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'Dis'-abilities as Divine:
Bodily Anomalies and Shamanic Power in Ancient Costa Rican Ceramic Effigies

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Abstract

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This thesis explores various physical anomalies depicted in several Pre-Columbian Costa Rican ceramic effigies of shamans and proposes modern medical identifications for the anomalies. The medical understandings of Klinefelter's Syndrome, Scoliosis, Leishmaniasis, and other conditions are applied to the effigies demonstrating particular symptoms in order to further explore shamanic beliefs and cultural issues. Shamanic concepts of liminality, transformation, healing, and fertility are discussed in relation to the manner in which the bodily anomalies of particular diseases could affect the shaman's abilities. By suggesting modern terms of diseases and congenital conditions demonstrated by these shamanic effigies, the connection between shamanic power and atypical body types can be more comprehensible and accessible to interdisciplinary researchers.

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Introduction

All that is beyond the usual, the purposefully strange, seems to be the purview of shamanism, based on the extraordinary world of visionary experience (R. Stone, 2011). This thesis will explore several ways in which ancient Costa Rican effigies of spiritual intermediaries exhibiting atypical physiognomies concretize this positive value placed on the anomalous. The elevation of those with extraordinary bodies to the role of spiritual intermediary therefore questions, if not contradicts, the underlying assumptions of the Western term “disabled,” which inevitably implies compromised ability or contrasts those who are “abled.”¹ By contrast, I will argue that the anomalous-bodied were not considered lacking but rather “super-abled” or “spirit-abled” since they were chosen for a highly prestigious religious role precisely due to the *spiritual* powers signaled by having conquered a *physical* challenge and gained an unusual body to prove it. Thus, I seek to demonstrate that the modern western stigma of the term “disabled” is in direct opposition to the indigenous beliefs that anomalous bodies should be revered, not repulsed or pitied.² A significant subset of Costa Rican depictions of spiritual leaders celebrate bodies that are undeniably unusual, a fact that has not been widely recognized or systematically studied to date.³ The deep collection of ancient Costa Rican art at the Michael C. Carlos Museum at Emory University allows a fuller consideration of this important topic, in that it contains eleven of such effigies identifiable as shamans representing at least eight diseases or congenital conditions. I will focus on seven of these effigies for my primary focus objects in the present study, hoping to specifically identify several depicted physical conditions and suggest why those individuals would have been promoted as shamans within their culture.

¹ For a discussion of the shifting historical perceptions and opinions on the anomalous body, see Thomson (1996) especially the Introduction (p. 1-19).

² It is worth noting that not all bodily differentness has been historically stigmatized, as discussed in Frank (1995).

³ R. Stone discusses several effigies of anomalous shamans in her book, *The Jaguar Within*, but she does not go into much depth about the subject. The reader will notice that I use a few of the effigies she wrote on in her book, but I will go into much greater detail in the descriptions of the effigies and in the illumination of their physical conditions in this thesis.

Since pre-historic times, shamanism has persisted as a traditional form of ritual healing and spiritual communication throughout the world, especially in “Latin” America. In the ancient indigenous Americas, the artists of Greater Nicoya—the area from the northern part of present-day Costa Rica to the southern portion of Nicaragua—created a wide variety of shamanic depictions in ceramic, stone, and metal. Hundreds of effigies of shamans therefore exist for study and analysis, depicting both men and women in anthropomorphic, theriomorphic, and transformative forms.

To begin to grasp why not only theriomorphic/transformational states of being but inherently unusual-bodied individuals would also be shown as prime candidates for becoming shamans, we must consider the basic shamanic role as a healer and spiritual communicator. It can be argued that images of shamans dominate the ancient Central American corpus because of the longstanding and important religious role played by actual shamans to bridge the spiritual and terrestrial worlds as well as to promote healing and fertility for their people. Perceived communication with the spirit world takes place in trances, often achieved with the assistance of particular plant substances or ritual activities. Information gained during visionary experiences allowed the shamans to fight sickness, famine, and other undesirable situations as he or she accessed power from the spirits of nature. According to Fuller (1987), in his discussion of “unorthodox religion”: “It is clear that one of the most important functions of healing rituals is their capacity to induce an existential encounter with a sacred reality... the shaman is not only a healer but also a mystagogue and mediator between the divine and human realms” (p. 51). The inherent condition of a shaman being partly in the everyday world and partly in the otherworldly realms favors individuals who are similar to other terrestrial beings in some ways and patently different from them in others. Thus, it is in the basic nature of a shaman to be both typical and atypical. Furthermore, the fact that the main objective is to heal privileges those who have themselves experienced healing.

