An evolution of creativity and ritual: The immortalizing craftsmanship of the Chinchorro morticians

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AN EVOLUTION OF CREATIVITY AND RITUAL:
THE IMMORTALIZING CRAFTMENSHP
OF THE CHINCHORRO MORTICIANS

by

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A thesis submitted in partial fulfillment
of the requirements for the degree of

Master of Arts

in

Anthropology

Department of Anthropology
University of Nevada, Las Vegas
May 1996
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ABSTRACT

The ancient Chinchorros are the oldest culture known to have developed elaborate artificial mummification practices for their deceased. This study tested a Chinchorro sedentary subsistence strategy proposed by Arriaza (1995a). This proposition conflicts with the present paradigms concerning prehistoric egalitarian societies. By analyzing the mummified remains of twenty-seven individuals, radiocarbon dates and ethnographic mortuariai data of ten other maritime cultures, this thesis builds a base for both supporting and opposing the sedentary proposition. It is suggested that the Chinchorro were sedentary during the black period (ca. 5050 - 3000 B.C.) but more mobile during the subsequent red and mud-coated periods. The style, technique, and complexity of the mummies indicate Chinchorro morticians played a central social and political role in shaping their society. It is speculated that the morticians were females during the black period based on correlations drawn from the mortuary remains reflecting patterns in ethnographic data; while males practiced the mortuary arts during the red period also based on similar correlations drawn from the materials and ethnographic data.
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My advisor, Dr. Bernardo Arriaza approached me early in the spring of 1995 with a chance to work with the oldest mummified individuals on earth. So excited and impatient was I to go and study in South America, I would have swam, ran, and jumped my way to those mummies. Dr. Arriaza also provided most of my financial support for field work, without which I would have never been able to pursue this study. Thank you Dr. Arriaza. The Graduate Student Association at the University of Nevada, Las Vegas also provided me with funding for housing while in Chile, and I am thankful for their financial support as well.

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In a South American museum, when you are the only one in a lab filled with the bodies of people who have been dead for thousands of years, it gets a little unnerving. At
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CHAPTER ONE:

INTRODUCTION

The prehistoric Chinchorro culture of South America was a fishing society that created astonishing images of their dead (Arriaza and Hapke 1996). Researchers have long believed the Chinchorro people to have been very nomadic. However, the complexity of the culture’s artificial mummification practice reflects that the Chinchorro people were not always nomadic hunters and gatherers, a theoretical pre-requisite apparently for most egalitarian cultures. Arriaza (1995b) has presented a perspective that does not coincide with the wandering band pattern.

In Beyond Death, Arriaza postulates that the Chinchorro people were living year-round along the coast, at the edge of the Atacama Desert. Using dietary analysis, paleopathology, and mortuary practices, he proposes that the ample subsistence and fresh water springs that existed near Arica, Chile allowed ancient wanderers to settle into a permanent niche. One of the greatest products of the proposed sedentary lifestyle was the development of artificial mummification techniques among the Chinchorro’s mortuary rituals.
This thesis discusses the mortuary practices of ten other cultures, primarily maritime, to provide a brief summary to compare with the Chinchorro culture using the HRAF (Human Relations Area Files) system. The HRAF system is very helpful for its efficiency in separating and organizing ethnographic information. The main disadvantage of using such a system, is the difficulty in comparing the time frames of the prehistoric Chinchorro and the ethnographically recorded present.

Comparisons drawn from both Chinchorro and Egyptian mortuary styles illustrated differences in belief systems of cultures that used artificial mummification techniques. It is possible that the comparison with the Egyptians may yield evidence to either support or deny the Chinchorro’s proposed prehistoric sedentism. Aside from the sedentary possibilities of the society through time, the reconstruction of social identities for the Chinchorro morticians were explored. This study also examines the societies’ creativity as well as their ability to cooperate, to influence, to change, and to remain stable.

Several studies report as societies increase in size and complexity through time, their cultural identities grow in depth as well (Binford 1971; Chapman 1981; King 1970; Saxe 1968). In egalitarian societies, because there is an absence of political rankings and structure thus eliminating the political identity, social identity bases itself on social experience (Binford 1971; King 1970; Saxe 1968; Saxe 1972). Social experience and social identity are reflected in the burial record by a less complex organizational classification system that separates individuals more
through sex and age than through political status and economical standing. The ancient Chinchorro culture is regarded both as egalitarian and as a non-sedentary population because it lacks a reflection of political rankings within the archaeological record.

Small to medium sized organizational units are assumed to have come down to extract the bounties of the ocean. Afterwards they supposedly returned to the upland valleys and mountains of the Andes (Dillehay et al 1992; Nunez 1969). This is a direct consequence of the loose political structure of egalitarian societies. These same studies will help provide some answers concerning Arriaza's proposed sedentary lifestyles of the Chinchorro culture. Examination of the mummies does not support a mobile population in the earlier stages of cultural development due to the styles involved in the artificial mummification manufacturing techniques. A second speculation may also arise from the first argument: did the Chinchorro remain egalitarian during the later red and mud-coated styles of artificial mummification? The interpretations of the individual examinations will also provide a basis to build up to the second part of this study, the reconstruction of the cultural identities for the Chinchorro morticians.

Several terms are necessary to define to reconstruct the morticians' identities: political identity, social identity, social personae, style, and mannerism. For the first three definitions, this study will rely on the ideas presented in past mortuary theory (Binford 1971; Huntington and Metcalf 1979), but defined primarily by Saxe(1968; 1970). The latter two terms are based on the theories of
Martin Wobst, who defines style in the archaeological record as an informational system of communication and social exchange (Wobst 1977).

Due to the aridity of the Atacama Desert (Montell 1929: 6; Moseley 1975: 7-11), it is easy to comprehend why the Chinchorro were among the first societies around the world to develop methods to preserve their deceased permanently (Allison et al. 1984; Arriaza 1995b; Cockburn & Cockburn 1983: 136; Rivero and von Tschudi 1854). This thesis examines two styles of artificial mummification as defined by Arriaza (1993). The black style, extending chronologically from 5,000 to approximately 2,500 B.C., is characterized by the total evisceration and reconstruction of the body, and the black coloring used for the entire body. The red style dates from approximately 2,600 to 2,000 B.C., and is characterized by less complex methods of artificial mummification similar to ancient Egyptian methods, the use of red paint for the body, and long flowing manes of hair protruding from porcelain-like helmets.

Later mummification techniques were less complex and resulted in a style known as the mud-coated mummies. The morticians gutted these individuals as fish from the daily catch and cemented them into shallow graves using a mixture of mud, clay, and an organic bonding agent (i.e., blood, urine, fat). The technical processes examined for the first two styles may yield the possible conditions for the abrupt transition into the third style, the mud-coated mummies. Their dominant design lasts for only an extremely brief period and at the end of artificial mummification tradition (Arriaza 1995b: 114-115; Standen 1991).
We know the Chinchorro morticians created their immortal mummies from the environment directly in contact with them. The people were so familiar with their surroundings that they adapted the natural world to suit their changing economical and spiritual needs. Natural media doubled not only as the necessary mechanisms for everyday labor intense activities, but also for the clays and paints used in artistic endeavors, such as the mummies. In order for this pre-ceramic culture to have become so learned in the environment and their mortuary arts, they needed time and stability to nurture their creativity, ideology, and rituals.

Early phases in the Chinchorro’s development best imply the sedentary possibilities for the ancient culture. This early sedentary development is represented heavily in the elaborately designed black mummies whose 'reign' lasted almost 2,500 years (Arriaza 1995b: 150). As time progressed, the Chinchorro adapted their mummification techniques, using less complex measures. Later traditions reflected a changing world and perhaps an increase in mobility and trade. The culture turned from a more rigid tradition of manufacturing with strong structural designs (the black style) to a more individualistic practice. The resulting change produced a more visually powerful mummy. In understanding the change in the mummies over time, we can understand the changes in the culture as well. By examining the various artistic techniques through the eyes of the artisan, we can interpret the results of those examinations with the training of an archaeologist.

The mummies’ “artistic” qualities reveal differences in the design styles of particular periods. The morticians identities’ of specific periods are represented by
the style and mannerisms reflected within the mummification process. The
"artistic" patterns are the morticians' behavioral traits, or mannerisms, and reflect
both the personae of the mortuary practitioners and the society as a whole. The
mummies, then, represent not only a religious practice used as a symbol for the
group's continuation, but perhaps also the beginnings of creative expression as a
form of art.

Once we establish the mortuary specialists' visual testimonies through their
artistic expressions, then we can explore possible social interactions in the ancient
fisher-folk society. Mummies could represent belief and interaction within
prehistoric society used by morticians to keep control. Yet, their appearance could
also be a reflection of the changing times, where outside influences affect the
transition of mortuary style over time. The style reflected in the creation
techniques provides a visual perception of Chinchorro society.

Why did the artistic styles change over time? What were the stresses that
motivated the culture to change from the complex rituals of the black style, to
increasingly less complex practices until there was a total abandonment of artificial
mummification? Who prepared the bodies for mummification? Can we draw
conclusions from the artistic styles used to create the mummies? This study
explores the idea of modern behavioral patterns, particularly those that intertwine
with creativity, and applies them to a prehistoric context with some surprising
results.
CHAPTER TWO:

DEATH AND ANTHROPOLOGICAL THEORY

Death and Mummies in General

For Western society, death is the end to a lineal existence. The passing of someone familiar interrupts the conscious exchange of experience to be obtained from that person in the future. It is common practice to separate the deceased from society through religious rituals, mourning, and by the definitive processes that manifest from the permanent loss for loved ones (Arriaza 1995: 25-29). Huntington and Metcalf (1991: 66) illustrate this process using

Robert Hertz's original hypothesis, where death is a reflection of life. The entire process of mourning by the living to appease the soul of the deceased's body is a rite of passage for the dead into their new existence. This “passage” also reinforces
the social identity of the living and allows them to continue with their social experiences (see Figure 1).

Cremation and embalming are practices that symbolize this definitive end of an individual in many modern industrialized societies, as was true of many prehistoric peoples too. Whereas cremation is the reduction of bodily tissues to an unrecognizable pile of ash, embalming is a process in which millions of modern humans invest to temporarily see their ancestors for some type of mental closure. The facade in the coffin eventually decomposes. The physical body ends, symbolically changing the social identity; and yet, the embalmed image remains eternally in the mental state of the mourners.

There are many cultures who do not remove the deceased from their lives, but create physical symbols through the dead to allow them to integrate with the living (Frazer 1940: 367). Mummies are probably the most familiar mortuary product of those societies. The most well known mummies are the ancient rulers of Egypt. Due to the enormous popular hype during the late 1800's and 1900's, it appears that the term “mummy” should be an invention of the Egyptian priests. However, the term ‘mummy’ is a Byzantine word signifying “bitumen.” In Latin, it expresses the use of bitumen to darken something. “Mummy” simply relates to the darkening of the skin (Budge 1995: 173; Guillen 992: 24). Therefore, mummifying an individual transforms the body’s soft tissue from a soft pliable state to a more permanent and less vulnerable state.
Removal of fluid and catalyzing agents is accomplished by: extreme freezing to draw out bodily fluids; to heat the fluids to the point of becoming a vapor; to apply some form of transferable medium to draw out fluids; or to remove the oxygen and water born nutrients that the feed the enzymes in the fluids (Budge 1893: 175; Wilkins 1989). A body may be preserved for extreme periods by these processes in most climates, except those with high temperature and humidity levels.

A mummy can be any (deceased) body preserved through natural or artificial processes. Does this then limit the range of environmental characteristics necessary for preserving the individual? Apparently not, for mummified bodies are found in all corners of the globe, in all sorts of cracks, crevices, coffins, and contorted positions (Cockburn & Cockburn 1983). In the late 1800's and early 1900's, the halted decomposition of dead tissue was intriguing to early European researchers. This intrigue provided decades of myths and hoaxes surrounding the mummies, almost all of which we know are not true (Budge 1995: 174). A necessity to preserve soft tissue is the removal of bodily fluids and, what is more important, the catalyzing enzymes within those fluids. By doing so, we are removing the medium through which bacteria decompose the soft tissues.

Egypt has some of the most well known examples of artificially mummified bodies (Bucaille 1990; Budge 1995). The Chinchorro culture of South America also practiced elaborate artificial mummification techniques. The artificial preparation practiced by both cultures hastened the preservation process.
providing a smaller period that bacteria could affect soft tissues. Artificial mummification was a process that needed time to perfect by groups around the globe, such as the Egyptians and the Chinchorros.

Symbolically resembling the mummification process of other cultures, a plastered skull fragment was found in the Levant region of the Middle East, at the prehistoric village of 'Ain Ghazal, Jordan (Simmons et al. 1990). However, because only the head was preserved and the soft tissues it appeared were not suspect to preservation techniques, this Middle Eastern burial is not considered to be a form of artificial mummification. The skull fragment was much older than Egyptian examples (approximately 4,000 - 6,000 B.C.), preceding Egyptian mummification practices by 1,000 to 3,000 years.

Naturally mummified bodies are found in an even greater number of geographic locations. For example, the Alps yielded recently an excellently preserved middle-aged man, trapped beneath the ice for over 5,000 years (Spindler et al. 1994). In Greenland, 500 year old naturally mummified bodies of six women and two children were discovered by two brothers during the 1970’s (Hansen et al. 1991). In the Great Basin region of North America, Native Americans have traditionally placed their dead in sacred places (El-Najjar 1983; Haury 1950; Wormington 1983). In short, mummies are preserved bodies, in any shape and form, and are common worldwide.
The Comparison: Egyptian versus Chinchorro mummies

Albeit not the same in culture or process, the Egyptian mummification practices provide an excellent window for comparing mortuary techniques with the Chinchorro culture of South America. Thus far, the Egyptian mortuary techniques are the primary source available to properly compare and contrast artificial mummification practices with those of the Chinchorro morticians. The reason behind this limited sourcing relates to the elements of time, geographical location, and enormous amounts of information obtained from Egyptian studies.

The two traditions of artificial mummification are stylistically different, but occur in reverse fashion. From the third through the fifth dynastic periods of Egypt (around 3100-2,900 B.C.) when the rulers' morticians were just realizing the implications of artificial mummification, the South American specialists had already passed through the height of stylistic complexity. By the time the Egyptian priests had developed complete mastery of their techniques (approximately 2100 B.C.), the later red-style of Chinchorro mummification was on its way out of the mainstream traditions.

For both the Egyptians and the Chinchorro, there was a proto-mummification period in which the earlier deceased individuals were buried in various positions and patterns until a suitable form could be found. In the case of the Egyptians, many of the early pre-dynastic graves contained individuals in flexed positions with common burial goods (Guillen 1992: 27). The early and late Chinchorro mummies were buried in semi-flexed positions with simple items from
everyday use (Arriaza 1995b: 97). Both ancient cultures show dramatic shifts in mortuary ritual and style after their initial time periods.

For the Egyptians, the shift into artificial mummification was gradual. Beginning around the third dynasty, it was found that bodies would last longer if they were placed in an extended position (el Mahdy 1989:53). This appears to be a position the Chinchorro understood for its significance as well (Guillen 1992: 53). By the fifth and sixth dynasties, the bodies were wrapped in cloth and the outer surface plastered with clays and resins in the likeness of the deceased (el Mahdy 1989: 54). Unfortunately, the body was still in danger of decay due to the excess fluid remaining in the body. It was also later in this time that efforts to remove the inner organs were acknowledged widely as another measure to help ensure preservation (Spencer 1982:29-44). Much later in the Eighteenth Dynasty (approximately 2,100 B.C.), the removal of the brain tissue was found to be yet another preventative measure to resist decay (Spencer 1982: 117) and the embalming techniques had reached the complexity that Herodotus would later report almost 1500 years later, in the fifth century B.C.

For the Chinchorro culture, researchers have traced its earliest beginnings between 7,000-6,000 B.C. along the coasts of northern Chile and southern Peru. The dates for the earliest form of artificial mummification, notably the black style, begin at approximately 5,050 B.C. (Arriaza 1995b:125-126). At this point, the mortuary specialists already had attained an extensive amount of knowledge concerning extracting organs, skinning the deceased in an efficient and reusable
manner, and the creative knowledge in reconstructing the body using clay, reed fibers and poles (Arriaza 1995a, 1995b, 1995c). This early black style period remained consistent with the cultural traditions for 2,500 years.

The later red style of mummification resembles the Egyptian methods of mummification: the simple removal of inner organs from the chest and head through incisions made in the outer skin, and by the extended burial position. This period for the Chinchorro lasted from approximately 2,570 - 2,000 B.C. (Arriaza 1995b: 130), about the same time Egyptian priests were attempting to begin their own artificial mummification practices.

In the similarities of both cultures, it is important to illustrate several factors that aid in the argument for the sedentary lifestyle of the Chinchorro culture. First is the similar 2,000 year development of various practices followed by a 1,000 year decline found in both cultures. The reasons behind the declines may have been different: economic vs. social, social vs. religious, religious vs. economic. In the case of the Egyptians, disputes between the upper and lower Nile kingdoms forced the exchange of ideas, including those that led to the symbolic lessening of the rulers' statures from gods to mortal individuals.

For the Chinchorro, because there is not much evidence for warring groups or fights, the answers may lie in more economic reasons. The increase in trade goods reported for later time periods (i.e., tropical feathers and coca leaves from the east, lapis lazuli stones from the south: Rivera 1995) may indicate that the exchanges of ideas with outside cultures were responsible for many of the
societies' sudden 'shifts' represented by the mummies alterations over time.
Whatever the reasons behind the demise of both artificial mummification traditions, the element of time still stands clear: the isolated practices of artificial mummification, and their continued development over several thousand years suggests that the Chinchorro, like the Egyptians, were a society based in one geographic location. Because the Chinchorro lack the monumental architecture of the Egyptian culture, there may have been several base camps along the several hundred miles of coast that the group exploited during the year.

Again, because the artificial mummification practices appear to be an isolated invention of the Chinchorro people, as it was with the ancient peoples of Egypt, their intense knowledge of how to use those natural elements in the immediate environment most likely evolved because the group was sedentary (at least for the period represented by the black mummies) and had time to develop their understanding of the environment. The Egyptians discovered salts such as natron for drying agents and created them from an intense sedentary based knowledge. The same reasoning may be applied to the Chinchorro.

Both cultures practiced extended burial positioning and evisceration, an indicator of knowledge to halt the body's eventual decay. Both cultures used types of mineral salts to dry and preserve the tissue; however, while the Egyptians sought out and created the salts for their preservation, the Chinchorro's coastal environment provided their drying agents naturally. Regarding the burial of the bodies, both cultures practiced burying the dead away from the more fertile land...
areas and in more arid and less hospitable regions. The Egyptians (as well as other prehistoric societies) buried their dead away from the cultivated soils for reasons of preservation and space (Chapman & Randsborg 1981: 17; Spencer 1982: 30). It has not been fully postulated why the Chinchorro buried their dead away from the uncultivated valley floors, especially when the earlier societies subsisted largely on maritime products and not agricultural. With the San Jose and Lluta Rivers providing two of several fresh water sources, it is possible that at least some of the Chinchorro practiced the same methods as the Egyptians. To spoil the clean environment with decaying bodies would probably have altered the society's mummification practices more rapidly than is shown in the archaeological record.

