbolism of the supernatural, the imperial state extended its authority through the ritual medium into village society.⁶³

In contrast, the state seems to be outside the ritual arena of the similarly hierarchical symbolism of the dragon god and its temples. Rather, what we have here is a very creative manipulation of the symbolism of ritual centers by the irrigation communities themselves. Viewed historically, the gate associations constantly needed to segment and recombine for purposes of co-operation and competition in order to maximize their interests and effectiveness. What the ritual hierarchy of Longwang temples provided was a stable framework of authority within which the constant flux of shifting alliances could take place. As a device demarcating authoritative jurisdictions, the Longwang temples were a remarkable community institution which not only reduced the necessity of state intervention, but also permitted enormous flexibility within the system.

While the ritual hierarchy served to mark off the authority of different levels of the system, the internal dynamics of the system determining whether an association would combine or segment, who would be its allies and competitors, and what would be the outcome of the conflict, could hypothetically be moulded within a matrix of three organizational systems: 1) the drainage basin, 2) the political system and 3) the marketing system. We will see to what extent, and in what ways these three systems shape the pattern of the conflict and its outcome.

The Drainage Basin

By observing patterns of co-operation and conflict among gate associations both within and across counties, we see that they all occur within the drainage basin of the river supplying the sluices. All the examples come from the drainage basins of the three river systems marked on the map. The first system uses the waters emerging from the groundwater spring called Baiquan which ultimately feeds

the Baiquan river. The second system is located north of the Baiquan or Qili river and uses the water of this river. The third system is a little more complicated. It is composed of one large gate association in Xingtai. It is called the Guanwan association and is also sometimes referred to by the name of its major water artery, the Xinggouhe. Now whereas most of its villages are located north of the Niuwei river and it uses the water from this river, one of its sluice gates is located on the Baiquan river several li south of the villages, and east of Dongwang association in the second system. Thus, it is part of the drainage basins of two rivers, though most of its water comes from the Niuwei river to the north. There are several other systems east of these three that are not discussed because there is no information on them.

The second important fact worth observing is that the drainage basins of all three river systems obviously do not follow the county's political boundaries. Thus, the drainage basin of the Niuwei river includes a number of gate associations in Ren county; that of Baiquan includes those in Nanhe county; and the groundwater spring of Baiquan fed canals that irrigated lands in Shahe county. In fact, there were associations on the borders of the county that included villages from both counties. As we shall see later this does not really deny the significance of the political boundary. However, it does suggest that as far as water control was concerned, the drainage basin was the self-sufficient region.

Conflicts, coalitions and co-operation typically occurred within the drainage basin. In our sources, there is only one instance when conflict took place between groups of two different river systems. This is the case mentioned earlier when Guanwan association quarrelled with Dongwang association claiming that Dongwang was taking more than its share of water. It will be recalled that most of the villages using the waters of Guanwan association were located north of the Niuwei river and belonged to the third system outlined above. It was only this particular canal which shared the drainage basin of the Baiquan river, the second system. The case had to be resolved by the county magistrate but it is interesting to note that the plaque recording the incident states that it was a dispute between Guanwan association and the seven associations of the Baiquan river drainage basin which included the two from Nanhe county.⁶⁴

In this and the next section shall look at some of the major cases of co-operation and conflict within each of the systems. The gate associations of the Baiquan river system or the second river system, got together once a year in order to dredge the Baiquan river and repair its dykes and bridges. The gate associations of both counties that shared the waters contributed equal amounts of labor and money irrespective of the actual volume of water they used. A conference discussing these matters was held in the third month at Dongwang market when even the leaders of Jimin association in Nanhe county attended.⁶⁵

I have already discussed two important cases of conflict and coalition in this region: when the three associations of the Daxian

Longwang temple region fought against Dongwang association, and later, when all seven associations of the region combined their forces against Guanwan association. Both Dongwang and Shijing (in Puji association) were centers of powerful organizations engaging in numerous disputes.⁶⁶ We saw earlier, how as market towns, they were able to dominate an association internally. Another reason for their power was that as market towns they were repositories of relatively great political influence which they were able to exercise outside of the community as well. This aspect of the market is seen again in the fact that Dongwang market was the organizational center of the co-operative activities of the entire region.⁶⁷ However, while the market town itself was important, the marketing area or the marketing system did not determine or delimit the spread of alliances among water control organizations in the region. The relevant system here, as we have seen, was the drainage basin which cut across marketing areas. In this context, it is worth noting that while business matters were discussed in Dongwang market town, the ceremonies which were held in the Daxian Longwang temple and expressed the unified character of the area did not have the same center.