In antiquity, some individuals, who in modern times would be considered “normal,” would decide to attempt the rigorous training required to become a shaman, but others were seemingly chosen by the spirit world for the occupation due to their anomalous bodies. While modern science may attribute someone’s survival of a fatal disease or

condition to having a stronger immune system or responding well to modern medications, in shamanism the spirit world is held responsible for both affliction and cure. The logic of the “wounded healer” dictates that the survival of an illness or mastering a congenital physical anomaly was viewed as a call to become a shaman since the spirits had obviously chosen to give the individual especially potent healing abilities (R. Stone, 2011: 57-58). As Halifax explained, “These horrific adversaries become tutors as the shaman learns the ways of the spirits that ravage and cause sickness...the shaman acquires direct knowledge from direct experience” (as cited in R. Stone, 2011: 58). Therefore, someone who has fought these spiritual adversaries and won has proven him or herself a healer and able to interact with spirits to obtain that healing. Moreover, as R. Stone argues, “*multiple* physical anomalies increase the power of the wounded healer” (p. 105, emphasis mine): the harder the battle, the stronger the victor. Thus, rather than seen as possibly weakening an individual, what we call ‘disabilities’ can be additive—the more anomalous the individual’s corporeality, the greater the spiritual power. Such anomalous shamans were portrayed realistically and abstractly throughout ancient Costa Rican art in numerous styles and mediums, clearly demonstrating not only a respect of the shamans’ divine powers but a fascination with the corporeal anomalies. In this thesis, I will propose the connection, clearly demonstrated by ancient Costa Rican ceramic effigies, between particular types of anomalous bodies, often identifiable in modern terms as what we would call various diseases or medical conditions, and shamanic power.

Throughout ancient Costa Rican art, such anomalous shamans were portrayed in numerous styles and media, as well as both realistically and abstractly, clearly demonstrating an abiding respect for them across time and space. Although we obviously have not unearthed every ancient Costa Rican ceramic effigie, the existing corpus of effigies undoubtedly shows that the figures I discuss as anomalous are indeed atypical body types. Furthermore, in this thesis I propose that ancient Costa Rican ceramic effigies clearly make the connection between shamanic power and *particular types* of anomalous bodies. According to the image record, in ancient Costa Rica mystagogue-healers may display a range of physical anomalies, of many types and intensities. These anomalies can be correlated to different aspects of the shamanic role, from gender

inclusivity/transcendence, to the extension of death into life via a visible and exaggerated skeleton, to the spottedness of the top animal spirit, the jaguar.

To properly introduce this complex topic, it is necessary to explain my choices in vocabulary as well as the reasons I chose the particular ceramics and anomalies that will be discussed. In order to remain as socially and culturally sensitive as possible, to limit confusion for the reader, and to demonstrate the value of applying modern terminology to ancient understandings, I have elected to use current terminology for the region, shamanic concepts, and anomalous conditions. Additionally, modern terminology is necessarily utilized and must suffice because we have no record of their original languages. The indigenous Costa Ricans were the unlucky first peoples on the continental Americas to encounter the Spanish and suffered massive population loss and so the original languages have been eradicated. Instead of “Greater Nicoya,” I have chosen to use “Costa Rica” so the reader will more easily identify with the region and envision the environment from which these ceramic effigies emerged. The styles discussed here also fall within the current borders of Costa Rica, rather than in Nicaragua, so the cross-country designation of “Greater Nicoya” is less persuasive in any case. I use the terms “shaman” and “healer” because modern scholars most frequently use them and they convey the general notions of the ritual role. “Shaman”, while admittedly not a Native American word, does originate from the Tungus language of the Altay region of Western Asia, the heartland of shamanism and scientifically proven start point of Native American migrations (Laufer, 1917; Shreeve, 2006). “Healer” is also generally applicable because the end goal of all the shaman’s activities is to heal a body, a soul, or some affliction of their people as a whole.⁴ Like Western medicine and science, the purpose of shamanism is to heal patients; however, shamanism is also similar to Western medicine in that it is not concrete. Shamanistic practices seek to heal illnesses of the mind and body through communications with the spirit world, which is obviously a healing system that is not certain since there is no guarantee that the spirits will help the patient or not. Western medicine is likewise

⁴ Spanish terms for indigenous healers include “curandero” (healer), “brujo” (witch), and “hechicero” (sorcerer), but since these terms can have negatively biased connotations, I refrain from using them.

uncertain in some regards since the knowledge of diseases and of the human body are constantly shifting. The plant substances ingested by shamans and sometimes by ritual participants to induce trance are referred to as “entheogens”, not “drugs” or “hallucinagens”, since the substances are all naturally derived and are used for sacred, not recreational, purposes. Likewise, “trances,” not “hallucinations,” is the term used because the Costa Rican cultures viewed them as divine communications and perceptions.