Some contrasting issues found between the two cultures include: the gradual shift in Egyptian technique compared to the sudden shifts in Chinchorro styles; the mummification primarily of adult elite versus the mummification of everyone, including children; varying economic standards of mummification versus egalitarian techniques; the proximity of burials to one another; and the total incorporation of extensive goods found in Egyptian burials versus small amounts of burial goods found in the reed mats with the Chinchorro. Most of these differences can be explained in more economic terms. While the two cultures have produced some very efficient technical procedures for mortuary ritual, the driving forces behind them are extremely different. As we know, the Egyptians were a strictly ranked society, while we assume that the Chinchorro were totally egalitarian for the two time periods marked by artificial mummification. It is
possible that the stability of subsistence strategies would provide an excellent
opportunity for cultural development in the Chinchorro society, away from
egalitarian standards, starting with the red style of mummification. The reasoning
behind such a possibility shall be discussed in later chapters.

_Past Chinchorro Research_

Ethnographically, Andean traditions practiced ancestral worship (Harris
1982) for at least one thousand years. During the early portion of the 17th
century, two separate chroniclers, Garcilaso de la Vega (1609) and Father Joseph
Arriaga (1621), wrote of the unusual practices surrounding mummification and
ancestral worship. It is possible to assume that the Chinchorro were among the
first to start the traditions of ancestral worship based on similarities in burial
customs with more recent cultures (Arriaza 1995b: 30). Other theories mark this
mortuary tradition as a means of publicly displaying the dead, venerating ancestors
as though they had not died but rather exchanged their mortal form for something
much more sacred (Guillen 1992: 41-44).

After the time of Arriaga and de la Vega, the artificial mummification
processes of southern Peru and northern Chile remained unwritten until
approximately 1917, when Max Uhle excavated several mummies from the Arica
coastline. In figure two, the development of the ideas concerning the Chinchorro
culture is represented through points aligned on a time-chart. From 1621 to 1917,
there is a large gap in time where the mummification practices of South America
went unnoticed. However, as the time line shows, after Uhle's pioneering work in 1917, there has been a steady flow of archaeologists working with the mummies every decade. What has transpired, as well, has been a continual reworking of the idea: what is Chinchorro, and what defines its people? Whether the ideas from each decade are merely a reflection of the archaeologists' theoretical training, or the continuation of better methodological studies, research has provided an increasing base of knowledge about the prehistoric past.

Figure 2: Timeline. The initial recording of ancestral worship in Peru by Garcilaso de la Vega and Father Arriaga in the 1600's, and the 20th century revival of interest.

One of the most immediate questions in the minds of scientists was the origin of the Chinchorro people. Some researchers theorized for coastal migrations from the North (Llagostera 1992; Uhle 1922; Sandweiss et al. 1989). Others felt the Chinchorro were a product of eastern Andean influences (Rothhammer and Silva 1989; Sothert and Quilter 1991). All the researchers were reaching for one goal, to define the origin and thereby define the existence of the Chinchorro. In Beyond Death, Arriaza (1995b) has gathered the information from the past and combined
past perspectives to continually redefine the Chinchorro culture to its present state (Arriaza 1995b).

Arriaza's work approaches the Chinchorro mostly from his summary of past work (Bird 1943; Dauelsberg 1963; Latcham 1928; Nunez 1965, 1969; Rivera 1975, 1988; Skottsberg 1924; Standen 1991; Uhle 1922), and through interpreting pathological reports of disease and nutrition (Allison 1982; 1985a; 1985b; Allison et al. 1984; Arriaza 1993; Arriaza, Salo and Aufderheide 1994; Aufderheide 1989).

Recent knowledge about health, birth and death rates, and labor division brings archaeologists one step closer to understanding how the prehistoric culture lived, yet every new discovery generates more questions about the Chinchorro's
ancient mystique. By the abundant shores of the Pacific Ocean, and with a chronologically increasing trade supply from the eastern highlands, there was not much of a struggle for resources. The distance involved in later trade relations, combined with foreign objects used for burial, supports a theory of mobility rather than sedentism in later societies. Popular journal articles reveal subsistence strategies for the prehistoric culture had created a moderately high nutritional diet in the pre-agricultural stages of this fisher-folk society living along the Atacama's edge (Smith 1986).

The pattern of burial-marking for various territories accompanies lands with strict subsistence patterns, where an increase of population would be seriously detrimental. As we see, this was not a case for the Chinchorro, at least not early on in their development. Display of the dead in some cultures marks territoriality, and certainly the Chinchorro's methods of mummifying an ancestor and placing them where they will be seen by all is one sure marker of familial territory. Guillen (1992) argued that the preservation started as a way to mark territoriality through permanency of the dead (43-44). Problems of territorial markers most likely did not arise until later periods, when highland and lowland contacts increased the trading standards and rate of exchange so more efficient burial strategies were sought. Dramatic shifts of this type appear in the transitions from the black, to red, to mud-coated, to the abandonment of artificial mummification techniques. It is possible then that territoriality was not the primary reason behind the
mummification practices for the Chinchorro culture of northern Chile and southern Peru.

It has been discussed that with displaying the dead comes the mobility of the deceased to be situated in sacred locales for temporary intervals. Many of the black mummies are too cumbersome and delicate to have been moved about more than once. If the mummies were moved, Arriaza (1995b) states that, because of their rigidity, the black and red style mummies were an easily transportable item (107) rather than the fixed mud-coated mummies of later times. The unfired clay used for structure decreases the likelihood that the mummies were mobile, primarily the black style. That the bodies were reinforced with soft wood poles does not help this case. Because of the shifting and vibrations during “movement,” the poles would cause more problems due to the weight and instability of unfired clay around the poles as they bent from the weight.

Several pathologists (Allison 1985; Arriaza 1995b:105) have reported the repainting and reconstruction of surfaces due to the flaking and appearance of several dark layers on the bodies, which could have been the result of painting, possibly from being revisited from time to time. However, does this support that secondary burial practices were present at El Morro? Perhaps the layering and ‘repainting’ of surfaces simply have been from natural pigmentation and oxidation of exposed media layers through time. Can the multiple burial layers prove that Arica was a permanent settlement for prehistoric peoples?
It may be possible that the site of Arica's El Morro, because of its majestic shape thrusting outward into the Pacific Ocean, was considered sacred to the prehistoric Andean peoples. Because of the interrelated familial nature of hunter-gatherer societies, a few anthropologists found that established disposal areas, like El Morro, were consistent with groups that practice lineal descent (Rivera 1995; Tainter 1994:123). Perhaps highland people used the area to bury their dead to pay a type of tribute to an ocean that yielded so much for their survival. This would account for the massive build-up of different sex and age burials in the area. It would not account, though, for the high specialization within the culture, nor would it account for the sedentary patterning needed to accompany the high levels of nutrients only provided by marine subsistence.

The reasoning behind migratory highland non-related burial practice is not supported using the ideas of Saxe and Goldstein, who found the connection between formal sites and lineage patterns to be very strict (Tainter 1994: 123). We already know the groupings of burials are not subject to only families, but of both related and unrelated individuals. Such an idea does support migrational burial. It is possible that the Chinchorro, as other ethnographically recorded societies, treated everyone's children as their own. Perhaps burial placement was not an issue, if everyone saw everyone else as part of the same 'family.' Because the styles represented are so stylistically similar in technique and craftsmanship is in an isolated geographic area, sedentism would be the more logical solution.
So where does that leave us? Can we predict the subsistence and mobility patterns by the patterns of burials and mummified bodies left behind? How can we use past models of explanation for other locations, when this specific area seems to eliminate many of those mortuary paradigms? It may be possible that this area is the root of many of the Andean traditions and folklore beliefs as other studies have found similar results of varying prehistoric societies (Huntington & Metcalf 1979: 17). To examine the mummies as a whole can tell us something about death and burial, just as similar styles of investigation have revealed clues concerning other cultural groups (Layton 1989: 1-19).

For years, the processes governing the mummification techniques were mostly speculated and guessed. After the 1983 recovery of the El Morro site's mummies, scientists could internally explore and study individuals accidentally cut by construction equipment. The result of this study was a description of the Chinchorro's overall process of mummification, recently provided by Bernardo Arriaza (1995a):

First a mortuary assistant would have cleaned and eviscerated the corpse and detached the head. Using a stone knife, he (or possibly she) removed the skin, flesh, and organs, including the eyes, but ignores the hands and feet - too tricky to work on. After cutting into the skin, he probably rolled it back much as one might take off a sock. He set the skin aside for reuse, perhaps soaking it in seawater to keep it soft and workable.

An expert artisan, most likely with help from an assistant, filled the [emptied] skull cavity with straw (ash from the hearth was sometimes use as a filler as well). He lashed the cranium to the lower jaw with cords of tortora reeds, all-purpose plants with edible roots. A straight stick braced the spine and acted as a hitching post for the skull. Around this stick he wound a reinforcing "neck" of reeds.

The artisan bulked out the skeleton, and stabilized it further, by tying twigs and reeds to the bones. To regain lost volume in the
trunk, he stuffed the chest cavity with grass and a paste made of ash, water, and a protein binder such as sea lion blood, bird eggs, or fish glue. Much of the body was covered with this light gray paste, which in addition was used to model the sexual organs.

...the artisan coated the front of the skull with a layer of paste, which hardened into a mask. He sculpted a nose and made neat elliptical incisions for the eyes and mouth.

Many Chinchorro mummies have an O-shaped mouth...One explanation is that the artisans failed to tie the skulls tightly enough to close the mouth, which would have fallen open in death. Or maybe this was a deliberate practice, to give the face character and make the person seem to come alive.

Reattaching skin restored the human look, as did a short wig of human hair past to the skull.

Having thus rebuilt the body into a rigid, durable, and convincingly human form, he added the final, glorious touch: a coat of black manganese paint.

At first glance, the Chinchorro mummies of southern Peru and northern Chile follow this general pattern. However, the thirty individuals examined during the 1995 summer field research were all found to have some sort of deviation from the traditional norm. Any in-depth descriptions concerning general practices for the individuals and their deviations will be discussed in the next chapter.

The methodologies that follow discuss the deviations of process and how they reflect the morticians' behavioral traits, or mannerisms, in the mortuary arts. The methodologies examine the individual process of each mummy, and try to relate the signatures left behind artistically to more routine and practical labor intensive activities. To examine the craftsmanship of the mummies is to see the work of individuals, individuals who collectively create the whole. To study the group, we must first take a look at the fruits of the individual's labor, primarily the media used in preparing the artificially reconstructed mummies.
CHAPTER THREE:

RESEARCH DESIGN, MATERIALS AND METHODOLOGY

Research Design

Mortuary analysis has been an area where basic 'rules' cannot be explained through logarithmic equations and ethnographic models due to the element of cultural diversity (Van Gennep 1960: 149-157; Saxe 1970: 64-121). The human element always has and will forever evolve. By reinforcing and adding to the mortuary paradigms, anthropologists have found an area to which there has been little (or no) deliberation towards a universal truth, save the possibility that there is none. This ambiguity in mortuary analysis allows us to approach the Chinchorro with little prejudice and a clean slate.

Mortuary specialists are a necessary part of culture for everyone; those who provide the rituals in order for deceased ancestors to pass into their next plane of existence, and away from the living. With stratified societies, permanent mortuary specialists are a necessity. Egalitarian societies rarely have full time specialists and count on more familial practices for death ritual. The morticians have the final say in the characterization of the deceased, not the mourners. However, sometimes, depending on the culture they are the same.
In attempting to further understand mortuary rites, and primarily those which intertwine with the Chinchorro, we need to define several terms that will help reveal more ethnographic information about the morticians: political identity, social identity, social personae, style, and mannerisms. The definitions for social identity and social personae come from the 1970 work Social Dimensions of Mortuary Practices by Arthur A. Saxe. Political identity addresses the notion of political status for individuals within a particular group: the goals, responsibilities, and influences that individual has upon society. Social identity is defined by Saxe as "... a social position or status" (4). Because of the very fine between these two terms, political identity suggests a much more specialized role in the success of the cultural group politically. A social identity may include one or more political identities, but not all social identities are needed for the success of the group.

As a general pattern, intense energy investments and increasing burial item amounts are indicators for greater political and social identities. There is a greater amount of separation due to economic based reasons, and this separation is reflected in the mortuary record. In Egypt, for example, the techniques used to mummify individuals indicate their political and social status almost as much as the burial items recovered with the body (el Mahdy 1989: 52-68). During the later Egyptians dynasties, the need for a separately identified permanent mortician permeated even the lowest ranks of society (el Mahdy 1989: 14-15).

In an egalitarian society, because the needs for a center of authority are very few, the religious belief systems may dictate order through cultural norms and
daily ritual. Therefore, one of the more important and influential figures of society will be the mortician, who specializes in the removal of the deceased in an orderly manner, and reintegrates society through a series of patterned rituals. Because the position is a temporary one, the status of morticians is one of a complex series within a given set of social identities. Both ranked and egalitarian societies then possess *social personae*, our third term to be defined.

In *social personae*, an individual, or individuals, occupies a particular social identity for a brief period, or as Saxe defines it, "A composite of several social identities selected as appropriate to a given interaction is referred to as a *social personae*" (7). In the case of the Chinchorro, the social persona comes into play during the mortuary practice of artificial mummification. Every entity involved with burial rituals and mummification process assumes a role that is outside the cultural norm for the everyday purposes, but is needed for the continuation of the group. This temporary change in the populace is controlled for a brief time by the mortuary specialists, without whom the society cannot properly return to daily routines.

Because it was possible that the status of the mortician(s) altered with the passing of time, it was necessary to implement the last two terms *style* and *mannerisms* for this study. Martin Wobst (1977: 318) defined style as thus:

*It relates solely to processes which precede its sociocultural articulations, so much so, that these articulations are irrelevant to the persistence and change of particular stylistic regularities...*  
*...style is “acquired” before it is applied to artifacts and before these artifacts articulate with other cultural processes; therefore, the articulations of styles are irrelevant*
to the dynamics of stylistic behavior, and style can be treated as if it were a phenomenon without function.

By this notion then, style is already present in the culture by the time special social institutions are put forth (i.e., mortuary practices), and therefore reflect the long term mannerisms of individuals within the culture. Mannerisms can be generally defined as the particular behavioral traits displayed by individuals in culture process. Among the messages transmitted indirectly through style and mannerisms are emotional states and daily ritual (Wobst 1977: 323). We should then be able to detect other messages through the mummies besides the obvious reflection for loss of ancestral life in the Chinchorro culture (i.e., daily labor strategies, stylistic traditions, etc...).

So far, style in the archaeological record has been limited to the spatial distribution and fossil type analogies drawn around lithics, ceramics, and a variety of other quantified attributes. Because style is not only a system of symbolic social interaction, but a system in which archaeologists can view reflections of past labor intense behaviors, style can be attributed to more ethnoarchaeological contexts. In using style and mannerisms in this manner, not only should we be able to separate the black and red styles of artificial mummification into two separate chronological mortuary traditions within the Chinchorro culture, but to identify specific social identities and possible political identities within the two periods as well.
**Getting Started with Mortuary Data.**

The purpose of this thesis was twofold: to provide either support or arguments to the sedentary possibilities of Chinchorro culture; and to reconstruct the morticians' social identities using the artistic styles represented in the black and red mummies. We have already seen that through style and mannerism, the mummies reflect the social personae for the entire community. The physical manifestations (the mummies) and the manufacturing techniques may be used for comparison with the other groups for possible correlation. Now that we have a literary and theoretical base to work from, we can ask: Did the Chinchorro culture have mortuary specialists? If so, who were they? Can we use the evidence of artificial mummification to determine not only social identity and social personae, but perhaps an emerging political identity within the society as well?

When Arriaza (1995b) suggested the possible sedentary subsistence strategy for the Chinchorro people, much of the hypothesis was based on the pathological, biological, and geographical data. More indirect analogies were drawn using the uniformity of outward design displayed in the mummies to argue two things. First, the isolated practice of artificial mummification was a local invention. Second, the practice supported the sedentary implications mentioned previously. How can we define cultural characteristics through artificial mummification? By concentrating on the craftsmanship techniques and less on aesthetic values. Though aesthetics are qualities that attract or repel, technique is
the direct reflection of cultural interaction. Therefore, to reveal techniques used by 
the morticians is to reveal how society interacted within itself.

In generally viewing the mummies (black and red styles), there were two 
main trends noticed. From the initial descriptive information, it is hypothesized that 
in the early black period many people were part time specialists, while in the later 
red period the occupation may have been done by a few. The black mummy 
revealed at first glance a more rigid structural tradition and less "aesthetic" 
necessities. The red mummies, however, displayed a much higher aesthetic 
continuity and less patterned structural traits. The greater similarity in the black 
style techniques suggested a much stronger continuation of social identities within 
tradition (over 2,500 years) and less in the individualism of mortuary burial. If the 
culture was sedentary, this would be the period that would fit such a model. The 
greater individuality represented in the red mummies suggests a lessening of strict 
mortuary ritual and shift in social personae and religious beliefs. The status of the 
mortician is challenged, and the loosely structured society of egalitarian fisher-folk 
evolved into a more interwoven stratified socially organized group that traded ever 
increasingly with the highland peoples. All of this is reflected in the mummies.

**Materials**

The field data for this study were collected at the San Miguel 
Archaeological Museum, at the University of Tarapaca in Arica, Chile. Other data
were provided by Dr. Bernardo Arriaza, who has continually studied the Chinchorro culture since the early 1980’s. His data consists of notes, photos, and several rare or “hard-to-obtain” works essential for this study. Also provided by Dr. Arriaza were the test results from several soil samples and skin samples analyzed by the Winterthur Museum Analytical Laboratory (1984). Dr. Arthur Aufderheide, of the University of Minnesota in Duluth, was present for several discussions concerning the artificial mummification process. Dr. Aufderheide’s aid in answering questions over some of the basic biological restrictions on skin and organic tissues was deeply appreciated. The discussions provided a general reference as time limits set by one of the main media, the utilized mammal skin. The results of these discussions were used in the initial interpretation of artificial mummification techniques in chapter four.

The mummies studied originally came from five main sites within one hundred miles of Arica, Chile. The largest cemeterial plot, Morro 1, was undertaken by Standen in 1983. Sites Morro 1-5, Morro 1-6, and Playa-Miller-8 were excavated under the direction of Focacci (n.d.), while Rivera removed materials from Camarones (1984; 1991; n.d.). The dates for these sites are recorded in other texts (Arriaza 1995b; Rivera 1995), and span both the Chinchorro’s prehistory and history.

Thirty individuals were effectively recorded, twenty-seven of which are reported in this study. Table 1 breaks down the mummies in three parts: mummification style, sex, and age. Of the mummies examined, eighteen of the total
twenty-seven individuals displayed red style characteristics. Only nine individuals were designated as part of the black style. This number may seem too low in determining social identities through physical remains. However, viewing other photographic material taken of numerous additional mummies allowed this study to continue with the self-assurance of producing an accurate account of prehistoric mannerisms.