The Political System

If the marketing area and the marketing system were not particularly relevant in shaping alliances, conflicts and their outcome, the same could not be said of the political system. By the political system I mean essentially the networks of people with political influence, which in the pre-Republican period were mostly the gentry, and, of course, the civil administration of the state and its jurisdictions.

The imperial state came into contact with the irrigation communities when it needed to arbitrate disputes, particularly when the conflict crossed county borders, but also in cases when protracted litigation seemed inevitable. Ordinary disputes within and between gate associations were mediated by conferences of the association headmen and other leaders.⁶⁸ As for political networking among gate associations, this was the principal force behind the formation of coalitions and coalition strategies. These strategies were designed to maximize the political resources of any single organization especially if it needed to deal with the state. In most cases this meant garnering as much gentry support as possible not only because they had influence with the local authorities, but because they were crucial when litigation began and the case went beyond the county, to the prefectural authorities.

Conflicts across county borders were not uncommon because conflicts occurred within drainage basins and drainage basins cut across political boundaries. A case which took place in 1875 illustrates the political implications of such a conflict. A quarrel took place over the provision of labor services on the river and canals within Yongli gate association. The interesting fact is that this association was composed of one dominating village from Xingtai county, Jingjiamen, and five villages from the neighboring county of Nanhe. Although the issue was a minor one and the scale of the

conflict was limited only to the association, it became a huge affair because the gentry of both counties began litigation and the case went up to the prefectural authorities. After protracted negotiations, the two sides were brought together and an agreement was hammered out. ⁶⁹ This case is particularly apposite because it shows how a small conflict can assume a much greater dimension because of political boundaries. It leads one to believe that mobilization of political resources would be even greater when the parties involved in a dispute were gate associations or alliances of gate associations.

The same pattern emerges in all cases of conflicts involving units belonging to two different counties: the conflict occurs within the drainage basin, and the gentry is always involved, leading to litigation and intervention by the state. These cases demonstrate both the importance and the unimportance of political boundaries. They are unimportant in so far as they do not constitute an obstacle to forming co-operative arrangements for water utilization across them. However, precisely because the gate associations (or neighboring associations engaged in a conflict) belonged to two different political systems, because the networks of gentry power grew around the hierarchy of political centers, was it possible for a small case to assume a serious dimension, involving the prefectural authorities. Thus, within the drainage basin, political boundaries, like market centers, have the effect of specifying a constituent area and strengthening it over the others by making available greater political resources than it would have had otherwise. Only, the political strength of county-wide networks were much stronger than those available in a market town, and as the next case reveals, they were capable of bringing sufficient pressure on the state to reverse its decisions.

The region south of the Baiquan river formed another distinct irrigation system and it included villages from Shahe county in the south. The inter-county relations were much the same here as they were in the previous case. In the Wanli reign period of the Ming dynasty, after several canals had been established in the Baiquan region, a plaque records that the people of Shahe also became interested in utilizing the waters of Baiquan spring. They approached the Xingtai county magistrate but he refused permission. Subsequently, however, the prefect reversed the decision and permitted them to construct a canal. During the construction they blocked off the flow of water in Wahe canal -- the oldest in the system -- diverting it to their own. Enraged, the villagers of Xingtai rose in defense of their waters and began litigation proceedings. The case reached the prefectural authorities, and finally, the Shahe villages were compelled to restore the waters to Wahe canal. The plaque was signed by a higher degree holder (jīnshì) and seven lower degree holders.⁷⁰ It is worth pointing out that although there was no market town in this drainage basin, the combined forces of the area were capable of mobilizing gentry support and forcing its attention upon the state. The pattern of gentry led litigation against the neighboring counties sharing its waters is often repeated through the entire area.⁷¹

What principles did the state utilize in attempting to resolve these conflicts, particularly the ones across counties? One template that it always followed in times of drought, when many disputes arose, was the principle that the county in which the water source was located had primary rights over the water. For instance, during a drought the people of Guangrung association in Xingtai constructed a reservoir by building dykes so that the water level could rise sufficiently to enter their sluices. This deprived the gate associations of Nanhe county of their water, and consequently, they sued Guangrung association. The joint report of the magistrates of both counties approved the actions of Guangrung association because the waters originated in this county.⁷² The gazetteer of Xingtai stated this locational principle more generally. Quoting a decision of the prefect, it said,⁷³

"The river originates in Xingtai and its benefits belong to the people of Xingtai. This is natural and reasonable. Only after Xingtai has fulfilled its needs and there is still some surplus may the two counties of Nanhe and Ren begin to receive the generosity of Xingtai. This is also natural and reasonable.....Therefore, when these two counties receive water it is through an act of generosity on the part of Xingtai, and when they meet a crisis it is not proper that Xingtai should also have to suffer".