According to Siegel (1977), “Under the right social circumstances the perceptions may be regarded as valid...All such reports, however, are necessarily subjective” (p. 132). Although modern scientific society may regard the visions and trances sought by shamans as un-real “hallucinations”, the cultures in question define their reality by these spiritual visions. However, the most important issue brought up by the analysis and conclusions of this thesis concerns the words we tend to use to typify anomalous physical states of being themselves. “Anomaly” is a preferable term and concept, rather than the commonly used term “disability,” because I argue that the shamans in these works of art are depicted as particularly endowed with extraordinary abilities and powers that make them stronger, not conditions that make them weak, lesser in any way, or unable to function. The diseases and genetic conditions proposed are identified by modern medical terms, again for the sake of the reader’s understanding, but also to demonstrate that the current scientific understanding of these anomalous conditions can assist researchers to better comprehend the artistic renditions. I am attempting to put timeless conditions into contemporary medical terms in order to identify iconography that can illuminate shamanic concepts. In one sense, this is a basic art historical technique known as iconography, what is being shown and how it is being presented, which has a long history in the field. Art history utilizes many other disciplines to stretch its ability to identify and interpret complex imagery, especially that of foreign times, lost cultures, and exoteric subject matter. There is no assumption whatsoever that the ancient Costa Ricans would have described, named, or understood these disease states or genetic conditions with terms such as chromosomal anomaly, hormonal imbalances, etc. By exploring the now-known symptoms of these conditions, researchers can apply the modern medical knowledge to ancient effigies to

achieve a better grasp of the way in which a given person was depicted, their specific constellation of symptoms, and their effect on the shamanic role.

This study primarily focuses on ceramic effigies that are part of the Michael C. Carlos Museum's collection because of proximity to and familiarity with these art works as well as the artistic quality and breadth of the collection. However, supplemental focus objects from the Denver Art Museum and the Mint Museum are also considered. Although anomalous shamans were portrayed in clay, volcanic stone, and jadeite throughout time in Costa Rica, I narrowed my analysis to only ceramic effigies for the purposes of this study because of the ability of clay to capture details of the anomalous conditions better than rough volcanic stone or angular jadeite carvings. Unless otherwise specified, I describe general iconographic attributes of ancient Costa Rican effigies and do not focus on the description of individual styles. My discussion focuses on the overarching themes portrayed in the shamanic art of this specific region and the ways in which the depicted shamans demonstrate the relationship between the anomalies and shamanic abilities. Spanning the artistic record of Costa Rica, shamans have been illustrated with specific characteristics that serve as indicators of their power and status such as body positions, body art and decorations, facial expressions, and others that will be illuminated. As for the anomalies in question, conditions range from the easily identifiable to the more ambiguous portrayal of symptoms that can be applied to a number of modern medical diagnoses. I begin with the anomalous effigies that have a high likelihood of being ascribed a single modern identification and progress to effigies with more obscure attributes that apply to a multitude of possible diagnoses; to all of my proposed identifications, I suggest the possible cultural and religious interpretations of the presence of the particular condition.

The first chapter will describe intersexed shamans, those who present both male and female sexual characteristics, and specifically the condition modernly referred to as Klinefelter's Syndrome. To start, I will describe the symptoms of Klinefelter's Syndrome as well as its genetic cause. As the reader will see, the physical traits are present in naturalistic depictions of shamans as well as in more abstract portrayals. I will also discuss the ways in which additional mental symptoms of Klinefelter's Syndrome may broaden our understanding of how this aspect of the condition would impact a shaman's connection to

trances. I argue that the naturalistic effigies of the intersexed shamans discussed could be identified with Klinefelter's Syndrome and I present the reasons why such an identification would be meaningful to the analysis of the iconography of the more abstract effigies. Concurrently, I explore the shamanic importance of an individual presenting dual sex characteristics. As will be discussed, intersexed shamans would seemingly appear ultra-fertile and supernaturally endowed with a strong relationship to the spirits. The anomalies and corresponding medical identification presented in this chapter are the least ambiguous of those discussed.

The second chapter will explore a few types of skeletal anomalies, one of which is easily attributed to a specific medical condition and others that are not so easily understood. I describe the known symptoms of the medical conditions scoliosis, osteomalacia, and spinal tuberculosis and present my reasoning why these are possible causes of the anomalous bodily structures of the shaman effigies. The shamanic concepts explored in this chapter concern the shaman's apparent bridging of life and death due to their protuberances of bone and an analysis of status indicators observed on the focus objects. I also discuss the implications the diseases would make concerning cultural views of the contorted bodies and interactions between different regions of the Americas. A main issue of this chapter also revolves around the struggle to make conclusions about the diseases afflicting ancient peoples of Costa Rica because bodily remains are typically not preserved in the jungle. This middle chapter serves as an appropriate link between the first and final chapter because it further discusses artistic indicators of healer status, strengthens my argument that anomalies were believed to evidence shamanic abilities, and progresses from an easily recognizable identification to an ambiguous set of symptoms.