The sex for a large number of mummies was indeterminate due to their age or lack of lower pelvic region. Exactly thirteen of the individuals could not be sexed. It was found that roughly one third of the individuals studied were male, while roughly only one fifth of the total number were female. These numbers will obviously change in time and so far do not represent a fixed number from which to reference properly.

Table one: Observation totals of mummified individuals in Museum of Archaeology in Azapa (University of Tarapaca).

<table>
<thead>
<tr>
<th>Style: Black</th>
<th>Males</th>
<th>Females</th>
<th>Unknown</th>
<th>Statuettes</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Style: Red</td>
<td>7</td>
<td>3</td>
<td>4</td>
<td>4</td>
<td>14 (18)</td>
</tr>
<tr>
<td>Adult</td>
<td>5</td>
<td>2</td>
<td>-</td>
<td>-</td>
<td>7</td>
</tr>
<tr>
<td>Youth</td>
<td>6</td>
<td>2</td>
<td>12</td>
<td>-</td>
<td>20</td>
</tr>
<tr>
<td>Indeterminate Sex Totals</td>
<td>13</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indeterminate Age Totals</td>
<td>12</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: #’s in () denote statuettes added that share characteristics with each style.
Several of the specimens were small statuettes, no greater than twenty-five centimeters in length. The statuettes' design and construction remained consistent with the techniques used to create the mummies, and as a result remained a vital clue for insight into the mannerisms of the Chinchorro morticians. For table one, these statuettes were added to the totals with each style that shared similar characteristics.

Methodology

To properly perform this study, two approaches were used: the ethnographic and the archaeological. Ethnographically we can learn much about societies who practice similar methods of mortuary practices through the HRAF. An ethnographic base provides us with a behavioral base from which we can speculate about possible correlation within the archaeological record. The archaeological base, one that is derived from a “hands-on” observation of cultural remains, allows us to describe and interpret first-hand the mannerisms reflected within the artifacts. Although culture varies greatly from region to region, behavioral templates, ones that describe more mundane aspects of society, change at a much slower and predictable rate.

To test the hypothesis that the Chinchorro mummies reflect a change in subsistence strategies, social structure or religious belief, a research design is used that involves critical descriptions of media usage, design complexity, and deviations from the set description of the mummification process (Arriaza 1995a).
We will look into additional mannerisms defining: energy expenditure, ritual expression, and the practical yet innovative use of craftsmanship. Then, interpretations will speculate the sedentary implications and initial interpretations of social identity for the morticians.

Using various theories in sociology, art, and anthropology, this work speculates on the artistic expression and mannerisms that discern either a permanent or part-time mortician status. The theories concerning non-narrative art allow us to combine with past mortuary theory to reveal a ethnoarchaeological perspective. Because culture is a dynamic experience, all societies (because they contain culture) will be dynamic as well. The visual representations that manifest themselves from culture that we call art, constantly change and develop in a variety of unknown pathways. It is academically poor in judgment to assume that only change in aesthetic design reflects varying behavioral patterns of culture. Therefore, again by reviewing the techniques of each period behind the aesthetic design we are viewing the reflections of various periods in cultural development.

**Using the HRAF to aid in the problem of sedentism**

After defining the ideas concerning mummies, we can isolate and compare the burial practices of the Chinchorros with other cultures studied ethnographically. Due to the problem of time and geographical distances, it is
obvious that we cannot take the entire social personae of other cultures at face value. However, we can use some of the more communal rituals of those societies that share common variables with the Chinchorro, and interpret them. This thesis examined ten maritime cultures’ mortuary practices with similar subsistence strategies to those of the Chinchorro, and the mortuary techniques of the ancient Egyptians.

A search of other maritime cultures provides us with several perspective bases. First, we are given a look at cultural practice for everyday labor activity and mortuary rituals that may resemble the Chinchorro burial process at a more economical level. Next, we are provided a time-frame in which other cultures that practice similar time frames to inter their dead. We see how the various burial techniques compare with the Chinchorros; how similar cultural practices of maritime cultures reflected in the archaeological and ethnographic record. We are provided with the reaction of mourners to the deceased. Finally we see the sedentary or mobile nature of maritime societies, which is comparable to the assumptions surrounding the Chinchorro culture.

By searching the HRAF system, we should expect to find in other maritime cultures a consistency in the economic and subsistence strategies, primarily those that deal with mortuary ritual and with everyday labor activity. If the cultures are more nomadic in nature, we would expect to find a less congruous mortuary tradition. However, with cultures who are more sedentary based and live in a more stable environment, we would expect to find rigidly structured mortuary rituals for
greater lengths of time, especially for smaller groups. Comparing the burial practices of other maritime cultures and compiling data on: position, investment, interment strategies, decoration, and status allows us insight into the mortuary practices of the Chinchorro culture. Burial practices are reflections of daily activities within the various cultures. They are already present in each particular group's values before the initiation of mortuary rituals begins. This presence of simple behavioral traits, culminating in more complex rituals, is what we can term as mannerisms. The resulting rituals will be known as styles, and in particular, mortuary styles.

Next, in viewing the Egyptians extremely well recorded artificial mummification processes, we have a basis for not only a time-frame in which the bodies must be prepared, but an overall comparative time-frame of a culture who also changed its subsistence patterns through time. As mentioned earlier, the more elaborate mummification processes for the Egyptians occur several centuries after the initial experimentation, whereas the Chinchorro's most elaborate techniques occur not later, but earlier in the archaeological record. Also, in later traditions of Egyptian mortuary rituals, we find greater variations of style and economical standards in the mummies.

Such a variation indicates not only greater individuality on behalf of the individual, but in the mortician as well. The well-ranked processes indicate a sub-hierarchy within the identities of Egyptian morticians, and reinforced by the levels of treatment used for burial. If the Chinchorro culture was egalitarian, as is
assumed, then we would expect to find equal treatment within each style of mummification technique. We would also assume that the egalitarian treatments should be consistent throughout the archaeological record.

Archaeological Methodology

Before the initial fieldwork was accomplished, the main strategy for research was to collect as much background information as possible. Using texts found in public and private collections, the first stage of planning field research was to compose a type of recording format. It was determined in the beginning that the initial data collected would be: a description of each individual, including anatomical measurements; comparisons with past text material; and samples collected from the mummies and geographic region for future examination. Photographic evidence would provide some of the visual reinforcement necessary to support the work, supplemented by illustrations to reconstruct the artificial mummification process. The period of study was extremely finite (two months), so fieldwork had to be as efficient as possible.

If we were able to record only six to ten individuals, we decided to record them as well we could. Fortunately, thirty individuals were studied during the field work, three times the amount expected. Yet, this accomplishment occurred in a manner (as many field work reports do) other than the one planned initially. Luckily, the recording techniques were extremely adaptable to the situation.
Photography proved inadequate, and the established format was adequate for only recording anatomical data. Therefore, sketches provided the information gathered during the 1995 field study, illustrating various deviations from the ascribed processes (Arriaza 1995a). This method of recording helped to illustrate composite areas where photo angles would have been impossible to catch the necessary details. However, whatever was revealed in a sketch that a photo could not show had to be proven as factual (to the observer) and not conjecture. Several of the illustrations are expressly created to show the intricate details of technique, so several illustrations shown are not to scale.

The illustrative methods of recording deviations in the mummification process appeared more ethnographic than archaeological in nature, due to their intimacy. Because the search was more for deviations than similarities, the examination of the mummified remains was in the same context that a teacher examines a pupil's work, looking for quality and technique. The general processes of removal and reconstruction have been described by various scholars (Allison 1984; Arriaza 1995a; Bittmann and Munizaga 1976; Guillen 1992; Standen 1991) providing a very competent view of prehistoric South American artificial mummification techniques. This thesis, however, describes the deviations of those practices in the individual mummies. The first portion of each description is a short narrative detailing to the reader the mummy's condition and anatomical data. Other data recorded for each mummy studied were: any special items buried with the
individuals; special coloration; presence of pigments and/or dyes; and a listing of
the various media used in creation.

After describing the deviations from the artificial mummification styles,
then, interpretations of the varying techniques are discussed and related to possible
common labor activities. The observations found during the 1995 field study,
combined with the discussions with several pathologists, suggest inconsistencies
with past theories. We will then compile the data collected from the descriptions of
the mummies, as well as the initial interpretations. We will see how well the
analysis of style and mannerism sets in the arena of Chinchorro cultural prehistory.
Finally, we will speculate the possible social identities of the morticians for both
the black and red periods.
CHAPTER FOUR:

RESULTS AND INTERPRETATIONS

Ethnographic Findings:
Burial Practices for other Maritime Societies

The Chinchorro people are thus far the only group who developed the special black and red styles of artificial mummification. However, several of the accompanying practices for their burial processes are very similar to other maritime cultures. In this section we examine ten other cultures who also base their subsistence on maritime resources for some further insights into mortuary ritual.

Table one lists the burial practices of ten different maritime cultures, based on information found within the HRAF system. Separated by categories that, for the most part, can be found in the archaeological record, the table mentions the elements of interment, positioning, energy investment, and investment type. Interment was intended for the time allotted before the body was officially 'buried.' Positioning simply implies the position of the body in its final position of interment. Energy investment (for the body) is defined in three areas: low, medium, and high. Low energy investment is simply the cleaning and dressing of the body in some decorative manner, without altering the body's physical form. Medium investment refers to some bodily alteration, usually those that alter the body to some varied or...
unrecognizable form (i.e., decapitation, cremation, etc.). High energy investment involves the processes under which most artificial mummification techniques fall. High energy investment involves the chemical and physical alteration of the body, but to preserve the deceased in some rather recognizable form of their past self. Investment type simply refers to the techniques and rituals accompanying the energy investment of the various groups.

Table two details the more similar mortuary ritual patterns found with the other maritime cultures. One of the more significant features is the short time of interment found in most societies, within approximately 8 days. Another significant feature was body placement. Many burials were found to be closely connected with water in one symbolic form or another. All the cultures were noted to have buried the bodies near some source of water, either fresh or saline.

Of course, with the comparison it was found that body treatment and body positioning were the least similar rituals in mortuary practices. Body treatment ranges greatly in many of the cultures, but does share a similarity in the pragmatic levels in which the mourners prepare the body. This is a factor that will later be used for the Chinchorro burials. Body positioning was dependent on the culture and less tied to environmental influences.

Although not marked on the table, there are other factors to address. One of the most significant of those is the use of reeds to produce mats to envelop the bodies of the deceased entirely. Some cultures shred the reeds while others keep them whole, but the end result is the same: a large matting, capable of entirely
wrapping the body for protection in cultures extending chronologically from the later Inca traditions to the ethnographically present Micronesian islanders (Cobo 1893: 241; Ferdon 1957: 234; Gladwin and Sarason 1953: 160; Rowe 1946: 183-333; Schneider 1957: 800; Spiro 1949: 96).

This labor intense element is considered part of the energy investment used for the mortuary ritual, albeit it is a trait used for daily routines as well, where islanders used rolled up mats for floats. Metraux writes in his mid-1930's study of Easter Island that, "Dead people were wrapped in mats..." and reports later, "rolled into big bundles, mats formed swimming floats (pora)" (Metraux 1940). The practice of enveloping the dead coincides significantly with the early Chinchorro, and, as those found at El Morro, almost all the individuals recovered were wrapped in similar matting styles (Standen 1991).

Early Incan and pre-Incan cultures buried their dead either in small above-ground tombs or rock lined pits (Rowe 1946: 183-330). However, an important trait and similar to the "mat rolling" is the sewing up of the body in a piece of animal hide for protection (Bird 1943: 246; Cockburn & Cockburn 1983: 138; Montell 1929: 8). This trait is also found in several mummies from Arica where small children mostly of the red artificial mummification style have been sewn into birdskin. For example, one child identified as Morro 1 Tumba 23 Cuerpo 10 reveals a seam along the skin covering just above the forehead and continues into the posterior region.
culture Time period Time before interment Body positioning Energy investment Investment strategy
Araucanian S. Chile Christian Contact 4 days - 1 week extended - supine low body cleaned, jewelry and favorite items
Early Inca. Cuzco, Peru A.D. 1200 - 1438 8 days sitting, tomb burial low body cleaned, clothed and fed
Easter Islander. Pacific Islands Christian 6 mos. - 1st 1 yr - 2nd extended - 1st detached - 2nd low body cleaned, some wrapping
Trok Islanders. Micronesia Early 1900's < 7 days extended - supine low - children's burial
Woleai Islanders. Micronesia Early 1900's < 7 days semi-flexed low body cleaned, grave
Yap Islanders. Micronesia Pre 1900's < 7 days (initial burial - coastal) flexed - sitting low body cleaned, mats or coffins
Mimac. North America 1800's 6 mos - 1st 6 mos - 2nd, cremation ext. & flex - 1st NA - 2nd medium medium cremation of body
Tlingit II. North America 1800's NA cremation cremation variable low cremeation of body
Egyptians pre-dyn. Middle East < 3100 B.C. NA cremation variable low body dec., burial goods
Egyptians, dynastic. Middle East 2500 - 2000 B.C. 40-70 days extended - supine high high mummified burial, ranked goods, food surplus
Chinchorro, black style. N. Chile 5050 - 2500 B.C. 5-7 days: (assumed) extended - supine high - mumm. and Reconstruction, body painting
Chinchorro, red style. N. Chile 2600 - 2000 B.C. < 7 days: (assumed) extended - supine high - mumm. body alteration

Table 2. Maritime mortuary observations. HRAF (source).

The extended body position allowed cultures to perform rituals that may vary stylistically with burials of flexed positioning, or practiced secondary burials. One such ritual accompanying extended positions and tied symbolically to the use of animal skin to enclose the deceased’s body, is also tied to the practical application of floats used by fishers. Extended burial position and “mat rolling” suggests a possible connection with the ocean. The matting and the wrapping of animal hides may be more symbolic than practical. Yet, it could also reflect a great pragmatic behavioral trait of maritime cultures, revealing life’s image in death through immersing mortuary ritual with daily mannerisms.
Like the Chinchorro, other maritime cultures buried their deceased near water. Early Europeans recorded that Easter Island inhabitants buried their dead facing the open sea. Other cultures buried their dead in coastal caves or beneath shell and/or rocks with some specific extended body orientation. The Micmac culture of the northwest North American coast buried their dead along rivers or near the ocean, but without specific orientation (Wallis & Wallis 1955). In Arica, at the El Morro site, many burials had shifted, but all faced up and to the sea. Like the Micmac practice of burying the dead near rivers, many later burials are found along the Azapa River extending from the valley to the Pacific Ocean (See figures four and five).

The importance of children differed between the Chinchorro and other maritime cultures. Chinchorro infants and children were given the same burial treatment as adults. Adults of other cultures usually received preferential treatment. The Truk island culture of Micronesia, for example, buried children with little or no ceremony in unprotected shallow graves (Gladwin & Sarason 1953). The children's inability to hold onto life by themselves, proved they did not possess a social identity that was needed for the group's success. The Araucanians of southern Chile marked children's graves with small crosses and gave little treatment due to the negligible loss for the group (Titiev 1951: 103-106).
An interesting deviation for this lower, or negligible, status for children comes from Huntington and Metcalf's (1979) report of a Nyakyusa burial in
Africa. In Nyakyusa culture, all individuals over the age of ten must attend the mortuary ritual lest they be 'fingered' as possible witches. Children under the age of ten are apparently exempt from this rule. This suggests that at such a young age they are not yet corrupted and, therefore, cannot be responsible for harmful magic that could befall any individual by witchcraft. Nonetheless, this again suggests a lack of social identity in children because in Nyakyusa culture people cannot be corrupted [supernaturally] until after the age of ten. The problem of status about age then is another more culturally dependent factor and less environmentally influenced.

Initial burial investment within a period of one week is also very consistent with most of the maritime cultures. Because the preparation goes on in a finite time, before bacteria have a chance to break down soft tissue, the mortuary ritual of some maritime cultures may be viewed as more practical than spiritually founded. Only two maritime cultures the inhabitants of Easter Island and the Micmac culture of North America, were noted to wait more than a period of one week to bury their dead, or used secondary burial. These cultures generally cleaned and prepared the body with clean clothing, burial goods, or paints (Ferdon 1957; Metraux 1940; Wallis & Wallis 1955). Easter Islanders waited six to nine months for the decay of soft tissues; upon which the person was buried 'officially.' The Micmac culture performed two ceremonies: one before the cremation of the body and one as a type of repatriation ceremonies performed on cremated bodies. There are other variations of this theme to be sure. However, the cultures viewed here
provide an understanding about the more practical nature of maritime societies; an
understanding that may be used for the Chinchorro model as well.

The last consistency is painting. This process occurs both for the deceased
and the mourners. In the HRAF, in North America, the Tlingit of the northwest
coast mourn their dead by painting the faces of the deceased's relatives all black
(Krause 1956). In Micmac society, the deceased's face was religiously painted with
a red paint (Wallis & Wallis 1955). The Woleai of Micronesia also painted the
entire body of their deceased with a red pigment paint (Damm et al. 1938: 764).
In late Egyptian dynasties, men were often painted red and women painted with a
yellow pigment (elMahdy 1989: 65). The Uiracocha Inca mourners practiced a
deviated mortuary ritual whereupon the women who mourned cut off their hair
and smeared their faces with black paint (Montell 1929: 222). This is another
practice similar to the prehistoric Chinchorro mummification ritual, primarily in the
black masks. The Uiracocha Inca practice of hair cutting parallels the Chinchorro
wig manufacturers.

Archaeological Findings:

The following are the observations made during the 1995 field study. The
interpretations speculate sedentary implications for the earlier, black period. The
section will set up the discussions for chapter five dealing with social identity and
past model conflicts.
Off the Straight and Narrow Path of Tradition

SPECIMEN #1: ID: Maderas Enco, Cuerpo I: black style subadult male: This is the remains of a teenage male between fourteen and twenty years of age. One of three mummies found together in downtown Arica, Chile several miles north of the El Morro mass cemetery, this black style mummy is the only individual known thus far to have multicolored bands painted across the ventral portion of the trunk section. This male mummy measures an estimated maximum body length of 95 centimeters with a trunk width of over 12 cm.

The mummy is in disrepair; its head is completely destroyed. Only a few skull fragments remain with wig portions cemented to the outer surface. Small rodent bones found inside the cephalic region of both the sub-adult and the adult female mummy (Cuerpos 2) suggest that rodents may have claimed the bodies for their habitat, thus accelerating the decay of the superior ends. The large reed matting which enveloped the mummy is gone, unsalvageable during the rescue operation and the vegetal fibers too brittle for transport to the museum's storage facility. In spite of such little protection from the elements and successive populations, the Maderas Enco group is preserved extremely well. The group was found about 100 meters from the shoreline on the valley floor.

As mentioned before, this mummy has bands of color painted horizontally across the body. This is one of the most noticeable deviations from the 1995 description by Arriaza for artificial mummification. The colors are alternating yellow (or white) and red ochre bands applied using fingertips. Evidence of this
was in the impressions still left behind by the mortician's finger-strokes where they started and ended on each stripe. The finger strokes are oriented from the right to the left side. Also of interest are the nails of this teen; they are painted with the same red ochre paint that covers the trunk. The mummified teen was most likely in place when the bands were applied due to the excess or 'mistakes' found on the outer right arm of Specimen #2.

