

Water rituals on the Bravo/Grande River: a transnational political and ecological inheritance

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1. Introduction

In northern Mexico there are agricultural settlements whose origins can be traced to the highlands of central Mexico, a fact unknown to most of the people who live in or study the North. Today this inheritance from Mesoamerica – a hybrid legacy of both indigenous and Spanish traditions – seems to have become historically and economically irrelevant, systematically forgotten or excised from official histories. Nevertheless, there are aspects of this history that are increasingly important, in particular the way these small agricultural settlements defend the water that makes the desert bloom and has supported their way of life for centuries. This legacy of local knowledge, born of centuries of managing hydraulic resources for farms and livestock, forms a technological fund which, for its versatility, adaptability and now profitability, has permitted the survival of a material culture that has overcome the challenges of the desert environment (Doolittle 1990; Donkin 1979).

This culture is present among the innumerable rural inhabitants of the borderlands: the peasants, ranchers and farmers whom Eric Wolf has called the "people without history" (Wolf 1982). The colonization of the borderlands provinces of Nuevo Reino de León, Nuevo Santander and the Antigua Provincia de Coahuila and Texas and New Mexico was chronicled by military leaders in their annuals. But relatively little is known of the humble soldiers, shepherds and peasants who paved the roads of conquest, produced the food, defended the gains and assured the continuity of the settlements (Mecham 1927; Mendizábal 1943; Morales Rodríguez 1949; Morfi 1980; Moorhead 1975; De la Mota and Escobar 1940; Nostrand 1992). Indigenous people from Tlaxcala, in central Mexico, served as allies of the Spanish in this colonization process, and played a particularly important role in the establishment of a variety of Mesoamerican culture in the arid north (Martínez Saldaña 1997). The cultural inheritance and technical knowledge of these rural people took shape over four hundred years through the creation of agriculture and ranching in the previously uncultivated northern expanses. These activities, and the culture that supported them, eventually formed the basis for the emergence of a modern economy by, first, providing materials needed for the accumulation and reproduction of capital and labor, and, second, by supporting the growth of regional urban centers such as Monterrey, Albuquerque, El Paso, San Antonio, Chihuahua and Ciudad Juárez. The small riverbank irrigation systems these settlers created, and the economy supported by these systems, defined the contours of a cultural and environmental region as big as Western Europe, spread throughout the southwest United States and Northern Mexico.

2. The Mesoamerican heritage in Northern New Spain

The history of the native American migrants from central Mexico appears in the literature as something of a legend or fable at the margins of national histories of the United States and Mexico. Nevertheless, we are beginning to understand the impact these colonists from the central Mexican region of Tlaxcala had through the building of small-scale irrigation systems that supported agricultural communities, which in turn supplied food for the new colonial population in the borderlands (Adams 1991; Robles 1978; Armella and Castelló 1989; Frye 1996; Assadurian and Martínez 1991)

Tlaxcalans, an indigenous group that was subjected to the empire of the Aztecs, allied with the Spanish in their conquest of Mexico, and in the colonial period they retained both special privileges. Because of these privileges, Tlaxcala is seen by many anthropologists as a place where elements of prehispanic Mesoamerican culture survived intact through the conquest, and have continued in some form into the present (González Jacome 2008; Robichaux 1997). Tlaxcalans were also given a key role in Spanish colonization and government, and through these processes *Mesoamericana* culture spread to the riverbasins of the north. As peasant agriculturalists, these colonists in the northern borderlands defended their towns, governments and religious associations. At the same time, they were brave and experienced soldiers in the service of the

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governments of Nueva Vizcaya and Nueva Galicia, who expanded Spanish rule to areas beyond the confines of their communities, throughout the Bolson de Mapimi, the Tunal Grande and the Gran Chichimeca; even as far as Louisiana and New Mexico. These same colonists crossed the sparsely inhabited lands of Nueva Vizcaya and reached all the way to the Llano Estacado of Nebraska and Oklahoma. Their communities and institutions were established during the Great Chichimeca War in the sixteenth century, and carried out the expansion of merchant capitalism in the colonial domain for two hundred years, creating in the process a spirit of independence throughout the region (Powell 1980; Powell 1977; Revilla Gígedo 1966). This colonizing process was central to Spanish expansion in that it constituted the material support for the Silver Trail (Ruta de la Plata) initially, and the Royal Road (El Camino Real de Tierra Adentro) later, and gave rise to the ethnic character of northern Mexican society (De los Reyes 1991). The historiography of the Gran Chichimeca and its heritage that has been written since 1900 forms the basis for contemporary analyses of the borderlands (Braniff 1994; Bolton 1917-18; Bolton 1913; Bye 1994; Cárdenas Magolo 1985; De Angeli 1982; Martínez *et al.* 2007; Moorhead 1975).

The theoretical approach pioneered by Angel Palerm orients this historical sketch of the Mesoamerican colonization of the borderlands. Palerm developed a particular Mexican iteration of historical social anthropology that integrated research questions from cultural ecology about water, social complexity and state formation with a Marxist attention to modes of production and social formations (Palerm 1976, 1980). Subsequent generations of researchers inherited this framework for understanding rural society in Mesoamerica and the northern borderlands (Boehm 2001, 2005; Martínez 1981; Melville 1993; J. Palerm 1995), and carried out some ethnography (Martínez Saldaña and Palerm Vich 1979; Martínez Saldaña and Hernández X. 1988; Martínez Saldaña 1991; 1997), but an enormous amount of research remains to be done. This chapter presents results of this line of inquiry on the water cultures of the borderlands, and outlines an agenda to research and describe a part of the daily life of the region that could serve as a bridge between peoples separated by a national boundary.

