

Exploring Water Consumption Using a Gender Continuum: The Case of the American West

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EXECUTIVE SUMMARY

This paper focuses on both exhaustive and non-exhaustive consumption of water in the arid American West (e.g., irrigating a field and river rafting, respectively). We explore how decisions surrounding the consumption of this natural resource benefit from the inclusion of gender-related attributes. This paper contends that the consumption decisions regarding such a complex good as water reflect larger cultural values and norms, including gendered constructs. It suggests that understanding the deep cultural values implicit in natural resource decisions (like water consumption) may improve marketing's understanding of the process.

The term gendered constructs will be used to capture social notions of attributes that are deemed "masculine" or "feminine," not what is male or female. We use the terms masculine and feminine to describe aspects of the *relationship* humans have with water. Our discussion extends previous thinking about the types of relationships between humans and nature to include regional geography, norms and laws.

We build on previous literature to present a composite of gender-related attributes that tend to cluster together in American culture and have been identified in other studies. Our *sense* of certain attributes being associated more with one gender than the other has grown out of deeply embedded cultural norms, behaviors and beliefs. Some of the attributes that cluster with the notion of masculinity, which we refer to as the masculine construct, are outward, political, square, straight, assertive, individualistic, controlling, hard, and technical. Some of the attributes that are cluster with the notion of femininity, which we refer to as the feminine construct, are inward, private, circle, flowing, submissive, communal, controlled, soft and non-technical.

We argue that nature itself is not gendered, but that it is the manner in which individuals and society encounter or interact with nature that has gendered characteristics. We build upon these notions to develop our thesis. This thesis contends:

- During the last 200 years in the arid American West, the norms and laws around water evolved in a manner which embodies masculine values such as individual ownership, the primacy of production as the best use for water and the overall appeal of controlling natural forces.
- This system of norms forms a patriarchy of relationship to water in which masculine ways of relating to water are powerful and embedded and dominate feminine ways of relating to water.
- Consumer interpretation of promotional materials using water in their visuals will reflect these deeply held notions of gendered ways of relating to water.
- Research on trends away from normative behavior concerning water, say towards conservation or ecological protection, may be enhanced through application of these gender-related constructs.

As an example of our inquiry, contrast sitting in a verdant grotto with building a dam. The quiet grotto has many feminine attributes and the dam has many masculine attributes. However, the water caught behind a dam can be used to grow food and support the more feminine dimensions of nurturing, food preparation and domestic maintenance. Pressing further, we explore who actually has access to the reservoir of water. Is the water a common good that is allocated proportionally to all, or do individuals hold rights to the water? What happens to rights of access and exchange in times of scarcity?

Pursuing this discussion to the level of ownership and exchange exposes fundamental norms and beliefs a society has about its relationships to a natural resource such as water. We trace how the American West evolved a complex set of legal doctrines governing water rights with strongly masculine attributes that now underlie all other consumption activity in this region. Our line of questioning asks how culture and its values influence and shape the landscape instead of asking the more traditional question of how landscape influences a particular culture.

We develop our theory through five sections. Together these five sections develop the notion of applying gendered constructs to one particular natural resource, water, and suggest how the constructs can be used to suggest further consumer research.

Section 1 outlines how the foundation for a masculine relationship with water in the American West emerged when individual ownership of water rights was permitted and became synonymous with using water for production (either industrial, agricultural, or for population growth). We investigate the collision between established societies that embraced a more feminine attitude towards natural resources with an influx of settlers who developed a more masculine perspective on ownership of natural resources. The social and political factors that enabled the new masculine system to overturn the established feminine set of water laws are detailed.

Section 2 traces how the belief that untamed water was dangerous, and not productive, led to wide support for Federally financed large dams. These dams reduced the destructive nature of water and facilitated ownership. Sections 3 and 4 bring together several examples of how gender constructs associated with water can be used to bring an added dimension to marketing analysis of materials promoting the West. Section 5 suggests that contemporary trends to renegotiate the underlying power structure of water may be clarified using gender constructs. This section introduces gender constructs to the ongoing discussion of how marketers may frame promotional messages to encourage behavior that enhance the common good, such as water conservation.

Together these five sections develop the notion of applying gender-related constructs to one particular natural resource, water, and suggest how the constructs can be used to further consumer behavior and public policy research. Consumption of a natural resource relies on access, which raises the question of who has the access, power, and control of the resource. In a society in which power, control domination and productivity are closely linked to other gendered attributes, it is not surprising to find the human relationship to a natural resource reflecting these values. Gender-related constructs open a new level of understanding of the way in which resources are consumed.

Exploring Water Consumption Using a Gender Continuum: The Case of the American West

The notion that Nature provides and sustains us, while simultaneously presenting people with a powerful, unpredictable force is shared across the globe. There are many natural resources that humans consume, such as oil and gas, timber, beautiful views, hikes in forests, water and air. Some forms of consumption are exhaustive (e.g., drilling for oil), while others impact the surroundings in a less exhaustive way (e.g., visiting National Parks). We explore how analyses of decisions surrounding the consumption of natural resources benefit from the inclusion of gender-related attributes. In this paper we will focus on both exhaustive and non-exhaustive consumption of water in the arid American West (e.g., irrigating a field and river rafting, respectively). This paper contends that the consumption decisions regarding such a complex good as water reflect larger cultural values and norms, including gendered constructs.

We believe decisions about natural resources reflect values, values reflect strong cultural norms and beliefs, and that some of these norms and beliefs can be understood using archetypal masculine/feminine paradigms. Our intent is not to imply that the human decisions to consume/not consume or alter/not alter natural resources are inherently flawed, nor that such decisions represent some sort of exploitation of females by males. Instead, we suggest that understanding the deep cultural values implicit in natural resource decisions (like water) may improve marketing's understanding of the process.

