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'LORDS OF THE FORT', 'LORDS OF THE WATER', AND 'NO LORDS AT ALL': The Politics of Irrigation in Three Tibetan Societies.

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Summary
Water is life in the high altitude desert of the west-Tibetan region. The traditional political and social systems which regulate the distribution of water through the irrigation systems of the villages provide a carefully balanced method of ensuring equity in this. They also provide an insight into the sources of, and checks on, power in the community.

"Power must be analyzed as something which circulates, or rather as something which only functions in the form of a chain....not only to individuals who circulate between its threads; they are always in a position of simultaneously undergoing and exercising this power." (Foucault, 1980: 98).

Irrigation schemes present microcosms which offer a glimpse of the mechanics of power and politics in village societies. I do not wish to analyze power in the sites where it has been spoken of more conventionally — the realms of kings, presidents, the military, or other agents of the state repression. Instead, I intend to examine the webs of water, or irrigation systems, which bind Ladakhi and Zangskari villagers to each other. These webs reflect a shared source of life; for water is life in the high altitude desert of the west-Tibetan region. However, these webs of solidarity are also webs of restraint that bind villagers to an all-seeing village order they cannot easily escape. The tightness of the web reflects the dark and the light aspects of village politics. The easy intimacy and consensus-based decisions which flow from webs of village solidarity might suggest an ideal form of Greek democracy. However, the same webs create claustrophobic techniques of surveillance by which villagers keep each other in check.

The irrigation systems of central Ladakh and Zangskar are fine-tuned mechanisms for distributing water equitably and efficiently.
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I mention systems in the plural, for each and every village has its own rotational scheme by which certain channels or houses are allotted water throughout the growing season. The rotational scheme is largely determined by village topography, total village acreage, relative exposure to sun, average temperature, size of the glaciers or snowfields from which most villages draw their water, soil type, and seepage in the irrigation channels, among other factors. Most central Ladakhi and Zangskari villages (with the exception of those directly on the Indus plain such as Chushot, Spitug, Thikse, etc. and those on the Stod River plain in Zangskar such as Reru and Yulang) do not take their water from the major rivers along which they are situated. Instead, villages obtain their irrigation water from tributary streams that flow down from the glaciers high above.

The amount of water that a village receives varies by year, season, day, and even hour. Variations in daily temperature and sunshine are enough to turn a calm morning rivulet into a raging afternoon torrent. In order to accommodate these variations somewhat systematically, Ladakhi and Zangskari irrigation systems are both fixed and flexible. They take an extremely variable water supply and distribute it equitably and efficiently in a series of waterings throughout the summer. The main grain crops in Ladakh and Zangskar are barley, wheat and buckwheat, with peas in Zangskar and mustard seed in Ladakh. These crops ideally require eight to ten waterings in a single growing season. Using figures from Crook and Osmaston (1994: 152), barley takes 85 days to mature along the Indus and between 105 and 120 days to mature in Zangskar. In comparison, wheat matures in 65 days along the Indus and in 120 days in Zangskar, while peas mature in 90 days and buckwheat in 75 days in Zangskar. In sum, the fields require a watering every seven to ten days, which is no easy task in larger Ladakhi villages. Leh has a cultivated area of over 5000 hectares (ha.) and 80% of Ladakhi villages have between 100 and 1000 ha. (Census of India, 1971).

Irrigation water is a critical source of food and wealth in Ladakh and Zangskar (99% of the rural population were farmers as late as the 1961 census). One might expect to find a complex politics of distribution and exploitation in these circumstances. Distribution is certainly complicated, but exploitation is rare. Of course there are inevitable abuses and conflicts in the distribution of water, but they are managed through a variety of political mechanisms which I shall investigate.

Ladakhi and Zangskari villagers are implicated in an intricate web of power. Villagers are continually being watched at the same time that they are watching out for their neighbors. It is difficult to disguise the telltale signs of cheating: a moist field when all the surrounding fields are dry. In short, the distribution of water is managed by an ingenious network which provides fairness but exacts scrupulousness. The formalization of the village bureaucracies which manage water distribution depend primarily on the size of the village concerned. I shall look at several cases of irrigation which range from the more formalized (Tibet) to the more ad hoc (Zangskar).