One of the clearest elements of this inheritance is the technology utilized in small-scale irrigation. This technology utilized small sources of water, such as streams and springs, and could be managed with the resources on hand: stone, wood, and the labor of humans and animals such as oxen or donkeys. The technical limits imposed by these materials and sources of water and energy guided the shape and scale of the systems. People would divert a water source into an artificial canal – called the *acequia madre* – which led to a system of smaller canals and eventually to fields. Normally these *acequias* extended a few kilometers but some present-day systems, such as those near Taos in New Mexico, extend upwards of 15 kilometers (Rodríguez 2006: plate 1), a huge feat when one considers that they require yearly maintenance. The smaller, secondary canals that led to the fields were known by different names such as *sangrias* and *regaderas*, and formed the basis of complex ecosystems that included fruit trees or other plants that protected the fields from wind and cold, and provided shelter for animals.

The social use of water in the dry, cold and windy borderlands environment obliged the colonists from Mesoamerica to modify their technology and customs, in particular the management of irrigated wetlands to protect them from frost, wind and heat, and the reduction of planted surface areas in order to conserve humidity. The settlers used germplasm that enabled an intensive cultivation of small parcels of land: corn, beans, squash and chile all grown on the same plot. This *milpa* cultivation strategy was a Mesoamerican tradition that was especially useful in the dry, cold north, where land was plentiful but water was scarce. The small irrigation systems demanded periodic maintenance, which in turn strengthened social organization and solidarity within the isolated communities. This social organization and community can still be found in the Acequia Association of New Mexico, and the associations of irrigators in Chihuahua and Durango grouped by the federal government into *uniones de pequeño riego* (URDERALES) (fieldwork by Martínez Saldana, 2002-2004). As we shall see, other dimensions of the social life of these communities are also alive and well, such as religious festivals and dances. The study of water rituals on the Bravo/Grande River allows us to unite methodologically a series of phenomena that occur in this space in accordance with the agricultural, religious and cultural calendar.

3. Location of the Rio Bravo/Grande Borderlands

The Rio Bravo/Grande watershed is located in the Mexican-American borderlands, but roughly a third of the region extends more than 1000 kilometers into US territory north of Ciudad Juárez and El Paso (Figure 1). This region can be characterized by three fundamental criteria. The first is ecological. The region is located in a desert zone with steppes and plains that bring together the Chihuahuan desert, the arid highlands of New Mexico, and the foothills of the Rocky Mountains, where the Rio Bravo/Grande is born. One of the principal tributaries of the Bravo/Grande is the Pecos river, which drains south and east from a spur of the Rockies to meet up with the Bravo/Grande in Texas (in the northern state of Coahuila). In Mexico, the Sierra Madre Occidental and its foothills contribute another substantive portion of the flow of the Bravo/Grande that descends through tributaries such as the Rio Florido to feed the Rio Conchos as it flows through Chihuahua.

The other two principal Mexican tributaries, the Río Salado and the Río San Juan, dump their contents into the Bravo Grande farther along in its course (Baxter 1996).



Figure 1. The Rio Bravo/Grande watershed and main channels. Source: Wikimedia Commons.

A second defining characteristic of the watershed of the Rio Bravo/Grande is hydraulic. The lives of the region and its people depend on the water of the Rio Bravo/Grande, and the river forms a watershed that includes various states in the United States and Mexico: a portion of Colorado, New Mexico, Chihuahua, Texas, Coahuila, Nuevo Leon and Tamaulipas. What unites all this territory is the utilization of a common water source through the construction and management of hydraulic works dating back four hundred years to the first systems built in the area of the Paso del Norte (today El Paso/Ciudad Juárez). The principal course of the Bravo/Grande now has five large dams that contain and administer the flow, three in New Mexico and two on the Mexico-Texas border. There are, in addition, numerous large and small dams on the tributaries on both sides of the border.

A third criterion that defines the watershed as a region is drought, or aridity. It should be noted that in desert areas drought, or long periods without rainfall, is a common characteristic, and that rainfall is the exception rather than the rule. The concept of drought implies that rainfall is regular in the region, and aridity is exceptional: a problematic assumption for the borderlands. In the Bravo/Grande watershed the problem is not the absence of rainfall, but rather what to do with the water when it does happen to rain in abundance, about every eleven years on average. Because there is so little organic material in the soil to absorb water, rainwater tends to flood the watercourses of the region, destroying hydraulic works and washing out lowlying areas. Added to this problem of aridity and periodic abundance of water, are the particular demands made on

the resource today by a growing population that doesn't live from agriculture or ranching but rather from industry and services. This demographic trend, which has become important since World War II, has caused geopolitical shifts in the relations between the two countries and the various states that make up the watershed.

4. Water culture in the Rio Bravo/Grande watershed

In this natural setting of aridity and inundation, a "culture of water" has arisen that has outlived the Spanish Empire, the rule of a Mexico that extended north to Colorado, and now the control over the region by two sovereign nation-states. Despite the longevity of this water culture, the social relations that derive from the direct and intimate contact with the water of the Río Bravo/Grande (as well as other borderlands rivers and springs that don't drain into that watershed, such as Parras, Coahuila) have always been part of a more complex whole, and often remained unnoticed as long as there was a sufficient amount of the liquid. In the last few decades, however, overexploitation of the resource has led to a crisis of availability that has stimulated interest in the often-forgotten water culture of the borderlands.