The final chapter looks into the ambiguousness of a particular effigy and the manner in which researchers can use the artistic elements of the ceramic effigy to determine possible medical identifications. I use this chapter to harmonize the structure of this thesis: as the first chapter focuses on one medical condition and multiple focus objects and the second describes multiple diseases that could apply to several effigies, this final chapter takes one focus object and demonstrates how three different diagnoses could be applied and the distinct implications of each diagnosis. I propose the three most likely diseases

afflicting the portrayed shaman and elucidate the ways that each disease could affect the shaman in his perceived powers and the symbolism induced by his appearance. I delve into the shamanic importance of ambiguity and the symbolism of the artistic style as it applies to the specific focus object. This chapter serves as the final buttress of my argument that anomalies were indicators of spiritual abilities and the depiction of these anomalies can be of value to researchers proposing modern identifications for the iconography.

It is my intention with this thesis to illuminate a small portion of the various ways that these anomalies have been artistically rendered in ancient Costa Rican ceramics with regard to their perceived shamanic abilities. I determined that this scope of conditions and focus objects gives an adequate taste of the variety of anomalies depicted in ancient effigies and will perhaps inspire future research toward the identification of other anomalies depicted in ancient shamanic artworks.

Chapter 1: Shamans Between the Sexes

According to the Intersex Society of North America ([ISNA], 1993), 1/500 births produce a child that does not conform to the standard male or female sex. Klinefelter's syndrome occurs in approximately 1/500 to 1/1000 live-born male births⁵ (Simpson, et al., 2003: 460; Lanfranco, et al., 2004: 273). The disparity in this statistic is due to some cases not presenting symptoms of the syndrome so, unless the individual is tested for genetic abnormalities, there is no physical confirmation that the individual has the abnormal genotype. Even so, Klinefelter's syndrome is the "most common form of male hypogonadism and chromosome aneuploidy" and the "most common cause of male infertility" (ibid: 273). This means that Klinefelter's males have abnormal numbers of chromosomes in particular areas that cause deficient production of hormones in the gonads, which results in abnormally small genitalia and sterility. Pre-Hispanic Amerindians in Costa Rica would very likely have been subject to this chromosomal abnormality just as frequently, if not more so due to the smaller genetic pool, as modern cases that have been reported. As will be discussed, Klinefelter's Syndrome can result in physical anomalies, which are depicted in renditions of these individuals, in addition to mental differences and abnormal hormonal secretion. I propose that the ceramic effigies from ancient Costa Rica that depict certain physical anomalies can be identified with the modern medical diagnosis of Klinefelter's syndrome and that these effigies demonstrate the shamanic power attributed to sexually liminal people, as opposed to them just being viewed as physically different.

Klinefelter's syndrome occurs when a fertilized egg, the zygote, contains an extra X chromosome from the mother or father, which results in a genotype of 47, XXY. The extra sex chromosome is the product of a chromosome pair failing to separate, known as non-disjunction. Non-disjunction can take place in the production of the egg, resulting in an XX egg that may be fertilized by a Y bearing sperm, or it can occur during sperm production so

⁵ Individuals with Klinefelter's Syndrome are referred to as "male", even though they do not have the standard XY genotype, because many cases do not produce symptoms and all individuals with the syndrome have typical male development until puberty, as will be discussed.

the XY bearing sperm fertilizes an X egg. Either way, an XXY zygote forms and leads to the birth of a male with Klinefelter's syndrome (Bishop, 1966: 1258). There are about equal chances of the chromosomal error resulting from the mother or the father. The majority of cases, eighty percent, have the 47, XXY anomaly and twenty percent have variants, such as 48, XXXY and 49, XXXXY (Lanfranco, et al., 2004: 273). The chromosomal anomaly causes a variety of hormonal, physical, and mental deviations. The variants of the genotype, those with more Xs in the genotype, increase the risk of presenting symptoms and the severity of the anomalies (Bishop, 1966: 1261; Lanfranco, et al., 2004: 276; Simpson, et al., 2003: 462-3).