The term gendered constructs will be used to capture social notions of attributes that are deemed "masculine" or "feminine," not what is male or female. We use the terms masculine and feminine to describe aspects of the *relationship* humans have with water. The use of the term relationship in this setting captures how humans think about, experience and value water. For example, a form of relationship with a natural resource that is closer to the feminine end of the gender continuum might emphasize communal ownership, while a masculine form would emphasize individual ownership (see Table 1). As we explore the relationship people have with water in the American West and consider the gendered aspects of human relationship to this natural resource, the values and norms of American society suggest that the drive for economic advancement coupled with resource scarcity will lead to masculine types of interactions dominating feminine ones.

Other researchers have examined differences in how males and females use the land, or differences in access to natural resources. However, this literature largely avoids considering human relation to nature itself as gendered. This paper will present a perspective on natural resource consumption that is rooted in the idea that human relationships to aspects of nature may be considered as gendered constructs *in and of themselves*. It is our hope that by applying a gender construct to the ways that humans think about natural resources we may present some new opportunities for exploring the marketing and consumption of these assets.

WATER IN THE AMERICAN WEST

We have chosen water as the natural resource we will study in this paper. Most societies developed in geographic regions that were defined by their access to water. Because water is so primal, it has a long, complex history in every culture. References to water, wells or oases appear more than 200 times in the Bible; Muslims believed that all the sweet waters of the planet originated beneath the sacred Dome of the Rock (de Villiers 2000). Water appears in religious ritual as a medium for immersion and purification, and individuals who can identify the location of underground water are called water "diviners". In the Dogon tribe, in arid West African Mali, newborns are given the gift of speech by being sprayed gently with a mouthful of water by the midwife (de Villiers 2000). The Aborigines of Australia tell how the world was created during Dreamtime and the first ancestors awoke in waterholes that were sung into being (Chatwin 1987, see also <http://www.arthistory.sbc.edu/sacredplaces/water.html>). In one of the Navajo creation stories as the Holy Beings emerge into what is now our world, it is covered with water (see the Fifth World section of http://www.library.arizona.edu/southcorner/nav_beginning.html). Water is a heavily laden symbol in all cultures; it follows that the cultural meanings of water will impact the norms and values a society has for its consumption.

In this paper we will limit our application of gender constructs to the consumption of water during the last 200 years in various settings in the arid portion of the Western United States (this encompasses most of the geographic areas in the U.S. west of and including Montana, Wyoming, Colorado and New Mexico). We have chosen this setting for two main reasons. First, although this area has been inhabited for over ten thousand years, the last two hundred years provide the stage upon which the more communal, holistic water values shared by the Native Americans and the early Hispanic settlers collided with the individualistic, agentic values of the Westward expansion (Brown and Ingram 1987; Hundley 2001; Pisani 1992; Wilkensen 1992; Worster 1985). These texts trace the history, legal and political developments and negotiations for control over and use of water during this time. They do not explicitly link these events to gendered constructs though, which closes the door on a potentially rich area of gender and consumption research. (Authors such as Brown and Ingram 1987 and Greaves 1998 discuss disparities in power; we build on such work by including the structure of gender in the analysis.)

The second reason we use the American West to apply gendered attributes to natural resource consumption is that during westward expansion and regional growth the U.S. developed a relationship with water that was unprecedented in the world (Postel 1997; Reisner 1986). Although the vast majority of the Western United States is a desert, this region is now economically vibrant and the most rapidly growing region of the country. Los Angeles, a city of 3.6 million, is actually drier than Beirut, yet the city is known as an oasis in the desert with palm trees and swimming pools. Water for this city travels hundreds of miles from Northern California and the Colorado River basin (Hundley 2001; Postel 1997; Reisner 1986). Los Angeles is typical of other Western American desert cities and the success of this region represents a remarkable feat of water consumption. This economic vitality set an example for other nations with arid regions. As a result, in addition to exporting dam building technology and know-how, the Western United States exported a model for how a growing society may address its need for water (Zeller 2000). Because of this, we believe understanding the American model for developing and using water will assist consumer and public policy researchers in regions outside the Western U.S.

USING THE CONTINUUM OF GENDER

If we use gender to provide an additional dimension to our understanding of natural resource consumption, we must call upon some fairly broad assessments of certain behaviors and attributes as being either masculine or feminine. There is evidence that Americans do engage in a dualistic attribution of sounds, toys, clothing, forms of discourse and so on, as either masculine or feminine or appropriate for males or females (Keller 1983; Lakoff 1975; Pavia and Costa 1991). We wish to avoid this simple gender polarization, and consider consumption behaviors as reflections of a continuum of deeply held beliefs about gender, power, authority, relationship and dominion. As noted in the Introduction, the two gender categories may not even be the best monikers for the end points of the continuum (Bradway 1995), but we will use them because these titles are often called into play. A collection of attributes associated with the poles of this continuum that we will call masculine/feminine appears in Table 1. The attributes in Table 1 reflect a composite of characteristics identified in a variety of other studies. These researchers identify a consistent constellation of gender-related attributes that tend to cluster together in American culture.

We believe that our *sense* of certain attributes being associated more with one gender than the other has grown out of deeply embedded cultural norms, behaviors and beliefs. For example, flowers, floral prints, floral scents, and floral names (e.g., Rose and Iris) are associated with females and the feminine in American culture. This is an association between an element that is generally soft, curved, natural and nurturing with females and the feminine. This association reflects the interrelated feminine construct in Table 1 and simultaneously reinforces it. This same reflexive relationship between reinforcing the masculine construct in Table 1 and being a result of it is evident in the classic image of the explorer. He is male, an adventurous explorer, individualistic, hard angular and often pictured gazing over the land to be discovered. These examples are meant to demonstrate our belief that the constructs in Table 1 are a reflection of American culture,

and that they are frequently reinforced by American culture, but that beyond this, these gender constructs provide no particular truth about individual men or women¹.