"Water culture" is conceived here as the actions, rites, rituals, ceremonies, uses and customs of the hydrological and agricultural cycle, as well as the interpretation that the people have of these activities. Almost all the settlements founded by Mesoamericans on the shores of the river were fundamentally agricultural and pastoral, and they shared with the gatherers and hunters that preceded them an intimate knowledge of the river and a complex cultural construction of it. Institutional religion incorporated many of the ritual manifestations associated with the change of seasons, aridity and dry spells, and the wax and wane of the river's flow. This knowledge and religious calendar informed agricultural activities that in most cases were developed by the Hispano-American colonists that began to arrive in the sixteenth century. By 1580 colonists arriving from Nueva Vizcaya established irrigation systems and agriculture in the headwaters of the Rio Conchos – what is now the Allende Valley of Chihuahua – from where they expanded into neighboring river valleys and eventually to Parral, Chihuahua. Another settlement in the headwaters of the Rio Bravo/Grande was created by Juan de Oñate in New Mexico, who followed the river north from the Paso del Norte. Indigenous colonizers from Tlaxcala in central Mexico founded San Esteban de la Nueva Tlaxcala (today Saltillo, Coahuila), and spread out over the following two hundred years to virtually every tributary of the Rio Bravo/Grande in Coahuila, Nuevo Leon and Texas (Martinez Saldana 2005; Martinez Saldaña, Lamadrid and Loeffler 2005; Martinez Saldaña *et al.* 2007).

By the end of the colonial period, the riverbank land and water systems of the Bravo/Grande were in full exploitation, thanks to a water culture and technology of Mesoamerican and Spanish origin that was shared from Santa Fe, New Mexico to Matamoros, Tamaulipas. The use of the water was based in the construction of small dams of brush and stone that directed water to *acequias madres* (primary ditches or canals) that distributed water by gravity to secondary canals and then to agricultural plots. Some of these systems were quite extensive and complex. In San Felipe de Albuquerque, Guadalupe del Paso del Norte and San Juan Bautista del Rio Grande these irrigation systems involved many kilometers of canals, and gave rise to a considerable production of food, wine, spices, meat, hides and cheese. This model of irrigated agriculture was based on that which had been built in the Tlaxcaltecan settlements of the north, such as San Esteban in Saltillo (today Coahuila) or the Valle de Allende (the Allende Valley in what is today Chihuahua). Along the *acequia madre* the colonists built thick curtains of plants native to the region, such as palms, cactus, walnuts, huizaches, mequites, junipers, and others. This curtain provided shade that served to protect soil humidity, and demarcated the agricultural zone. The protected area formed a microclimate where all sorts of food crops flourished. Fruits, herbs, corn, and beans, as well as small livestock such as goats and sheep, still constitute the traditional artisanal cuisine on both sides of the border (de la Teja 1995; Peña 1998, Arguello 1996; Hicks 2003). These foodways, together with the woolen products derived from sheep ranching, such as the famous *sarapes* (blankets) of Saltillo, gave a distinct regional character to northern Mexico that lasted until 1930. And although only a few of these irrigation systems remain in service, the familial, communal, and regional organization based in the management of these hydraulic works has left elements that continue to characterize the communities of the borderlands.

5. Water rituals on the Bravo/Grande River

A particular borderlands water culture found fertile ground in these irrigation communities. It is important to remember that the ceremonies of this water culture are not only ethnohistorical remnants, but rather a living tradition of the twenty-first century that can be observed, traced and evaluated. This will be discussed in the conclusions of the article, but here I will focus on the historical constitution of this water culture. The Rio Bravo/Grande has been the setting for water rituals since the days of the pre-Columbian peoples who lived along the shores of the river. Some of these rituals have survived, mixed with other Christian rituals that arrived with the monks and the Tlaxcalans who settled in 1598 in San Juan de los Caballeros and later in Santa Fé del Nuevo Mexico. The festivals that are celebrated with water rituals are those related to the agricultural calendar and the Christian religious calendar. In the northern reaches of the Rio Bravo/Grande of New Mexico and Colorado these festivals still have a communal, familiar and intimate

character, and only a few are linked to tourism. Most of these festivals are celebrated each year and often are repeated in various towns, but go unnoticed by most as they are celebrated within the communities. The Dance of the Matachines is commonly performed, and reflects the contribution of the Hispano-Mexican tradition in communities of indigenous origin. The Pueblo, Hopi, Zuni, Apaches and Comanches celebrate rituals associated with hunting, but also water rituals linked to the corn cult. The strengthening of the tradition of dances can be seen as a manifestation of unity and support in the face of problems such as water shortages in areas where it has not rained in three years (Rivera 2002). The Acequia Association has unintentionally reorganized the dances and rituals by promoting the defense of the irrigation communities and their social organization, as well as the restructuring of water rights within them.

The most significant cultural values are presented in the rituals of the life-course, seasons and cultural inheritance. The Matachines Dances are conducted in conjunction with the sacred rituals of the liturgical calendar, although the most important festivals are those that are linked to the agricultural and rainfall calendar. Among the most notable festivals are those that take place on the saints days of Santa Cruz and San Antonio, and those that take place during Easter and Christmas. The dances with an indigenous character include dances of the buffalo, deer and maize, and these of course are carried out according to the religious calendar. Almost all the events have an institutional blessing through the ministries of the Catholic Church, whose celebrations include pilgrimages to springs where the river water originates. These civil-religious processions recognize and interpret the landscape and reinforce among those who participate in them an agricultural and religious language, although most of the participants have long abandoned farming as a way of life.