I'll begin with an unknown district in Tibet, as described by Charles Bell (1928), the British representative under the thirteenth Dalai Lama. Tibetan irrigation suggests a highly centralized polity, in which village level water disputes could ultimately land in the Lhasa courts. Bell notes that irrigation in Tibetan villages was managed according to written schemes stored in the archives of local dzongs or district forts. These forts were the administrative centers of the Lhasa government in its outlying districts. Because the schemes by which each house or estate received water were stored at the dzong, the dzong dpon or "Lord of the Fort" had first rights of adjudication in case of a dispute. However, since he was often an absentee landlord who lived the 'good life' in Lhasa, disputes would be referred to him there. Ultimately, disputes could end up in the Lhasa court system if the underlying politics got too messy. Although Bell (1928) does not say so, I would surmise that it was necessary to appeal to higher authorities of the Lhasa judiciary when the players involved in the dispute were themselves aristocrats or monastic estate owners with more power than the dzong dpon himself. Unfortunately, there are no descriptions of disputes or specific village rotational schemes in the English language sources which mention Tibetan irrigation (Aziz, 1978; Bell, 1928; Carrasco, 1959; Dargyay, 1982). A similar lack of detail is apparent in the sources which mention Ladakhi and Zangskari irrigation (Asboe, 1937; Friedl, 1983; Heber, 1903; Moorcroft, 1837; Norberg-Hodge, 1992; Ribbach, 1906; Rizvi, 1989). Only Crook and Osmaston (1994: 81-90) provide a detailed account of the irrigation schemes in Stongde, Zangskar.

While Tibetan irrigation was managed at several levels of government including the highest authorities in Lhasa, Ladakhi and Zangskari irrigation schemes are managed at the village level, although the officials involved and the degree of power they wield varies with the size of the village. Basically, there are no categorical differences between Ladakhi and Zangskari modes of irrigation, for a small village in Ladakh uses a system very similar to that used by a small village in Zangskar. However, because most villages in Zangskar are much smaller than those of central Ladakh, one finds more complex distribution schemes and a more formalized bureaucracy in the
Ladakhi villages along the Indus valley. For instance, villages in the lung nag region of Zangskar have between 3 and 90 houses; central Zangskari villages have between 150 and 200 houses; and central Ladakhi villages between 100 and 400 houses (excluding Leh).

Because Leh is the largest town in Ladakh (with a population of nearly 11,000 as estimated in the 1991 census), its water distribution system is fairly complex. Most of the fields of Leh below Sankar monastery obtain their water from (and are said to "belong to") one of three major watersheds ('drog po): Drugchu, Sheldan, and Shenam. The areas above Sankar, known as sNgan pa (literally, "those before") and Yur thung, have separate water schemes which are interwoven with the main cycle of the three major watersheds. This occurs as follows: the official daytime and nighttime periods when the three watersheds are given water are 10 a.m. to 4 p.m. and 10 p.m. to 4 a.m. respectively. In the intervening blocks of time, water is routed to the upper parts of Leh watershed such as sNgan pa, sGang las, and Yur thung, which have their own water distribution schemes.

The three major watersheds alternate water as follows. For the initial watering (tha chu) which takes place from March to mid May (i.e. before the fields are even ploughed), each watershed consecutively receives water for a period between 20 and 29 days and nights. The exact number of days is not fixed for it is measured by however long it takes to water all of the fields along the watershed. After this initial watering, the watersheds take turns receiving water according to the following schedule: while watershed 'A' receives water during the official daytime period, watershed 'B' receives water at night. This lasts as long as it takes to water the fields along the full length of the watersheds. Thereafter, watershed 'B' receives water in the daytime and watershed 'C' at night; then 'C' in the daytime and 'A' at night, and so on all summer long. Villagers whose fields lie along the watershed that receive water at night divert the water into storage tanks (zing) and let it out the following day to make watering more convenient. Because the flow of water is heavier after mid May, it usually only takes 10-15 days to water all of the fields along a watershed; thus, fields are ideally watered every 7-10 days. In practice, because the upper areas of the Leh watershed receive a stronger flow of water (as natural topography would suggest), fields in these areas receive more frequent waterings than fields in the lower—and thus poorer and drier—sections of Leh township such as Skalzangling and Skara. This system of distribution (with many more nuances I have to space to go into) functions for most of the summer. In periods of excessive water or aridity, extraordinary measures are called for by the Leh chu dpon or "Lords of the Water".