It is arguable that the bands were applied as a type of secondary burial ritual, where the body was replenished through color while another person's remains (an infant in this case) were placed on top of the body on a bed of camelid fur. It is possible that the 'mistakes' are in actuality imprints made from the mummies touching each other. After careful consideration, this was found to be a very unlikely occurrence because, first, there are only a few markings near the shoulder end, and we would expect to see more further down the arm if the bodies were in such close contact that the stripes rubbed off; also, because the markings do not match or mirror those on the right arm of Cuerpos 2, they are considered as mistakes made from reaching over the bodies to paint. As is typical with the black style, the teen is covered with a magnesium base paint or wash, absorbed by the skin.

One burial item found in association primarily with the teenage male is the remains of a harpoon shaft. Not noted during the initial rescue operation, the harpoon was found during the 1995 field research and its context was associated with Specimen #1. There are several reasons for this late association of the burial
item, but the primary cause may lie in the 'secretive' positioning of the harpoon between the male and female mummies while hidden from above by the third burial, the infant.

The Maderas Enco group (Specimens 1, 2, and 3) is an interesting minor deviation from the 1995(a) description by Arriaza. The outward extensions are easily recognizable as the black style, but the technique deviates from the traditional norm. Probably the greatest deviations lie in Cuerpos 1 and 2, the sub-adult male and adult female mummies; starting with the skeletal structure. Most skeletal tissue from other black mummies show signs of defleshing and the removal of soft tissue.

In processing the individuals, the skeletal remains are arranged with unnecessary portions either omitted or knapped transversely to ensure successful replacement of the outer skin. In Figure 6, note the knapping of the arm and leg bones. By examining the process of knapping and joining with cordage, this process is vaguely
reminiscent of coiling techniques used for basketry or the joining of plies for cords. This is a process that is common in many of the black mummies, where ends are knapped for easier reconstruction methods. Single ply animal sinew, known only so far utilized in preparation of the Maderas Enco mummies, is another oddity and deviation from the mortuary technique, and ties together the ends of the bones.

Soft wood poles are then arranged along the lower arms, legs, and vertebrae, running into and eventually through the cranium and tied to the skeleton with sinew. It is possible that the poles were stained with some of the red ochre paints before they were applied, due to the deep rich reddish brown color present in these poles that is not present elsewhere. The shoulder and collar bones are present and tied also with sinew. The pelvis bones, perhaps too bulky to use for reconstruction apparently, are omitted from the mummy. Methods to be sure of this is to either take a radiograph, which is useless due to the density of the clay, or to cut apart the mummy, which is out of the question due to its destructive nature.

The next deviation is the body cavity filler. In the case of Maderas Enco illustrated in Figures 7-10, there are no vegetal fibers used to fill the body cavity. A thick white ash clay is applied thick and clumped around the individual portions and allowed to dry. From the evidence left behind, there was more than one application of this inner clay due to the different consistencies found between layers, as well as several ‘oozing’ formations found around inner cording and bones.
Figure 7: Maderas Enco Reconstruction. Sinew binds poles to bone, not vegetal fibers as in other cases. Also bones are knapped for conservation of space. Illustration by Russell A. Hapke.

Figure 8: Maderas Enco Reconstruction, phase two. No vegetal fibers used for stuffing. Instead a white ash paste is applied and allowed to dry. The dried separate pieces are then bound with sinew and vegetal cords to the trunk. Facial mask created. Illus. by Russell A. Hapke.

Figure 9: Maderas Enco Reconstruction, phase three. Second clay layer applied and allowed to dry. Original skin re-applied to body and tied with sinew cording. Illus. by Russell A. Hapke.

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Once dry, the separate pieces were tied together with a 2-ply sinew cord (Z2S). The skull fragments indicate that originally the skull was bound with the traditional vegetal cording (Z2S) and lashed to the trunk. Also during this stage, a mask made from the first batch of white ash clay was used to create the facial mask and applied to the skull.

The figure was let alone to dry until the clay set up to hold another layer without dissolving. The second layer, a bit thinner and less gritty than the first, formed the body contours. For a second time, the body was allowed to dry. Because of the rectangular form of the body, it appears that the
inner clay over time absorbed moisture to settle and readjust in a saddle-like fashion. The fragmented remains reveal that both the sub-adult and the adult were reconstructed with outer geometric design features.

When the skin(s) was reapplied to the form, the skin of the head region was pulled over and gathered at the nape of the neck where it was tied, first with a sinew cord and later with a larger, more decorative cord. Scant remains of the masks show how the skin was gathered loosely like a cloth at the neck region, strongly contrasting the tight and stretched skin portions that covered the face. Using more of the same style of tightly corded sinew found within the mummy, the skin atop the facial mask was bound tightly in place, and the cord wrapped the circumference of the face several times. Another cord is found around the waist (Z2S) made from yellow camelid wool. The cord has a dual purpose. First, as it covers and is covered by the black paint; it appears that the waist was another area where two large pieces of skin joined. The first wrapping of cord is hidden beneath more of the same cord (Z2S). The second purpose is obviously for decoration.
Figure 11: Maderas Enco, Cuerpos I. The subadult male mummy. Artist’s rendering of the vibrant use of colors for trunk decoration. Illustration by R. Hapke.
SPECIMEN #2: ID: Maderas Enco Cuerpo 2: Black style adult female: Much of the cephalic region is destroyed for this female adult mummy. Rodent skeletal remains are scattered throughout this area, but were found most in the neck region. The body is not as well preserved as Cuerpo 1: the arms have detached from the shoulder region and remain in several large pieces. The legs are almost complete, except for the feet which cemented together and broke away from the legs. It is estimated that the maximum length for this mummy is between 105-115 cm with a trunk width of about 12 cm.

The female is painted entirely black. She does not possess the multitude of colors the male does, except where the mortician knicked her right arm with paint while painting Cuerpo 1. There is a distinct possibility that the genitalia have been painted with a diluted form of the red ochre paint; however, this will have to be explored in future studies when a more advanced photographic method can be used to isolate the spectrum and enhance possible color variations.

Traces of reeds are left from the infant burial which rested atop both Cuerpos 1 and 2. Camelid fibers mixed in with the reeds also attach themselves with mystifying agility. Perhaps the only other recognizable possession on the adult female mummy is a crude leaf-shaped leather pouch. The edges are sewn three quarters around, leaving approximately 4 mm of leather between the seams and the edge of the leather. Later investigations may reveal what contents lie inside the pouch.
In the reconstruction of the body from its component parts, this female's skeletal pieces are also devoid of soft tissue material. Bone positioning was altered for reconstruction. For example: a vertebra in the mid spinal column was inverted when it was placed back on the structuring poles that run through the spine. Another deviation in the skeletal structure was the placement of a tooth within the white clay mixture applied to one arm.

Cuerpo 2, the adult female mummy, was constructed using the same methodology deviations as Cuerpos 1, the sub-adult male. A single ply of sinew was used to bind bones to poles, while corded sinew (Z2S) was used to attach clay to sticks, and the outer pieces to the frame. Again, the same geometric style is present in the body: flat, rectangular trunk with cylindrical limbs; an oval-shaped facial mask covered the face; and the body was lain out in perfect bilateral symmetry. The female’s clay genitalia were formed, it appears, after the skin and black ash paint were applied.

Note the wig constructions for the Maderas Enco group. As illustrated in Figure 12, approx. 5 millimeter tufts of hair (length unknown) were tied with a single ply.

Figure 12: Wig construction. Ill., R. Hapke.
of sinew. The bundles were then laced around twice with a corded sinew (Z2S), forming two sides of the wig. The wig was attached to the head with the white ash clay, or a rougher cementing substitute.

SPECIMEN #3: ID: Maderas Enco Cuerpo 3: Infant burial found on top of Cuerpos 1 and 2: Unfortunately, this infant is in extremely bad condition, most likely due to its precarious burial position, relative size, and method of creation. From the fragmented portions that remain, the estimated length of the infant was indeterminable. It appears as though the infant was painted only with the black base paint. No other traces of red ochre staining were present during examination.

There were no burial items found with the infant, except perhaps the cradle matting and camelid fur batting upon which the mummified infant was laid to rest. As described in Specimen #1's recovery, the infant was found placed on top of the sub-adult male mummy and the adult female mummy.

The creation of the infant deviates more from the other two Maderas Enco mummies than it does from the 'norm' or traditional mummification process. The soft connective tissues were left along the appendages and spinal column. There were only two poles present in the infant mummy, those that ran the length of the body from the legs to the cranium area. No pole was found through the vertebrae, and from investigation it appears the connective tissues remained when the infant was mummified due to the residual staining and residue on the bones.
Investigative reports from the rescue team initially, and subsequent informal reports from Dr. Bernardo Arriaza show that the infant was less than one and a half years in age when it died. Because of its relatively young age, it is highly improbable that the wig made for the infant mummy was created using its own hair. An even more feasible solution is that the wig was created from the mourners' hair, due to the thickness and the length of the wig. Also due to its age and amorphous bone structure, as well as lack of clay design elements, the sex of the infant was indeterminate.

Sinew is used to bind parts of the body together, just as it was in Cuerpos 1 and 2, and although it is difficult to be certain, there are some signs that the cranium was wrapped with vegetal cords. What is known from the excess amounts of camelid fur in the cranial area is that the infant's skull was stuffed with camelid fur. This is a reoccurring pattern that we will see in other infant and child mummies.

From the fragmented pieces, the body possessed a more natural shape than the other two mummies. Because more of the soft and connective tissues remained in the infant, the natural body shapes remained prevalent. The trunk was geometrically shaped; however, instead of the rectangular (cross-section) shape of the adults, the infant's trunk was almond-shaped (cross section) and tapered at the sides. Consistency in the white inner structuring clay suggests that either the body form came from one large batch of the same consistency, or possibly the innermost layer of white ash clay was not entirely dry before the second layering was added.
to the form. Absent from this burial is the inner vegetal reed stuffing found with
many of the black mummies.

SPECIMEN #4: ID: Morro 1, Tumba 1, Cuerpo 6: An adult male black style: This
specimen is described originally by Vivien Standen Ramirez (1991) during the
1983 excavations at the El Morro site. This fisherman, buried with the base
section of his harpoon thrower, is a prime example of the Chinchorro mummy
creationary process. When the construction crews troughed the lanes for the
pipeline burial, they bladed through the legs and lower arm portions of this
mummy. Fortunately, the rest of the mummy is intact, and the clean breaks of the
arms and legs show a beautiful detail about inside workings of this male mummy.
The mummy is estimated to originally to have been approximately 115 cm in length
with a trunk diameter of 20 cm.

The mummy is painted entirely black, characteristic of the black style
technique. Across his chest and torso is spread an extremely large piece of sea
mammal skin. Also, across his chest lies an intricately-made decorative matting
that is unlike the matting used to surround the bodies. This matting, setting
diagonally across the chest, is made of shredded reed fibers, gathered in 5 mm
thick bunches and intervals of approximately 2 cm. The mask is bound in place
using extremely fine corded sinew wrapped several times around the circumference
of the outer mask. Unknown to scientists whether or not the original skin was
pulled back over the skull and mask as is done with the arm and leg regions, this
mummy held some fascinating clues to unraveling this mystery. The continuation of the skin from the existent ear lobe on the right side of the head suggests the original skin was reused (at least in this case). Also, but more arguably, are the eye, nose, and mouth slits of the mask area. The original facial openings were found to still exist with black paint blotted inside the openings.

SPECIMEN #5: ID: Morro 1, Tumba 03: Cradleboarded black style infant (nonsexed): Original descriptions of this mummified infant are found in V. Standen (1991). This infant was found with the cradleboard underneath, made from soft wood reeds, bound whole and while they were still partially green. The infant, from its outward appearance, has no sexual organs define artistically, and

Figure 13: Black style infant head. Ill. by R. Hapke.
the absence of outer organs makes it impossible to sex the individual. The body is entirely painted black, but outer skin and paint layers are quickly deteriorating from the lower waist and leg areas, revealing the inner white ash clay form. The skull is detached from the body and the back portion of the cranium has been smashed. The frontal area is still intact, with an oval and almost featureless painted mask (see Figure 13). The mask is painted with the black paint, and it appears that the color on the face has a reddish hue. It is possible because of the oxidizing effects of the iron and copper rich minerals in the decorative paints that time and the elements have altered the facial paint's appearance.

It is unknown what the inner structure of the infant mummy is, yet we do know of the white ash clay form, the skin wrapping, and the outer black clay paint. The cord (Z2S) which binds this mummy's mask is made of camelid fibers, giving a softer, less rigid look. The scant traces of camelid fur in the back of the skull suggest that this infant's skull was stuffed with camelid fur. The hands and feet are absent in the mummy, as the appendages end in tapered forms with rounded ends. The outer skin which covers the body is much thinner than the skin of others previously examined, and with the absence of the hands and feet, suggests that a different type of skin, possibly birdskin, was utilized to take the place of this infant's real skin.
SPECIMEN #6: ID: No. 3: unidentified statuette found during the first half of the 1900's: This statuette is speculated to be in fact an embryo, wrapped and mummified in the same processes as the children and adult counterparts; however, due to the density of the clays and wrappings blocking x-ray analysis, its true meaning remains a mystery. The statuette mummy is entirely whole, with just a few cracks and scrapes in the body and neck areas. There were no burial items found with this mummy, which also has been assumed to be a burial item itself for a larger corpse. The statuette has been classified as part of the red style mummification process.

The head is the most perplexing deviation here, mainly because of its misproportioned size in relation to the body. Clearly, the facial area is painted black, and if examined closely enough the imprints from two thumbs can still be seen around the cheeks and eyes (see Figure 14). The eyes and mouth were both created through poking a small stick or object into the face. One object was rectangular and the other round, as reflected in the eyes and mouth, respectively.

Because one of the ends on an appendage is in poor shape, we are allowed to catch a glimpse into the overall creation of the statuette. As illustrated in figure 15 (though not to scale), the inner structure, whether skeletal remains or sticks, is wrapped around with leather straps. A second, and thicker layer of leather bands is applied and corded sinew (Z2S) used to bind the ends, so as not to unravel later. A crack at the base of the neck shows that white ash clay was possibly used to construct the head and upper torso area for the statuette. The hair of an older
individual was cemented to the inside. Later, the black clay paint layer was applied to cover up the blemishes and create the helmet effect, found on most of the red style mummies, over which was applied the traditional red layer.

SPECIMEN #7: ID: Morro 1 Tumba 7 Cuerpo 5: Red style male child: Originally, this mummy was described by Standen (1991) during El Morro excavations. This small male child is a typical red style mummy. Unfortunately, the head is in a bit of need of repair, but overall the specimen is well preserved. The hands and parts of the feet still remain, items that in the earlier black styles fell prey to decay. Body length is 67 cm, with a trunk diameter of 15 cm.

A small bag of thin animal skin is attached to the boy's left side by the leather strap. The neck is decorated with a beautifully thick cord (S2Z) made of what is assumed to be human hair. The amount needed for this undertaking is what makes the cord so spectacular, for the cord is approximately seven millimeters thick. Added to the wig's length of this mummy, which measures over 30 centimeters in length outside the helmet region, the morticians may have needed donations from several hair donors to finish this one.

In process, the boy mummy is typical for the red style. The body cavity was opened, soft organs removed, and organic grasses and dry clays were added together to provide a filling for the body. The head apparently was severed at the neck and the brain tissue removed, only to be replaced by clays, dirt and vegetal fibers. The position of the jaw line in the mask suggests that connective
Figure 14: Illustration detailing the facial construction of the red style mummified statuette. [Not to scale] Note the "finger" impressions left behind by the pushing motion of the artist's hands. Fig. 15: Suggested construction of statue. Illustration by R. Hapke.
tissues were not removed and the mask was sculpted into place. It is uncertain whether or not the skin of the child's head was re-applied. It is very possible that the red style process of creating the helmet structure makes reusing the original skin obsolete.

The appendages in this mummy appear not to have been filled, nor were the original soft tissues removed. The only portion where stuffing occurs in the appendages is in the upper thigh regions. The shoulders and knees do show some signs of sinew used as a type of thread, either to rejoin or strengthen the body structure. The genitals remained untouched by the mortician. This child's body was closed using a piece of animal skin lain over the incision area. Just inside the incision is placed a small amount of camelid fur. This was a reoccurring trait found in mummified children. The outside exterior is painted with the red paint.

SPECIMEN #8: ID: None; unidentified arm and head of red style mummified infant given to the Museo Arqueologico de San Miguel, Azapa in the last decade: The fetus' head portion of this mummy contained some of the most interesting and eye-opening traits to the cultural symbols placed within the mummies. The arm is in poor condition, and is almost unrecognizable except for the different media used in its construction; but while the posterior parietal portion of the head and helmet are missing as well, the exposed fetus head provides us with a great amount of inside detail.
As with other infant and child mummies, the cranium of Specimen #8 is filled with camelid fur. With this specimen, we can see portions of the cranium, so the delicate operation of filling this area was done with accuracy.

The fur is inserted in a swirling motion, not crammed into the skull by just poking (See Figure 16). Evidently, there is some religious tie with camelids early in the archaeological record, shown in the preparation of the mummies.

The infant’s head was prepared in the typical red style. The clear breaks in the side of the head reveal the entrance of the wig around the skull cap and the black outer shaping clay which extends over the wig to initiate the helmet. The eyes and mouth are made by poking and rotating an oval shaped edge. The nose is pushed into place. Instead of using the thumbs to push away from the nose area to construct the brow-ridge, the minute amount of clay used for the nose is pushed together, and then poked with a twig for nostrils at the base.

![Figure 16: Llama fur style for head. Ill. by R.Hapke](image-url)
SPECIMEN #9: ID:

"This statuette is considered to be part of site Chinchorro 4":

Here is another small statuette mummy, apparently that of an unborn infant. A radiograph taken by the Museo Arqueologico de San Miguel, Azapa shows the dense clay head and outer side regions of the statuette; however, there does not appear to be a visible skeletal structure. The statuette is approximately 17 cm in length and 4 cm in width.

The infant statuette was constructed with separate arms and legs. After the separate portions were wrapped with reed materials, the head and body were encased with white ash clay and allowed to harden. The eyes and mouth were created using a twig, poked into the head about 1/8 of an inch. At this point, the wig was still separate from the body. Then, a thin piece of animal skin, most likely bird in this case, was gathered from head to toe, encasing the body in a parachute.
effect. A separate layer of the black clay was applied and the body was made into one solid piece. The body, the appendages, and even the wig, were all encased with the clay material and then painted with a purple-red paint. To help define the head region and gather the skin, the clay body was apparently 'squeezed' while still moist and pliable. The neck area still bears the effects caused by this squeezing (see Figure 17). Only the face was left with the black clay paint, which now has all but been wiped away.

