

ACEQUIA

Water Sharing, Sanctity, and Place

Introduction

The story told in these pages is born out of the struggle of acequia systems to survive in a world where water scarcity and competition are no longer local issues but part of a global crisis. Small farmers and ranchers in New Mexico are fully immersed in the urban wage economy, and few subsist exclusively or primarily by agriculture. Yet in communities in Taos, Río Arriba, Mora, and other northern counties, people still clean their ditches and irrigate, and ditch associations increasingly mobilize and litigate to defend their water rights against competing claims and demands. The regional pressures that face them include population growth, urbanization, and industrial or resort development, all of which require ever greater amounts of water—water that most city dwellers comfortably assume will be transferred for their needs and out of agricultural use.

Water scarcity and the legal status and ownership of water and water rights are major world issues in the 21st century. The acequia associations of New Mexico, like other local water-use and water-sharing communities around the world, are caught in a dilemma: the legal transition of water as a substance to which all humans have a right, to water as a commodity available to the highest bidders. This worldwide crisis magnifies their significance as an example of a workable, even elegant solution to the age-old problem of dividing water where it is scarce.

Every society, whether hunting-foraging, agricultural, pastoral, or industrial,

must have a system for capturing, storing, and distributing water. This requires some form of technology and associated practices, rules, and meanings. The larger and more complex the society, the larger and more complex the waterworks. Archaeologists have long recognized canal irrigation as a cornerstone of human civilization in both the Old World and New World. Karl Wittfogel's hypothesis (1957) that massive irrigation works require the centralized authoritarian power of a state sparked an ongoing debate over the relationship between hydraulics and social structure. Although many cases challenge his formulation, scholars agree that power and water control are intimately related. The question is, how will their relation vary and under what conditions? Even more important, how should they correlate in a fair and just society?

In New Mexico, the Arabic derivation *acequia* refers to both a canal structure and a social institution whereby river water is diverted and distributed via gravity flow among a community of irrigators or water right user-owners called *parciantes*. Historically, acequias made possible the Spanish colonial settlement of the semiarid Upper Rio Grande Valley of New Mexico, starting in the late 16th century. Acequias appropriated and transformed whatever irrigation structures and practices were operating among Pueblos in the Upper Rio Grande Valley at the time of European contact.

During the colonial and Mexican periods and into the American era, acequias proliferated. For roughly 350 years, they formed a core component of the technological infrastructure of New Mexico's agropastoral economy. Their local, interlocking networks of canals transformed and shaped the entire riparian ecology of the region. The body of irrigation law brought from Spain and adapted through customary practice to frontier conditions became incorporated into territorial and finally New Mexico state water law.

Today's acequia associations are political subdivisions of the state. Local associations of *parciantes* elect a *mayordomo* and commissioners to oversee the annual operations of the acequias and to maintain, use, improve, and defend them. At the start of the 21st century, approximately one thousand acequia associations still existed in New Mexico. The humble earthen ditches crisscrossing the fields and arable valleys along the Rio Grande and its tributaries are arguably the oldest living, non-indigenous public works system in North America.

Acequias occupy a paradoxical position along the hypothetical water-control continuum between extremes of centralized control at one pole and autonomy or consensus at the other. Historically, acequias partake of both extremes. At the outset, they were a colonial or colonizing institution. In concert with roads, architecture, mines, and the agriculture they supported, acequias transformed the indigenous landscape radically and forever. Subordinated workers dug the first colonial ditches. Yet despite invasive beginnings, acequias became integral to the New Mexican environment.

In our own era, acequia associations continue to promote a fluctuating balance between cooperation and competition, as well as seasonal, face-to-face interaction among *parciantes* on a ditch. They are a democratic institution in that *parciantes* elect

their mayordomo and commissioners, with usually one vote per *parciante*. Ownership of water rights is normally inherited but can transfer with the land. Nowadays, a water right is also a prime commodity bought and sold separately from the land to which it was once implicitly attached, and it can be transferred to urban uses. The market in detachable water rights escalates with each passing year. Use rights to a ditch depend on exercise through irrigation, compliance with rules, and proportional contribution to maintenance of the system. Each ditch operates according to its own variant of a common set of principles. Some are written as law; some are observed, spoken, but not written; and others are simply unspoken practice.