The "Lords of the Water" in Leh manage and monitor this complicated water distribution scheme. Each year, ten chu dpon are chosen on a rotational basis from the following subsections of Leh: four from Skya ngos; four from sGo gsum; one each from Chans pa and dGon pa. Sankar and Yur thung have their own chu dpon, as they are on a separate distribution system. The chu dpon duty is rotated between all the main houses (khang pa) in a given subsection. This duty is a difficult summer job with rather low pay (chu dpon are paid 1000 Rs. per summer by the Indian government as of 1982; previously payment was in kind, i.e. one khal of grain per family in Leh). Each day, in principle, all of the chu dpon must serve duty. In practice, all ten chu dpon rarely show up, especially if they have more pressing things to do that day. They are required to pay someone to come as their substitute, but often fail to do so. Each day, the chu dpon go up to the head of the Leh valley: eight men go to Ta zas, the principal junction where the Drugchu and Sheldan watersheds split off from one another, and two men go to Sgang las, where they check that by 10 a.m. all of the channels (yur ra) are closed off and no water is being diverted to fields in this area. During the day, the chu dpon are supposed to watch the channels along the watershed in order to insure that water is not diverted higher up and is being sent down to the appropriate channels which are to receive water that day. As there are more than 100 channels along any given watershed, each chu dpon is assigned to monitor a certain number of channels. At night, one or two chu dpon sleep by the storage tanks along the watershed which is receiving water (tsan chu or "night water") and in the morning this water is released to the appropriate fields.

Ideally, the chu dpons insure that all of the fields along a watershed receive an equitable share of water throughout most of the summer. At the end of each day, two of the most senior chu dpon (the oldest or most experienced) go down both of the watersheds which received water that day and previous night to check how many fields were irrigated that day. This monitoring is necessary, I was told, for otherwise people would simply divert the water to their willow groves and demand more water for their fields on the next day. The population increase in Leh has put a premium on wood as a lucrative construction material. Informants noted that disputes, cheating, and bribery are more prevalent in recent decades due to the changes in the Leh economy and demography. The chu dpons are responsible for reporting any abuses to the head man of Leh, who mediates the dispute and arranges the fine to be paid (as high as 500 Rs. in some cases).

While the present chu dpon is a part of the Indian bureaucracy, the system of selecting chu dpons was different before 1947, when
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Ladakh first became a part of the Indian nation. According to an informant who served as a chu dpon some sixty years ago, selection used to be on the basis of merit, in a process that included both royal and ecclesiastic authorities. Every year the headman (goba) of Leh, in consultation with his deputies (khotwal), would select a group of candidates from five subsections of Leh (sGo gsum, sKya ngos, Chans pa, dGon pa, and bSangs dkar (Sankar)). The candidates chosen were men known to be virtuous and upright (nI rgyal ba) who came from large and wealthy households. On an auspicious day in the third Tibetan month, all of the candidates, as well as one Sankar monk, the Prime Minister (bKa' blon), the headman, and the Wazir of Leh would gather at the Byams pa Lha khang below the palace. A lottery (tag ril) was conducted to determine who would be chosen as chu dpon from each of the subsections that year. The names of all of the candidates from a given subsection were written on slips of paper which were rolled into little tsampa balls (ril bu). The Sankar monk, who was the keeper (sGo gnyer) of the Byams pa Lha khang, then placed all of the balls into a wooden tsampa bowl and invoked Byams pa (Maitreya) and various other deities for their blessings upon the following procedure. He swirled the balls around until one dropped, or jumped, out. The name on the paper indicated the chu dpon chosen for that subsection. The process was repeated until all seven chu dpon were chosen (two from sGo gsum, two from sKya ngos, one each from Chans pa, dGon pa, and Sankar).