SPECIMEN #10; ID: None: A black style baby’s head: Here is an example of the black style process for an infant. The production of the head is consistent with the general description mentioned in Chapter 2, and some evidence of the camelid stuffing for the cranium is present. The perfect preservation of the head allows researchers to see not only the facial slits from the eyes, nose, and mouth (Figure 18) but also how the facial skin was reapplied to the head as well. The back of the head reveals a colic, emphasizing that the original skin was used for the black style as argued. What is extremely apparent in this infant’s mummified head. The colic swirls around the deceased scalp, not covered with the typical wig application, and it is only interrupted by the folds of skin that overlap from the incision of the skin during the first removal of soft tissue. See Figure 19 for details.
Figure 18: Black style infant head. Note the eye, nose, and mouth slits, though it is believed that these are from the original openings. Illustration by R. Hapke.

Figure 19: Back of black style infant head, providing one of the heaviest arguments for the reuse of original facial skin. Note the overlapping of skin with a hair colic still present (middle). Illustration by R. Hapke.
SPECIMEN #11: ID: The solid black statuette: Figure 20 reveals the overall structure of this small statuette. The lower portion, including the lower waist and legs, is gone. The body is entirely black with the exception of the green and fleshy pink stripes painted vertically on the face. The stripes are applied using fingertips and the strokes are visibly seen on the surface. At the top of the figurine lies the scant remains of the wig, which has been broken away almost to the roots. The upper left portion of the head has been destroyed, revealing the inner wig and vegetal fibers that wrap the inner structure.

The arms and spine area both appear to have poles running along their lengths and a small amount of the black ash past applied before they are wrapped with plant fibers to hold to separate body parts together in one unit. A second and thicker ash paste is applied. The fine black paste is built up in layers until the correct form was created, including the rough shape of the head. After drying, the vertical stripes are applied.
Figure 20: Black style statuette. Upper torso and arms present. Illustration by R. Hapke.
SPECIMEN #12: ID: None; Adult female head, red style: This adult female's head is all that remains of this red style mummy. We suspect that the head is from a female because of the possible hair braiding just outside the edge of the helmet. This is a feature that does not show up in the archaeological record until the Quiani phase, several centuries later. Most of the wig is gone now, and just the ends remain. The face is brownish-black in color, almost painted. There is a definite color variation between the black clay layer which constructs the helmet and the color of the face.

There are no eyes present except for the depressions created from ages of settling clay; however, the nose still has two nostrils artificially constructed by using a sharp triangular point. Unlike the red style mummified children found thus far, this mummy was constructed with her mouth shut. Animal skin, used to enshroud the head portion, has broken away from the head and face, taking with it the upper lip area and revealing the chipped front teeth. There are still pieces of the cover skin on the left side of the head.

Found at the top of the head were extremely fine cords (Z2S) made from what is assumed to be human hair, given its structure and color. From the orientation of the hair and the depression left behind, the hair decoration may have been a type of crowning or band. Further speculation may reveal that this common feature of hair cording found on several of the red style mummies may be a tradition carried over from the earlier black style times when cords of hair, sinew, and vegetal fibers were utilized for keeping the decorative facial mask in place.
SPECIMEN #13: ID: Morro 1, #19 Chinchorro: Red style girl with stomach suture: Originally, this mummy is described by Allison (1984) and later by Standen (1991). Maximum body length appears to be approximately 49 cm with a trunk width of 11 cm. There is nothing visibly left of the head above the mandible. The body is in disrepair and fragile portions of the body break apart easily. One region is the pelvic girdle, where the skin has broken free just above the genitalia.

There are no burial items with this child except for the special garments she adorns. Her feet are wrapped with bird skin, forming small slippers. Across her waist is a grass skirt. As grass was gathered in small bundles and tied around another cord, a different cord interwove the grass bundles together, forming the skirt (see Figure 21).

Figure 21: Stylized grass skirt. R.Hapke 1

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This child is the only mummified individual seen thus far with a fully visible suture across the belly. The suture was created from animal sinew, wound in a Z2S fashion. The skin along the suture was gathered as it was sewn, ensuring that the body cavity would be closed. Below the suture lies a few scant traces of camelid fur. There is also llama fur present at the upper thoracic cavity meaning two things: either the upper cavity was stuffed with the camelid fibers, or the stuffing is from the head (as examined in other mummified children) and was mixed in with the upper thoracic cavity during excavation.

Only the chest and head cavities are stuffed. On the thighs there appears to be a loosely corded cord of human hair. Perhaps it is there to hold the legs together. Plant material is gathered and wrapped around the wrist three times and bound on the inside. Another large decorative cord (Z2S4Z) is found at the neck area. This is considered to have been decorative because of its relatively large and bulky size.

It appears that this small female was filled with ashes as well as unburned organic materials, due to the ash and fur found inside. When the outer decorative clays were applied to the small female, scant traces of black clay on the inner portions of the jaw match the patterns of those examined on M1T7C5 and suggest thus that the jaw was open when the mask was applied.
SPECIMEN #14: ID:
None: A wooden statuette. This statuette has no known provenience. The arms are not present. It is assumed that there were arms at one time because of the traditional separate leg and appendage design. Most of the outer clays are gone, with only a scant trace left on the lower leg regions (See Figure 22).

The statuette measures 21.5 cm in length with a 4 cm diameter. Human hair is bound inside the main trunk cavity with vegetal reeds. Also, three poles are present: one which travels the length of the torso, and two others which form the structure for the legs. The small stick which forms the left leg's 'skeleton' can be seen underneath the tight vegetal fiber wrappings. The head is carved stylistically.

Figure 22: Small statuette. Illus. by R. Hapke
abstractly, with elongated features of a nose and brow ridge that have deteriorated almost entirely. The combination of the hair, poles, and the carving suggest that although this statuette is not human, its presence may represent someone who was.

SPECIMEN #15: ID: Morro 1-5 Tumba No V.: Female child red style: Originally, this mummified child was described by Guillen (1992). The mummified body is deteriorating. Maximum length is not known for this young girl, yet her waist is 11 cm in diameter. The arms and legs are breaking apart and crumbling. Much of the skin is broken and missing, but the shape of the head is still present and the torso is in decent shape for study. She has not been painted like the others. The color of her skin suggests that powdered red ochre was rubbed into the skin, which would account for the unevenness of coverage unlike the coloration of mummies that have been painted with a red ochre and organic liquid mixture.

Figure 23 shows the steps in the construction of the head portion of this particular mummy. In this section, the head was removed and the inner soft tissues extracted. Next a mixture of organic material, soil, and red ochre were stuffed inside the head. A trace amount of animal hair is present. Because there are no visible strings wrapped around the skull, it is logical to assume that the tendons and ligaments for the mandible were left in place. With the inner stuffing complete, the head was mounted back on the shoulders using a pole (reminiscent of the black style) stuffed down along side the spinal column. A possible inner
Figure 23: Head reconstruction illustrated from mum. remains. Illus. by Russell Hapke.
black clay layer was used to first fill some crevices while long bundles of hair were draped over the head and banded to the skull using either a cotton or fur cord. All of this was then covered with an organic mixture (or paste), possibly the same as what was put inside the skull and allowed to dry.

After drying, a large piece of thin skin was applied over the head and body from the left to the right side where it was gathered together. This skin layer was tied with a thick cord to hold it into place while a generous amount of cotton cording, rubbed with red ochre, was wrapped several dozen times around the forehead region. Two different cording styles are present, suggesting that perhaps more than one person prepared the cording for the head. Finally, a second skin was applied to envelop over the head. This second skin was also tied with two brown fur cords, and it is believed to be bird's skin due to its extremely thin layer.

The arms and legs appear not to have been dissected and stuffed, but poles are inserted alongside the bones and muscle tissue, just inside the skin. Another pole is inserted into the torso but it is not inside the vertebrae, nor does it extend into the cranium all of the way. Except for the torso and the poles inserted into it, the body has retained its original hard and soft tissues.

As mentioned before, there is a difference in the cording styles used for the decorative band around the head, hinting that there may be more than one person who worked on this girl, at least in twisting the cords. While several cords are Z2S, there are an equal number of S2Z cords as well. Another item that seems to hint at multiple morticians is the matting both shredded and whole reed types used
around the body. In the shredded reed matting, the spacing is irregular and erratic, suggesting perhaps that someone of less experience with matting made this for the girl, whereas the whole reed matting that enveloped the entire body upon burial is much more evenly spaced, the work of an experienced crafter.

SPECIMEN #16: ID: Morro 1 Tumba 22 Cuerpo 2: The body of this male red style mummy is broken in several parts, including the knees, neck and jaw, which has been destroyed almost entirely. Maximum body length is 42 cm due to breakage, with a trunk width of 10 cm. The body is not painted with the deep purple red paint like others studied before him; instead, he appears to have been washed over with a poorly made red stain. As a result, we see the male child mummy as a light salmon coloring with the traditional charcoal gray to black mask covering the facial area of the helmet. Although original descriptions of the mummy and its burial items were done by Standen (1991), the only burial items presently available for this child are the decorative ropes (Z2S2Z) created from human hair which bind the body in several regions.

Only near the shoulders and upper thigh areas do we encounter some organic stuffing used to compensate for loss in soft tissue. Through the broken mandible, we can see that the head is stuffed with organic material. The incision for the removal of soft tissues appears to have been made vertically for the thin skin used traditionally to cover the incision has left an impression on either side of the incision area, where it appears that something has been inserted to ensure the
rift is closed. It is possible that camelid skin was inserted for this child as it was for others for it would remain non-compressed and could have caused such an impression.

The black ash past/clay appliqué cemented the wig into its helmet. It was at this time that the face was formed, including the open mouth with teeth exposed inside. Leather foot garments were applied to the child’s feet; layers of leather differ at the feet and above the ankle region seem to rolled down like socks. The body was painted with the thin red ochre wash; but the paint may have contained too much salt in its components. This would explain the dilution of the coloring over time. It would also explain the yellowing effect the paint had on the mummy. The white ash past was applied to the head to give the helmet some bulk and to help create the facial features. When a second thin layer of the black ash paint was applied, the eyes and the nostrils were poked into the face with the same sharp instrument. They all look as if created with the tip of a projectile point.

The body was wrapped with a thicker piece of sea mammal or camelid skin after the painting of the body took place. Once all the leather was gathered, a thick cord of human hair (Z2S2Z) approximately 7 mm thick bound the leather together at the neck, chest and just above the ankles.

SPECIMEN #17: ID: Morro 1 Tumba 23 Cuerpo 10: The bandage mummy: Described by Standen (1991), this is one of a very few specimens where the individual was wrapped in leather strips. Termed the bandage mummy style by
Arriaza in 1993, this is a deviation from the main red style. The body is in need of repair, as several portions have dislodged and broken free from the main body.

Much of the bandaged area is broken and misplaced, including the lower true skin of the individual. This is one of few known red style mummies that has been filled solely with ashes. Arms, legs, and the torso have all been reinforced with small poles running along their lengths and meeting toward the middle of the body.

Small strips of animal skin have been cut and wrapped around the body horizontally. The strips cover from the neck to the waist, where they abruptly stop. Photos from past research reveal that this is not a unique pattern. At least two other children, not examined during the 1995 field study but designated as Morro 1, T27, C16 and Morro 1 T27, C17, and one anonymous adult are reported to have the same treatment of leather bands wrapped around the exterior. The skin of the child is still present, but mostly on the legs and shoulder regions. Pelican skin in a large piece sewn at certain portions was used to enshroud the child during burial. Above the forehead, a seam is still visible where the material was joined.

This child was given the utmost care and delicacy when it was mummified. A special red-brown clay was used for the creation of the mask. The traditional black coloring of the mask is covering red clay, not black or white like the other individuals studied. Cotton cording of Z2S is found around the neck, gathering the pelican skin and defining the head. A fine cord of human hair, again Z2S, is wrapped around both knee areas. Because of the deteriorated condition of the knees and the different leathers present at the area, it is uncertain whether the cord
is decorative and wound only around the inner skin, or whether it is there to hold the protective skin covering around the child’s lower body. Dozens upon dozens of times, the feet are delicately wrapped with a cotton cord. Figure 24 shows the intimate care taken solely for the feet of this deceased child. One reason may be as a reaction to the early black style mummification days. This cording may be present to hold the ankles and feet to the body to ensure the body remains whole. The decay and loss of feet was a common occurrence for the black mummies where no support was given to the already weak area.

SPECIMEN

#18: ID: Morro

Tumba 30:

Male red style child: The head and feet are missing from this mummified child, yet the barely recognizable hands still lay at the child’s sides. Maximum trunk width was measured at 14.5 cm, but no estimate

1 Fig. 24: Mummy feet. III. R. Hapke

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for the length could be taken for this individual. When this child's inner organs were removed, they were replaced with an extremely large amount of stuffing. The pattern of stuffing at the shoulders would suggest that the child's arms were raised above his head while being stuffed. The lower leg portions did not receive any stuffing (see Figure 25) A thick piece of sea mammal or camelid skin was placed over the incision area and covers only the torso. At the incision, camelid fur once again is used to close the gap and ensure the organic materials remain inside. A poor quality red ochre paint covered the body. The paint appears to have had salt mixed in with it, or the red ochre was of a very low grade found near the coastline.

SPECIMEN #19: Morro 1 Tumba 1 Cuerpo 7: Black style subadult: Found with MIT1C6, this individual's lower body parts were detached in 1983. What is left, between the waistline and the head, is in excellent condition. The design of the body is remarkably close to MIT1C6 in manufacture techniques, but there are some outer design changes. The greatest change is a 'hat' on the left side of the head. This 'hat' is a piece of bird skin with feathers present. The facial construction of this fellow has several layers of black clay applied. Mummy MIT1C6 had 1-2 layers. Punctured eye slits and a lack of a visible mouth suggests this mummy's head was covered with an animal skin. There are also no ears present to suggest original skin use.
Figure 25: Red style stuffing technique: Trunk cavity is incised and emptied; an arm or stick is used to push the material into the hard to reach shoulder region. Piece of animal skin covers the trunk to disguise blemishes. Illustration by Russell A. Hapke.
Because there are several layers of the fine porcelain-like black clay applied to this sub-adult mummy, it is possible to assume that they may have died before M1T1C6 and the extra layers were used to revitalize the expression of the dead.

SPECIMEN #20: ID: 19/1165/59: Red style male child: The hands for this male mummified child are gone. The head is in disrepair and needs much attention. In the cranial cavity, the organic stuffing used to fill the skull is stained red with the use of a fine grade of red ochre. Llama fur is also mixed into the stuffing, reinforcing this uninterpreted tradition among the burial practices for the young.

A reconstruction of the head for 19/1165/59 would look like Figure 26. Note the smooth curvature of the head, typical of the helmets designed during the red style traditions. Here it should be noted that the shape of the skull is similar to that of M1 T23 C10, elongated and circular. Another interesting tie in with the two mummies is the construction of the facial features. The clay brow ridges were pushed up and curved using the fingers. Both also have the open mouths, where the lower ridge portion is pushed slightly as if it were 'pouting'. The eyes and nostrils of both individuals were created using the end of a sharp tool, perhaps a harpoon tip or knife.

The body is covered by a piece of skin with fur on the underside (facing the chest). Again, animal skin is used here to cover the incision and ensure the body is closed. The body is lashed around several times with a cord composed of tightly wound camelid fur (S2Z). This cord most likely held the thick leather close to the

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Figure 26: 19/1165/59: Red style child. Upper sketch illustrates the damage to the posterior cranial portion (face has been reconstructed). Below is a reconstruction of child’s head. Illus. by R. Hapke.
child, as done in other mummified children. It was also possibly rubbed with red ochre for decoration, but this may have been a consequence of thousands of years of rubbing against the body and transferring pigment. There is just not enough pigment on the cording to warrant a full interpretation of its coloration. At the feet, the burial specialist(s) used extreme delicacy in wrapping them with tight cotton cording (Z2S). The style of cording is very familiar to the banded mummy M1T23C10.

SPECIMEN #21: ID:
19/1146/59: Wooden Statuette from Chinchorro 4:
This small statuette is carved from one piece of soft wood approximately 10.6 cm in length. The wood has a sheen on the middle portion of the body but not at the ends where an artificial application of a sheen would be have been more likely. This suggests that

Figure 26: Wooden Statuette. III. by R. Hapke

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the sheen is from handling of the object by one or more persons. There is an extreme polishing in the trunk area of the statuette, rather than the ends. If the object is ceremonial, such as a representation of a lost infant, we would expect the ends to have been more polished and less in the middle section. This polishing effect indicates that the statuette was handled quite often. Because it was found in proximity with a small child mummy, it may be possible that this was simply a child's toy. If it were a toy, it would explain the simplicity of the design, as well as the small area polished by handling the object. As seen with other statuettes, typically the wood would be prepared with hair, reds, and clay if it were to represent a loss of human life, yet none of these factors are present.

SPECIMEN #22: ID: Morro 1 Tumba 7 Cuerpo 3: Male red child: Original descriptions by Standen (1991): Most of the body is present except for the mask region of the head and the feet. The body is in good condition and has been preserved well. From what is left of the jaw area, it appears the mouth was in an open position when the mask was created. The jaw was stuffed with organic material. There is a definite transition from the organic to the clay layers. Because the shoulders were so firm, the arms may have been raised above the head to allow for maximum stuffing in the shoulders and then lowered for burial. The lower legs again were not touched and the soft tissues are still in place. The genitals for this boy are stuffed. The stuffing used for the body is extremely low in salt content and was a dark brownish gray in color. Very little discoloration and
pitting was evident in this mummy. Llama fur was used at the incision point to ensure that the body cavity was closed. A cord, wrapped at least twice around the lower waist, was comprised of human hair and held a piece of animal skin over the incision area. Another piece of decorative leather was wrapped around the waistline once.

SPECIMEN #23: ID: Morro 1-5, IV: Red style child (sex - unknown): This mummy has been described by Guillen (1992). The skin for the face was not present, and in its place was a bird skin covering organic stuffing filling both the inside and part of the outside features. This child was buried with a few material items including a fishing net and a stick inside the net. Figure 28 shows the llama fur covering the tip of the stick. A few centimeters below the end, the stick is wrapped loosely with a vegetal cord.

The appendages show an extreme sense of patience. Both the arms and legs were wrapped with camelid fur cording (Z2S) from the wrist to the shoulder regions, and from the ankle to the upper thighs. At least two people worked on the cording for this fellow, or at least for the cording preparation. We have Z2S, S2Z, and Z2S2Z cording on the two corded skirts present. One skirt is

![Figure 28: Illus. By R. Hapke](Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.)
made from darker camelid fur while a second is tied over the top of the darker one, and it is comprised of yellowed camelid fur cord. The legs are corded several dozen times around, at the end of which the feet are covered with thin pieces of leather and banded at the ankles. Only the trunk appears to the have been altered here. There are poles in the trunk, protruding towards the skull area.

