

EXCHANGE AND RITUAL FUNERARY CONSUMPTION:
LATE MARINE HUNTER-GATHERERS OF THE TALTAL COAST
(ATACAMA DESERT, NORTHERN CHILE)

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INTRODUCTION

Few archaeological areas in northern Chile display artifacts from such a diverse array of sources as those recovered from the cemeteries of the marine hunter-gatherers who lived on the desert coast of Taltal. At the turn of the twentieth century, amateur archaeologist Augusto Capdeville excavated dozens of burial sites corresponding to the Late Intermediate and Late Periods of northern Chile. Although the work done at these sites was never published as a monograph, and most of the information on them is in the form of photographs, drawings, correspondence, and field diaries, the presence of objects from Tarapacá, the Salar de Atacama, the Copiapó River Valley and northwestern Argentina (Figure 1) has stimulated the archaeological imagination to the point of consolidating the idea that Taltal operated as an enclave of multiethnic colonies (Núñez 1987; Schiappacasse *et al.* 1989). While the conjunction of archaeological materials discovered in Taltal was indeed the result of social interaction, population displacement is not the only possible explanation for this process. In fact, there is a lack of biological and habitation evidence to support it.

In the beginning, archaeologists working in the Atacama viewed the coastal populations as

less developed than the inland agro-pastoral groups of the region (Latcham 1915). This notion seems to have tempered archaeological interest in the desert coast, where research programs are much more limited than those focusing on the region's inland oases and highlands (Llagostera 2005; Schiappacasse *et al.* 1989). Nevertheless, the recent publication of Capdeville's field diaries, and the revisiting of existing archaeological information, suggests a level of social complexity among these groups that has so far been ignored. This has allowed us to consider the coastal populations under study as more than simply passive subjects. Therefore, in this paper we explore an alternative social process, a model in which the subjects actively constructed their lives through practices of economic intensification, exchange, and ritual funerary consumption.

EXCHANGE AND RITUAL CONSUMPTION

Exchange can be defined as forms of payment and credit that create relations of dependence among individuals and/or communities (Appadurai 1996; Godelier 1998; Mauss 1971; Renfrew 1969; Sahlins 1977). All exchange is a tense negotiation that implies a reduction of conflict based on an apparent climate of equilibrium, a reciprocity practice that often is repre-

sented as the negation of inequality and domination (Lazzari 1999).

From our perspective, social life is determined by the cycle of production, distribution, and consumption (Marx 1972 [1857-1858]), an economic process that structures social reproduction at the level of the nuclear family and the community. Reproduction is realized in the consumption of goods and services, normally those of endogenous and exogenous origins, or from autonomous production and exchange. The surplus used in exogenous exchange can include products intended for any kind of consumption, and these products necessarily involve social production. Thus, the relations of production required to generate surpluses set the limits of modes of consumption (Kohl 1975).

Recent literature has favored ritual as the main realm for legitimating political action and authority in small-scale societies, because while the political fortune of individuals and groups tends to exhaust itself, the sphere of ritual endures as a context for exhibition, distribution, interaction, and consumption. In this regard, Spielmann (2002) suggests that economic intensification is linked to greater and more frequent instances of ceremonial activity. Both Malinowski (1986 [1922]) and Rappaport (1967) have indicated the importance of ritual in regulating the cycle and organization of labor, documenting the enormous economic impact of communal ceremonies. In fact, Rappaport (1984 [1968]) coined the term *ritual mode of production* to describe this social practice, in which the objective is not individual enrichment, but rather the performance of superlative generosity and community participation in the realization of communal celebrations and festivities (Spielmann 2002).

Corporate communities that frequently exhibit territorial rights, and rights of ownership

over the means of production, generally finance their ritual system at the community level. In these cases, the community encourages its members to contribute their surpluses to a common fund that is used to sustain the religious system and the associated ritual activities (e.g., Wolf 1957). In this way, wealth and accumulation are not oriented towards the consumption of new goods, but are socially redistributed. The community is the entity that must ensure that there is adequate material for ritual expenditure, cyclical consumption that must be re-supplied, and that has various effects on the economic system. Thus, surplus production necessarily involves economic intensification, especially when ceremonial festivities are frequent and onerous.

For Hayden (2009), the feast is an ideal context for introducing new values and manipulating people's emotions to favor political and economic interests. The most elaborate festivities are often funeral celebrations, as they carry the deepest emotional implications. Because of their charged emotional and relational qualities, these events attract individuals from different social groups (family members, friends, and allies), making them an ideal context in which to reaffirm alliances. This social situation makes funeral ceremonies key socioeconomic venues for creating and reaffirming political relations through gifts, favors, and services. The late cemeteries of the Taltal coast and the amazing diversity of materials they contained from several distant regions, suggest a form of consumption based on generosity and ostentation that likely required a direct commitment from those who participated in the funerary celebration.