Origin

The principles that organized Spanish irrigation crossed the Atlantic with the colonists to take root in the New World in three contexts: private systems that were built and maintained by wealthy landowners, public community systems that met the domestic and agricultural needs of incorporated communities, and private community systems that served “non-incorporated agricultural clusters” (Meyer 2000:79). The latter, *acequias de común*, predominate in New Mexico. Today’s one thousand New Mexican acequia associations, or local irrigation communities, arose out of diverse beginnings such as private individual grants, community grants, or de facto settlements along a stream.¹ These “rural agricultural clusters” survived through an organizational strategy for ditch construction and maintenance, water sharing, and irrigation management (Meyer 2000:79–93). The scarcity of water demanded some means of allocating the vital substance. Lacking formal governmental structures, the colonists resorted to a form of “democratic collectivism motivated by self-interest” (Meyer 2000:88). Some kind of water-sharing plan accordingly became the key ingredient in every local setting (Meyer 2000:89).²

From the late colonial through Mexican periods, ditch organization and water-sharing practice coalesced into broad uniformity on the Rio Grande and its tributaries, notwithstanding variation in local custom. Acequia associations sprang up along the “mother ditches,” *acequias madres*, according to regulations that originated in Spain and were published in 1680 in a compilation of laws for the colonies, known by specialists as the *Recopilación*. Community ditch associations in the Upper Rio Grande Valley and Río Arriba worked out their specific water-sharing customs in an unending dialectic between the word of law and day-to-day practical accommodation. Water law and acequia practices remained in place under Mexican rule and were preserved by the Kearny Code enacted upon Americanization in 1846 (Clark 1987; Wozniak 1997; Rivera 1998).

In 1895 the New Mexico legislature defined community acequias as corporate bodies with powers to sue and be sued; each association was required to elect three commissioners to assist a mayordomo in regulating ditch operation and maintenance (Clark 1987:30). The status of acequias was clarified in a series of court decisions

following statehood in 1912 (Apodaca and Zokan 1999). In 1945 the state legislature tightened the administrative requirements for mayordomos and acequia commissioners (Clark 1987:350) and 20 years later declared acequias to be political subdivisions of the state of New Mexico (Wozniak 1997:131; Rivera 1998:148–149).³

Custom

Repartimientos de agua (or more colloquially, *repartos*) are basic to how community acequia systems operate. They follow the pattern for Spanish colonial customary law, in which “customs vary from place to place, are locally accepted and obeyed, and for officials to enforce them, the custom must be clear, contain reasonable and immemorial practices not contradictory to each other, and lastly they must be continuous and remain undisputed” (Tyler 1995:152–153; Rivera 1998:168). Custom originally arose out of conflict, secreted like a pearl around the grain of perpetual dispute. Rather than crystallize into a static measure, custom persists as the ongoing, elastic process of negotiation or conciliation itself, of meeting year after year to divide the water according to an agreement forged in crisis long ago.⁴

Scholars recognize two basic models of water allocation found in irrigation systems around the world: Syrian and Yemenite (Scarborough 2003:97–99). In the former, water is allocated in proportion to the amount of land under irrigation. In the latter, water is allocated on a fixed, time-release basis. Historian Thomas Glick links these two models to different conditions and suggests that an irrigation system may shift sequentially from a Syrian to a Yemenite model when demand exceeds availability (Glick 1970:1972). Anthropologists Robert and Eva Hunt (1976) report the Yemenite model in the private sector and the Syrian on *ejido* (common) land in rural Mexico and tell how, in one case, the Syrian gave way to the Yemenite method during a protracted drought.

Interestingly, *repartos* implemented on a single stream in the Upper Río Grande Valley often combine both models. Both operate on the Río Pueblo and the Río Lucero, involving slightly different combinations of proportional and rotational methods. Both apply among the acequias themselves in that each *parciante* receives an amount proportional to his or her cultivated acreage but all *parciantes* are subject to fixed time releases when demand exceeds supply. The Yemenite system holds between Taos Pueblo and the downstream acequia madre on the Río Lucero except in times of abundance; the Syrian prevails between Taos Pueblo and the acequia madre on the Río Pueblo. Responding to contingencies of weather and supply, the *mayordomo* calculates need and enunciates a measured equity when he must rotate the water among large and small irrigators.