TABLE 1
The Collection of Attributes Forming Two End Points for the Gender Continuum

Masculine	Feminine	Reference
Yang	Yin	Bradway 1995
Left brain	Right brain	Bradway 1995
Conceptual	Participational	Casey 1993 pgs. 132-145
Outward	Inward	Casey 1993 pgs. 132-145
Urban/Political	Domestic	Casey 1993 pgs. 132-145
Public/External	Private/Internal	Casey 1993 pgs. 132-145, Firat 1994
Square/straight	Circle/curved	Casey 1993 pgs. 132-145, Pavia and Costa 1991
Barren	Lush	Costa 1998
Active/Actor	Passive/Acted Upon	Firat 1994
Assertive	Submissive	Firat 1994
Owner	Property	Firat 1994
Cultivated/Man-made	Nature	Firat 1994
Consumer	Consumed	Firat 1994
Focused	Holistic	Keller 1983
Separating subject and object	Merging	Keller 1983
Individual/Agentic	Communal	Keller 1983
Dominating/Controlling	Nurturing	Costa 1998, Keller 1983
Hard	Soft	Pavia and Costa 1991
Angular	Flowing	Pavia and Costa 1991
Technical	Non-technical	Pavia and Costa 1991
Gazer	Gazed at	Rose 1993, pgs 3-4

Myths exist in many cultures reflecting the idea that the gender of a natural resource depends on how one encounters it. For example, there are various legends and stories about rain and moisture in the Navajo culture. One song is the Water or Rain Chant in which a distinction is made between Male-Rain (storms, thunder and lightening) and Female-rain (gentle

¹ Of course, counter examples can be found for every item in the list of “feminine” or “masculine” qualities (e.g., see Petersen 1998 page 84 for a critique of the nature-culture dichotomy). For example, while being dominant may be seen as a primarily masculine quality, and submission as feminine, many aggressive, male dominated martial arts forms teach that the best form of physical engagement is disarmament rather than attack and the attempt of a mother grizzly bear to nurture her young often leads to violent attack.

showers) (from Curtis 1968 pgs 365-366 quoted in <http://www.stateoftheartist.com/legends/rain.html>)². The rainwater is given its gender associations based on the Navajo's perceptions and experiences of the rain. As another example, in Greek mythology, Oceanus was one of the twelve Titans; he ruled the ocean that circled the earth and formed its outermost boundary. He was father to 3000 daughters known as Oceanids. The Oceanids were the spirits and goddesses of streams and springs. This mythology reflects a cultural acceptance of the smaller, more accessible aspects of water as female, and the large delimiting body of water as male.

We draw from these stories in which gender is ascribed to elements of nature to our own proposal in which the natural resources themselves are neither masculine nor feminine, but the relationship one has with the natural resource carries the masculine or feminine characteristics. For example, the concept of not interfering with nature – leaving it in an untouched state - is a feminine form of interaction. In this sense, the *experience* of pristine nature is associated with the feminine because the experience is available courtesy of a feminine style of interacting with nature. The rest of this analysis is premised on the idea that, water, in and of itself, is neither masculine nor feminine; the gender associations of water are available when humans interact with or place value on water.

APPLYING THE GENDER CONTINUUM TO WATER AS A NATURAL RESOURCE

Given Table 1 as a reflection of the sense that American culture has about gender, we now examine how masculine or feminine constructs relate to natural resource consumption. We propose the manner in which individuals, groups or societies experience and think about a natural resource usually reflects a more masculine or a more feminine relationship. For example, sitting in a verdant grotto is consistent with the feminine construct in Table 1, while damming a river to generate hydropower is consistent with the masculine construct. In response though, one may note that the water caught behind a dam can be used to grow food and otherwise sustain society by providing water for drinking and household use. In this way dams support the more feminine dimensions of nurturing, food preparation and domestic maintenance. However, the astute marketer may press the inquiry further, asking who actually has access to the reservoir of water. Is the water a common good that is allocated proportionally to all, or do individuals hold rights to the water? What happens to rights of access and exchange in times of scarcity?

Pursuing this discussion to the level of ownership and exchange exposes fundamental norms and beliefs a society has about its relationships to natural resource such as water. As detailed in Section 1 below, the American West evolved a complex set of legal doctrines governing water rights that now underlie all other consumption activity in this region. As Hundley (2001) notes in the Preface to his history of water in California, the most obvious theme in the history of western water is "the dynamic interplay between *human values* and *what human beings do to the waterscape*" (pg xviii). This means that our line of questioning asks how culture and its values influence and shape the landscape instead of asking the more traditional question of how landscape influences a particular culture.

For example, a culture that values masculine attributes of individuality and productivity will construct a legal and political environment that supports individual ownership and links that ownership to productive output. This perspective could lead to large privately owned water works or rights of ownership that are tied to productive use. A culture that values more feminine attributes such as equity and common welfare will support a division of natural resources that is perceived as fair and beneficial to all. In the event of a shortage this perspective could lead to across the board proportional reductions in available water.

² Interestingly, Female-Rain is also associated with being pollen covered, linking the life-giving, life-sustaining, reproductive nature of this rain. As an example of another culture that identified water with both genders, the male Egyptian god Hapi was portrayed with breasts, the northern Nile emanating from one breast, the southern Nile from the other (de Villers 2000).