Within the county it seemed, at least on one occasion, to follow another principle: that of seniority or the superior rights of the organization which had begun to utilize water earlier. This is brought out in the quarrel between Dongwang association and its latecomer neighbors. The magistrate determined that the waters should be shared on a 6:4 basis favoring Dongwang because it was an older organization.⁷⁴

A major conclusion of this discussion of coalitions and conflicts is that, although water control organizations are formed across villages in order to efficiently manage water resources that cannot be handled by families and single villages, their organizational structure also permits them to enhance available political resources. In the Xingtai region this usually meant mobilizing gentry networks for litigation, and presumably, for lobbying among the authorities. Since the county magistrates rarely made decisions which went against their own county, it may not be unreasonable to presume that they were susceptible to the pressures of the local gentry. However, it is not so clear that such pressures could also be brought to bear on the prefect with great success, suggesting perhaps that the impartial state began at the prefecture. Finally, an interesting issue is how these networks are so often utilized for conflicts across county boundaries even when the parties and issues involved are insignificant. It is as if the powers of community organizations and the procedures for consensual mediation break down at the borders of the county, and these communities are thrown back to the county to maximize their political resources and engage in litigation. Does this, in fact, disclose the subliminal strength of state power in its ability to delimit the spread of local networks?

The Republican State and Irrigation Communities

As the discussion of conflicts within the system has shown, the imperial state only seemed to intervene in the affairs of the irrigation communities when local pressure seemed to force it to do so. The image here is a far cry from the all powerful despotic state dominating local communities. In general, the role of the state among irrigation communities in imperial times appears to be exaggerated because written records cite important cases and important cases involved the state. Even with regard to the establishment of gate associations, although the gazetteers of Xingtai and Ren counties state that the initiative to build and repair them came from officials, they also cite a large number of cases when degree holders and non-degree holders took this initiative.⁷⁵ Moreover Maeda cites evidence from other sources which suggest that the associations were built spontaneously by the local communities and the reference to official supervision exists only as a formality.⁷⁶ Certainly, the associations often sought state approval for their decisions and agreements post facto in order to confer an aura of legitimacy on them.⁷⁷

Around the turn of this century, the Chinese state launched onto a process of state-building and modernization which continued through the Republican period. It is during this period, rather than during imperial times that one sees the state playing a more interventionist role among irrigation communities - taking the initiative to start new irrigation projects and seeking to bring local management and mediating structures into some kind of formal relationship with it.

The state was particularly active in north China after the establishment of the nationalist government there in 1928. The nationalists inherited a sprawling network of administrative organs of water control at the provincial level, many of which had been started by previous republican administrations. These included water control bureaus for every river, especially in Hebei, and also various other specialist bureaus such as the Shandong Grand Canal Engineering Bureau.⁷⁸ However, not much information is available on what these institutions did for irrigation until the nationalist period. Contemporary Western observers during the 1930s saw considerable progress in the extension of irrigation in north China, some of it using modern technology and methods.⁷⁹

It is in areas which were just beginning to develop irrigation projects in this period, that we see evidence of a much more active state. A good example comes from a county magistrate's report of his plans to develop irrigation in Lingshou county in Hebei. Lying at the foothills of the Taihang mountains, Lingshou county had not had easy access to water, and in contrast to many of its water rich neighbors it had been impoverished by drought and taxation. The magistrate planned to bring in water by modern methods in order to irrigate the fields and bring prosperity to his people. Although he intended it to be a community enterprise, the dominant role he saw for the state was quite remarkable. In the matter of financing the project, for

instance, he had planned the sale of county government bonds which would be partially voluntary and partially compulsory. The portion which was to be sold compulsorily was to be levied like a tax on the village community where people bought bonds on the basis of their landed wealth. He saw this as a means of creating a collective interest in the project while at the same time raising the much needed funds for the building and employment of technical specialists. It was also the state which laid down the rules for water allocation and responsibilities for maintenance. Finally, the irrigation communities were to be organized under the new and deep-reaching administrative framework of the sub-county ward and the administrative village. The administrative officials at these levels were to form the irrigations associations and supervise their elections and functioning. We do not know how the Lingshou project worked in practice, but in conception it was far more formalized, and thus, more controllable by the state than Xingtai had ever been.⁸⁰