Most significant is that in extreme scarcity the *mayordomo* must allocate every drop according to need and give priority to animals. Seniority does not confer, and has never conferred, exclusive right on either stream. Instead, sharing arrangements on these and other rivers include *sobrante* (surplus) water that others petition to use and

the *auxilio* (special dispensation) made during crises. Although not articulated as such, the principle at work here resembles—and may well derive from—both the Islamic Right of Thirst, which dictates that all living creatures have a right to water, and the Islamic Right of Irrigation, which gives all users the right to irrigate their crops.⁵

Autonomy and Globalization

Each acequia association, as well as the stream as a whole, constitutes a self-regulating entity that anthropologists call an autonomous irrigation community. Small-scale autonomous irrigation communities in Latin America, the Philippines, Bali, and elsewhere generally operate according to six principles: “autonomy, uniformity, contiguity, proportionality, regularity, and transparency, which results from the others and allows for accountability within the system” (Trawick 2001a:366–377; see Coward 1980b).⁶ Such systems are autonomous only insofar as they control their own flow of water. Local irrigation communities are always embedded within larger state, national, and global systems, in which they occupy marginal and subordinated positions. Each is locked in struggle with larger systems, as well as internal interests, over the ownership and control of the water it depends on. The battles intensify as the privatization of water accelerates.

A set of procedures or lawsuits known as water rights adjudications, brought by the New Mexico State Engineer, has forced all acequia systems to defend in court the water rights claimed by individual *parciantes*. Each adjudication suit is a separate case. The purpose of each case—which assumes a different name in each watershed according to the names of the defendants, listed in alphabetical order, such as Aamodt for Pojoaque and Abeyta for Taos—is to determine the nature and extent of all water right claims on the Upper Rio Grande and its tributaries, as well as those of other river systems (including groundwater) located in the state.⁷

These cases are driven by the imperative to quantify and rationalize every drop of water in these finite, fully allocated river systems. Because of the US doctrine of prior appropriation, this litigation places all water right claimants in adversarial relation to one another and threatens to rank them according to priority of right based on priority in time. Acequia associations contend that Spanish and Mexican law, which is based on a system of equitable apportionment, applies. *Parciantes* believe that water should be shared according to need and equity rather than owned exclusively, based on a principle of prior appropriation. In 1991 and again in 1993, the US district court recognized the importance of customs in the apportionment among acequias, a point critical to my focus on customs of water sharing (Rivera 1998:166, n. 55).

Acequia associations contend that the doctrine of prior appropriation is inimical to their very basis of operation, a flexible principle of equity and the common good. Prior appropriation privileges seniority of water rights exclusively during times of abundance and scarcity alike. It imposes an all-or-nothing, zero-sum formula on what has been a fluid process of negotiation that, in principle at least, spreads the last drops

among the thirsty. Ditch coalitions contend that their customary repartos—which, despite their diversity, share a common ethic—should receive full legal recognition.

Acequia Practice

Acequia practice encompasses the annual spring cleaning of the ditch and other work of repair, maintenance, and improvement; changing the headgate and dividing the water; and attending meetings of the parciantes. Irrigating the fields, orchards, and gardens is the basic secular activity, and far from the simplest. Stanley Crawford's (1988) memoir, *Mayordomo*, about his year of service as mayordomo on a ditch in Dixon, in southern Taos County, offers the most detailed account of everyday acequia activities. His narrative begins and ends with cleaning the ditch but also covers the daily tasks—repair, crisis management, planning, improvement, dues collection, record keeping, meeting, and negotiation—that make up the seasonal operation of an acequia.

Curiously, Crawford never describes the actual process of irrigation. Perhaps, like riding a horse or driving a car, it is taken for granted and laborious to explain. Irrigation involves bodily skill learned through observation in the context of practice. Practitioners do not describe it in the abstract or narrate it outside its execution. Irrigation is kinesthetic, visual, spatial, technical, and interactive, but not especially verbal.

Anyone who has watched the minimalist gestures of a parciante irrigating a field will allow that at first glance it does not look like much. Yet anyone who has tried to control the gravity-driven flow of water over an irregular gradient of variably porous, plowed ground so that it will soak in slowly, deeply, and evenly will tell you how difficult this job is. Success requires experience, patience, knowledge, and control. One must be familiar with the terrain and responsive to the contingencies of weather and water flow. One must not lose the water or let it get away. Given the undeniable power of flowing water, little apparent exertion can become a mark of skill rather than lassitude. Each act of irrigation is particular to a piece of land (plate 9). My own first attempt years ago at what looked like a simple project ended in ruined, washed-out rows and tears of frustration and shock. I failed to anticipate the force of the water as it rushed off the mountain and over my neatly planted rows of seeds. Seventy-eight-year-old Corina Santistevan of Cordillera put it this way:

But there was, there is, a real craft about how to irrigate a field. It isn't done, it can't be done, by just anybody. I have been paying for people to do it for me, and they don't know how to irrigate. They either flood one spot, or they never get the water to another, and they don't have that sense of how the water runs. [April 1996]