While few regions think about, experience and value their natural resources in a purely masculine or a purely feminine way, the basic notions of ownership and exchange may be predominately masculine or feminine. These provide a cultural backdrop against which other consumption activities take place. Circling back to the original contrast described in this section, that of sitting in a verdant grotto or of damming a river, the meanings attributed to these activities will be interpreted within a culture that places its emphasis most heavily on either masculine or feminine attributes. If the culture values masculine attributes our thesis suggests that even a more feminine relationship such as sitting in a grotto is understood differently if the grotto is on one's own property or if it is part of a public National Park. Similarly, in a society that values feminine attributes like communal benefit, even a masculine activity like the construction of a dam may not suggest more opportunities for individuals to gain water rights, but may signal the potential for an overall increase in public welfare.

Keller suggested "the emphasis on power and control so prevalent in the rhetoric of Western science ... is invited by the rhetoric that conjoins the domination of nature with the insistent image of nature as female" (1983, page 118). Others have rejected the vision of nature as female, suggesting "land is not gendered female. Instead, it is beyond gender – a simulacrum of spiritual emotions" (Torgovnick 1996, page 84). We believe that the basic tenets of ownership and exchange of a natural resource such as water have gendered attributes. These laws and norms lay a foundation for relating to a resource like water – they forecast how the resource will be used, how the resource is thought about and the types of experiences individuals can have with the resource. Subsequent consumption of a resource like water will have masculine or feminine attributes. The meaning that is attached to various types of consumption (or non-consumption) in the culture rests on the gendered attributes of the normative and legal foundation the society adopted.

In specific, the thesis we develop contends

- During the last 200 years in the Western U.S., the norms and laws around water evolved to embody masculine values such as individual ownership, the primacy of production as the best use for water and the overall appeal of controlling natural forces.
- This system of norms forms a patriarchy of relationship to water in which masculine ways of relating to water are powerful and dominate feminine ways of relating to water.
- Consumer interpretation of promotional materials using water in their visuals will reflect these deeply held notions of gendered relationships to water and other natural resources.
- Research on trends away from normative behavior concerning water, say towards conservation or ecological protection, may be enhanced through application of these gendered constructs.

We develop these ideas in the next five sections of this paper. The first two sections provide an example of using gender constructs to analyze large changes in social thought about natural resources. Section 1 traces the emergence of strongly masculine means of relating to water in the American West. Section 2 explores the widespread social support for large dams, the presence of which enabled stunning alteration of the Western landscape. Sections 3, 4 and 5 open questions of how researchers can use this type of analysis to explore marketing issues such as tourism or conservation.

SECTION 1 THE EMERGENCE OF STRONGLY MASCULINE-CENTERED VALUES REGARDING WATER IN THE AMERICAN WEST

In this section we consider some of the fundamental notions that emerged during the westward expansion regarding water. The motivation for this is to show how gender constructs can frame large social and legal changes and to lay the foundation for the more individual consumer research suggested in Sections 3, 4 and 5. The laws and norms surrounding western water are remarkably complex and have spawned research in law, political science, sociology, environmental science, and economics. The tensions in the West brought on by the scarcity of water helped to define what it means to own water in this region. Current western water norms and laws are clear that water rights can be owned if the water is being put to "beneficial" use. Beneficial use is itself a slippery term, but has come to be interpreted as meaning mining, agriculture, industrial, municipal, domestic, stock raising and hydropower (Hundley 2001; Wilkinson 1992; Worster

1992). Individuals with rights to various stream flows can also lose these rights if the water is not put to beneficial use in a manner that meets these notions (see de Villers pages 62 – 64 for an example of contemporary claims of abandonment).

This notion of water ownership, which goes by the name "prior appropriation," began during westward expansion (about 1840) and has evolved through contemporary times. Prior appropriation can be grossly simplified into a unifying theme of "use it or lose it." Prior appropriation stands in sharp contrast to both western Native American and Native Hispanic attitudes about water³. Spanish water law prevailed in the Hispanic communities before European settlers arrived and was fairly communal (Bates et al. 1993; Brown and Ingram 1987; Hundley 2001). For example, under Spanish water law, the right to particular water required the property owner to use what he or she needed and not to waste the rest. A neighbor could not be made to go wanting for water if the owner had excess water, simply because the owner had priority rights. Similarly, Native Americans understood that particular tribes occupied specific geographical locations, and this conferred access to particular resources. For example, in 1833 Black Hawk, chief of the Sauk and Fox Indians said, "My reason teaches me that land cannot be sold. The Great Spirit gave it to his children to live upon, and cultivate as far as is necessary for the subsistence. Nothing can be sold but such things as can be carried away" (Black Hawk 1997, see also Arapooish 1988). That is, the benefits of the land could accrue to the tribes that inhabited it, but no one owned the land itself.

As another example, Spanish settlements in California used Spanish water law dating from medieval times which said that the only water anyone, even a community or pueblo could own, was water originating on the owner's property (e.g., a spring or well). Between 1810 and 1846, when the pueblo of Los Angeles repeatedly contested the demands that the newer mission, San Fernando, put on the Los Angeles River, the complaint was framed in terms of equity. Los Angeles claimed that San Fernando was not behaving "fairly" in taking the amount of water that they did. As with most other Hispanic water disputes during this time, each complaint was resolved by embracing ideas of equity and the common good (Hundley 2001). As the doctrine of prior appropriation emerged between 1850 and 1900, political and business leaders recognized an unprecedented opportunity to secure their economic future by cementing their rights to various water flows. Long-standing norms and values were overturned as the social climate sanctioned more individualistic values and a new, masculine paradigm for owning the rights to water emerged in the American West. Proof of this change is evident in documents showing that in 1874 Los Angeles claimed all rights to the water in the Los Angeles river in order to have enough water to thrive and grow as a city. They claimed these rights even if this meant depriving existing upstream users of access to the water. This claim began a massive multi-year effort that secured for Los Angeles the water it needed for growth to its present size.