In Xingtai, where powerful irrigation communities already existed, the role of the state was more modest. However, it did seek to bring the mediating institutions of the associations under its formal control. The way in which the state tried to extend its control over the gate associations resembled its efforts to do the same thing to village government. It sought to delegate formal powers to existing informal structures of management and control thereby, initially at least, enhancing their authority in the local system. In the villages, unfortunately, the formalization of powers went hand in hand with the increasingly irksome task of feeding the state with more and more revenues, and this ultimately destroyed any prestige associated with village office. From the outset, therefore, it is interesting to see what kind of impact state-building would have on the water control organizations.

In 1919, the county received a provincial decree ordering the formation of a county-wide organization called the Combined River Water Control Association (shuili lianhehui) whose primary task was to arbitrate disputes. All the headmen of the different associations became councillors, and thus became part of a public body.⁸¹ The transformation of their titles discussed earlier, which now had a more official ring to them, also took place around this time. This state sponsored organization was headed by Chen Jishan, the leader of Guanwan association and an extremely competent man.⁸² We earlier observed testimonies to his abilities in the form of plaques presented to him from villagers and leaders from not only this county but from other counties as well.

Under Chen's leadership, the organization arbitrated several disputes between river systems and counties which had previously been the preserve of gentry mediation, whether directly or through litigation.⁸³ We have seen how gentry involvement had the effect of magnifying even minor disputes into protracted legal cases -- a fact that a modernizing state no doubt viewed as an obstacle to its goals. During the Republic, there are hardly any reports of legal suits being brought to the county or prefectural authorities over water disputes. No doubt this had something to do with the

weakening of gentry networks which must have accompanied the abolition of the examination system. Nonetheless, in part at least, the state probably succeeded in curbing the influence of the county elite and limited the opportunities of mobilizing the old gentry networks through the new institution of arbitration.

Unlike the situation in the villages, the leadership of local gate associations was not adversely affected by the new state sponsored institution. True, it was deprived of the influence of a county level elite, but on the other hand, the new organization did not encroach upon the existing structure of control and arbitration within the drainage basin. For instance, both the Baiquan river drainage basin and the Baiquan spring area acquired new state backed institutions for mediation within their own particular areas which utilized the existing leadership structure.⁸⁴ Thus, not only did the leadership of the associations escape the fate of their counterparts in the village, but with the new political certification of the state, it may even have emerged strengthened. It is perhaps not unreasonable to suggest that this leadership was able to escape the fate of the village leadership principally because, unlike the village, the water control organizations were not perceived by the state as prime targets of its extractive policies.

In conclusion, in Xingtai at least, local irrigation communities probably managed to preserve much of their autonomy, even if they appeared to lose some of the vigor with which they fought for their interests. The fact that they were able to do this in the face of that cruel paradox of the republic - an encroaching state accompanied by burgeoning anarchy - is testimony to the strength of its community institutions. What happened to these institutions in the PRC when strong collective structures, but with different organizational foci, come into being, is a question that is well worth investigating.

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3. Mancheng Xianzhi (Mancheng county gazetteer) [1757] juan 2: 19 and supplement 1-2; Xingtang Xianzhi (Xingtang county gazetteer) [1772] juan 2: 6-7, juan 3 14-16
4. Xingtai Xianzhi juan 1: 27-37
5. CN6 97-100
6. CN6 243
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17. CN6 97-98
18. CN6 115, 117, 229, 256, 268, 300
19. CN6 104
20. CN6 115
21. CN6 247, 250, 257
22. CN6 209, 304
23. Xingtai Xianzhi [1905] juan 1: 37
24. CN6 97, 100, 106
25. CN6 100, 103, 106, 114, 338

26.CN6 114. See also Ren Xianzhi (1915) juan 1: 24-25

27.The data on landholding by ward is from Ishida Hiroshi, "Kahoku ni okeru Suiri Kyodotai ni tsuite" (Concerning co-operation in water control in north China) Ajia Keizai Dec 1977 No.18.12 69. Data on the two leaders are to be found in CN6 98, 247. My interpretation of this data is somewhat different from Ishida's.