A birdskin is apparently utilized as a loose covering. Llama fur appears again on the stomach incision area, as well as near the upper body and on one of the burial items (the stick). Hair tufts found with the corpse are bound with fine cord (assumed to be sinew), Z2S, about 2 centimeters from the ends. Hair tufts measure approximately 5 millimeters thick and over 20 centimeters in length. A piece of camelid or sea mammal skin was put over the trunk and part of the skirts. The body was wrapped in a thin piece of skin and corded with red ochre stained cording up the body. Very little signs of clay on the hair bundles support the same construction methods used for Morro 1-5, Tumba No.V. It does appear that at one time the cords of hair bundles were attached to each other. Also buried with this mummy were a thick vegetal cording, assumed for around the neck, and a finger painted striped reed broom like object. The body was surrounded by the typical large whole reed matting.

SPECIMEN #24: ID: Morro 1 Tumba 1 Cuerpo 4: Adult male black mummy: This is the only mummy dissected by the Museo Arqueologico de San Miguel, Azapa. It was from this mummy's body construction that the description of the general
process concerning the artificial mummification process of the Chinchorro morticians was written (Allison et al 1984). In this case the deviation is the removal of the back of the skull cap to remove soft tissues. The bones appear to have been forced apart and cut. They were then lashed with the vegetal cording and the process continued.

SPECIMEN #25: ID: Morro 1 Tumba 7 Cuerpo 6: Male red style child: Primarily the area between the knees and the neck of this mummy presently exist. The hands, head, and lower legs are gone. Because of the amount of muscular tissue left, I am inclined to believe that there were very few incisions made on this fellow: perhaps one incision across the belly just above the corded skirt, and another in the neck area. Many of the exposed bone surfaces still show signs of muscle tissue, except for the vertebrae in the top of the neck.

The manufacturing of this mummy was interesting because the techniques used for him can be interpreted almost as easy as reading a book. First, the child was cleaned and prepared. Incisions were made in the abdomen and head areas and internal organs were removed. Arms were positioned upward and organic material pushed into the appendages using hands or some sort of tool (stick)(See Figure 24 for details). The legs were also stuffed in this manner. In several areas of the appendages, camelid hair tufts were present. Once the appendages were finished, the trunk was filled with organic material and camelid skin was wiped with a red ochre paint. The llama fur which covers the incision was also painted. Even the
skirt which adorns the waist was covered with the red ochre paint. A piece of decorative leather covered the trunk.

SPECIMEN #26: ID: Morro 1 Tumba 7 Cuerpos 4: Adult male red style mummified pelvis: Original description for this mummy was done by Standen (1991). Only the pelvic area exists for study on this mummy. Typical red style of design, the pelvic region is stuffed with a massive amount of organic material mixed with red ochre and camelid furs. There is a leather strap over the genitals, painted with red ochre coloring. There is a concentration of llama fur at the top of the stomach near the incision area. Llama fur is also present at the hip-leg joints.

SPECIMEN #27: ID: PLM 8/45: wooden statue: Photographed in the 1980's for Natural History, this wooden statue does not have the same qualities as other burial statuettes. Clearly the features of the face have been cut and carved, and the style of the carving is very reminiscent of the red style of mask sculpting. The open mouth, too, suggests that it is from the red style time period (Figure 29). Its bodily design suggests that its purpose may be other than a substitute or an effigy for a deceased person. This is perhaps the most artistic and least practical of all of the statuettes. A consistent factor found in statuettes used in Chinchorro burial is the combination of different elements (i.e. hair, fur, skin, vegetal fibers, etc.) for more symbolic reasons, yet with this statue none of those were found.
Figure 29: Wooden statuette. Note the markings of the facial design are stylistically similar to the overall design of the mummification technique. Illustration by Russell Hapke.
Black Style: Sedentary Implications

The collection of media as Arriaza reports (1995b: 105), were from nearby sources. Even though the collection of media could have been accomplished during initial transportation of the deceased to the coast, the use of the media suggests something different. The black mummies are an elaborate and systematically creative design form. Such knowledge did not happen overnight or while roaming the countryside during the year. Careful, practical preparation, the media used for artificial mummification, and generations of social tradition were those mannerisms that were particularly familiar to the morticians. Such familiarity suggested a sedentary subsistence strategy.

In comparison, Egyptian pre-dynastic burials (before 3,100 BC) were simple in technique and style. With the emergence of social identities, political identities, and practical sedentary subsistence, an explosion of traditions occurred, evolving into absolute perfection over a span of 2,000 years. This occurred because the sedentary lifestyle created an environment in which the Egyptian morticians could grow and develop their trade. The Chinchorro followed this pattern of development, except that their explosion of tradition lasted for almost 3,000 years. By direct comparison, initial interpretations within this work suggest that at least for the duration of Chinchorro society that existed with the black style and first period of red style manufacture, the culture was sedentary.

So far, many of the techniques mentioned here are practical and intimate traditions from a society who knew their surroundings extremely well. In the black
style mummies, although the exterior designs are more diverse, the construction techniques are very tight traditionally. Even though this thesis describes only 27 individuals, examinations of an even greater number of black style mummies show the interpretations to be valid. The author viewed numerous photographs of black style mummies whose bodies had also deteriorated over time, and yet were still used for museum display. The “foreign” mummies (originally from the area) visually supported the ideas in this work.

Perhaps the strongest argument for sedentism using the element of style is the utilization of the dense clay structures for the black mummies. Due the weight, the mummy would be cumbersome to move great distances. This perspective conflicts, then, with one presented by others who suggest the mobility of design in the mummies (Allison 1985; Arriaza 1995b: 105; Rivera 1995). Unless the deceased were brought specifically to the area from the highlands to die and then mummified, the most likely recourse would be to assume that the population was already present.

It was suggested during a conversation with a colleague (Wedding 1996) that perhaps the society was mobile, and the media for the mortuary ritual was created in surplus in advance. There are a few reasons we might disagree with this proposition. Although it would seem very practical to prepare media in advance, it is not practical to assume the group traveled with extra quantities of different sized mats, clay, paint, and poles, especially when there are no known recorded vessels for carrying several of the aforementioned media. Also, because the media were
geographically specific to the Arica region, the group would need to return to Arica every time their surplus depleted. This would be an awkward situation if the group was farther away, with a clay supply depleted during the mortuary ritual, and the deceased is only half-way completed. Because the mummies created with consistent media throughout the body, it is more likely to assume the deceased were already present in the area before death.

**Mortician Manufacturing Techniques and Deviations**

An interesting question to be asked is: were the bodies field dressed immediately after death like animals after a hunt? Would the blood provide more of a hindrance and more problematic health risk if the body set for a while? If the deceased were bled, what then became of the blood? Was it used for the reconstruction of the body? If so, can we locate specific elements in the organic bonding agents used with the various media that would trace them to the same blood type of the individual? These questions will have to be answered in a future study. For now, there are other questions that we can answer.

In the first steps of this particular artificial mummification tradition, to properly remove the skin around the head, the morticians shaved the deceased's hair. In some instances (like Specimen #10, the black style infant's head), there was no need to shave the head due to a lack of hair. The hair used for wigs is generally not over 20 cm in length and very coarse. The hair of the deceased was
possibly reused for the wig construction, thereby keeping the person “whole.” In Maderas Enco Cuerpos 3, there were possible portions of a wig construction; however, in the black style infant head there is no wig attachment. The presence of rodent skeletons in the Maderas Enco group suggests the cause for the partial destruction of the corpses. Their presence also suggests a possible reason for the rearrangement of materials such as wig fragments from the sub-adult male and adult female mummies.

In skinning the individuals, apparently the deceased were skinned face down with primary incisions along the spinal column. The tough sinewy portions along the spine make it more difficult to remove skin than it would be from the frontal sections. To save time and resources, the incisions along both sides of the spine would provide for the best results. An incision from this area would also provide the best piece of leather. Someone experienced in cutting and removing flesh would understand this process almost as a natural instinct, suggesting that whoever was responsible for cleaning was connected with preparing meat. In the survey performed through the HRAF, it was non-specific who were the morticians for many groups. However, because the familial unit usually aided at least in the initial preparation, it can be assumed that at least for the egalitarian societies that the family members were the morticians.

Similar circumstances are also valid for the appendages and the head, which, as seen from the black style infant head, was cut right up the middle of the occipital region. Arriaza reported (1995a) that the wrists and ankles were generally
left alone, perhaps because of their complexity. Another reason for leaving them alone may be more practical. There was no reason to cut skin from the deceased's hands and feet, because the ends would be too much of a hassle, not too complicated. The Chinchorro possessed the ability to perform such intricate cutting (as shown in the precise removal of facial skin for M1T1C6), but decided not to use it for reasons we may only speculate.

During the discussions with Dr. Arthur Aufderheide, it was found that the period for the pliability of the skin media ranges from three to six days. Yet, to use the human skin portions effectively, the work needed to be completed within the six day period. If the skin were kept in either a stream or small eddy along the coast, bacteria would still affect the tissues and decomposition would start within six days. The skin may have rested in a small pool of water to keep it pliable, or the fatty tissues scraped to help deter bacterial growth. This exacting time shows that the morticians had an immediate knowledge of their time constraints and media limitations.

Once the bodies were skinned and the muscles were removed, the inner skeletal structures were emptied and reconstructed from natural media. In the craniums of several infants and children, camelid fur filled the emptied cavity. Several younger black and red style mummies shared this element. Adults it appears had their heads stuffed with totora reed fibers, leaves and other organic materials. Of the mummies studied, 1 black and 8 red style individuals had camelid fur either as the main or partial component in the cranial stuffing. Only one of the
mummies, an adult red style female, contained traces of camelid fur in her cranium. Due to the lack of heads on several individuals, this number is obviously skewed.

Researchers have noted the poles that run the length of many black mummies, and they interpret that it is the poles that provide the structural strength needed for constructing mummies. Perhaps we should concentrate more on the joined regions and how they are wrapped for a more in-depth trait of construction, than the assumed manifest function of rigidity. This type of manufacturing technique is useful in daily labor traditions and can be found in a number of daily uses: for fashioning harpoon shafts, digging sticks and walking sticks; for possible construction of reed floats, enabling divers to have a buoyant yet sturdy place to come up when diving; for extending poles used for structures; and for cording techniques where more materials are added on to extend cord length. The poles provide a somewhat rigid frame. However, the joining methods used ensure joint integrity between poles and bone suggests someone practiced using cording for the everyday labor tasks used the same technique for the mummies.

One small infant’s mask, Morro 1 T3, remained in place with corded camelid fur, much like that which filled the cranium of several other young mummified individuals. Sinew generally bound facial masks into one set place. Again, we can assume that the use of camelid fibers for the young and other fibers for adults is another significant determiner of social status.

In creating the cords, it was noted in the black style that the combination Z-2-S was the most prominent cording technique used. There are a few deviations
showing S-2-Z, but these occurred in only one or two mummies. Not only was the
Z-2-S style used for holding the skull together, but this type of cording was largely
used in matting, binding hair for wigs, holding the masks in place, the wefts in
cradleboards, and other places of design. The greatest discrepancy lies in the
decorative cording where we find several different combinations of cording
techniques and varying media. It is possible that the Z-2-S is more of a tradition in
common labor use, accounting for its extreme presence in the structural designs of
the black mummies.

Cording usage is another useful trait practiced by the ancient morticians.
As illustrated on page 102 of Beyond Death, the mortician(s) used vegetal cording
to help reinforce several areas of the skeleton. Corded sinew also reinforced
skeletal structure (see Figure 6). The area where cording is used is where there is
a joining of bones, and for several mummies the bones have been knapped to
reduce surface area. As mentioned earlier, this type of joining resembles
techniques used for basketry and matting techniques. In several black mummies,
the cording wraps around elbows, knees, head and neck to provide strength. In the
Maderas Enco group, the long bones of the arms and legs are altered and knapped
transversely to allow for a stronger joining of two structural pieces.

Earlier observations during this and past research discuss the use of both
human and other mammal skins for the exterior shell. In cases especially where the
genitalia were reconstructed and created from pockets (Maderas Enco C1 & C2),
we understand that that section of skin is not originally from the deceased. Until
enough tests return on samples taken from several parts of the body, it will be difficult to say what other areas foreign skins also replaced. With such a design in the black mummies that is lessened in succeeding generations, this behavior may suggest a symbolic connection (with the black mummy period) with media that were close at hand for the Chinchorro, including other mammal skins.

After the bodies were reconstructed and the skins placed back over the body in the necessary positions, the Chinchorro morticians painted the bodies with the rich black manganese base paint. The total contents that compose this paint have yet to be determined, but manganese appears to be one of the major components within the black paint (Winterthur 1984). A red ochre paint was also devised for several of the mummies, but not used extensively for the black style. Because of the color shifts from one technique to another (from black to red), this practice suggests another symbolic exchange of ideas within the culture.

**Red Style: Sedentary Implications**

The red style mummies represent a much more symbolically linked ritual practice of mummification that is more politically oriented than the more technical and elaborate black mummies. Individualism is more evident in the black style than in the red in construction and outer appearance. In the red style, it appears that as long as the finished product fit the socially accepted norm, the inner designs were less important. We have a much higher concentration of what we would classify as aesthetic traits: helmet construction, wig length, multi-chromatic coloring, mouth
positioning, llama fur usage, etc. What we do not have is the consistency in design as displayed with the earlier black mummies.

During the red mummy period, there was a rise in foreign trade objects (Arriaza 1995b; Rivera 1975; Rivera 1995; Standen 1991), as well as an increase of coastal items in upland areas. The representation in the archaeological record of increased trade relations suggests a mixing of cultural ideas, where during the earlier centuries just after the exploration phase, groups isolated themselves and practiced more regional developments. Because there is less need for the intense knowledge of varying technical skills in the red style as opposed to the black style, there is less need for multiple morticians.

Initial interpretations suggest that trade with other regions may have influenced the change in techniques to a more economical method of burial. Yet, the ties to the past still may have called for the traditional creative need of artificial mummification. Because of the change in preparation, and lessening necessity of multiple morticians, initial interpretations suggest that during the red style, the emergence of political identities evolves with changing social identities and social personae. This would account for the sudden increase in using llama fur as a stuffing material in children, implying some symbolic connection between the two. Also, the visual reinforcement of the red style mummies is much greater than the earlier black style, suggesting either an internal change in the group, or most likely, some diffusion of foreign cultural ideas. The red style, then, stylistically represents
a stage of development when increased contact with outside groups began to influence the ideas reflected in the mortuary ritual.

**Mortician Manufacturing Techniques and Deviations**

The strong facial mask is probably the key element required for characterizing a red style mummy. The long, elaborate tresses that run along the body vanish into a finely sculpted helmet constructed around the entire head. The facial region characteristically has an oval mask with sculpted brow ridges, poked eyes and nostrils, and the artistically inspiring open mouth. At first thought to be from the loosening of tendons in the jaw that affect most of the later mummified peoples (Arriaza 1995a), the open maul of the red style appears purposeful and sculpted into place. This contrasts strongly with the earlier black style, where we find very few specimens with open mouths. In contrast to the gaping awls of the red mummies, the black mummies tend to have mouths formed through either poking the facial skin with a sharp implement, or by the original lips that display the soft mewing effect (as in Specimen #10). Where the black mummies had masks that were created from a thick, lumpy white ash based clay, the red mummies' masks are constructed of a finer porcelain-like clay of manganese soils.
Like the black style mummies, the red mummies' faces are black. However, contrasting with the older style is the use of red ochre paint on the entire body. Some mummies appear painted with a much richer quality of red ochre paints, indicating there was a difference in knowledge about natural pigments. This use of different colors suggests a shift in the social personae of the culture, or it may be a reflection of the successors' inability to produce the same forms of the earlier media.

As noted previously, the red style mummies are not entirely dissected and then reconstructed. The red mummies show that morticians simply removed inner organs from the trunk cavity and from the head by a few well-placed incisions in the abdomen and neck. The filling that recreated the bulk of the deceased's body was determined by whoever was refilling the cavity. The two most prominent fillings were either ashes or organic materials of clay and vegetation.

A consistency, mentioned in the previous section, in several red style mummified children is the use of camelid fur for the inside of the cranium. One child (19/1165/59) also had a red ochre clay mixture with some camelid fibers used to fill its head. The presence of the fur does generate ideas concerning the social status placement of not only children, but also camelids, in the early prehistoric society's religious beliefs. Is it possible the two intertwined somehow symbolically, such as the ideas surrounding ancestral worship and huacas?

When examined, the mummies revealed most to all the original skin remained fully intact. Incisions in the abdomen either across the waistline,
vertically along the trunk, or at an angle, allowed entry to the trunk cavity. Once the inside organs were removed, the mortician had some space to work. The mannerisms used to stuff the mummies vary as much as the contents within the stuffing itself. In several young mummies, for instance, the extremely tight shoulders suggest that the arms were raised while the mortician pushed stuffing into the area. Then, the arms were lowered to the sides again (see Figure 25 for details). Several red style child mummies have shoulder seams, but many of these are not from removing the arms or are void of the same dense packing of inner material. Whatever the information, this is another example of deviations from the traditional patterns of artificial mummification.

Most red mummies’ lower arm and leg regions were not stuffed, although in several individuals poles were forced into the appendages and along the bones for support. What this description so far illustrates is while experience in understanding the make-up of the body is beneficial, it does not appear to have been a necessity. Preparation time is cut drastically by not having to totally reconstruct the body, and the methods used to refill the body with natural media appear to cut the time down as well. Only the head is more complicated in structural design than the earlier black style.

The use of human hair becomes much more prevalent in this period, as does the use of suturing broken skin areas. In several of the young mummies, the hair used for the wigs is long, suggesting the hair must have come from another source: the mourning parties that prepared the body. There are several mummies
where both massive and intricate cords consisting of human hair are used for
decoration. In the black style, much of the cording held a dual purpose, for
decoration and for securing different body parts, but the red style uses this
seemingly rare commodity as a significant symbol. Whether religiously or for some
type of social identity marker, the hair was important to include for overall design.
Even in the representations of fetuses, hair is used for construction an individual
whom no one has even seen alive.

Another significant use of camelid fur is at the point of incision. In
approximately eight individuals, and possibly an additional four other mummies, a
minimal amount of camelid fur was stuffed just under the skin at the point of
incision. Several mummies were covered with mammal skin, protecting the
anterior trunk portion; and breaks near the piece's edges revealed the camelid fur at
the possible incision point. Evidently, the use of camelid fiber during the 400 year
period was becoming an important religious symbol of some sort.
CHAPTER FIVE:

DISCUSSION

In chapter four, this thesis made some initial interpretations from studying the red and black style mummies' creation techniques. The author's experiences both academically and socially gathered aided in recognizing and interpreting technique from both an anthropologist's and a layperson's viewpoint. Still, the interpretations cannot help without a theoretical base.

Artistic creativity is a dynamic force within any society, and expresses itself in a variety of ways. Anthropologists report art to be functional, entertaining, religious, spiritual, and nonsensical, either all at once or in any combination of these attributes. Some researchers rely on the more modern terminology of artistic circles to redefine the prehistoric past (Conkey 1982; Blocker 1994: 6, 80-81; Duvignaud 1967: 20-21). Many of the definitions depend on the symbolic effect and reaction of the audience (in this case, the anthropologist), and the categories that define more modernistic art styles. There is a problem in labeling the past with modern boundaries. The terminology is designed for the context that artists, critics, and the public recognize in a familiar modern symbolic form.
Labeling the past's aesthetic values limits anthropologists to what they can discern about prehistoric society because they may subconsciously recognize only modern contexts and fields. One example comes from Lepenski Vir, a prehistoric site where men were assumed to be the artists and women were the subjects of design (Handsman 1991). The fields are sexually ethnocentric because they convey modern interpretive values assigned by the interpreters of the site. By applying modern male or female contextual fields, we are losing interpretation potential because of viewing the aesthetic values assigned from what we experience socially, not what the artists might have experienced.