Physical, hormonal, and mental anomalies present themselves gradually in Klinefelter's males. Before puberty males with Klinefelter's syndrome generally have typical physical development and are indistinguishable from standard XY children, except for slightly longer legs and lower testicular volume (Lanfranco, et al., 2004: 275). According to Bishop (1966), after puberty "one or more of the three classical features may become apparent: the testicles remain small and are usually firm in consistency, gynaecomastia (breasts) may develop, and there may be signs of eunuchoidism such as long arms and legs and poor sexual hair and beard growth" (p. 1261). Simpson, et al., (2003) found that Klinefelter's males present a "temporal development of hormonal and spermatogenic abnormalities" that can greatly effect their appearance and gender identity (p. 461). The males are of average height or taller with a narrow shoulder diameter and broad hips. The androgen deficiency causes lower than normal muscle and body mass. Structural anomalies such as kyphosis (a hunched back), scoliosis (exaggerated curvature of the spine), and lordosis (inward curvature of the spine) frequently occur. Pectus carinatum (protrusion of sternum and ribs) or pectus excavatum (depression in the breastbone) occurs in varying degrees, as does pes planus (flat footedness) and clinodactyly (inward curving of the little fingers). The absence of spermatogenesis, sperm production, results in azoospermia, meaning that the males can have sex and potentially ejaculate but no viable sperm is produced (Lanfranco, et al., 2004: 276-7). Several of these characteristics are correlated to the deficient production of testosterone and androgen that is characteristic of Klinefelter's syndrome (Simpson et al., 2003: 462).

Males with the 47, XXY genotype are of average intelligence but typically have difficulties with language and cognition (Lanfranco, et al., 2004: 276; Simpson, et al., 2003: 463). Limited vocabulary and problems with verbal processing and execution are common. Speech and cognition delays are exacerbated by difficulties with lip and tongue coordination. Language issues could be the result of slight size differences in the brain. The size of the temporal lobe is decreased while the occipital region is increased in a Klinefelter's male's brain. This results in above average visual processing and memory but decreased auditory processing. Having decreased auditory processing abilities could very well affect their cognition of speech (ibid: 464). As mentioned above, an increase in the number of X chromosomes in the genotype intensifies the severity and frequency of the physical and mental abnormalities, thus the twenty percent of males with variants of the syndrome would exhibit very pronounced anomalies.

Klinefelter's syndrome results in a liminal, or in-between, person due to their bodily and mental differences. Due to their cognitive and expressive challenges and deficiency in muscle mass and body hair, the males are caught between childhood and adulthood. The presence of male and female sexual characteristics locks them between being a "man" or "woman" biologically as well as socially. Simpson, et al., (2003) found that in Western cultures this syndrome can be ostracizing and create gender identity disorders (p. 462); however, I contend that in shamanic cultures the symptoms create a celebrated ambiguity that can designate the potential to be a powerful shaman. According to Barbara Tedlock (2005), generally shamanic practices are divided by gender: males are associated with the right side and focus on war and politics while women are associated with the left side and are concerned with catharsis and healing (p. 57, 150-4). However, she states, "by shifting genders and embodying characteristics of each gender, they (shamans) manipulate the male-female polarity itself" (ibid: 254). Shamans often shift gender identities by incorporating spirits of the opposite sex, thereby boosting their ability to heal and promote fertility (ibid: 250). Intersexed shamans can be seen as inherently combining the strengths of males and females so their shamanic powers benefit from perpetually being in a gender-liminal stage. Shamans with Klinefelter's syndrome would have the benefit of their perceptibly anomalous bodies demonstrating more sexual attributes than others, making

them seem ultra-fertile. They also could seem extra-attuned to visions due to their enhanced visual processing and naturally transformative body. Ironically, these super-sexual shamans would be unable to actually reproduce. The following ceramic effigies demonstrate the shamanic value of being intersexed either by their naturalistic physiognomy or by the iconographic configuration.



Fig. 1. Front view of kneeling intersexed kyphotic effigy. Costa Rica, Greater Nicoya, Guinea Incised, 300BCE – 500CE. Michael C. Carlos Museum accession number 1991.4.512.

Fig. 2. Side view of figure 1.

The red ceramic kneeling effigy (figs. 1 and 2) displays obvious traits of Klinefelter's Syndrome. This figure is the most physically realistic, anatomically accurate of the three pieces discussed, however that is not to suggest that there are not abstracted features. The intersexed figure has bilateral breasts, two small testicles, and an erect penis. Ancient Costa Rican ceramic effigies often portray sexual characteristics, even when portraying abnormal or abstract bodies, but the definition of the urethral opening of the penis is an uncharacteristic detail that points to the importance of the figure's genitalia. The side view of the effigy reveals a substantially convex back and a rounded chest, which indicates kyphosis and pectus carinatum. From above, the viewer can observe that the lump on the

back is more to the figure's left side, indicating scoliosis. The narrow shoulders lead to floppy arms that bend in an unnaturally rounded manner. Likewise, the hips lead to long, thin legs that have a pronounced round bend. Long limbs are not characteristic of ancient American effigies, so the length and floppiness of the limbs were an artistic choice to better represent the abnormalities of the body. The anatomical characteristics of the figure strongly suggest a diagnosis of Klinefelter's Syndrome; furthermore, his pose and departure from typical appearances suggest he is a shaman, not simply a person with an anomalous physique.