28.CN6 104

29.CN6 278, 342

30.CN6 245

31.CN6 247

32.Ishida Hiroshi, "Kahoku ni okeru Suiri Kyodotai Roso no Seiri" (A summing up of debates on community control of water in north China) Noringyo Mondai Kenkyu No. 54, [1979] 35

33.CN6 258, 278, 307, 342, 363

34.CN6 100, 232, 338, 342. Of course, it is possible to have systems of allocation other than these two.. Arthur Maass and R.L. Anderson discuss a range of them, as for example, distributing water according to the crop grown. Arthur Maass and R.L.Anderson, ...and the Desert shall Rejoice [Cambridge, Ma. 1978]. (There are several interesting parallels between the systems described in this book and the one in Xingtai) In north China, however, these two appear to be the dominant forms and there is a persistent association of time shares with a market in water rights. See for example the work of Shinjo Norimitau on Suiyuan. Mantetsu Chosa Geppo Oct 1941 21.9 128-129

35.CN6 238

36.CN6 239

37.CN6 238-239

38.CN6 239

39.In Pingxiang county, east of Ren county, the leadership of gate associations was in the hands of the lower gentry till at least the mid Qing.CN6 251. By the 20th century, however, this leadership belonged to the heterodox secret societies of the area, the Qingbang and Zaijiali.CN6 250. The disorganization of public life created in the wake of the Japanese invasion, further upset the structure of control exercised by the gate associations and permitted local bullies to usurp this control and wreak havoc. In one of the villages which reported the diversion and sale of water, it was also reported that the gate association had broken down in 1937 and water matters were now being handled by the village headman. CN6 238

40. See for instance, Hatada Takashi, Chugoku Sonraku to Kyodotai Riron (Chinese Villages and the Theory of Village Community) (Tokyo, 1976), and Yoshinami Koji, "Problems in Historical Research of Chinese Water Control Organizations from the Song" (Japanese title?) in Shigaku Zasshi Feb 1967.

41.CN6 112

42.CN6 115. The numbers of xiaojia are fixed and unequal. p.104.

43.CN6 118

44.CN6 252, 254 See also Maeda Shotaro, "Kahoku Noson ni okeru Suiri Kiko" (The organization of water control in north China) in Gendai Aija no Kakumei to Ho [Tokyo 1966] 47-48

45.CN6 252-256

46.CN6 257, 365, 366

47.CN6 358, 359

48.CN6 100

49.CN6 117

50.CN6 119

51.CN6 86

52.CN5 297, 298. The informant also claims that it is very important to repair Longwang's temple to prevent natural disasters.

53.CN6 105, 106, 118

54.CN6 265

55.CN6 256

56.CN6 105-107

57.CN6 268-278

58.CN6 268. For instance the waters used by Dongwang are called zhengshui (proper waters) whereas those used by others are called yushui (surplus waters)

59.CN6 265

60.CN6 270, 278

61.CN6 230

62.CN6 372

63. C.K.Yang, Religion in Chinese Society (Berkeley, 1967). See also Arthur P. Wolf, "Gods, Ghosts and Ancestors," in Arthur P. Wolf ed., Religion and Ritual in Chinese Society (Stanford 1974)
- 64.CN6 372
- 65.CN6 229
- 66.CN6 268, 270, 278
- 67.CN6 229
- 68.CN6 100, 105, 115
- 69.CN6 329
- 70.CN6 109
- 71.CN6 239. See also Ren Xianzhi [1915] juan 1: 24-25
- 72.CN6 371
- 73.Xingtai Xianzhi [1905] juan 1: 33. Ren Xianzhi [1915] juan 1: 25
- 74.CN6 268. In the Baiquan spring basin as well, Wahe association had superior rights because it was older. Its water was referred to as "old water" as opposed to the "new water" of its neighbors.
- 75.Xingtai Xianzhi [1905] juan 1: 27-30, 31, 32, 33-34;
Ren Xianzhi [1915] juan 1: 23, 24
- 76.Maeda [1966] 58
- 77.CN6 278. Xingtai Xianzhi [1905] 37
78. Anonymous. "Zuijin Ershinian Shuili Xingzheng Gaikuang" (The Conditions of Water Control Administration during the Last Twenty Years) in Huabei Shuili Yuekan 7.3/4 (April 1934) pp 104-105.
- ✓ 79.O.J.Todd, "The Progress of Irrigation in North China: Modern Structures Replace Primitive Means of Distributing Water" in Civil Engineering (August 1937).
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- 81.CN6 247
- 82.CN6 246-247
- 83.CN6 247
- 84.CN6 101, 109