MARINE HUNTER-GATHERERS OF THE ATACAMA DESERT: THE ETHNOHISTORIC RECORD

The Atacama Desert coast extends for more than 650 kilometers from the mouth of the Loa

River in the north to the mouth of the Copiapó River in the south, and is home to a rich variety of marine fauna. In 1579, after a battle at Copiapó, Francis Drake repaired his ship in a tranquil bay farther north, where he commented on the richness of the sea's resources: "Within this bay, during our abode there, we had such abundance of fish . . . the plenty whereof in this place was such, that our gentlemen sporting themselves day by day with 4 or 5 hookes or lines, in 2 or 3 houres, would take sometimes 400, sometimes more at one time" (Vaux 1854:105).

The climate in this desert region is harsh, with annual precipitation of just two to eight millimeters, but freshwater springs and coastal fog allow enough plant cover to sustain small populations of terrestrial fauna such as guanacos, rodents, and birds. These environmental conditions favored human settlement here. Colonial officials called the zone's early inhabitants Camanchacas, Proanches, and Uros, and often described them in derogatory terms (*c.f.* Lizarraga 1916 [c. 1595-1609]:168).

Other early colonial documents confirm Lizarraga's observations, adding that these marine hunter-gatherers lived near freshwater springs associated with coves suitable for launching and landing their inflated sea lion skin rafts (*e.g.* Cavendish 1588 in Pretty 1904; Vaux 1854; Vivar 1979 [1558]; Figure 2). The vessels were described with amazement by these and other chroniclers, officials, and travelers, and they made possible an arrangement of relatively stable settlements with highly mobile logistical systems (Ballester and Gallardo 2011). Using these watercraft, the men traveled long distances and caught fish in abundance, bringing them back to a work camp where the fish were eviscerated and sun dried.

Preserving their catch in this way allowed groups to accumulate hundreds of kilograms of dried fish (Feuillée 1714-1725, Volume 2:589)

were most likely stored in permanent settlements, and provided the basis for relations with inland farming and pastoral groups. Traces of these activities appear continuously in the archaeological record between the sixteenth and the nineteenth centuries (*c.f.* Bauver 1990; Bollaert 1851; Bresson 1875; Philippi 1860; Lozano 1992[1581]:32).

There was a delayed-return surplus economy introduced, by definition, by levels of complexity in the roles and agencies of those who participated in the cycles of production, circulation, and consumption (Meillassoux 1973; Woodburn 1982). Specialized groups that controlled the products of their labor participated in this economic process. Jerónimo de Vivar (1979 [1558]:11) reported that on the Atacama coast there were hunters who were experts in both hunting, and in the construction of sea lion skin rafts. This specialization is consistent with the statements made by the last remaining sea lion skin raft producers of the mid-twentieth century, who said that only some fishermen possessed the technical knowledge required to build the rafts and they transmitted this knowledge only to their children (Ávarez 2003). This division of labor also had an impact on men and women. The former led fishing activities, while the latter took charge of life in the base camp. On his visit to Morro Moreno in 1587, Thomas Cavendish was taken by the local people to their camp, where he saw "their women and lodging, which is nothing but the skin of some beast layd upon the ground: and over them instead of houses, is nothing but five or sixe sticks layd across, which stand upon two forkes with stickes on the ground and a few boughes layd on it" (Cavendish [1588] in Pretty 1904:307).

These productive relations lasted until the nineteenth century. It was customary for young boys from the fishing base camp on the Taltal coast to remain with their mothers until they were old enough to work with the men (Philippi

1860:36). In regard to the role of men in the sixteenth and seventeenth centuries, the available information associates them with ocean fishing in vessels (the basis of surplus production) and with exchange. This male mobility would have allowed the simultaneous control of social interaction, the flow of information, and the redistribution of goods.

It is clear that movement along the coast was not only limited to exploiting marine resources, but also to establishing alliances. Marriage and baptism records from the eighteenth century mention fishermen from Tocopilla, Cobija, Morro Moreno, Caldera, and Copiapó (Bittmann 1979). Such kinship relations were the favored means of social interaction—exchange, marriage, funerals—and enabled the reduction of risks associated with a dependence on marine resources. An example of this is found in a record from 1665 indicating that a family from Cobija moved to Caldera to baptize a child and find “better fishing” (*ibid.*).