The shaman is kneeling with the hands resting on the knees, which, according to R. Stone (2011) is "a common meditation pose assumed for inducing and experiencing trances" (p. 74). The hands demonstrate polymelia, a multiplication of digits often experienced when in trance. Cephalocentrism, an emphasis on the head that is common in shamanic art due to the knowledge stemming from visions (ibid: 30, 76), is obvious; the head is exaggeratedly large and commands the viewer's attention. Although a small head is a typical trait of Klinefelter's syndrome, the shamanic artistic tendency to enlarge the head negates the need for this trait to identify the syndrome. The head makes up a large portion of the figure's size and demonstrates a trance grimace. The bared teeth, squinting puffy eyes, upturned nose, and abstract ears, as well as the transformed hands, draw attention to the senses that become enhanced or hypersensitive during trance states. The eyes take on greater than usual prominence due to the large area of the face that they occupy. While "trance eyes" are typical traits in shamanistic art, their presence in the sexually anomalous effigy could correlate to the stronger visual processing and memory related to Klinefelter's syndrome, which would enhance the shaman's abilities to utilize the visions achieved during trance states. An exaggerated brow ridge crosses the forehead and connects the ears, drawing more attention to the face. Above the ridge, a cap that is reminiscent of a mushroom graces the top of the head. This could be a metaphor for a mushroom cap to signify that the shaman ingested mushrooms to go into trance or that he was becoming his 'mushroom self' and was communicating with the mushroom's plant spirit. Another possibility is that the cap is an abstraction of emanations that the shaman can feel emerging from his head during trance. Perhaps it is a visual metaphor for the gaining of wisdom and

growth of mind that is sought by going into trance. The head creates not simply a focal point but also a visual ambiguity that correlates to the liminal nature of the figure's body in order to demonstrate the power of the intersexed shaman.



Fig. 3. Front view of intersexed shaman effigy vessel. Costa Rica, Greater Nicoya, Carrillo Polychrome, 500-800CE. Denver Art Museum accession number 62.1992. Denver Art Museum: Collection of Frederick and Jan Mayer. Photograph © Denver Art Museum 2008. All Rights Reserved.



Fig. 4. Rear view of figure 3. Photograph © Denver Art Museum 2008. All rights reserved.

The intersexed shaman effigy vessel from the Denver Art Museum (figs. 3 and 4) displays sexual and gender liminality as well as shamanic practices through its form and decoration. According to R. Stone (2011), shamanic effigy vessels can serve as a receptacle for part of the shaman's spirit, especially when under a trance (p. 29), or as a container for the entheogens that assist the shaman with his practices. This dynamic polychrome vessel incorporates the shaman's whole body, which exaggerates the head and body shape and creates a more abstract figural representation that is as much vessel as person. The characteristics that distinguish Klinefelter's syndrome are even more pronounced by the form's exaggeration. The figure's spread legs reveal an erect penis and two compact testicles. The small breasts are accentuated by dark red nipples and heavy black coloration.

The flatness of the front of the torso gives way to a darker, red kyphotic back accentuated with pronounced spinal bumps. The exaggerated roundness of the back creates increased space in the interior repository and emphasizes the kyphotic spine. Attention is kept at the front of the vessel, however, by its greater added detail and lighter coloration.

The buff front and head of the vessel convey the natural reddish-tan skin tone of Central Americans. The red and black markings represent either paint or tattoos meant to visually demonstrate the power of the shaman. R. Stone (2011) has proposed that the crisscross pattern on the front of the legs and down the chest likely emulates *Banisteriopsis inebrians*, a plant used to induce visions (p. 105). The largest markings move down the chest toward the everted navel, connoting fertility in general and late-stage pregnancy in particular. The figure's hands rest on the stomach, a feminine pose suggesting fertility.⁶ While the kneeling effigy (fig. 1) assumes a gender-neutral meditation pose, this intersexed shaman takes on a specifically female pose that suggests a more feminine gender identity. The position could even indicate the squatting pose of parturition, which would be all the more ironic since the individual would be infertile. However, the lack of body paint on the lower male genitalia, in comparison to the heavily decorated breasts and navel, causes a visual disparity that calls attention to both sets of genitalia and thereby results in balance of gender features.