Using the gender continuum, societies that embraced a more feminine attitude towards natural resources (Spanish settlements, Native American and indigenous Hispanic) collided with an influx of settlers who developed a masculine perspective on ownership of natural resources. Hundley (2001) describes this as the "appearance of a new kind of social imperialist whose goal was to acquire the water of others and prosper at their expense" (pg xix). Interestingly, the settlers of the westward expansion did not bring this strong masculine perspective with them – at the time the Eastern United States operated under a system of riparian water law (Pisani 1992). Riparian law does not even consider that one individual might own all the water in a river because in the Eastern U.S no one needed an entire stream the way Western settlers did.

It is intriguing to ask how the doctrine of prior appropriation gained such widespread acceptance and supplanted years of a more feminine approach to water rights. The requisite ingredient for this rapid transformation was the ascendancy of masculine social norms and values that quickly replaced more feminine communal values. The evolving culture of westward expansion had many masculine attributes – it was rough and tumble, it promoted individualism, and was motivated by a national desire to tame and populate the land (Penaloza 2000; Ward 1996). The types of people who were drawn to the challenges of the west were often attracted by the possibility of individual betterment, and the laws of the

³ Some settlers, such as the Mormon pioneers did not practice individual ownership of water when they first arrived in the West in 1847, instead believing that the church owned the water (Fradkin page 133). However, under pressure from the expanding United States, they dropped their plans for cessation and joined the U.S. As they recognized the enormous expense Western waterworks demand, they took advantage of their status as part of the union and became some of the greatest advocates for Federally financed dams (Reisner 1986).

land were allowed to evolve far removed from the courts of the Eastern United States. The number of settlers from westward expansion also quickly exceeded the existing Hispanic and Native American residents. In the face of scarcity, these factors combined to move the Western American legal and social system towards a individualistic, masculine model for water that permitted individual ownership and demanded productivity to legitimize that ownership.

We see theoretical questions here in consumer behavior and public policy that extend beyond understanding water consumption in the Western U.S. One such question is how to distinguish between consumers, groups or societies that gravitate toward communal/feminine ownership or individual/masculine ownership of natural resources in settings of scarcity. This could include questions of identifying people who support open space versus community development, or private property development versus protecting endangered species on the property. In the case of water, a marketer or policy maker may wish to communicate with groups that support notions of private ownership (and requiring the beneficial use of water to maintain ownership rights). Or the marketer may wish to communicate with people or groups who favor notions of leaving water in an untouched state. If attitudes towards the environment are associated with deeply embedded gender constructs, as we propose, this knowledge may be useful in segmenting, targeting or communicating with various groups.

SECTION 2 CONTROLLING AND MANIPULATING WATER WITH LARGE DAMS AND WATERWORKS

In this Section we use gender constructs to explore the role of large dams in the Western American relationship to water. These dams accelerated the adoption of existing masculine water values. Reflexively, dams both relied on existing forms of masculine relationship and strengthened this approach to water.

A notable feature of the American West is that water is rarely where one needs it, when one needs it. Water is locked in the snow in the mountains during the winter, which melts quickly in the spring, followed by a long dry summer. The summer remains hot and dry for weeks, only to be subject to intense thunderstorms leading to flash floods. The spring snowmelt or thunderstorm runoff gathers into long river drainages that wind through inaccessible canyons. Settlers quickly realized that the only way to use this water was to store it and move it to settlements, fields and grazing lands. Although the settlers attempted to develop waterworks privately (to claim the water themselves and then sell it to others in the area), the physical size of the drainage basins and the occasional torrential water surges in this geographic region proved financially prohibitive.

The problem of collecting water across ample geographic area, with sufficient funding, was eventually solved when the Federal government started building large western waterworks projects (Reisner 1986; Wilkinson 1992; Wooster 1985). During the first half of the twentieth century, even while building the infrastructure to collect and distribute to water with tax dollars, the United States government continued to recognize and support individual ownership of water rights. So, while there was a collective effort to build hundreds of small dams and dozens of large dams (e.g., dams such as Hoover, Shasta, Bonneville, Grand Coulee, Glen Canyon, Parker, and Davis), the net outcome of this collective effort was to concentrate access, ownership and power in a few private hands.

The issue of whether untamed nature was/is seen as inherently dangerous is the key to understanding the social support for large dams in the Western United States, and subsequently in the rest of the world. One of the primary arguments used to support dam construction between 1902 and 1970 was flood control; the other arguments concerned means to encourage westward expansion (conquering the wilderness) and the support of small farms (making it productive). The promise of flood control as a rationale for building dams has been used in many locations (e.g., the U.S., Egypt, China and India) (Artisan Entertainment 1998, Reisner 1986, Zeller 2000). Flood control reflects the conflicted view many contemporary people have of nature. On the one hand nature may be peaceful and "natural" and a refuge, but on the other hand nature may be uncontrolled and destructive of our stability.

Large dams provide a dual function: they enable production and they limit the destructive forces of wild, erratic, cyclical waters. They contain the previously free running water behind tons and tons of material, releasing the water in a manner

that produces electricity (usually) and/or then lifting the waters out of ancient curving riverbeds to roll across hundreds of miles of concrete waterways to enable growth and production.

Fundamentally, the ability to control water is the ability to control the reproductive capacity of the land. Together, land and the water provide a fertile environment. However, in an arid region, ownership of land is not associated with power unless one also owns water. Ownership of water in a desert, on the other hand, is the heart of power regardless if one owns land or not. An example of this association appeared in the movie *Chinatown*, which centers on the intrigue surrounding powerful, wealthy individuals in Los Angeles who vie for control over water in the early 1900's. This movie was originally titled *Water and Power* because, as Director Roman Polanski explained, "Water was power. It was money" (PBS 1997).