This type of mobility must have introduced more than a few obligations of reciprocity among groups, and, according to documentary evidence, these inter-community tensions were regulated by means of public feasts supplied by/to celebrate the whale hunt (Vázquez de Espinosa 1948 [1628]:619). There is little doubt that this mode of distribution on the community and supra-community scale mobilized different contingents, and reinforced the social bonds derived from kinship relations (McGuire and Saitta 1996). As such it acted as a political and symbolic activity that is consistent with surplus production in which males were dominant, according to historic records.

THE ARCHAEOLOGY OF TALTAL

Augusto Capdeville worked as a customs officer in the port of Taltal from 1910 to 1930. On his days off he excavated cemeteries from

different local temporal periods, but it was the later ones that provided the greatest variety of artifacts. His correspondence with Max Uhle, Ricardo Latcham, and other experts of the day enabled him to attribute these materials to the Chincha Atacameño Periods; today, cultural history assigns these artifacts to the Regional Development (Late Intermediate) and Inca (Late) Periods. Although there are few recent studies of sites attributed to that time, the information gathered suggests that new areas were occupied that had not been used before, and specialized sites emerged for processing fish, sea lions, and molluscs (Castelleti 2007). Other changes were observed in the grave goods, which began to include more foreign items, indicating an expansion of the area through which goods circulated (including Arica, the Atacama area, Copiapó, and Northwestern Argentina; *ibid.*; Salazar *et al.* 2010).

The cemeteries excavated by Capdeville and considered in this study cover an extensive area that extends from Botija in the north to Caleta Esmeralda, 172 kilometers to the south. The impact of these excavations, and intensive looting, are easy to spot at the sites, which at least allows for the recovery of information on their placement and spatial distribution. Descriptions of the sites (Capdeville 1921a, 1921b, 1922, 1923, 1928, ca. 1920s; Evans 1906, Mostny 1964) allow the identification of at least twenty-one localities, most of them less than fifteen kilometers apart (Figure 1). In some cases the areas excavated can be used to obtain an idea of the approximate sizes of the sites, which range from around two hundred, to more than two thousand, square meters. The differences in size are probably related to the intensity of illegal excavations, given a report by a mid-nineteenth century traveler that noted little difference among the populations of fishing base camps on the Taltal coast. Three or four families of fishermen lived in Punta Grande, six or more

at Agua Dulce, and four or five at Morro Colorado (Bollaert 1851:171).

The funerary sites are associated with habitational places and appear on terraces about one hundred meters from the sea. Most of them correspond to fishing coves with safe harbors for vessels, and with freshwater springs. Based on what we know today, the cemeteries were groups of circular or oval graves spaced about two meters apart, that contained bodies resting on their sides, with knees bent and positioned in an east-west orientation. All sets of funerary offerings included non-local goods, such as polychromatic ceramics, a variety of copper artifacts, objects associated with the consumption of hallucinogenic substances, and yarn-making implements (Capdeville 1921a, 1921b; 1923; 1928; Contreras 2009; Mostny 1964). Accompanying the above were local goods such as shell and bone ornaments and artifacts that were part of the subsistence strategies of these coastal-maritime people, including copper fish hooks and “cigarette” fishing weights, harpoons (bone harpoon heads, harpoon barbs), and implements for the mass processing of bivalves (stone points and stone knives, among other items). One particularly notable funerary site is the Vasos Pintados Cemetery, located one hundred meters east of Morro Colorado in a pass that is hardly visible from the ground. Capdeville described the place in 1918 as a great cemetery with a wealth of grave goods (*ibid.*). Recently published extracts from Capdeville’s field journal include an inventory of twenty-seven tombs he excavated at the above-mentioned site (Contreras 2009). The descriptions are a far cry from the “wealth of grave goods” mentioned. In quantitative terms twenty-six percent of them contained no offerings, and the rest contained between one and six foreign-made goods. Half of the tombs contained ceramics (one piece each), less than a third included metal artifacts, and only three had both of these materials. This situation seems to be the norm.

The above-described distribution of grave goods is similar to that of thirteen other tombs in different sites attributed to the same period (at Punta de Plata, Punta Grande, Agua Dulce, and Punta Morada). While the objects in the graves are clearly not abundant, the relatively small number of items is an indication of their high value, especially considering that some of the ceramic pieces seem to have been repaired and, as Capdeville affirmed, even ceramic fragments could have served as grave goods. This suggests that access to, and possession of, exotic goods was limited, making redistributive activities a key device for social integration and reproduction.