La saca, or *la limpia de la acequia* (the annual spring cleaning of the ditch), requires each parciante to contribute labor toward physical maintenance of the system. Each

parciante goes, sends a *peón* (surrogate), or pays for hired labor, according to how much acreage he or she irrigates. Contribution to ditch maintenance is proportional. On the morning of the designated day, each worker arrives with a shovel and spends the day clearing away underbrush and digging dirt and debris out of the ditch (plates 6 and 7). The mayordomo marks and calls out the sections and supervises the labor. This is the *tarea* (task) to which generations of parciantes have committed their sons from the age of puberty. Today, most parciantes hire or pay for peones rather than go, or they send their sons. Each spring, a few young boys can still be found performing this rite of passage on their acequia madre. Some ditches take more than one day to clean. Along with irrigation, la limpia enables parciantes to become familiar with their ditches and keep their use rights. It is a day of common labor by the members—or their peones—of an acequia community. It affirms and socializes members into a cooperative, subsistence institution. “Ditch cleanings are all very much the same,” Crawford (1988:224) writes, “and in this they often feel more like ritual than work.” The warm glow of mutualism notwithstanding, Crawford still perceived an underlying tension in acequia work:

The collective power of a ditch crew of twenty or thirty men can often be felt as threatening or dangerous, but what holds it in restraint are the conventions and traditions that have evolved out of hundreds of years of maintaining acequias—a complex social fabric binds a ditch crew together far more than the character of a mayordomo or the commissioners, recalling it to a sense of common purpose and preventing the inevitable disputes from flaring into political divisiveness or even physical violence. [Crawford 1988:23–24]

Meetings are the major venue for the cooperative, organizational, and managerial aspects of acequia practice. Each acequia must hold an annual meeting to elect the mayordomo and commissioners and to deal with other routine ditch business. Parciantes also hold meetings to deal with crisis situations and the rationing of water during drought. New Mexico state statute requires mayordomos and commissioners to meet each spring to decide how the water will be divided on their common stream under pending conditions. A parciante meets with the mayordomo at a given time and headgate to transfer the water from one ditch to another. Crawford evokes the everyday seesaw of structure and agency played out among individuals and families through time along a ditch. The medium of meetings is public language, employed as an instrument of organization, control, and power.

The mayordomo plays a key role in the New Mexican community acequia complex. The mayordomo and commissioners manage all ditch business. They supervise la saca, preside over meetings, resolve minor disputes between parciantes, and organize repair jobs. The mayordomo assigns the water and manages the reparto de agua according to custom. Each tributary and acequia madre has its own, distilled out of generations of struggle and negotiation or conciliation among parciantes or between parciantes and pueblo irrigators over their respective shares of river water. Each reparto

synthesizes principles of law with the pragmatics of compromise. Some customs, such as the ones governing the division of water on the Río Pueblo and the Río Lucero, enjoy the force and formality of a legal decree or agreement. Others persist in memory and practice but go unwritten and jurally unrecognized.

Today's *parciantes* describe *mayordomos* of a generation or two ago as powerful, authoritarian figures regarded with a mixture of respect, trust, and fear. Gus García put it succinctly: "They were like dictators, and what the *mayordomo* said was the law and you did it" (personal communication with the author, July 1995). A good *mayordomo* must know and uphold the customary *repartos* on his ditches, as well as on the river as a whole. He must be fair and evenhanded, possess intimate knowledge of local topography and hydraulics, and be able to deliver the water despite adversity or conflict. He must command respect. The authoritarian nature of the position is counterbalanced by the fact that *parciantes* in good standing on a ditch elect the *mayordomo* and the commissioners. The *mayordomo* is both a leader and an equal among peers.

Mayordomos are still respected, and the position carries status along with responsibility. They exert less power, however, and are less feared than in the old days when nearly everyone farmed for a living. State statute has spread the *mayordomo's* former power among the commissioners. A person's boss can potentially impact household economy the way the *mayordomo* of the *acequia* once did. Today people rarely seek the role of *mayordomo* and often accept it reluctantly, under subtle, irresistible pressure. The *acequia* association pays the *mayordomo* a modest stipend that hardly covers the hours, miles, worry, and labor involved. The variety of *mayordomos* is as diverse as the ditches themselves. Some are adept and fair; others are inept or self-serving. *Acequias* and their *mayordomos* have always had to adapt to local conditions shaped by larger forces. These days, officers are as preoccupied with defending their *acequia* rights in court as with dividing the water or maintaining their ditch.