The social environment from early 1900 to 1970 was strongly supportive of actions that transformed water from a natural resource with many feminine attributes to one with substantial masculine attributes. Water was altered from a cyclic, flowing, curved, hidden natural resource to one that is more predictable, measured, straight, and easy to access. The relationship that humans had with the water became more "masculine" too. Wild water became controlled; water was valued for its ability to produce; the power to decide which land should produce/reproduce was ceded to those with ownership; and ownership was strongly correlated with power and other aspects of social status (membership in dominant social groups, wealth, etc.).

Large dams are currently under construction in many parts of the world (e.g., Lesotho, China and Columbia, see Zeller 2000). The United States exports dam building technology to most of these nations, reflecting and reinforcing the value of controlling and using water for human benefit. In the U.S. there is periodic discussion of whether some dams should be breached; the motivation is usually a desire to protect plant or animal species (notably salmon). However, droughts, floods or electric shortages seem to mute these discussions and no Western dams have been breached yet.

A promising venue for consumer research is to explore the rhetoric behind the communications concerning projects that impact natural resources, both pro and con. How do parties that oppose restrictions on dams, logging, oil and gas drilling portray nature and its forces? For example, where does untouched nature (e.g., a free running river or a virgin forest) sit on a continuum from intrinsically valuable to inherently dangerous or wasteful? How are its perceived attributes communicated to various audiences? Does nature require taming? Is it solely available to sustain human activity? What sorts of activity are "better" than others? We believe that a careful assessment of the communications arising from these dialogs will identify consistent themes that have the sets of attributes falling somewhere along the continuum with the endpoints shown in Table 1 (whether the themes are explicitly identified as gender-related or not).

SECTION 3 IMAGES OF WATER IN SELLING THE AMERICAN WEST

In the next three sections we turn to specific examples of applying gendered constructs to consumer research for exhaustive and non-exhaustive consumption of water.

Kluckhohn and Strodtbeck (1961) proposed three culturally embedded orientations towards nature that have been applied to analyses of marketing promotions: mastery over nature, harmony with nature and subjugation of nature. Our thesis suggests a taxonomy like this will falter unless it is embedded in the shared understandings of the society's broader social constructs. Beliefs and behaviors surrounding water in the American West exhibit all the markers of a patriarchal system (e.g., concentration of power/access, exploitation of those with less power/access, using productivity to justify the system, embedded processes to perpetuate the system) and are embedded in a culture with many patriarchal features (Johnson 1997). Consequently, the symbolic meaning of water in messages that marketers employ must be understood within this system too.

For example, consider the visual image of a fountain. A small fountain in an enclosed courtyard, providing refuge and a gathering spot for a social group, has many feminine aspects. It is private, small and consumes little. A large fountain in

front of a housing development or hotel, that has no access for foot traffic or communitas, has more masculine attributes. Not only is the public fountain technical and constructed (all masculine attributes), it is also a visible marker of wealth and power (masculine attributes associated with water ownership). In a desert the large, publicly visible fountain signals "water to waste" and is even more of a wealth and power marker than having "money to burn." Such a fountain is a well-encoded message of the type of community available in this development, the likelihood of finding high-end homes, the likelihood of finding residents with similar attitudes towards swimming pools and green lawns and so on⁴.

Or, consider typical images that are used in promotional materials (see <http://www.utah.com>, or http://www.travelnevada.com/photo_archive.asp for examples). In some pictures hikers (often solitary) are shown winding through water-carved sinuous redrock canyons or perched overlooking a river. In these images water has an organic form. In this form, water is part of an integrated environment in which the human engages in a holistic experience of self-in-nature. Contrasting promotional materials show scenes such as a raft of excited participants riding river rapids, an extreme skier in action (usually solitary), or jet skiers and water skiers on a dam-formed reservoir. In these latter examples water is part of the natural medium that is being conquered or mastered. As Arnould and Price (1993) found, activities like river running do have a feminine component (e.g., communing with nature). But when humans experience whitewater (as shown in the photographs), it evokes clear masculine attributes such as "testing limits, adventure, risk, and an adrenalin rush" (Arnould and Price 1993). The contrasting masculine and feminine forms of humans interacting with water evoke very different notions of recreational consumption of the West.

Marketers will readily accept that different images used to promote the West will appeal to different aspirations humans may have for their time spent in natural settings. Some aspirations have stronger masculine (M) or feminine (F) attributes such as: conquering nature (M), blowing off steam or excess energy (M), or pushing the envelope (M), and communing with nature (F), forming a shared memory (F), being at peace with oneself and others (F). A promising area of research is to examine how natural resources appear in regional tourism promotion. We speculate that effective marketing campaigns will mirror the human aspiration for their experience in a particular geographic region with the form in which water, or other natural resources, appears in the promotion.

SECTION 4 WATER AND THE QUINTESSENTIAL SOUTHWEST IMAGE

We now turn to a final example of the insight that is brought to marketing analysis by understanding the gendered attributes of a natural resource. One of the enduring symbols of the Southwest is the native woman with her pots, either making them or carrying them. Most often these pots are for water. The olla maiden, as she is called, the young woman carrying a pot of water on her head or seated by her pots, represents a collection of meaning for the viewer. She is female, using a pot (which are made almost exclusively in the southwest by Native American women), to carry water (a life sustaining product) from the source to the home (where she provides this product to her family). Babcock asks "Why has a traditionally dressed woman shaping or carrying an olla (a water jar) become the metonymic misrepresentation of the Pueblo, and why has Anglo American invested so much in this image for well over a century?" (1994, see also <http://www.library.arizona.edu/users/kwilliam/rebecca.html> for an early version of her 1994 article and a large number of photographs that support her thesis). Babcock goes on to use Said's (1978) construction of Orientalism to argue that the American Southwest *is* America's Orient. The Southwest has attributes that can be fit into the "oriental" model: colorful native inhabitants; unique structures for homes; intriguing pottery and artifacts that one could buy or collect; striking jewelry that one could also adopt for oneself; and an image of connection to nature. However, the perspective developed here would suggest that the fact that the maiden has a *water* pot is in itself key. There is a tension of power here in which the vulnerable, young Native American has an item that confers status and power stored in an easily breached container.