One researcher provides the argument to counter the idea of modern aesthetic taxonomy: "...this ordering [of human behavior] -- and that which it produces -- cannot be understood without knowledge of the semantic structure from which it is generated (Greenfield 1978: 441)" (Conkey 1982: 116). To understand the artistic creativity of the Chinchorro culture, then, we have to understand the driving forces behind their creativity and social identities. By doing so we come one step closer to understanding their perspective of the past, not one that we may assign by aesthetics.

Already, a biological research background of the Chinchorro past provides information on disease, maternal mortality rates, and skeletal diseases (Arriaza 1995a). We also know the subsistence strategy changes over time leading to varying nutritional standards. There is even a vast amount of data concerning variation in mortuary theory (Binford 1971; Brown 1971; Han et al. 1986;
Comparative data collected from other maritime cultures and Andean cultural traditions (Bastien 1995; Buikstra 1995; Cobo 1893; Latcham 1909; Rowe 1946; Rowe 1995; Titiev 1951) suggests a more practical reasoning behind the Chinchorros' mortuary rituals. Comparative data from the Egyptians' mummification techniques (el Mahdy 1989; Spencer 1982) lets us speculate about the political identities, social identities, and social personae for the black and red style mummy traditions. How can we speculate social identity using artistic style, creativity and mannerisms?

Popular opinion engages in the belief whereupon art exists as a transcendental "thing." It also believes the artist to be the mediator between some distant plane of existence and our world (Blocker 1994: 19; Duvignaud 1967: 24). The mannerisms that exist both in art and daily activity are inter-related. Reasoning that art is from another plane of being limits the range of creativity to a few individuals who have assumed a social identity, and a type of political identity. Both of which provide a temporary separation from society. This separation would tend to exclude the daily social experiences that combine randomly in different individuals to provide some base for those persons from which to build. Without a connection to the society, the artist cannot create successful and recognizable symbols for the group, and thus their style is brief, and, for the most part, unknown to the rest of the group. Many researchers assume the aesthetic products of artistic 'mediators' are excellent reflections to describe the past. However, interpretations using aesthetics are often poor when used by scholars, primarily because they view...
the interpretations at aesthetic levels that are outside an ascribed social field of perception (Blocker 1994: 61; Duvignaud 1967: 25).

Prehistoric societies are classified "primitive" based on the comparative viewpoint of evolutionary "hierarchies," as are their forms of creative design. Descriptions of the earliest works suggest they are simple and lacking in intellectual thought or design. Often, we assume these works to be the result of spurts of religious necessity where icons create a common identity to unite people (Duvignaud 1967: 26). To quote one researcher, "The artist, whatever his role, is neither the interpreter of some higher force nor does he minister to any cult; creativity is damaged as much by gods as by enthusiasts (Duvignaud 1967: 33)." A perception held by others as well (Rubin 1989: 17). Studying the techniques of the Chinchorro morticians allows us a glance into the daily experiences that formulate part of the culture's social personae. The styles, designs, and creative processes involved reflect the social experiences. Although they will not tell us about the spiritual 'realm' of art, they will provide some insight into the Chinchorro traditions (Arriaza and Hapke 1996).

Many anthropologists view objects based on necessity and manufacturer's efficiency. The manifest functions of the products non-Western societies create often categorize them (e.g., lithic points for hunting, rituals to compensate for death or other situations that affect the community, etc.: Binford 1971).

In the case of the Chinchorro, because the original inhabitants were not mummified as were their successors, we know that the opposite is true. Socio-
economic necessity dictated nothing within the Chinchorro society about artistic expression and mortuary ritual; however, creativity dictated everything. The explosion of creative exploration displayed in the artificial mummification techniques reflects this behavior.

This type of analogy conflicts with Binford's view that such expression is from a functional standpoint. If we accept that the archaeological record reflects style and mannerism, then we can pursue the more "ethnographic" areas of mortuary ritual (Wylie 1991). Environment was only an influence to overcome or adjust to as expressed in some other work (Dillehay et al. 1992; Rubin 1989: 30).

Objects that are viewed as 'artistic,' are created by the individual through some inspiration, either internal or external. However, this inspiration is not to cope with the stress intelligently, but in an inferior and 'primitive' reasoning of fear and superstition (Huntington & Metcalf 1979: 31; Van Gennep 1960: VIII). Rarely has practical design been used to describe the techniques of creativity in non-western societies (Duvignaud 1967: 73).

This may seem like an attack on past research, but the topic of predicting behavioral templates in non-industrialized societies of the past remains under great dispute in the anthropological world. Clifford Geertz, in the November 1995 New York Review, arbitrates a similar argument from two opposing viewpoints. The argument stems from discrepancies over the analysis of the 18th century homage and eventual killing of Captain James Cook by Pacific Islanders.
On one side of the argument is the etic anthropologist, Marshall Sahlins. Sahlins defined the causes behind both the initial homage and the facts that led up to Cook’s eventual demise using European values and western philosophical contexts. On the other side: the emic researcher, Gananath Obeyesekere, who warns that one cannot judge a non-Western philosophical society based on Western philosophies. In this particular situation, Geertz judged the latter argument as less credential without more of a theoretical base for the new perspective. However, he does admit to the cautionary response Obeyesekere presents for viewing foreign cultures (Geertz 1995).

The cautionary moral delivered by the argument brings this discussion back to our initial understanding. The outside observer must present a context of the social behavior within the society for relating social behavioral structures and building a credible theoretical base (Huntington & Metcalf 1979: 42; Tilley 1989: 189). We cannot assign philosophical identities yet to persons, with which we have had no contact for over five thousand years. For the Chinchorro, we must view the primary facts and build from that base of factual knowledge if we are to create any type of theoretical body for behavioral templates.

First, the Chinchorro culture consisted of small bands who used the maritime subsistence of the South American coast with incredible skill. Second, the Chinchorro society had sex related tasks reflected by specific skeletal disorders found in earlier population studies. Third, the culture had developed an extremely elaborate technique to mummify their dead during the earliest stages of their
development obtained by comparing radiocarbon samples dated within the last three decades. Fourth, from the changes in the mummification techniques, we can assume that major changes took place during several well-identified time periods. Fifth, the processes diminished not only in technical difficulty over time, but every stage following the black style came in increasingly smaller time intervals. Finally, the amount of foreign trade items increases over time as the complexities in mummification styles decrease.

Examining how patterned traditions begin and remain successful will allow us to further accept the two main hypotheses in this thesis. Art, aesthetically, only works if it is appeasing to its audience and addresses some theme (Tilley 1989: 187; Duvignaud 1967: 28-29). If the public does not appreciate the symbols within the work, it will not be a strong re-occurring theme within society. In order for the product to become successful to everyone besides its original creator, the artist must understand and be fully competent in those traditional institutions that will aid in his/her technique. Art must also be successful symbolically to the culture if it is to be accepted internally by its individual members (Hatcher 1985: 113; Rubin 1989: 17; Duvignaud 1967: 67). When individuals within a culture find particular creative patterns that suit their needs, then for obvious reasons the art is a success. Whether the work is a painting depicting certain feelings or narrative suggestions, a ceramic piece with traditionalized decorations, or mortuary ritual, a variety of social pathways express the creative need. The black and red style mummies of southern Peru and northern Chile are examples of successful recombination of
daily techniques used to administer artistic creativity. This mortuary art was also beneficial to the whole community.

Depending on other factors within the society, the group’s interactive capabilities limit the chronological successes of the artistic representations (Tilley 1989: 189). Factors that may make continuity of a stylistic tradition difficult can vary with every group. Several examples are: individual creativity, bride ages compared to her level of aesthetic experience, internal structuring of the husband’s group, structure of wife’s group, etc.

We can assume that the Chinchorros’ techniques were extremely successful because we find the black style artificial mummification traditions lasting for over 2,500 years. This is consistent with other theories concerning art traditions (Blocker 1994: 29). The elaborate combination of repetitive simple elements, combined with other factors, suggests different trends during different time periods and correlates with past research (Blocker 1994: 85). Perhaps the main assumption of Chinchorro society, that they existed as a small community is correct, and is the main reason for such success in extended transfer of social experience over such a long period.

How many morticians does it take for the process of artificial mummification? For the black style, the recombination and intense usage of varied elements suggest multiple individuals collaborated on creating the finished product within a finite time span. Because the effort was collaborative, we may speculate that the outer aesthetic design was less important to the symbols conveyed through
the media and the artificial mummification process itself. If the group was indeed egalitarian, as is assumed, then several individuals with similar social identities prepared the dead. Usually, the group performing the mortuary ritual was of one sex or another. This would correlate with other types of sexually dimorphic labor strategies. However, as seen in one report, such institutions as hunting and gathering, or mortuary rites are not limited to just one sex (Kelly 1995: 262-270).

For speculating the sex of the morticians we need to look at other factors within the population. The intense preparation needed not only to prepare the body, but also combine the various natural elements to compose the media used in reconstruction suggest the need for collaboration. Those artistic techniques used for preparing the body for mummification, as previously mentioned, are remarkably similar to techniques used for every labor (i.e., matting, mudding, food preparation, etc.). Perhaps for the black style, the mortician status created a temporary political and social status for both the mortician and the deceased. This meant several part-time morticians who held skilled full-time positions in other social identities filled the temporary status. Past mortuary theory described this type of situation as well (Blocker 1994: 55, 61; Van Gennep 1960: VIII; Rubin 1989: 17).

Later, during the time of the red mummies, the morticians simplified the style to accommodate different economic and spiritual needs. The more simplified techniques involve a drastic change away from the total reconstruction observed from the earlier black style, where morticians cut incisions into the body cavity to
remove internal organs. Also, the morticians do not use the white ash or organic clay compound for restructuring; instead, they stuff a more spontaneous mixture of earth and vegetation inside. Skin preparation is much less involved as well. Instead of entirely removing the delicate skin forms, the morticians use other animal skins to cover blemishes. Perhaps the only technique more elaborate than those used for the black style is the creation of the wig and helmet. It is indeterminable if the mortician reused the original facial skin for the red mummies. The morticians for the red mummies consistently use the decorative black ash clay once used to paint the black mummies for a different purpose. During the red style, this clay created a smooth contoured helmet for the long, elegant wig, attached so clumsily in earlier traditions. Whatever the change, both artificial mummification styles represent successful and creative forms of artistic technique.

There are several reasons behind this type of success theoretically. In smaller societies, such as the Chinchorro who were semi-isolated for a long period, the channels of communication are naturally stronger between all of their members. Therefore, the symbols used by those societies will be much more homogeneous than in larger, stratified societies (Duvignaud 1967: 100). Also, continual use of powerful symbolic representations and more specialized themes maintain social identities (Hatcher 1985: 113; Kertzer 1988: 18). In South America, after the initial populating of various geographical locales, it appears that many cultures, like the Chinchorro, developed less overall homogenizing designs and turned more for regional invention (Dillehay, et al. 1992: 189). As a result, many smaller
societies develop much tighter and longer lasting traditions than larger and more heterogeneous societies (Blocker 1994: 29). This desire for local specialization of techniques and behavior certainly fits the Chinchorro model.

Why does art become successful? Perhaps the art fulfills one of several ritualistic requirements put upon it by a particular society (Hatcher 1985: 113; Kertzer 1988: 9). When it does not, then style replaces itself with something more accommodating. This is an act of intelligence, not one of desperation. This replacement of symbols, again, reflecting social identities and personae, occurred in prehistory just as it does in modern periods (Duvignaud 1967: 27; Hatcher 1985: 120-121). If two or more social identities interact, symbolically represented by artistic design, they will either conflict or work with each other. The reaction produced by this interaction of different social perspectives may be on the political, religious or social level (Blocker 1994: 29; Hatcher 1985: 113). All three levels are capable of producing hostile and peaceful solutions.

The archaeological record usually views abrupt change in artistic design as a ‘hostile’ solution, where the artistic patterns experience a sudden shift in representation of social and political identities. This ‘hostility’ does not have to be from outside influences that are in reality hostile to the group, only to the form of creativity. The influence can be from simple increases in trade with other groups, from changing social practices within the group, or from environmental impulses. Any number of random situations may lead to a change in the cultural beliefs at
any given time. Whatever the change, aesthetics and technique will define given sets of social personae represented by art (Hatcher 1985: 121; Kertzer 1988: 6).

Our job, then, is to seize all the information occurring around the artistic designs used and interpret the creative impulses according to the corresponding elements that make up the prehistoric past (Tilley 1989: 188). Because the styles change drastically over time, we can view these alterations of style as major shifts in social personae, and therefore identities. The theoretical base presented by researchers concerning tradition and transmission of social experience allows us to speculate about the morticians and Chinchorro culture's sedentary possibilities.

**The Chinchorro and Other Mortuary Theories and Methodologies**

Many archaeologists identify past belief systems and social identities through the burial items interred with bodies, or by a variety of social attributes (Binford 1971; Chapman 1981; King 1970; Little, Lamphear, & Owsley 1992; Saxe 1968, 1970: 4; Tainter 1994). As mentioned before, because egalitarian societies have a non-political nature, social identity expresses itself through the experience of the individual. The social and political identities of the dead are categorized by the items buried with them, which archaeologists use to define the individual's and the group's status, importance, and role. Age, economic standing, or sex, define burial treatment in egalitarian societies due to a more diffused spread of burial items (Binford 1971; King 1970; Saxe 1968; Tainter 1994).
This is a problem for archaeologists in viewing the Chinchorro. For there are very few burial goods associated with the deceased (Allison 1985; Bird 1943; Uhle 1922). Could the burials be arranged in some categorical fashion? If so, we should be able to recognize varying social status and, indirectly, the collective experiences of the individuals by the placement of the burials. Social distinctions should be evident and it has been argued that in cemeteries, like will be placed with like (hunters with hunters, etc.: Binford 1971; Saxe 1968; Saxe 1970). Burials of adults and subadults in egalitarian societies are usually arranged either by social affiliation, economic division of labor, or age categories. Status is marked by differential treatment of the deceased (Binford 1971; Saxe 1970; Tainter 1994).

As mentioned earlier, anthropologists like Arthur Saxe maintain that infants, who do not possess very many social experiences, are expected to have little or no social identity of their own (1968, 1970: 8). For some cultures, as with the ones examined by Saxe (1970) in Africa, the death of an infant is of a more supernatural or economic concern for the society rather than a spiritual mourning for the individual infant. Although the burials do show some special attention due to familial affiliation, the child (who has not experienced life) still has no real status, or identity, of his own (King 1970).

In societies like the Truk maritime society of the Pacific islands and the ancient Mississippi Spiro societies, the denial of an infant's social identity is proportionate to the age and social experience of the individual. Several cultures do not give names to children under the age of two, the time when it is believed
that the children's ability to take care of themselves begin (Brown 1971: Gladwin & Sarason 1953: 160).

These elements contrast with the Chinchorro culture, which buried everyone in family sized groupings with different social identity markers. Standen (1991) expressed that the groups are not necessarily nuclear family relations, even though they are buried in familial sized groupings. The theory of familial burial practices was hypothesized due to the placement of different age and sex groupings by past anthropologists (Rivera 1995).

So where does that place us in relation to studying the Chinchorro? Age does not play a part in the burial of the mummies of northern Chile and southern Peru. The age of the individuals buried together varies significantly (from adult to embryo), as does the general chronological age of the mummy design styles (black, red and natural styles are found together). Sex did not divide the burials for this extinct fisher-folk society. Because the culture apparently was egalitarian, economic status would not have been a separating characteristic. The subsistence and limited resources were shared in an equal fashion among the young and old, male as well as female.

With this large mixing of age and sex categories, one possible hypothesis for the Arica area is as a massive mortuary depository. It is popular opinion at present that the mummies are from a mobile mortuary practice, deposited by people who came to the coast for harvesting the sea, and then leaving their dead behind. The possible sedentism for this prehistoric society has not been largely
supported in the anthropological community, nor are the Chinchorros' mummification practices believed to be largely an isolated invention (Arriaza 1995b: 33).

The dominant view of migrational or harvesting groups that came to the coast for surplus still remains. Perhaps this explanatory migratory model of early prehistoric life is largely due to the tremendous influence of the later Andean empires that existed off their mobile trading ability (Bermann 1994: 156-158; Kolata 1993: 272; Mamani Condori 1989: 46-59; Rivera 1995). Decorative seashells excavated from mountain areas show that there was contact with the coast. Therefore, the idea is reinforced that people were sent to 'fetch' trade goods, but there were no initial permanent settlers along the coast (Guillen 1992: 57-78). The numerous amounts of burials present at Arica in northern Chile, and sites along the southern Peruvian coast, are hypothesized as part of this semi-migrational movement (Nunez 1969). Due to the extensive nature and complexity of the artificial mummification process, other researchers believe that the influence must have come from elsewhere, like coastal Peru for instance (Bittmann and Munizaga 1976: 125-126; Guillen 1992: 44-51).

In the case of Arica, Chile, there is evidence of human occupation from approximately 7,500 B.C. to the ethnographic present. The limited natural inland resources have forced the layering of burials along the hillsides and away from the few natural economic subsistences they possessed. With the older paradigms, this seeming lack of resources added to the perspective that the burials were brought to
the area for this specific purpose, using the numerical and statistical evidence to support nomadic habitation patterns. In some instances, there may be several burial layers present. So intense were the artificial mummification mortuary practices that even in today's world the ancestors of northern Chile and southern Peru can be felt, as noted by popular magazines and media sources (Smith 1986).

Why would elaborate processes have been developed in such a seemingly desolate region of the globe, and why do they suggest possible sedentism? Located along the edge of the Atacama Desert, this geographical setting has provided the driest area on earth for over 12,000 years [see figure 5] (Guillen 1992: 89-98). The area is naturally conducive to the mummification process due to the vast amounts of moisture-absorbing minerals in the sandy soil that quickly draw moisture from the clay and plant media. Unlike the Egyptian morticians who had to experiment with their natron salts, the Chinchorro morticians knew of the Atacama desert soils absorbing nature before they started their artificial mummification practices. Even though the process for artificial mummification ended about 1,720 B.C., the soils and mineral salts within the surrounding area continued to absorb the moisture and draw out the bodily fluids. Geographically, few places on earth have the conditions as prime for mummification techniques as they are in the small coastal region of South America.

In arguing for sedentism, unless the existing groups frequented the region often enough to observe the absorbing properties of the soil, they would not have understood its nature. If the culture was more sedentary based, the Chinchorro
would be more apt to understand this natural drying agent. For most purposes, mobile groups would not understand the physical world as well as those groups that were present for great lengths of time. If the opposite were true, then we would expect the development of the clay and manganese pastes much later in the Chinchorro's development. This does not happen; so therefore, we may assume that the clay and black paste manufacture were reflections of intense sedentary based knowledge due to their sudden emergence early one in the archaeological record.