The high relative value of funerary objects is well established when one considers, for example, the dense middens of Punta Morada and Morro Colorado, that are associated with the cemeteries excavated by Capdeville. The excavations that Junius Bird (1943) conducted at these sites allowed him to remove some fifty cubic meters of material, the stratigraphy of which displayed uninterrupted occupations dating back to Archaic times. The record included nine ceramic shards, but contained no evidence of metallurgy, spindles, or bone spatulas. Fishing and marine hunting instruments seem to be better documented, but they are very few in number, and are often preforms or broken pieces. These materials seem to bear no similarity to those reported by Capdeville for funerary contexts of incomparable technical quality.

THE ARCHAEOLOGICAL RECORD OF FOREIGN GOODS

Available evidence indicates that foreign goods were present in all of the sites excavated by Capdeville (Capdeville 1921a, 1921b, 1922, 1923, 1928, c. 1920s; Contreras 2009; Mostny 1964) and that they are equally, if not more, important than those of local origin (Table 1). Considering the total number of artifacts, and

analyzing them by typology, association, and spatial distribution, we can divide them operationally into those that came from the northern sphere of interaction (Loa-Tarapacá), a southern sphere (Caldera-Copiapó), and those manufactured by local artisans (Figure 3). This is an incomplete perspective, however, given different rates of decay, which would have adversely affected many products of organic origin.

Site	Pottery	Metal	Wood	Lithic	Bone	Textile
Botija	1	1		2	3	1
Miguel Díaz	1	1		2	2	
La Colorada		1	1		3	
Punta de Plata	1	1		2	3	
Las Cañas		1	1	2	3	
Grande	1	1	1	2	3	
Caleta Sur de Punta Grande	1			2	2	
Aguada del Pueblo				2		
Caleta Bandurrias	1	1		2	3	
Quebrada Bandurrias		1			3	
Agua Dulce	1	1	1	3	3	1
Punta Morada	1	1	1	3		
Morro Colorado	1	1	3	3	3	
Taltal	1	1	1	2	2	
Puntilla Sur	1	1		3	3	
Las Guaneras		1	1	2	3	
Punta San Pedro	1	1		2	3	1
Isla Las Tórtolas	1	1	1	2	3	
Cifunchos		1	1	2	3	
Caleta Esmeralda	1	1	1	2	3	1

Note: 1 = no local, 2 = local, 3 = both

Table 1: Provenances of artifacts recovered from late cemeteries of the Taltal coast.

Objects from the northern sphere include a small array of objects associated with the consumption of hallucinogenic substances (tablets and tubes), textile production (sewing needles, spindles, whorls, and camelid fiber yarn), combs, and domestic polychrome ceramics. The ceramics (Figure 4), though not a very popular element in mortuary contexts, are the most commonly consumed of the northern goods, although this perspective itself is skewed by the different rates at which different materials decay. The types of ceramic pieces identified at the sites of Miguel Díaz, Caleta Norte de Punta Grande, and Morro Colorado include clay pitchers and jugs of the Arica Culture group, whose traditional classification includes three decorative polychromatic styles: San Miguel, Pocoma, and Gentilar (Daueisberg 1972;

Romero 2002; Santoro *et al.* 2000; Uribe 1999). This ceramic tradition of the Western Valleys is chronologically situated, with variations for each style, during the Late Intermediate Period (A.D. 900 to 1350), although they extend into the Late Period (A.D. 140 to 1500; Romero 2002; Santoro *et al.* 2000; Uribe 1999). At Caleta Norte de Punta Grande, ceramics have been found from Tarapacá that have been attributed to the Pica-Charcollo style, and dated by thermoluminescence from A.D. 750 to 1450, which overlaps with early Inca expansion (Uribe 2007). A pitcher found in the area of Morro Colorado represents a Local-Inca style of the Tarapacá ceramic tradition. Another type of ceramics found at Caleta Norte de Punta Grande has been attributed to the Ayquina style ceramic traditions of Loa-San Pedro, whose absolute dates tend to concentrate around A.D. 1300 to 1400, but which was also manufactured during the Inca period (Uribe *et al.* 2004; Varela *et al.* 1993). An aryballoid jar that corresponds to a Local-Inca type from the above-mentioned ceramic tradition was found in the area of Morro Colorado.