The Dance of the Matachines celebrated in the United States is similar in form to that practiced throughout Mexico, with the characters of the Malinche, the Perejundia and the Viejos, but with a distinct and differing interpretation from the perspective of people who consider themselves Mexican in nationality but with U.S. citizenship. In addition to the Dance of the Matachines, there are two more festivals that are important and reflect the Hispano-Mexican tradition of the borderlands: the festival of Nuestro Padre Jesus and of San Isidro Labrador. These festivals are organized by the penitent brothers of Nuestro Padre Jesus, a brotherhood that originated in the Middle Ages and was brought to the region during its colonization.

These three celebratory activities – the Dance of the Matachines, the indigenous dances, and the festivals of the penitent brothers – form the basic context for those who carry out water rituals throughout the Rio Bravo/Grande watershed. From a Mexican perspective that assumes the legal separation of church and state, these celebrations and rituals in New Mexico seem to impose upon civic activities cultural and religious worlds that were buried in the mid-nineteenth century by the Mexican Laws of Reform. But in the United States, this combination of secular and religious festivals remains much as it existed in the seventeenth century. The water rituals of the upper Rio Bravo/Grande reflect the intermixing of three inheritances: the indigenous, the Hispano-Christian, and the Mexican indigenous (Tlaxcaltecan). Because the Mexican Laws of Reform didn't take hold in New Mexico, the non-separation of church and state has led to a confusing structure of power, which is linked to the religious associations (*cofradías*), the brotherhoods and finally to mutual societies. The non-secularization of social life allows for liturgical rituals to be expressed in events and symbols of a civic, rather than strictly religious, nature.

The triple inheritance of the borderlands has been used since the colonial period to manage water, land, language, food and material culture. Since the middle of the nineteenth century, the influence of American culture has generated a new amalgam of a Mexican culture inserted into an American world with values in common with American citizenship, but whose ritual expression is oriented by a Hispano-Mexican inheritance. American education, government and the English language had effects on all aspects of life, but this institutional influence has not obliterated the consecrated rituals of water that come down from the colonial era and make evident the inheritances and connections of present-day new Mexicans with the worlds of the indigenous communities, the original colonists to the region, and the monks, brothers and religious life of previous centuries.

6. The material inheritance of the irrigation ditches

Water rituals are performed in the open, sometimes in the courtyards of churches, in the fields, or at water sources such as springs, rivers, dams and canals. These water sources form small-scale water systems that are fed by the snowmelt and runoff from the Rocky Mountains. The water sources, which include the main channel of the Rio Bravo/Grande itself, are as unpredictable, itinerant and capricious as the weather patterns that bring them to life. The floodplain of the Rio Bravo/Grande – what local people refers to as La Madre del Rio – can be up to half a mile (804 metres) in width, with the water channel constantly finding a new path or a set of different paths. To accommodate the constant changes to the course of the river, as well as the dramatic flood stages linked to the spring snowmelt, the inhabitants of the riverbank would periodically build and rebuild makeshift dams in the rivers that would divert a portion of the river's flow and conduct it by gravity to canals that would irrigate a mile or two of orchards and fields established on the riverbank. The main canal is called the *Acequia* or *Acequia Madre*, and it runs parallel to the river, usually about 1500 feet (457

metres) away. The irrigated parcels are narrow and long, stretching down from the *acequia* to the river. When the parcels are more than about 900 feet (274 metres) long, another *acequia* is usually built. *Acequias* may be built on both banks of the river, if topography permits. In cases where the river is hemmed in by cliffs, the *acequia* is hewn from the rock until it reaches the irrigable lands. Along the Rio Grande in New Mexico and the Pecos River, the *acequias* create wetlands by providing water for trees such as the cotton willow and native plants such as the *jarilla*, which in turn provide shade that protects the humidity of the soil of the irrigation system. In these arid zones, the green band of foliage that has been cultivated along the riverbanks of the Borderlands Rivers is a welcome and pleasant sight.

This model is repeated time and again along the whole upper stretch of the river, from Velarde to the border with Mexico. The New Mexicans and the indigenous communities of the colonial period built something on the order of one thousand such dams and canals, constituting a hydraulic system that allowed them to irrigate around 25 thousand hectares (60 thousand acres). Beginning around 1930 this constellation of small-scale irrigation systems was absorbed and substituted by federal works built by the United States government, which included the Abiquiu dam around the town of Española the Cochiti dam near Santa Fe that carries water to Albuquerque. While these new works left 72 small dams obsolete, they did not destroy the centuries-old canals, or the social distribution mechanisms around which the communities were organized, but rather integrated them into a new, large-scale irrigation system. To this day the water users and their rights are divided and categorized according to the principles inscribed in the Treaty of Guadalupe Hidalgo.² The order of priority is the following: the indigenous communities; those who belong to canal associations; the military forces of the federal government; flora and fauna; and finally the urban centers.