Shortly thereafter, on an auspicious day chosen by a local astrologer (rtsis pa or dpon po), the chu dpon would proceed to the head of the Leh valley, to ceremonially inaugurate the watering season. The chu dpon climbed to a small temple at sGang las, which lies at the top of the valley, above the first irrigation channel. At the temple, the chu dpon prayed to Tsongkha for plentiful water and a bountiful harvest. They offered beer (chang), butter, tsampa, butter lamps, and blessing scarves (kha tag) to the deity. My informant recalled one year when his fellow chu dpon prayed so fervently that tears came to his eyes. Sure enough, there was more water than ever that year! The ceremony concluded with the official "opening" of the uppermost irrigation channel. A child is specifically chosen for this task. The child must be born in an auspicious year chosen by an astrologer and must be the legitimate offspring of parents who are still alive. When the child diverts water into the uppermost channel, the irrigation season is begun. This ceremony recalls the use of a child to "open" the earth when building a house in Tibetan societies as described by Wongmo (1985), Dollfus (1989), and Brauen (1980).

In contrast to the chu dpon bureaucracy of Leh, smaller

The Politics of Irrigation

Ladakhi villages such as Sakti and Chemre have a different but equally complex system of water distribution. Because Sakti lies above Chemre along the same tributary stream, one might expect a fundamentally asymmetrical or exploitative relationship of power to exist between these two villages. In fact, an interesting relationship of reciprocity exists between them. For most of the summer (from the tenth day of the fifth Tibetan month—Hemis Tse bCu—until the tenth day of the seventh month), Chemre is allotted water every seven days in what is known as a 'bab phyi. This 'bab phyi (literally, a "general descent" or perhaps 'bab chu, "falling water") is a period of 36 hours (two nights and the intervening day) when Sakti villagers must desist from taking water and all the water in the stream is fed down to Chemre. In return for this service, the Chemre villagers bring a ceremonial gift to Sakti village. On the third day of the third month, the treasurer (phyag mdzod) of Chemre dGon pa, two Chemre chu dpon, and three or four assistants (zhab zhi) proceed to Sakti bearing 16 jerry cans of chang and 500 Rs. It used to be a sheep instead of the Rupees, until 'Drug chen Rimpoche of Hemis changed the practice a few years ago. This gift, which is provided by Chemre dGon pa, is taken to a house in Sakti known as the gzim khang, where the chang is immediately consumed in a large feast. The rupees are given each year to one of the four subsections (bccu tshogs) of Sakti village, turn by turn. The traditional reciprocity between Sakti and Chemre is expressed symbolically by the gifts of food and chang in exchange for the gift of water. Sakti villagers speak of an obligation to provide Chemre with water, as if there were no choice but that of Buddhist compassion. The religious power of the Chemre monastery and Chemre's strategic location at the bottom of the valley, near the Leh-Manali trade route may provide Chemre some leverage to "demand" water from Sakti. Nonetheless, the villagers I spoke to denied this.

The arrangement between Sakti and Chemre suggests an unusual degree of cooperation between two villages. Nonetheless, this trust does not preclude a certain pragmatism in the sharing of water. Whenever there is a 'bab phyi, the Chemre villagers send four chu dpon and several other villagers up to Sakti to ensure that no water is 'accidentally' diverted to Sakti fields during this period. An informant told me that this was not because the Sakti villagers are known to cheat, but that they do sometimes "fall asleep at the channels" and forget to block them off for the 'bab phyi. I could imagine a very different scenario with a lot less compassion and more capitalism in the United States.

In addition to intra-village distribution between Sakti and Chemre, each village has its own rotational scheme as well. Roughly
speaking, one could divide Sakti and Chemre each into two portions: (a) channels and fields below and (b) channels and fields above the reservoirs. In the daytime, water is diverted to fields above the reservoirs and at nighttime, water is channelled into the reservoirs and let out the following morning. If the reservoir is not particularly big, then it may fill up in the middle of the night. At this point, the water will be released by a villager sleeping next to the reservoir. When water is scarce, the Sakti villagers whose fields lie below the reservoirs go up the watershed in the evening to check that all of the upper channels are indeed blocked off for the night and all water is routed into the reservoirs. In brief, while there are no chu dpon in Sakti, the system depends on a balance of surveillance and trust, in which each member of the system abides by an implicit honor code. When disputes arise, they are mediated by the village headman and his deputies, who call upon both parties of the dispute for an explanation and set a fine to be paid by the abusing party. In Chemre, where there is less water and thus more cause for disputes, chu dpon exist who monitor and mediate the distribution of water.