⁴ The most extreme example of large public fountains in the desert may be the world's highest fountain, located outside Phoenix in the residential development of Fountain Hills (see photo at <http://www.emol.org/emol/phoenix/fountain.html>). At full operation this fountain circulates 7000 gallons a minute and sits in the center of a 30 acre pond (<http://ag.arizona.edu/AZWATER/arroyo/073fount.html>).

She appears accessible, and ready to share, perhaps unknowingly, her wealth. As a marketing symbol she stands for less powerful people (in this case Native Americans) willingly extending access to the water and other natural resources.

We believe there are fruitful research areas in the exploration of images, from all parts of the world, of "the Other" (in Said's 1978 sense). These images need not be targeted exclusively to tourists. They may also be available in popular commercial art prints (e.g., Gauguin paintings set in Tahiti or O'Keefe paintings in the American Southwest). Are the most popular or quintessential images of "the Other" ones in which natural resources appear in a feminine form or a form that facilitates its transfer from the weaker to the stronger?

SECTION 5 WILL THE PENDULUM SWING BACK?

Finally, we note there is now somewhat of a backlash against the strongly masculine Western relationship to water. Consistent with the perspective we have outlined though, the established dominant groups (i.e., the groups with ownership and access) are not moving to a more gender balanced approach with enthusiasm. For example, in-stream use, wildlife protection, recreational enjoyment and beauty itself are still struggling to qualify as a legitimate use for water. In 1999, the Montana legislature drew up a compact with the Crow nation for division of the Bighorn River. This river currently supports an 18 million-dollar tourism fishing industry in Montana, a state with a poor economy. Nonetheless, the division of the river protects all consumptive rights (i.e., agriculture, industry, urban), with no specific protection for non-consumptive instream flows. In wet years, the consumptive claims will leave enough instream water for the fish, but in dry years the demand with the least priority – the instream flows – could be shorted. (Ochenski 2000)⁵.

As an example of a contemporary negotiation on the local level with masculine/feminine construct dimensions, a 1992 survey of Phoenix, Arizona citizens showed the majority held a very negative opinion of large decorative water features in new housing developments. Local ordinances were eventually passed to ban new fountains seen from the road (i.e., they must be in private space not public); to require catch basins twice the height of the fountain itself (i.e., the fountain cannot be a single upright stream, it must be part of a larger pool); and to require fountains to have devices installed that adapt to local weather, (e.g., shutting themselves off in windy conditions) (<http://ag.arizona.edu/AZWATER/arroyo/073fount.html>). All of these regulations introduce elements of the feminine; they support private/interior water, in a form that adapts to local conditions and is embedded in a watery pool. However, they still depend on hundreds of miles of concrete waterways for the water itself.

Water conservation in the American West presents a particularly puzzling marketing challenge. In this region water conservation has features of both a social trap (behavior that is individually optimal in the short term is harmful to the individual and others in the long term) and a social fence (short term adverse effects prevent individuals from engaging in acts with long term communal benefit) (Shultz and Holbrook 1999). As an example of the social trap, if a hay farmer in the high desert uses water that is heavily subsidized and priced well below cost, in the short term the farmer earns a profit. In the long term, both the farmer and other citizen are harmed as aquifers are drawn down and taxes rise. However, there is little incentive in a culture that places substantial weight on individual success for the individual farmer to incur personal loss simply for the common good. Similarly, as an example of a social fence, the widely held masculine value of individual ownership provides no incentive for someone to conserve water if by not using the water they forfeit their rights forever. Financial incentives, such as allowing an owner to sell his or her conserved water to another group continue to reinforce masculine based values of conservation only where there is the possibility of individual profit.

Shultz and Holbrook (1999) propose that conservation promotions, that is actions that are counter to those induced by social fences and traps, will be most effective when the communication increases knowledge of others in the group, trust

⁵ As another example, in 1989 the U.S. Supreme Court ruled that Native American tribes had the earliest water rights on the Wind River. Later the Wyoming Supreme Court clarified this to mean that the tribes had rights to all the water they were currently using for agriculture, but "cannot leave water in the river to maintain instream flow for fisheries, but can only divert it to meet the state's definition of 'beneficial use'" (Collins and Thunder 2000, page 249).

in others in the group, and details mutually agreed upon solutions. We observe that these features are feminine approaches to group dynamics (e.g., knowing the other members at a personal level, trusting them and wanting a degree of consensus). Placed in a gender framework, Shultz and Holbrook seem to suggest that in a society with strongly masculine values, appeals for communal behavior will work best when they exhibit the qualities of feminine group dynamics.

Based on this analysis we propose the following theoretical consideration. Conservation messages that enable the consumer to simply transfer water from one masculine-valued form to another (e.g., do fewer dishwasher load so we can support more industry moving to our city) will be less effective than messages that transfer masculine consumption to a form of feminine consumption (e.g., if every household did three fewer loads of dishes per month the city would not have to buy the rights to water in a specific lake, drain it and build a pipeline to bring it to the city). We suggest that applying the gender continuum to an analysis of public messages on conservation may illuminate a new dimension of interpretation.