The southern sphere boasts an array of goods of more varied forms and materials. It includes ornamental copper items (rings, plate pendants, earrings, necklaces, small bells) and other metallic objects (hand grips, axes, tweezers) (Figure 5); instruments related to the hallucinogenic complex (bone spatulas and spoons) (Figure 6); whorls and musical instruments (flutes and whistles; Castillo 1992; Cervellino 1994). The ceramic pieces (Figure 7) as well as the metal and bone objects are characteristic of the Inca period of the Copiapó region and are relatively popular grave goods in the tombs of the Taltal coast. The ceramics present in Capdeville contexts can be attributed to the tradition originating in the Copiapó region and the semi-arid north (Garrido 2007; Varela 2009). Notable among these are bowls (*escudillas* and *pucos*) discovered in the area of Morro

Colorado, which are of the Copiapó black-on-red type associated with the Inca Period in the early literature (Iribarren 1958). Variants of the Copiapó black-on-red type are also present at the sites of Caleta Norte de Punta Grande, Caleta Sur de Punta Grande, Bandurrias, and Morro Colorado with dates similar to the previous type. Other pieces such as the bowls found at Caleta Norte de Punta Grande and the everted-lip bowl of Las Tórtolas, describe another variant of the Copiapó style. Diaguita ceramics are represented in fragments, bowls, urns, and a *jarro zapato* (shoe-shaped pitcher) found at the sites of Caleta Norte de Punta Grande, Morro Colorado, Agua Dulce, and Cifuncho and belonging to stages II and III of the chronology that spans A.D. 900 to 1470. (Ampuero 1989; Cantarutti 2002). Although all of these types of ceramics originated more or less in the Pre-Inca period, in the area of Copiapó they appear contextually associated with the period of Cusco rule (Figure 7). For this reason, it is not surprising that these cemeteries (Punta Morada, Bandurrias, Cifunchos) also yielded a bird-shaped plate (*chua*), fragments of an Inca-Cuzqueño aríbalo, and two small llamas made of silver, and one made of *spondyllus* (Jaie Michelow, personal communication, 2012).

A MODEL OF EXCHANGE AND RITUAL CONSUMPTION FOR THE TALTAL COAST

Among all of the artifacts of non-local origin found on the Taltal coast, those from the southern sphere are probably the most prevalent and diverse. This is an association that corresponds entirely to contexts recovered in Copiapó during the period of Inca rule, and includes copper artifacts particularly (Campbell 1956; Cornely 1956; Bergholz and Bergholz 1973; Niemeyer *et al.* 1997). Although there is metallurgical evidence in the region from the early ceramic or El Molle Period, specialists highlight the final pre-Hispanic era precisely because of the abundance and variety of such goods from that period

(Cervellino 1994). This is no coincidence, because the Inca occupation there was particularly oriented to metallurgic production. The Viña del Cerro site in the Copiapó River Valley was the only installation of this kind on Chilean soil. It had storage facilities and several *huayras* (wind furnaces) associated with slag and crucible fragments (Niemeyer *et al.* 1997). The size of the installation points to its great productive importance, but the presence of an *ushnu* inside the great square, with a perimeter mural, is a clear indicator of its political and ritual importance (Figure 8). We know this because the Inca administrators used this kind of construction as both a public court and a frontier marker (González Holguín 1952 [1608]:358). Because of its importance, this installation would also have affected the interregional movement of metallurgic goods and people between the Atacama Desert, Northwestern Argentina, and the Coquimbo region, which was inhabited by the Diaguita, who were powerful allies of the Cusco-based empire.

A metallurgical center such as this would have required a major workforce, especially for ore extraction activities (Cervellino 1994), and the number of workers and skilled tradesmen required for the entire production cycle of copper ingots and objects would have been even greater. All of these workers would have needed to be fed, and the Inca officials would have had to create a system capable of supplying and transporting the food required. It is therefore not surprising that in 1558, on his assessment visit to Copiapó, Fernando de Santillán reported large contingents of miners as well as more than a few *camayoc* officials in charge of the local gardens, alpaca herds, and fisheries (Pizarro 2006).

The unusual distribution and presence of objects and raw metallurgical materials in the area of Copiapó leads us to believe that these (like other objects such as ceramics, spatulas,

spoons and whorls) would have circulated as part of the official reciprocity system (Murra 1983:7). Owing to its relative size, this flow of goods would have especially benefitted the fishermen residing on the Caldera coast—which Latcham (1938) believed was the metallurgical distribution center owing to the many copper objects found in the cemeteries here—and, by extension, those who inhabited the fishing coves of Taltal slightly farther north (Cervellino 1994; Latcham 1936). Indeed, these groups must have been key suppliers of dried fish, a resource that was actually consumed at inland sites (González and Westfall 2005; Niemeyer *et al.* 1997). The archaeological record and ethnohistoric information tell us that there was an Inca site on the coast close to Caldera, the purpose of which was to control the tribute and circulation of dried fish destined for the mining facilities farther inland (Cervellino 1994). We are relatively certain that this group would have had to operate under the Inca economic system. However, in Taltal the absence of settlements that suggest control over local activities makes it more likely that during this era the fishermen in the latter place obtained foreign goods directly from the coastal communities of Caldera and neighboring locations. If, as we believe, the exchanges among these fishing camps were not subject to the Inca *mit'a*, then the interaction that enabled the flow of goods from the northern desert coast can only be understood as an outcome of coastal movement and longstanding alliances (Ballester and Gallardo 2011).