In New Mexico, the amount of land irrigated by *acequias* has not increased, and although the soils tend to be among the most fertile in the region, they are dedicated to alfalfa and grass for dairy cows. It is notable that there is very little production of commercial fruits and vegetables in these small-scale irrigation systems, and little of the tradition staples of the region, corn, beans and squash. The indigenous communities have preserved their *acequias* and fields, but the economies of these groups have, in many cases, shifted to the management of casinos. Gaming has provided an incredible amount of income and some, but not all, of the groups have used these resources for social and community investment and household reproduction. The decline of irrigated agriculture is obvious, but nevertheless there continues to be a great deal of respect for the fields, which remain under cultivation and also provide habitat for flora and fauna. On the other hand, the irrigation systems are slowly being invaded by houses, for with their water and greenery they provide an exceptionally agreeable environment to live. These new households do not cultivate the land, and often sell their water rights. Some individuals have accumulated land in the irrigation districts in order to establish gardening and nursery businesses.

The *acequias* have been adapted to the new uses made of the irrigation water and lands, but they continue to operate as they did three hundred years ago. The *mayordomos*, or watermasters, continue to deliver water to each parcel every two or three weeks. The recipients use the water as they see fit, and those who grow alfalfa are able to produce three harvests a year. Because of the short summer of only four months, fruit production in New Mexico is precarious and now in steep decline. Nevertheless, in the *acequia* irrigation systems examples of Mesoamerican fruit cultivars are still found: Mexican apples, peaches and apricots; San Juan pears; quinces (*membrillos*), and wine grapes. For a period in the eighteenth and nineteenth century grapes were the most important commercial product in Albuquerque and El Paso. Even now they are making a comeback, driven by the recent growth in popularity of regional and specialty wines. There are other exotic species that are not as beneficial to the inhabitants and ecosystems of the river. Salt Cedar (*Tamarix*), Russian Olive (*Elaeagnus angustifolia*) and Chinese Elm (*Ulmus parvifolia*), for example, rob humidity and crowd out native species.

7. Water festivals in the Rio Bravo/Grande: Mexico

The Mexican part of the Rio Grande is called the Rio Bravo and forms the political border between the United States and Mexico for almost 1000 miles (1609 kilometers). This part of the river does not descend from a canyon, but rather runs through the plains of the Chihuahuan desert, beginning in the Juárez Valley, where there are still some remains of colonial period irrigated agriculture. By this point the entire flow of the river has been used, and only the waters of the Rio Conchos flowing down from Chihuahua make it a river again. The Rio Bravo continues along, filling the reservoirs of two large international dams – the Falcon and the Amistad – before trickling to the Gulf of Mexico at Matamoros and Brownsville. These days there are innumerable hydraulic works on the river, including a few small scale systems in Ojinaga and the Juárez Valley. Most of the *acequia* systems, however, are located in the headwaters of the tributaries of the Bravo: the

² Treaty of Guadalupe Hidalgo, 1848. Full text: <http://www.ourdocuments.gov/doc.php?flash=true&doc=26&page=transcript>

San Juan, the Salado, and, especially, the Conchos. These *acequia* systems are where most of the cultural and biological inheritance of central Mexico can be found.

We can find a water culture similar to that of New Mexico in the Conchos River: small-scale *acequia* systems controlled by their users, provisional dams, head-gates and canals, and riverbank wells. Water ritual is as rich and varied in Mexico as it is in the western United States, and while many of these rituals are of a local nature, some have also turned into regional festivals (*ferias*) that attract large numbers of people. The first type of ritual is very similar to those found in New Mexico: local, almost private, with meanings that don't extend much beyond the small group of people who carry them out. There are traditional dances performed with feathers, cane, and machetes, as well as reenactment of the historical encounter between Moors and Christians (*moros y cristianos*). These dances are seen as part of folklore and legend, traditions to be respected and used to stimulate civic pride and perhaps tourism.

In the mountains of Chihuahua there are indigenous water rituals celebrated by the Tarahumaras and the Tepehuanes – those who live in the old settlement of San Pablo de los Tepehuanes, now called Balleza. Water ritual also persists in the state capital, Chihuahua City, where the Santo Niño and Nombre de Dios neighborhoods, located on the riverbank, celebrate the rites of the "Union of the Rivers," where the Chuvizcar and Sacramento rivers come together. Water rituals are repeated along the course of the Florido River in the Allende Valley, and in Ciudad Jiménez community dances linked to water rituals are celebrated. It is probable that similar rituals are celebrated along the tributaries of the Río Sabinas in Coahuila, but research needs to be done to confirm this.

Along with the local water rituals, in northern Mexico there are relatively large-scale regional fairs that are grand exhibitions of faith, tradition and popular culture. They are longstanding events that have been celebrated without interruption since the seventeenth and eighteenth centuries. These fairs are unheard of in the United States, but in Mexico they retain momentum. Three of these rituals are especially notable: San Lorenzo in Ciudad Juárez, Chihuahua; San Miguel de Aguayo, in Bustamante, Nuevo Leon; and Nuestra Señora del Chorrizo, located in the Mesa de Hidalgo, about 100 miles (160 kilometers) from the border town of Reynosa, Tamaulipas. San Lorenzo, now a neighborhood of the city of Ciudad Juárez, was founded in 1680 by Tlaxcaltecs and Spaniards as well as Pueblo Indians who fled the Pueblo Indian uprising. Taking advantage of the interconnected irrigation works located in the orchards of Paso del Norte, the mission Nuestra Señora de Guadalupe and the Presidio of San Jose, these colonists founded an agricultural town that by 1770 was rich in grapevines and pecan trees, and that produced food for the entire region. The town was named San Lorenzo, because the Tlaxcaltecs that moved to northern Mexico in 1591 brought with them their religious beliefs as well as the name of the patron saint of Tlaxcala. The *fiesta*, or saint's day festival of San Lorenzo became the centerpiece of the ritual activity in the town, and has survived today as a festival dedicated to rain and water, held in the hottest moment of the year: August 10th.