The *acequia* is predominantly a male domain. The full significance of this cannot be explored here. Women have been known to irrigate, to dig and clean ditches, and even to serve as commissioner or *mayordomo*. But such cases remain exceptional. Women who actively participate on a ditch usually do so because there is no man around to fulfill the role. Depending on who she is in both personal and familial terms, according to the temper of the community and other circumstances, a woman *parcianta* may be barely tolerated, may be treated with respect, or may be silently erased. The rare woman who assumes the role of *mayordomo*, probably a late-20th-century innovation, will invariably admit to difficulty, if not hostility, encountered while trying to maneuver inside this deeply patriarchal domain.⁸

My own experience in conducting this study seems like an exception that proves the rule. Individual men graciously escorted me through each watershed, granting every access, answering every question, patiently but firmly instructing me about their ditches. But I was working for them rather than trying to run a ditch. The patriarchal face of *acequia* culture is pervasive and undeniable. Patriarchy structures the honor code and gender norms, not to mention a division of labor that domesticates women

and relegates most public and outdoor space to men. Even though women have chopped wood, hauled water, tended livestock, and irrigated, perhaps only in ritual were they allowed to move out of doors into the open air, to pray and walk in procession. Only men showed me the ditches. But when it came to religious ritual, my guides and advisers were mostly women.

The Pueblo Enigma

The water rights adjudications promote opposition between local acequia associations and their longtime neighbors, the Rio Grande Pueblos. These two populations are historically the oldest and economically the poorest owners of New Mexico's scarce and precious rights to river water. Both peoples entered the United States under the Treaty of Guadalupe Hidalgo but now have very different legal statuses vis-à-vis federal and state governments. The theme of Pueblo-Hispano relations weaves inextricably throughout the pages of this study. On the one hand, water rights adjudications serve to highlight the history of oscillating cooperation and competition that has characterized four centuries of Pueblo and acequia-based Hispano coexistence. On the other hand, the Abeyta case and similar cases can harden the perennial fluidity of these relations into rigid and fatal opposition. Research for the adjudications by scholars, including me, has generated a wealth of new knowledge about the history of irrigation and water disputes in New Mexico. Yet the adversarial climate of litigation, with its emphasis on asserting a superior claim, can discourage open inquiry into acequia-pueblo interpenetration. The question of what is shared and what is not when it comes to acequia and pueblo irrigation practices remains largely unanswered because no one seems to have asked it.

Although most scholars accept that Pueblo Indian agriculture incorporated acequias, no researcher has compared how ditch water is allocated at the pueblos with how neighboring acequia associations do it. In Hispano communities, ditch maintenance and water allocation are always vested in the hands of a *mayordomo* elected from among the *parciantes* on an acequia madre, or main ditch. Usually, two elected commissioners assist him. Pueblo ditch management may rest with the governor or a *mayordomo*, but little is documented about how Pueblos divide their water internally.⁹ In a rare study of the irrigation technology at a Northern Tiwa pueblo, anthropologist Richard Ford (1977:147) reports: "No authority in Picurís allots water; no calendar is followed." He says nothing about how water is shared during times of scarcity.

My research confirms customary water-sharing practices between Taos Pueblo and the acequia associations on both the Río Pueblo and the Río Lucero, but it also indicates that *parciantes* do not know how their pueblo neighbors divide the water among themselves or precisely how they manage their ditches. This raises questions. Is it possible that they knew in the past, when people were more engaged in the cooperative endeavor of farming? Do some pueblos follow the *mayordomo* system and employ

repartos, and others do not? Does this vary according to relative placement within a watershed? How is water managed internally at Taos Pueblo during times of shortage? How does canal irrigation relate to the Pueblo moral economy of water? Are Pueblo and Hispano moral economies alike? How do they differ, and why?

The Plan of the Book

In chapter 2, I provide the historical context for this two-part ethnography about contemporary acequia practice and belief. Part One, titled “Reparto,” contains two chapters in which I describe, drawing on the words of the parciantes themselves, how they divide the water on the Río Pueblo (chapter 3) and the Río Lucero (chapter 4). In Part Two, titled “Respeto,” I briefly discuss the concept of moral economy (chapter 5) and then describe the novena (chapter 6) and procession (chapter 7) performed each May in Los Córdovas in honor of San Isidro, the patron saint of farming. Drawing on the words of parishioners, the texts of prayers, and participant observation, I examine the religious and moral meanings and values these rituals embody. In chapter 8, the parciantes explain what they think would happen if they lost their water rights through adjudication.