CONCLUSION

In Section 1, we outlined the rapid transition from the more feminine approach to water that existed prior to westward expansion to the masculine approach that has dominated until recent times. We believe that various masculine social attributes such as the desire for individual betterment, and the geographic displacement from Eastern law courts enabled this transformation. Reviewing this history marketers may speculate that when formative laws and norms are dislocated from existing laws and norms, the new approaches will conform to broader social norms. If the broader ethos is oriented towards masculine values, the new laws and norms are likely to embody these values as well.

Section 2 traced how the belief that untamed water was dangerous, and not productive, led to wide support for Federally financed large dams. These dams not only reduced the destructive nature of water, they also leveraged the productive value by extracting a new good, hydroelectricity. Dams reflect and reinforce the masculine values of productivity, although as outlined, dams also enhance the feminine attributes of nurturing and social stability.

The thesis as developed in Sections 1 and 2 can be applied to a number of water issues currently under dispute. For example, one might expect nations with features associated with the feminine – the politically weaker, less powerful, non-dominant, and poorer regions – to struggle in their negotiations concerning natural resources with more powerful nations. In fact this is the case and Greaves raises a question that can be heard in thousands of conflicts around the world. "How can small, culturally distinct, enclaved societies exercise sufficient leverage over the larger, dominant societies that control the world around them in order to protect the water and other resources that make their homeland habitable?" (Page 42)⁶.

Although we cannot provide a solution to weaker negotiating partners, we propose the dominant group has the power it does over water because the manner in which the dominant group relates to water mirrors the manner in which the dominant group defines appropriate behavior. This means, in the American West, the dominant status quo and its subordinate challengers negotiate in an environment that reflects and reinforces the values and behaviors of the established and accepted power structure. Our thesis suggests weaker partners in negotiation must either change the underlying value structure (a daunting task), or frame their needs in terms of the valued attributes (e.g., being productive). If the conflict between the settlements of Los Angeles and San Fernando that was described earlier were a contemporary dispute, we would suggest that claims of "fairness" be eliminated in favor of claims of most beneficial use.

After exploring the birth and development of the masculine approach to Western water we turned to contemporary marketing promotions and considered them in light of this historical evolution. Section 3 brought together several

⁶ The patterns of countries with greater access to ability to exploit natural resources resisting protocols that favor more equitable treatment is widespread (de Villers 2000, Postel 1997). The United States has been in violation of the 1923 Colorado Compact for years. Only a small trickle of the Colorado River remains to enter into Mexico, and the water that does remain is unacceptably salty (Fradkin 1984).

examples of how gender constructs associated with water can be used to bring an added dimension to marketing analysis of materials promoting the West. It is not simply a question of whether a visual shows someone mastering nature or in harmony with nature (Kluckhohn and Strodtbeck 1961). The context within which these events take place and the geography of the viewer is critical to the analysis. A visual that shows someone sitting on a broad green lawn that he owns in the middle of a desert cannot be interpreted as simply a promotion encoding "harmony with nature." Instead it is a statement about power, wealth and individual access to water and land. The analyst must look beyond attributes of harmony with nature, subjugation to nature, and mastery of nature to include the geography and social norms (including gender) that is the fabric of the viewer's life. By encouraging the inclusion of regional geography, norms and laws, our discussion extends previous thinking about the types of relationships one may find in promotional material between humans and nature. Section 4 continues this theme with a very specific application of the notions developed here to an existing theoretical analysis of an enduring Southwestern marketing symbol.

Section 5 suggests that contemporary trends to renegotiate the underlying power structure of water may be clarified and improved using gender constructs. For example, conservation to allow more visible displays of water wealth basically has masculine qualities as its motivator. As Postel notes, "if we use the water saved through efficiency merely to fill more swimming pools, to irrigate more golf courses, and to sustain millions more meat-rich diets, we will get no closer to a sustainable world" (1997, pg x). She goes on to argue a position we support, that "it requires bucking deeply entrenched and politically influential special interests ... in some cases it even means challenging religious and cultural beliefs" (page 168).

The examples provided in Section 5 give some insight to the current tensions between competing masculine and feminine ways of thinking about, experiencing and using water. Many more exist driven by the recognition that, in many cases, the single sided approach simply is not working. Dams are silting up, water used and reused becomes unacceptably salty, there is not enough water to make the desert an oasis no matter how much technology is applied, and the markers of a healthy environment (other species, native plants) are dwindling (Postel 1997, de Villers 2000). de Villers presents four options for a world facing the prospect of less water than it believes it needs: 1) find more water through means such as desalinization, 2) conserve what water we do have, 3) consume at today's levels but have fewer people, and 4) steal water from others. The first and fourth of these could manifest more masculine-center-values, and the second and third more feminine-centered values, although as with our thinking of the ungendered quality of Nature itself, *it all depends on how things are done*.

Water is intimately associated in our vernacular with life (the fountain of youth), birth (emerging from our watery womb), purity (cleanliness being close to godliness), generatively (getting one's creative juices going), continuity (the river of life), and adaptability (go with the flow). Similar observations could be made about other natural resources such as air or trees. The consumption of anything that has such deep cultural meanings is likely to be complex and nuanced. Consumption of a natural resource relies on access, which raises the question of who has the access, power, and control of the resource. In a society in which power, control domination and productivity are closely linked to other gender-related attributes, it is not surprising to find the human relationship to a natural resource reflecting these values.

Norms and beliefs are the foundation upon which a society decides what is right to do with the physical space around it. We have developed an argument that says the decisions regarding resources with deep cultural meaning will benefit from an overlay of gender-related constructs. Gender-related constructs open a new level of understanding of the way in which resources are consumed and suggest how the constructs can be used to further consumer behavior and public policy research.

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