The festival of San Lorenzo brings together religious faithful as well as the general population from throughout the binational border region. The dances are a key part of the festival, and allow the observers and participants to recognize their shared borderlands heritage. Traditional elements such as hats, suits, bows and gloves are still present, although the dramatic elements of the neo-Aztec *conchero* dances from central Mexico are increasingly important. These latter produce prehispanic fantasies and are marked by spectacular dress including sequins, loud colors, and enormous feathered adornments. The spectacular nature of these dances is also seen in the music and steps, which have gotten faster and more intricate, losing the slow cadence that is characteristic of the dances of the North. Other festivals that originated in the agricultural cycle or the veneration of water are still practiced in the El Paso/Ciudad Juárez region, but these have become assimilated into Thanksgiving and the celebration of the patron saint of Mexico, *La Virgen de Guadalupe* (December 12). The *acequias* and other hydraulic infrastructure of the original small-scale irrigation systems have also been destroyed or subsumed by the municipal water system, and all that remains of the agriculture is the odd backyard fruit tree or cottonwood.

In Bustamante, Nuevo Leon, on the banks of the Sabinas River about 600 miles (966 kilometers) down the Rio Bravo/Grande from Ciudad Juárez/El Paso and 60 miles (96.5 kilometers) from the border, the inhabitants celebrate a water ritual on August 6th. This town was founded in 1698 by 13 Tlaxcaltecan families together with Alzapas Indians, and soon they established a Tlaxcaltecan government, and built a mission with a church dedicated to San Miguel, the patron saint of Tlaxcala, as well as a smaller church dedicated to San Antonio de las Alzapas. Since then the people of the town have built three *acequias* that run three miles (4.8 km) from a spring located in the mouth of a nearby canyon, to the center of the town of Bustamante. As a result of its elaborate irrigation system, San Miguel quickly grew into a center for the production of food, alcohol, bread and sweets, and remains so today. Owing to its geographical location, it was an important supply stop for the trade caravans that traveled north to Texas, and also provided conscripts and replacements for the forces that fought the apaches. Sugar and alcohol production made a few families in Bustamante wealthy enough to invest in the industries that emerged in Monterrey at the end of the nineteenth centuries.

San Miguel began its rituals practically from its inception, and documents indicate that the day of the Image of Santo Cristo (August 6th) was already celebrated by 1712. Today these celebrations continue, and

involve a nine-day period of prayers (*novenario*), followed by a three-day *fiesta* dedicated to water. This celebration has evolved into a commercial, agricultural and livestock fair, with dances, concerts, races and raffles that attract people from all over the region. Many of the people who have emigrated from Bustamante return during this time to visit and renew their connections with family and friends. On the final day of the celebrations the entire town and its visitors participate in a procession, accompanying a sacred image of Christ through the principal streets of San Miguel, passing by the canals, cottonwoods and orchards of the irrigation system. The participants in the procession accompany the image of Christ as pilgrims in the desert, and make around 20 stops to worship different artifacts, such as a cross made of fruits and cereals, or palm fronds laid in the street in anticipation of the passing of the image of Christ. The participants enact the Dance of the Matachines, and water is offered to all in a rite that promotes rainfall.

In the Sierra Madre Oriental, in the Valley of Orreo, above the coastal plain of Tamaulipas, an important spring bursts from the ground that provides water to a series of towns and agricultural settlements that culminates in the orchards of Hidalgo, Tamaulipas. This region was settled at the end of the eighteenth century as a land grant to a Tlaxcaltecan noble from Santa Maria de las Nieves del Rio Blanco, what is today Arramberi, Nuevo Leon. The springwater was used by a plantation called la Mesa, that had a sugar mill, sugarcane fields, and orchards of guava and citrus. At the spring, a temple has been built in honor of the Virgen de Guadalupe (Virgin of Guadalupe), also called Nuestra Señora de Guadalupe del Chorrito. Tradition holds that an image of the Virgin was found on a stalactite where the temple now stands. An image of the Virgin has been set up, as well as a courtyard and some installations to attend to pilgrims to the site. A religious association, constituted at the same time as the construction of the shrine, organizes the celebrations. Once again, the Matachines ritual is present and the people who attend the celebration venerate the Virgin who offers water in the desert. These celebrations occur in March, around the time of the fiesta of San Jose, and are rites that promote rainfall.

These three ceremonial centers scattered throughout the Mexican side of the Rio Bravo/Grande watershed unite all sorts pilgrims: workers, locals, the faithful, and tourists, seeking cures, water, identity, fun, rest, or a cool oasis in the desert. Despite their diverse origins, all identify with the rituals that provide color, atmosphere, sound and material evidence of the traditions that have taken root in the north during the last three centuries. These *fiestas* have a lot of Mesoamerican elements, but also now include local creations. They continue to be deeply popular locally and regionally despite having little promotion, and they contrast with the commercial *fiestas*, and those that have been appropriated by television, the institutional propaganda of the church, or the Mexican state.