**In Response to Past Theoretical Models**

Several authors, including Allison (1985), depict the mummies as propped up vertically for a short interval for public display before their final interment. Arriaza writes that although he thinks the mummies were on display, they rested in a reclined position and not vertically thus applying less stress to the structure (1995: 146). There appears to be a general assumption to compare this prehistoric fisher society with ethnographically recorded stratified societies, such as the Inca (Rivera 1995: 43-77; Rowe 1995: 41). The assumption is based on the idea that the practice of displaying the dead allows for veneration of the dead as supernatural symbols. These supernatural symbols help guide future generations, a practice lasting almost 500 years in recorded Andean history (Rowe 1995: 27-41). It is possible the Chinchorro may be one of the first groups to display their dead.
However, in the opinion of this thesis, the creative outlet came about more for reverence of the dead than of public display and visual reinforcement of social identity. We can further argue the earlier Chinchorro society represented by the black style mummies, did not prop up vertically their deceased for temporary religious display.

The first reason to disagree with vertical, public displays of the dead is the unfired clays used for the bodies. The mummies, when examined, showed signs of the clays oozing and hardening in different positions around the body. None were oriented in a manner suggesting display purposes for the mummies. Because the clay was unfired and thus more dense, even with the reinforced skeletal structure the clay would collapse upon itself.

There are no signs of cords apparently necessary to hold the mummies in place, causing deformations in the clay or skin coverings. There are no signs of the clay reformation inside the body that constitute such an idea. For example, if the bodies were presented upright, we would have expected more of an oozing effect, whereupon the white clays would enter the wrist and ankle regions, but this does not occur. What we do see is an absence of the clays from those two regions. This appears to be from the initial joining of the hands and feet to the body, where cumbersome clay formations would inhibit the proper reattachment of the appendages. The extreme fragility in the ankles and wrists, both of which are hardly ever found intact, reflect the absence of clay. This idea is supported by observations made by Arriaza (1995: 146).
Another reason to disagree with the public display of dead for the black style is the presence of the reed matting. When found in the Arica area during several periods within the last century, there was no general patterning detailing how the matting covered the bodies. Some burial "wraps" were single, while just a few meters away, whole groups of different sizes, ages and chronological styles were wrapped together; even further, with the burial of mud-coated mummies, there is no matting associated with many individuals (Standen 1991).

The mud-coated mummies may represent, stylistically, an abrupt change within the culture. Their short lived dominance (approximately 300 years) in the mortuary record and the greater structural variability indicates a more individualistic and separate approach to burial. I believe this to be part of the increasing trade and agricultural subsistence strategies found in later periods. If the black and red style mummies were created for display, the purpose seems more likely for a more familial context than a public acknowledgment or identity marker. From this tradition of reverence of the dead it is possible that variations of ancestral worship developed, including public display of the dead.

If this matting enshrouded the mummies and they were revered more in a familial context, how would this affect the effect of display? With the Chinchorro people, because the bodies are hidden, the effect of ancestral display greatly diminishes. For example, if there are twenty-three unrelated mummified people enshrouded with mats and displayed in an area for surviving family members to
worship, how do they know to which enshrouded 'lump' to pay homage? What happens when the area collects a vast number of bodies, such as the El Morro site?

In the positioning of the bodies in the Andean regions, it has been suggested that the positioning reflects the idea of sleep, an aspect that would reflect the ideas of the living (Rowe 1995: 27). This position occurs not only in the prehistoric mummies of northern Chile and southern Peru, but in many different societies and religions, including Christianity-based religions. Semi-flexed positions also supposedly suggest sleeping, another 'living' trait. Such reasoning though, omits an enormous amount of other cultures and burial styles (cremation, disembodiment, secondary burial, etc.). This seems more like an ethnocentric myth than reality. Prehistoric cultures understood the reasoning behind extending a person's body: the soft tissues and skin will preserve longer and mummify at a much faster rate (el Mahdy 1989: 53). During the comparative research of maritime societies on the HRAF, several cultures used this position (Cobo 1893: 241; Ferdon 1957: 234; Latcham 1909: 340; Metraux 1940; Titiev 1951: 103-106).

When examined further, the origins of such extended positionings seem more practical and economic than religious. For the Egyptians and other societies, this extended position is similar to the positioning used by food preparers when drying meat. The Chinchorro were reported to have used hot ashes and coals to initially dry out the eviscerated hull for further treatment (Allison 1985: 74-81). This practice resembles the practical art of smoking meat to preserve it for great
lengths of time. To properly dry pieces of meat, however, it was common to extend the pieces for maximum efficiency, creating another practical tie to the extended positioning of the body.

There is also the idea of human sacrifice, as suggested of later, more structured societies such as the Incas (Rowe 1995: 27-41). It seems unlikely in a society practicing non-differential burial treatment that sacrifice was an integral part of the Chinchorro society during the black and red mummification traditions because of the wide age and sex ranges. We would not expect the enormous energy investment in reconstructing the body if the body was to primarily meant for disposal through sacrifice. Would we not expect to also find such a variety in age and sex within the population.

If ancestral worship was to begin with the Chinchorro, political identity may have begun with the red style, reflected in the red mummies' more ‘aesthetically’ pleasing facade for public display of the dead. Their bodies are much more mobile than the black style: easier to handle because they are lighter and more pliable. Shorter preparation times suggested by the more immediate processing of the body also reveal more of an individual discrimination of materials used for the amount and placement of filling of the body cavity. Symbolically they represent a more rigid religious development, as well as emergence of political identities. It is within a few hundred years highland groups practiced mortuary rituals where women cut off their hair to mourn the dead (Rowe 1946).
Speculating Social Identity from Style: Black Style

The difference of media use may suggest a different position not only in social status, but also for religious significance (and therefore political status). If the society, like many other patriarchal prehistoric societies, first practiced burial based on the importance of the individual to the group’s success, then we would suspect a low investment for children. If the burial practices were first started by women, who ethnographically take on the task as the main food preparers for most groups, then perhaps we would expect that an infant would receive as much attention during death as it did in life.

In egalitarian, and primarily those societies based on a maritime subsistence, women and children are the gatherers of shellfish and other necessities, providing important dietary resources (Claasen 1991; Kelly 1995: 262-270). Because of this type of subsistence strategy include not only women but children as well, it is understandable that a much different bond would occur between the two groups (women and children) than with the males. Children could easily be employed as shellfish gatherers from the coastal pools, while in turn learning from the adults the more sexually dimorphic traits that would follow later in life. This idea correlates strongly with the Chinchorro pathological reports (Arriaza 1995b). Males have a significantly higher number of auditory exostoses (assumed from diving), while females have a greater number of back and leg injury, perhaps from working the slippery shellfish beds.
Women, as experienced food preparers, would understand the properties of the media used in the artificial mummification process. In a 1975 study, Slocum found in most "hunter-gatherer" societies, women not only were the food preparers, but the major contributors to the dietary intake (Wylie 1991). Another researcher, Hastorf (1991), reports that women, through sexual division of labor, ethnographically and archaeologically are associated with "hearth, grinding equipment, ... and processing food." Also, because women have a natural connection with fertility and life, and therefore death, it is also suggested that they naturally may assume the role of mortician because of this link to nature (Huntington and Metcalf 1979). Also, their close connection with children in their early years may account for the similar investment strategy used for child burials as with adults. Through the styles of the black mummy, we see the more domestically inclined traits reflect women as the most likely candidates for mortuary specialists.

If women were the morticians, were there head morticians? Because the style is so strong for 2,500 years, we can assume that the communal effort in acknowledging the dead was more important to the morticians than their artistic expression. In a society as the Chinchorro, where labor is more community oriented, in most cases it would be the female elders, then, who were in charge of the process. Because the younger individuals would have less say in the process, this may have aided in the longevity of the stylistic design.
Speculating Social Identity from Style: Red Style

The identity of the red style morticians is much more complex than the black style. We are dealing with a much more individualistic representation of structural style, and therefore the mortuary traditions are not communicated within the group as well as earlier groups. As mentioned in the previous sections, the less complex ritual allowed for fewer people to be responsible for the mortuary treatment. It may be the simpler design is what is responsible for the lesser need for multiple specialists.

What this period suggests is perhaps a shift from one group (women) to another (men) in mortuary treatment. Men do ethnographically tend to "feature" social experiences more than women, and the aesthetically strong design of the red mummies certainly reflects this display of experience. Men also tend to acknowledge each other more individually, both socially and materially, when it comes to more specialty rituals (hunting, singing, story-telling, etc.). This is reflected in the archaeological record (Conkey 1991).

The traits displayed by the red mummies are those associated with public display: the open mouth and red paint for example. The bodies are field dressed, as would any sea mammal when killed from a hunt, but not prepared as in food preparation. Cording styles are much more refined for binding, as those used for attaching points to hunting or fishing gear and for the construction of nets. It may be possible that men started infiltrating the mortuary practice with women and eventually took over during the red period, as is reflected from other prehistoric
and ethnographic groups. Whatever the strategy, the red style is a period that reflects a much different attitude, and therefore social personae, in the second stage of artificial mummification.
CHAPTER SIX:

CONCLUSION:
MOBILE TRADERS OR SETTLED MORTICIANS

The Chinchorro were a society so well versed in the lessons of the natural world that an explosion of creative techniques burst forth over 6,500 years ago in the form of artificial mummification. These mortuary arts reflected strong social identities and social personae of the Chinchorro people for over 3,000 years. The practice of artificial mummification, and the individual elements of technique and style combined for this ancient tradition, was one whose individual customs developed over a lengthy period of time.

When migratory peoples first explored the regions of southern Peru and northern Chile (approximately 10,000 - 8,000 y.b.p.), they did not immediately artificially mummify their deceased which is reflected in the archaeological record (Arriaza 1995b: 97). By comparison, the proto-dynastic burials of Egypt were also less complex during the time before a ranked society came about. The pioneer phase in the Chinchorro mummies also reflects an initial stage of cultural development before a great alteration of life, but in a much different manner.

With the emergence of the black style technique, what we find is an explosion of creativity where various persons within society decide to utilize the
knowledge of daily living for a more ideological purpose. Death did not create a necessary obstacle for the inhabitants to overcome for obviously death was already acknowledged by them during the pioneer period of settlement. This is reflected in the intentional burial of the early natural mummies. The serious decision by individuals to create visual representations of the dead, after generations of passing down socially learned mannerisms, culminated into a necessity for creative outlets. This expression is from the evolution of artistic representation and need for visual reinforcement, not for fear of the supernatural.

The mummification techniques developed over a great length of time. It appears that the culture was familiar with the area for some time. In fact, due to the extent of their knowledge of natural media, it is most likely that the society was inhabiting the same region for most of the year. This is also reflected in the original design of the black mummies where dense, cumbersome, and fragile clay structures would be logically created near the origins of the individual media elements. Because there is a lack of outside influence, and because the black style persists for so long solely in this particular region, we can assume that the culture was more sedentary during the first phase of artificial mummification.

The eruption of artificial mummification techniques does not indicate an abrupt realization of religion, but a society's reaction that felt the need to use the familiar mannerisms from every day tasks for something more spiritually significant. The mummies are a reaction to a spiritual need for the Chinchorro. This is unlike the Egyptians, who developed their mummification techniques...
mummification practices are religious in nature, but from a more personal level according to the artistic representations left behind.

There are other things which are reflected in the early black style. The strong design patterns for creating the mummies remained generally consistent for over 2,500 years. The outer additions are the most "individualized." These items create the social identity for the deceased. The harpoon spears, spindles, leather pouches, and other burial items indicate the separation in sex, age, and social personae. The strong traditions of the internal structure indicate an isolated set of social identities within Chinchorro society that are separate from other groups, primarily because no other artificially mummified persons have been located outside the several hundred mile boundary. The traditions also indicate a well communicated exchange of technology and style, an element expressed ethnographically by smaller sized societies.

It is clear from the intensity of the media and limited time span for interment that the black style was a group effort. This is probably the only time when we can assume a political identity within the earlier stages of the Chinchorro society, as a temporary identity created out of spiritual creativity, and respect for the loss of life. As a political identity, it may be possible that the morticians started a ranked society through self-importance. This political identity created something entirely different from the cultural norm for the group, an aspect that was more influential mentally than physically.
As mentioned throughout the thesis, the mortician's techniques reflect strong ties with food preparation. The elements in stylistic design mirroring domestic labor tasks aided in the social identity of the black style morticians. In chapter four, this thesis made some initial interpretation concerning the removal of skin and soft tissue. The chapter mentioned other factors as well: the draining of bodily fluids, and the possible heat preparation for drying out the outer shell by hot ash or low intensity fire (Allison 1985), further suggesting that the food preparers of this particular time period were the ones who also maintained the temporary social identities of morticians. The use of cording suggests the mortician was familiar with proto-basketry techniques. Also, the joining of several knapped areas of bone with sinew and/or vegetal cords suggest techniques familiar with those we would expect from one who works a lot with vegetal fibers for mats.

Ethnographically, again, it is women who are the majority of food preparers for various cultures (Wylie 1991). Perhaps it was so with the Chinchorro. This would indicate that women were the first morticians. Women prepare the homes and hearths and provide the majority of cordage and weaving work (Brumfiel 1991; Kelly 1995).

Because the black style immediately starts with the burial of adults and infants, it is possible that women in the prehistoric society first started the practice out of a loss of life from high infant mortality rates. Ethnographically, women and children forage together when gathering food (Kelly 1995). The strong connection felt not only from birth but from daily association would explain the high energy
investment for child, infant, and fetal burials. Infectious disease, passed from
mothers to children, was another factor that may have supplemented the driving
forces behind mortuary practices of young aged mummies (Arriaza 1995b).

The sexual division of labor fits the Chinchorro model in respect to the
pathological analysis of skeletal traumas as well. Perhaps the burial treatment
started not only as a way to pay respect to the loss of life from within themselves,
but their social apprentices as well. Children, with the “hunter-gatherer” model
would learn more from women during the first few years of life than from men due
to their proximity to women.

We see a sudden shift in technology use from the black style mummies into
the red style. No longer is the wig attached clumsily, but enveloped in a
streamlined helmet from which the hair emerges as a long flowing mane. The body
has also shifted in decorative standards from the original all black motif to a red
motif with black facial mask. The shape and color of the masks stays the same for
the second artificial mummification tradition, one of the few mannerisms that have
carried over from the earlier custom.

The simpler creation of the red style mummy suggests less energy
investment. Outer aesthetic design is much more consistent than the internal design
structure, suggesting another shift in both status of the deceased and the mortician.
Creating in the mummies a more generalized aesthetic pattern yet more
individualized structural pattern, the dead are separated from the group in a
different manner than the black mummies. The more generic aesthetic qualities
suggest less individualism and more of a communal persona religiously. Yet the strong symbolic structure suggests a separate identity for the morticians, one that is more individually political.

The mortician, who creates and controls this patterned ritual of burial, becomes a more permanent identity as specialist figure. One of their most effective tools of control is the possible emergence of displaying the dead. In earlier black traditions, because more people were involved in the creation, there was much less shock value in the outer design.

With the red style, the less complex structure necessitates lesser need for multiple morticians. As such, we can assume that one individual could have prepared the body with relative ease. Once the body was bled of its internal fluids and emptied of its soft tissues in the chest cavity, the stuffing mixture and clay application would be a simple matter. Because the helmet design and the paint styles are the only design techniques that remain consistent, we can postulate several things: first, there may have occurred a breakdown in the lines of communication that transmitted the tight traditions of the black style; second, the emergence of this new form reflects a greater sophistication of a political identity; and third, from the increasing number of foreign trade items between highland and coastal regions, the sudden shift to increased outside contacts may have influenced the society towards a more mobile way of life.

The breakdown of communication is reflected heavily in the internal structures. Mummies are stuffed with spontaneous mixtures: ash, organic material.
llama fur, clay, red ochre, et., in a variety of unsimilar patterns. Again, it appears that the outer aesthetic symbolism was more important during the red period than the manufacturing traditions. The only other consistency found in the red style other than the helmet and the use of red/black schemes of painting was the increased use of llama fur. Only 1 black mummy was reported to have llama fur inside, where over 12 individuals from the red style had camelid fibers used for stuffing in some region of the body.

Another generic design of the red mummy, the open mouth design described in the past, also indicates a more rigid control of the religious beliefs of the society by the mortician. The open mouth is an obvious successful transition from the shallow mouth slits of the black style due to the design’s duration of over 500 years. This “symbol”, created by the mortician, was one that the culture had already accepted for one reason or another and was thought of as important to the design of the mummy. By creating this imagery from the open mouth, the mortician is re-establishing their hold on society, and the society’s beliefs of a more supernatural element existing in the world around them. They are also establishing a marked difference in the ranked social identity of the living versus the dead, and the connection (the mortician) between the two. By providing a visual reinforcement, the mortician is also gaining status and a central place within society for themselves.

Foreign trade items show obvious contact with other cultural regions (Rivera 1995). Because the group was not as isolated culturally as in earlier
periods, it is logical to assume that foreign ideas diffused into the belief systems of the Chinchorro. Because of simplified manufacturing techniques and more stable internal structures, the red mummy is much more transportable than the earlier black mummies who were made of clumsy unfired clays. It is possible that one idea that diffuse out of the Arica area cultural epicenter was the idea of the mobile and displayable red mummy, especially later in the period. There are more examples of red mummies in the modern cities of Arica and Iquique, indicating a diffusion of ideas from the Arica area to other cultural groups (Arriaza 1995b: 150).

The final transition from the red mummies to the mud-coated mummies is not as sudden in shifting technologies. There were found some overlapping radiocarbon dates of traditions (Arriaza 1995b: 115) between the red and mud-coated mummies. Arriaza suggests the cementations of the bodies is another argument for the sedentary lifestyle of the Chinchorro people (1995b: 115). The opposite may be true though, and what is happening in actuality is the last ditch effort for artificial mummification by a rapidly changing culture. The mud-coated mummies represent a tradition that died with the past. Instead of sedentism, this small period of time (approximately 300 years: 2,000 - 1,700 B.C.) may indicate the last of a semi-sedentary group practicing the old traditions.

The signs indicated by the Chinchorro morticians' techniques show that the creation of the South American mummies was not out of fear of religion, but more out of intelligent and reasonable respect for the loss of life. The connection of the natural world to the Chinchorro culture is reflected strongly in the intense
distribution and design usage of media. The mummification of infants in two
periods indicate not only possible specific idea concerning burial, but likely the
work initiated by female morticians and later taken over by male counterparts. This
is an all too familiar trend that occurs around the globe through time.

Obviously, as this thesis has mentioned already, we can only speculate
about the social identities of the ancient Chinchorro and their morticians.
However, this thesis has provided several ideas that may be easily expanded upon
with support from physical data. An ethnographic view of the past is ascertainable
to a certain extent, as this work has shown. Though we cannot express the exact
thoughts of the ancient society, we can see the social interaction reflected in the
styles and techniques of the mummies over time.
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