In the smaller villages of Zangskar, irrigation is managed in a more ad-hoc and less formalized style. The amount of acreage and the number of irrigation channels in any given village seem to determine which kind of rotational scheme is used. If the village is small enough and the irrigation channels are few enough, rotational schemes of water distribution are pegged to the household, rather than the irrigation channels. In Leh, where a single watershed has more than 100 channels, and in Sakti, where the two watersheds ('brag nag and 'brag dkar) have 17 and 26 channels respectively, the water distribution is arranged by channels. Karsha, Zangskar—which is one of the largest villages in Zangskar with 308 ha. of cultivated land—has only nine major irrigation channels and yet it also distributes water by channel rather than by household. In Karsha, the four channels which are located above its four reservoirs receive water during the daytime, while the five channels which feed into the reservoirs let out water into the fields which has been stored the previous night.

Three smaller villages of the Yul gsum region in central Zangskar —Rizhing, Hongshet, and Testa — are situated along the same watershed. Each of these three villages has a unique mode of distributing water internally among their attendant households, in addition to being part of an overarching system which divides water between them. During much of the summer, when water is plentiful, there is no rotational scheme at all. However, by mid August water is usually scarce and the following rotational schemes are called into effect. For an 18 day cycle, Hongshet and Rizhing both receive water during the day, while Testa is allotted water at night. Hongshet and Rizhing each have their own distinct schemes of distribution. The ninemain houses (khang pa, or khang chen in Zangskar) of Hongshet village are divided into two groups of four and the ninth house is put into a separate group. The small houses (khang chung) which consists of extended kin from the larger houses receive water along with their brethren houses. For four days the first group (of four houses) jointly waters its fields, and for the next four days the second group waters its fields. Finally, on the ninth day the ninth house waters its fields. Two such cycles are repeated to form an 18 day cycle. Meantime, Rizhing village is undergoing its own version of the 18 day cycle. In Rizhing there are four main houses (khang chen): the four largest are given four days, three mid-sized houses are given three days, and finally the three smallest houses are given two days to water their fields jointly. This forms a nine day cycle which is repeated to make up the 18 days. After 18 days and nights in which Hongshet, Rizhing, and Testa share water, for one day and night water is diverted along a channel to the grasslands ('ol thang) owned by Karsha monastery. Karsha monastery is the largest landowner in the Yul gsum region and is the only landowner granted this special privilege of having its grasslands watered. The monastery, whose fields are leased and cultivated by lay villagers, does not receive any other benefits in terms of water rights.

Tentatively, the smaller the village and the more plentiful the water, the less likely one is to find a chu dpon system. Only one village in Zangskar with an extremely limited supply of water—Zangla—has a chu dpon office. Most Zangskari systems of irrigation are more flexible and ad hoc than the Ladakhi systems because they are managed by household rather than by channel. When only several houses obtain water on a given day, it is fairly easy to arrange whose fields will get water. In larger village systems, where distribution is arranged by channel, the fields lying along any given channel may belong to a large variety of households. Thus, larger villages often have a pre-arranged system by which houses share water from the channels receiving water on a given day. These pre-determined rotational schemes between households are recorded in the land records stored at the Patwari's (Tax and Revenue) office in Leh or on silk documents in the village itself (as in Sakti, Tashi Rabgyas has noted). The documentation of these rotational schemes suggests that disputes could be taken to the courts in Leh, for example. While this is beginning to be the case in Leh, villagers in Sakti and Chemre still prefer to negotiate their disputes at the village level.

Water distribution offers a means to analyze the mechanics of
power in different village societies of Ladakh and Zangskar. While this paper is an introduction to the subject and far more research is called for, one can make some preliminary conclusions about the nature of power in Ladakh and Zangskari society. Irrigation systems involve village players as both subjects and objects of power. The modes of distributing water suggest systems in which power is not concentrated in any one individual’s hands, and thus the more conventional notions of domination do not fully apply.

Power in these systems circulates among each of the member households, who are both the targets and the agents of its articulation. Surveillance appears to be the most significant coercive element in the system. Because village affiliation is often a lifetime sentence, the ignominy of being caught cheating may provide a sufficient deterrent to abuses within the system. However, as the villages become larger, more anonymous, and more influenced by a cash economy, the increasing anomie may result in a more contractual mode of managing power.

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