8. Who owns the traditions?

Many of the dancers that participate in these celebrations are the sons and grandsons of peasants and farmers who live in the towns of Tamaulipas, Nuevo Leon, Coahuila, Chihuahua, Zacatecas, San Luis and Jalisco. Many others are migrants who have moved north of the border. A few of these people recognize themselves to be successors to the Tlaxcaltecan. They continue to participate in the irrigation systems built by their ancestors and, despite the isolation in which they have lived, are proud and happy to share their beliefs and traditions. But beyond recognizing pride in these traditions, today there remains an enormous amount of wealth and potential that can be tapped to benefit them. Where there are dances and processions, religious fiestas, culinary traditions and a regional accent to the language, there is also a material cultural base in which the Mesoamerican heritage of the Tlaxcaltecan can be found. Of particular importance is the botanical heritage recognized today by herbal medicine, the germplasm of fruits and vegetables, and the irrigated agricultural systems that continue to support this biological heritage.

A good example of the value of this heritage can be found in the grapes of Parras, Coahuila, which, because of their particular qualities as well as their isolation, were saved from the *Phloxera* epidemic that devastated Europe. European wine production was rebuilt by bringing new root stock from Parras, among other places, and grafting it to European varieties. This technical miracle was made possible because the Tlaxcaltecan pioneers bred European varieties with heartier and more resistant indigenous American varieties. An obvious question arises from this case: Who has studied the genetic capacity of these grapevines, or the wild pecans that flourish in this zone? Where are the botanical collections and gardens dedicated to their study and reproduction? The value of these resources is not only scientific, but also commercial. While advances in biotechnology have enabled the isolation and reproduction of genetic material and facilitated its sale, in Mexico there is not even a registry of such resources let alone a project to benefit from them. The Tlaxcaltecan of the borderlands were expert horse breeders, as well as producers of fruits and milk products famous throughout the region during the last three centuries. These traditions remain an important fund that could be used to the advantage of their custodians, who would be happy to see their traditional products enter to modern markets, and to benefit from this encounter.

The productive systems that exist in the borderlands can be modernized and technologically enhanced, and as the example of candy production in Linares, Nuevo Leon shows us, can be organized to take advantage of economies of scale. But beyond the production and sale of finished commercial products, there exists a

wealth of genetic and botanical resources that must be studied in the plants, cacti, shrubs and fruit trees that have been cultivated and improved over the course of four hundred years. The same can be said for the humble goats and sheep, direct heirs of those brought from Spain four hundred years ago. We need look no farther to find the inheritance given by the pioneers from central Mexico to today's rural dwellers of the borderlands, and to the modern economy. These resources could be put to use improving the lives of many humble residents of the arid borderlands. Another example shows what can happen if we don't make an effort to put these resources to use for the benefit of their custodians: the pioneers introduced pecans to the borderlands, but those who have enjoyed the most success in producing them commercially are not the ancestors of the Tlaxcaltecs, but rather the agribusinesses of Texas.

9. Reflections on the water culture of the Rio Bravo/Grande

After having discussed at such length the rituals, celebrations, irrigation systems, agriculture, germplasm and developmental challenges and promises of the borderlands, I should point out that what has been discussed here as the "Tlaxcalan North" (the promised Nueva Tlaxcala or Yancuic Tlaxcalan), is mostly an analytical concept, because the peasants of the borderlands are no longer morally or physically Tlaxcaltecan. Rather, they are the heirs to a genetic and cultural legacy that dates to the sixteenth century, spread throughout the borderlands as those original Tlaxcaltecs migrated to the northern New Spain, and from there multiplied and colonized Coahuila, Nuevo Leon, Tamaulipas, New Mexico, Chihuahua and Texas. Four hundred years later these descendants of Tlaxcaltecs have, through processes of migration and mixing, also become the descendants of Spaniards, Arabs, Jews, Africans, Pueblo Indians, Apaches, hunter gatherers, Otomies, Tarascos and other indigenous groups. From the examples provided, it is also clear that herbivore culinary traditions have changed greatly with the inclusion of meat and milk from livestock, as well as prickly pear, pine nuts and pecans.

Nevertheless, there is a common heritage among those descendants of the original central Mexican colonists. Two hundred years after colonization this legacy became the base for livelihoods based in irrigated agriculture and ranching, as well as for political cultures and loyalties that contributed to the formation of the Mexican nation-state in the 19th century. Thus in northern Mexico the Tlaxcaltecs developed borderland cultural strategies: they became soldiers, artisans, horsemen, shepherds and ranchers, and farmers of oases, drylands and irrigation systems. Despite the passing of the years and all the socio-environmental changes, there are common patterns and shared riches that we must study and conserve for future generations. It is, furthermore, our obligation to stimulate pride in and respect for this Tlaxcaltecan border heritage, especially in regards to the use and management of that resource which forms the material basis for this heritage: water.

Cultural sensitivity on the part of scholars and functionaries is necessary in order to respect the knowledge and values of all those who share the water of the Rio Bravo/Grande, and to include their many different perspectives in the process of administering the resource. This respect for the diversity of cultures and opinions holds true as well among intellectuals and politicians involved in the administration of the waters of the borderlands. Good will and humility can serve as a style for presenting arguments and opinions, but it is even more important to recognize the limits of our opinions. It is, of course, natural among people who agree to find common cause, but the reasoned arguments of those who defend other points of view must not be discarded or ignored. This is especially relevant for understanding and managing the political struggles over hydraulic projects and allocations in the borderlands. Social science provides the methods, global perspectives and conceptual instruments useful for studying the institutional, cultural and ritual configurations that provide consensus for such projects and allocations. Examples of movements built of a diversity of perspectives are those organized in New Mexico around the symbolism of "Todos por el Agua." Here the authorities of the Pueblo Indians, the state governor and the mayors of the main towns such as Santa Fe Albuquerque, El Paso participate in a symbolic tour of places where the water of tributary rivers come together in the upper Rio Bravo/Grande. The people upstream send water to the people downstream as far away as el Paso Texas, passing the water hand by hand and celebrating this human chain with rituals and festivities (Rodriguez 1996; Rodriguez 2002).