Unfortunately, the local archaeology of this period is limited to the burial records obtained by Capdeville. The placement of graves and the artifacts they contained, however, can provide a proxy for economic intensification. Given what we know, that the settlement system operated from a base camp, then each of the nineteen cemeteries could correspond to different permanent residential units that were probably organized into corporate lineal descent

groups (Brown 1995). This residential pattern coincides repeatedly with freshwater springs and fishing coves suitable for maintaining the fishing vessels used by these communities. Taking these ecological requirements into account, we can affirm that these social units occupied all possible niches of the Taltal desert coast, maximizing productive exploitation on the coast. This is a change from the previous period, in which funerary sites appear to be distributed in just five localities (Capdeville 1921a, 1921b, 1923, 1928; Contreras 2009; Mostny 1964). Simultaneous with this territorial occupation process, a major change in the design of stone instruments is also observed. The instruments are smaller than in earlier times, and new harpoon points with large stems appear, as well as different types of asymmetrical knives (Capdeville 1928; Sénéchal de la Grange 1903). These tools display fine bifacial stonework that contrasts dramatically with the expedient unifacial stonework dominant among inland peoples, and may have been more effective for marine hunting activities and for processing the catch for drying.

We do not know how advantageous these exchanges were for the Taltal communities, but the goods that we have been able to access in our documentary study appear to be relatively few and therefore highly prized. Based on this, ritual consumption associated with multi-community celebrations—such as the funeral ceremonies related to the sites excavated by Capdeville—would have involved the commitment of family wealth, particularly a ritual fund that included both local and non-local objects that were highly valued for the quality of their craftsmanship. These may have been contributed by family members and/or those attending the ceremony and, given the limitations imposed on the possession of foreign goods, can be considered acts of extreme communal generosity. Certainly, such exceedingly generous acts allowed for the ideological reproduction of an unequal economic structure that affected both

intra- and inter-community relations. The act of violence recorded by Capdeville (1922:1-2) is worth recalling in this regard. At Puntilla Sur he found a body of this era with an arrow embedded in one of its bones that displayed a typology similar to that found in other late period sites.

Based on what the ethnohistoric information suggests, the coastal surplus-producing economy must have included different levels of complexity. These economic inequalities were not limited simply to the operations of a delayed-return redistributive system, because we know that only some members of the community had access to seagoing vessels, either because they possessed the knowledge required to build them, or the economic means to acquire them. If these considerations are correct, then it was precisely this segment of society that ranged over long distances, giving them preferential access to social interactions and the flow of knowledge and goods (Arnold 1995; Ballester and Gallardo 2011). Given these circumstances, the higher social and cultural status enjoyed by this special group would have generated social conflict that, given the communal mode of production these hunter-gatherers practiced, would have had to be restored through collective rituals and ceremonies. In regard to these, documentary sources in particular offer descriptions of feasts organized by the men who possessed sea lion skin rafts.

CONCLUSIONS

At the sites excavated by Augusto Capdeville at the beginning of the twentieth century, the regular distribution of foreign objects included a wide spectrum of goods, notable among which are a variety of copper artifacts. According to our analysis, most known sites possess a component from the Late Period, the nature of which clearly reflects an intensification of funerary rituals. Thus, one of the most characteristic economic features of the late marine hunter-

gatherers of the Taltal coast is that practically all exotic consumption involved goods with no direct relation to the domestic or alimentary realm, a relative value that is even more important when one considers their comparative rarity and scarcity. Instead, their ownership, use, and display were central to the community's collective wealth and rituals, particularly funerary ceremonies (Hayden 1998, 2009).

Funerary rituals are social events in which the focal point is the family, and it was these social units that would have had to ensure there was sufficient and suitable material for use in the ritual. Moreover, this type of consumption would have had to be resupplied. Evidently, the objects consumed in the funeral ritual did not travel on their own, but resulted from specific cycles of production, transportation, and exchange. The constant need to resupply the goods involved in ritual consumption must have generated an extensive chain of mutual obligations, the impact of which would have affected overall economic demand. Although coastal exchanges have been recorded from the Late Archaic Period onward, for the late marine hunter-gatherers of the Taltal coast, researchers agree that there was a dramatic change in funerary practices in the area, with increases in both the variety of items contained in the graves and the number of sites (Castelleti 2007; Salazar *et al.* 2010). We have, therefore, proposed a model of exchange and ritual consumption that is a hypothesis directly related to the system of services and redistribution of goods developed by the Inca state in the Copiapó area.