As with the kneeling effigy, decorations on the face delineate the senses enhanced by visions. The mouth has plump lips and appliquéd teeth that are bared in a grimace. The application of individual teeth is unusual in ancient Costa Rican effigies, so this detail draws even more attention to the face. Many ceramic effigies portray teeth through alternating spaces of slightly pushing in small spaces of clay, such as can be seen in figure 1. However, the individual teeth of this figure heightens the ferocity of the trance snarl or the animal alter-ego of the shaman. The teeth also have the shamanic value of showing the bones in a living person, making the liminal qualities of the face even more apparent. The bulging eyes gaze toward an otherworldly place and the ears have large black ear-spools that demonstrate the shaman's elevated social status. The opening of the vessel flares up and

⁶ A multitude of ancient Costa Rican effigies depict females in this pose to indicate fertility or pregnancy; for example see Stone (2001) cat. nos. 158, 301, 311, 348-354.

out from the top of the head, allowing physical and spiritual substances to enter and leave the container. The opening emphasizes the importance of the fontanel, the top of the head, from which power and energy stem from the shaman. The flare of the opening mirrors the vessel's base, which develops a visual balance between being drawn down to the underworld and flaring upward to the celestial. However, the coloration differs from the rest of the figure, suggesting that it is a stool or bench, an important shamanic tool and a sign of elevated status (D. Stone, 1962: 43-5; R. Stone, 2011: 74). Although the effigy is abstracted in its overall form, the somatic and decorative characteristics of the figure support the understanding of this effigy as a shaman whose power is bound to what we now term Klinefelter's Syndrome.



Fig. 5 (left)/ Fig. 6 (right). Bowl with appliqué intersexed and two-headed figures, a matched pair.

Costa Rica, Atlantic Watershed, El Bosque, 100BCE – 500CE.

Michael C. Carlos Museum accession number 1991.4.52 & 1991.4.53.

In an even more extreme case of the artistic exploration of sexually liminal beings, the pair of El Bosque style tripod vessels that depict matching sets of ambiguous figures (figs. 5 and 6) feature alternating intersexed and double-headed entities. The El Bosque style was prominent between 100BCE to 500CE and was characterized by red-on-buff ceramic vessels and an emphasis on toad iconography (R. Stone, 2002: 118-8). The legs and bottom half of the vessels have been painted with a reddish slip, typical of the El Bosque

style. The tan center of the vessels supports appliquéd figures alternating between intersexed anthropomorphic entities and bicephalous animalistic beings. The intersexed humans lie on their backs with their arms and legs splayed out. The arms and legs look more animalistic than human; the legs bend inward at the knee and the extremities seem like round paws. The splayed position of the intersexed beings displays their testicles, erect penis, and circular breasts positioned near the shoulders. Neither the breasts nor the lower genitalia are given primacy through this pose, making it a gender-neutral position. A rounded form lies between the legs; it could be a tail to further communicate animalization.

The artist achieved cephalocentrism by having the arms frame the exaggeratedly large and triangular head. The eyes are oversized circular stamped impressions, typical of the style, that demonstrate both the trance eye and the roundness of animal eyes. The bumps projecting beside the eyes could be trance emanations. The broad top of the head most likely indicates that the shaman is opening his mind to the spirit world as he experiences trance. According to Zuidema (1992), the splayed position is an archaic pose in Central and South American art and a triangular head is often related to sacred or deified beings (p. 252-3). Round, projecting bumps at the sides of the eyes could be trance emanations, strengthening the idea that these are shamans transformed through trance. R. Stone (2002) has argued that the prevalence of toad imagery in El Bosque style ceramics could indicate that the abstracted forms of this pair of vessels may also correlate to toads, which are an important shamanic animal-self (p. 120). The splayed pose of the figures and the striped coloration are reminiscent of toads, and the tail could very likely be connected to the transformation between tadpole and adult. Toads undergo an impressive transformation between a water-borne tadpole and a land-bound adult; as has been demonstrated, transformation is deeply valued by shamans. The bumps beside the eyes may represent the glands of certain toads that produce an entheogenic substance, which shamans use for trances, which again supports the correlation to toads (ibid). Thus, the iconographic configuration of liminal sex traits, cephalocentrism, and pose indicate the powerful transformative, theriomorphic nature of intersexed shamans.

The other half of the figures on the vessels are animalistic creatures with two heads. These creatures lie on their stomach with their limbs reaching toward the intersexed

figures to either side. Like the intersexed figures, the creatures have rounded paws at their extremities. One head rests at either end of the creature so distinguishing the front from the back is irrelevant. A long, lean back connects the heads, which could indicate that the creature is extending its body by pouncing. Pouncing suspends the animal's body in the air, creating a sort of liminal position since the animal is neither walking on the ground nor flying in the sky. The facial features of the identical heads are accentuated by the creatures' grimace or snarl. Round eyes stare ahead, seeing and not seeing simultaneously. The nose prominently sticks out from the face above the open mouth. Many animals, including humans, can be born with two heads. This would be visually significant to shamans because many elements, such as body parts, are multiplied during trance (R. Stone, 2011: 18). The multiplicity and animal-human liminality of the creatures indicate that they are transformed shamans.