In these movements a great array of contributions co-exist, from technical solutions and administrative reforms, to proposals of how to generate a new culture of water among users and residents of both sides of the border. With these kinds of movements we see a search for consensus; for categories and thoughts shared among diverse social groups that can either block or enable a determined "technical" action. The heirs to the Tlaxcaltecan water traditions and systems have made a decision to defend their water, their way of life, their culture and resources. This force is what unifies all the *acequia* users of the Rio Bravo/Grande, from its birth in the Colorado town of Creedle in the Rocky Mountains, to its passage through the binational Rio Bravo/Grande delta. It is fundamental to designate water for urban, domestic uses in the towns and cities of the region, but it is transcendently important to conserve the *acequias* that enlarge the riverbanks, provide habitat for native species, conserve the biological and genetic fund of the region, and facilitate the culture of water among the region's inhabitants. These values are shared across the modern national divide, unifying the

borderlands in favor of life and greenery. For its scope and transcendent importance, the culture of water in the Rio Bravo/Grande is a fact that can no longer pass unrecognized.

The cultural inheritance of the Mesoamerican peasant colonizers is, today, expressed as *norteña* culture, border culture, Tex-Mex, Southwest cuisine, and in a host of other artifacts and expressions. The heritage is there, regardless of the name used. But alongside the traditions of tastes, sounds and smells exists the material inheritance of the small-scale desert irrigation systems. Today this technology provides us with lessons that can influence the intensive forms of cultivation that have found a niche market in the region for foodstuffs and herbal medicines, such as permaculture and organic or biointensive agriculture. From this perspective, the borderlands water culture offers a vehicle for assuring biodiversity and environmental sustainability at the same time as providing livelihoods. The rituals will continue to be practiced wherever small-scale irrigation systems continue to carry water to the fields, nourishing trees and plants and providing a decent and pleasant way of life for the people who conserve them.

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Abstract

The Mexico-US border region is home to a particular hydraulic tradition with important social, cultural and environmental dimensions. This article discusses the ways that European, indigenous and mestizo colonists from central Mexico reshaped the borderlands as they molded Mesoamerican irrigation systems to the arid landscapes of the region. Small-scale irrigation systems conserve humidity and protect against heat and cold, and allow the reproduction of plants that constitute an important source of biodiversity, as well as a viable economic strategy for small-scale farmers. Religious festivals and rituals, together with social organizations, bring people together in communities around these irrigation systems. The author argues that these traditions are alive and well in many places, and constitute a shared inheritance of sustainable adaptation for people on both sides of the national-state divide.

Key words: Mexico-US border, Rio Bravo/Grande, water rituals, *acequias*

Resumé

La région frontalière américano-mexicaine porte une tradition hydraulique particulière, avec d'importantes dimensions sociales, culturelles et environnementales. Cet article traite la façon dont les colons européens, les indigènes et les métisses du Mexique central remodelé les régions frontalières au nord. Ces groupes ont porté leurs systèmes d'irrigation mésoaméricaines, adaptés afin qu'ils fonctionnent dans des paysages arides de la région frontalière. Les systèmes d'irrigation à petite échelle conserver l'humidité et protègent contre la chaleur et le froid. Ils permettent la reproduction des plantes qui sont importantes pour la biodiversité, ainsi que d'une stratégie économique viable pour les petits agriculteurs. Les fêtes religieuses et les rites, en collaboration avec les organisations sociales, rassembler les gens dans les communautés autour de ces systèmes d'irrigation. L'auteur fait valoir que ces traditions sont vivantes dans nombreux endroits, et constituent un héritage commun de l'adaptation durable pour les personnes des deux côtés de la frontière.

Mots clés: Frontière américano-mexicaine, Rio Bravo/Grande, les rituels de l'eau, *acequias*

Resumen

La región fronteriza entre México y los EUA es hogar de una tradición hidráulica con dimensiones sociales, culturales y ambientales importantes. Este artículo explora las formas en que colonos europeos, indígenas y mestizos originarios del centro de México, transformaron la región fronteriza al adaptar sistemas de irrigación Mesoamericanos a las áridas tierras de esa zona. Los sistemas de irrigación de pequeña escala construidos por aquellos colonos aun existen hoy en día, y representan un patrimonio importante de los dos países. Estos sistemas hidráulicos conservan la humedad y protegen en contra del calor y el frío, permitiendo la producción de plantas que son una fuente importante de biodiversidad, así como una estrategia económica viable para pequeños agricultores. Festivales y rituales religiosos, junto con organizaciones sociales, dio pie al surgimiento de comunidades alrededor de los sistemas de riego. Se propone que estas y tradiciones siguen vitales y funcionando en muchos lugares, y conforman una herencia compartida de adaptación sustentable para la gente de ambos lados de la división entre los estados nación.

Palabras clave: la frontera México-Estados Unidos, Río Bravo / Grande, rituales de agua, *acequias*