This scenario supposes, on the one hand, the payment of tribute in the form of dried fish from the coast used to supply the valley's mining-metallurgical industry, and on the other hand, the redistribution through celebrations and gift-giving of symbolically significant goods that were consumed in the funerary rituals of the coastal groups. Although information for

this period is scant, we would suggest that was especially relevant for the inhabitants of Caldera, who were able to redistribute part of the wealth obtained through the Inca *mi'ta* to the groups inhabiting the Taltal, by virtue of their mobility along the coast. This was an economic strategy founded upon alliances that enabled the increase of food production required for the Inca metallurgical industry.

Beyond our description of the exchanges that occurred, we suggest that the social need created by funerary celebrations involved the constant investment of family wealth from ceremonial funds, particularly both local and non-local goods with a high social value, which required acts of extreme generosity arranged by the male contingent, who had greater access to rafts, the central means of production for hunting, fishing, and transportation activities. Navigation and the resulting seagoing mobility allowed ties to be strengthened through exchanges among the groups that resided on the Atacama desert coast, and redistributed exchange goods would have enabled the ideological reproduction of an unequal economic structure, affecting both intra- and inter-community relations.

As a final point, the model of exchange and ritual consumption outlined herein is intended to open the discussion on processes of social complexity and modes of communal production among the marine hunter-gatherers of the desert coast of Taltal, as agents who are a far cry from the passive subjects depicted in regional studies and who, on the contrary, were actively responsible for social practices associated with economic intensification, exchange, and ritual funerary consumption.

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Figure 1: Distribution of sites on the Taltal coast and other sites mentioned in the text.



Figure 2: Water-craft on the Paposo coast (from Bresson 1875:11).

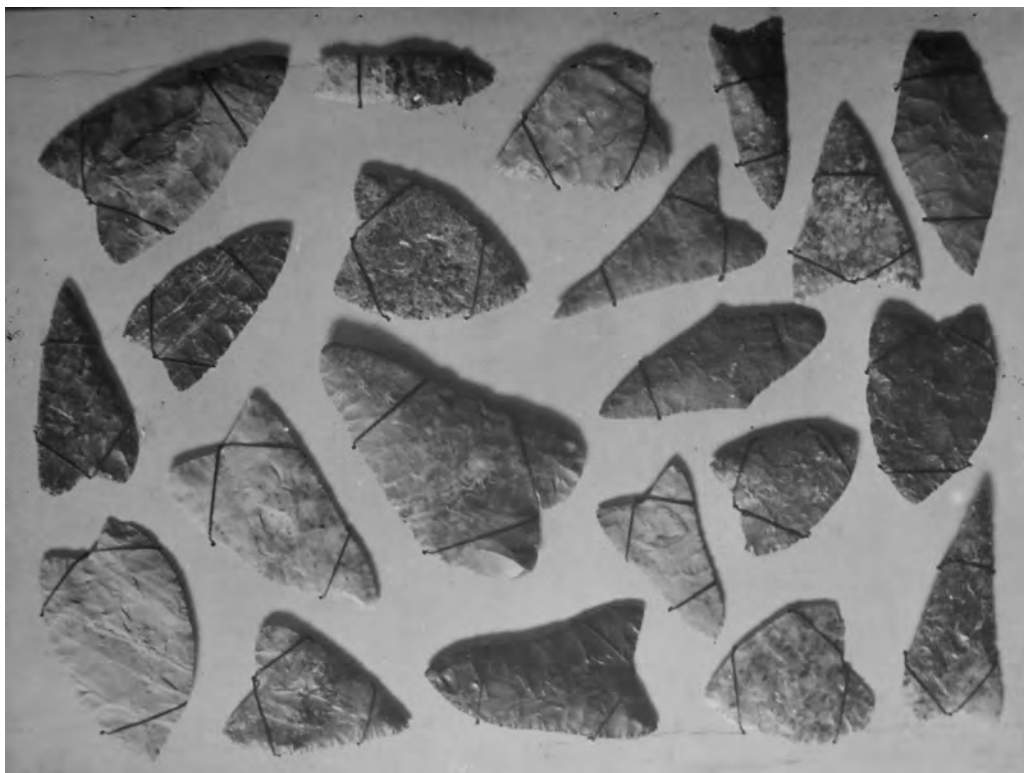


Figure 3: Projectile points recovered from the Isla Las Tortolas cemetery (from Capdeville, ca. 1920s).



Figure 4: Arica and Charcollo type ceramics from the Punta Grande cemetery (Capdeville, ca. 1920s).



Figure 5: Copper objects from the Caleta San Pedro cemetery (from Capdeville, c. 1920s).



Figure 6: Bone spatulas and spoons from the Calte Banderrias cemetery (from Capdeville, c. 1920s).

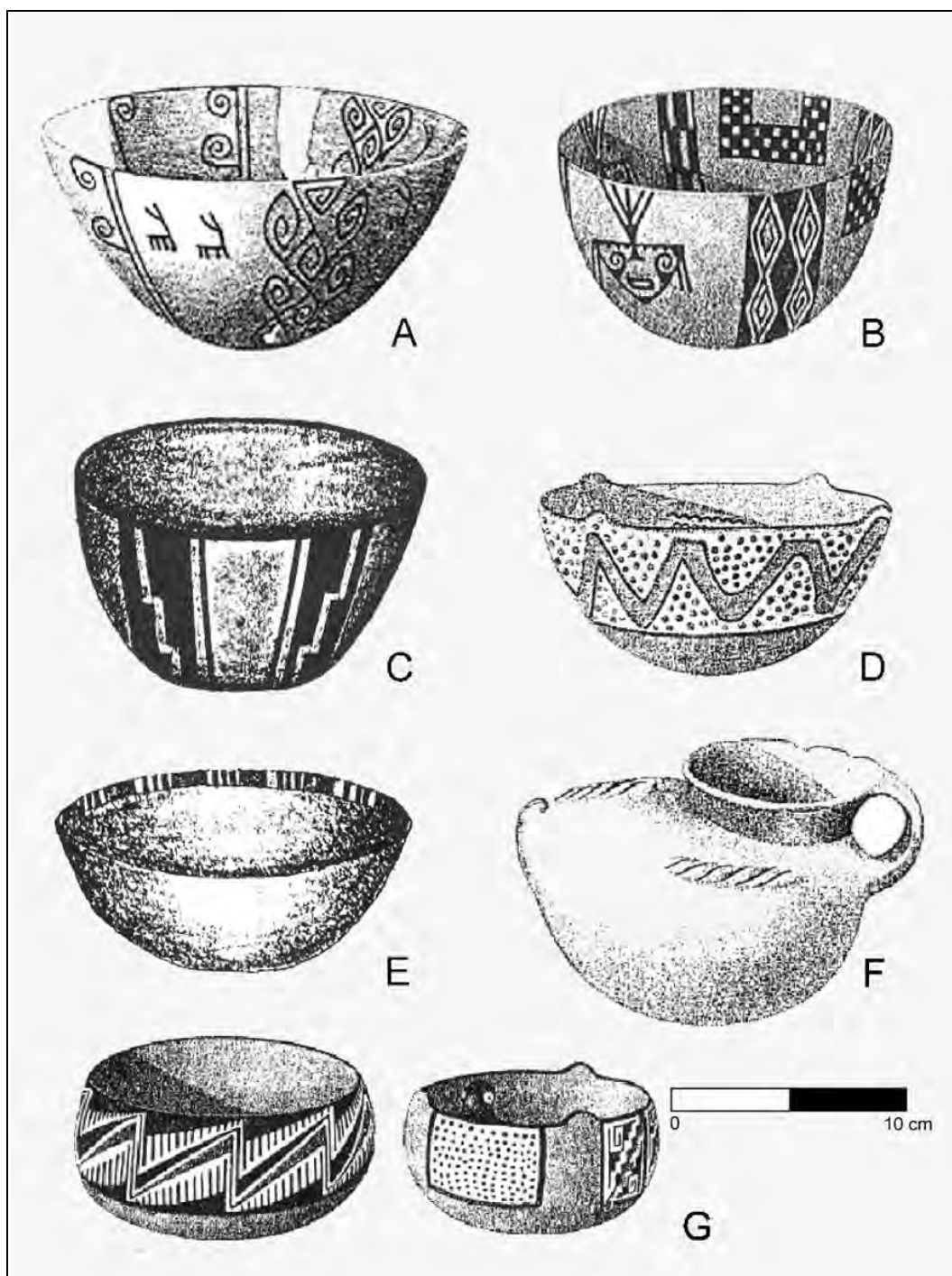


Figure 7: Ceramic types from the Inca period in the Copiapo Valley (from Niemeyer et al. 1997).



Figure 8: Ushnu at the Viña del Cerro metallurgic center in the Copiapo Valley.