Both sets of figures on the vessels have dark stripes down the length of their bodies, which may correlate to the stripes on toads. It is plausible that the shaman figures are demonstrating their toad-selves, among other animal-selves. Substances made from toad secretions could have been contained in the vessels and toads are often used as a symbol for fertility (R. Stone, 2011: 106). A larger stripe can be observed around the entirety of the vessel. The vessels are suspended by three sloping legs that connect to the vessel sides by amorphous forms. These forms are difficult to identify, but likely they are toads as per other El Bosque style pieces.⁷ The flaring wide-lipped brim at the top of the vessels is painted with the same red-brown slip that covers the bottom half and, like the figures, a lighter stripe goes through the middle. The layers of stripes in combination with the polycephaly and liminal sex convey the ambiguity of the vessels. They express duality and transformation and the concentric nature of the shamanistic worldview. The figures do not represent a singular animal or human; they represent the interconnection between many different beings and spirits. These visually ambiguous vessels evidence the importance of liminality, especially that different types of liminality are of similar shamanic value. Through the equal attention between the intersexed figures and the animalistic figures, the vessels demonstrate the correlation between corporeal liminality of any degree and

⁷ See Stone (2002) cat. nos. 246, 248, 253 (p. 118-9).

shamanic power. This supports the idea that sexual liminality is just as revered in the shamanic worldview as animal-human transformation, which is here allied with liminality.

Pre-Hispanic artworks from Costa Rica that depict intersexed shamans indicate the power of sexual and gender liminality. The kneeling shaman and the effigy vessel can be identified with Klinefelter's syndrome due to their physiognomy. The tripod vessels are not naturalistic depictions of intersexed shamans, thus they cannot be specifically diagnosed with Klinefelter's Syndrome but they can be connected to the transformational power of the toad. However, the vessels depict abstractions relating to the trance characteristics and gender liminality of the other two figures, which indicates that intersexed shamans were so highly valued that an iconographic configuration was developed to capture the essence of their powers. By identifying Klinefelter's Syndrome as the cause of the effigies' sexually liminal bodies, I argue that the characteristics of the effigies are not simply artistic abstractions but a portrayal of the actual features of the intersexed shamans. In addition, by identifying this medical syndrome as the cause of the anomalous bodies, a stronger understanding can be achieved regarding the connection between the mental processing differences and the depicted trance elements. Attaching a modern medical identification to the intersexed shaman effigies allows us to link the depicted physical traits to a modern conception and explore further connections between the combinations of now-known symptoms and shamanic principles.

Chapter 2: Transformational Bones

This chapter will discuss the prevalence of certain skeletal anomalies recorded in Pre-Hispanic Costa Rican shaman effigies and how these anomalies denote shamanic abilities. Scoliosis, kyphosis, and pectus carinatum are modern identifications for particular skeletal deviations that have been represented throughout ancient American art. Skeletal diseases that create protruding bones would have been especially meaningful to shamanic cultures because an individual with a skeleton more apparent than usual would seem to exist between life and death. This sort of liminality would better allow the shaman to communicate with the spirit world, thereby increasing his abilities to cure (R. Stone 2002: 82-83, 97 and 2011: 54).

Although scoliosis, kyphosis, and pectus carinatum are easily recognizable, the root cause of them is almost impossible to determine unless we know the medical history of the individual. Piggott (1977) found that the origin of scoliosis, the modern identification of an extreme rotation and curvature of a spine, is usually unknown in most cases (p. 34). Kyphosis, historically known as Hunchback or Roundback, refers to an exaggerated rounding outward protrusion of the back. The disease currently affects an estimated 4-8% of the population ("*Kyphosis*" *virtualmedicalcentre.org*), but this percentage was most likely higher in ancient America due to smaller genetic pools and the absence of modern medical treatments for spinal diseases and trauma. Since ancient indigenous societies were small, there would be only slight genetic variation so any genetic anomaly would appear more frequently in the population. Kyphosis can be present at birth, result from prolonged poor posture due to excessive slumping, or be a secondary symptom of an underlying health or genetic issue (Walker, *Spineuniverse*). Kyphosis can be a secondary symptom of many diseases (such as tuberculosis, rickets, osteomalacia, scoliosis, degenerative diseases, endocrine diseases, etc.) or a result of spinal trauma; therefore, pinpointing a root cause in an individual depicted in an ancient work of art is unlikely without knowing the prior health issues of the individual (*ibid.*). Pectus carinatum, a protrusion of the chest accounting for about 15% of chest wall deformities, is four times more likely to occur in boys than in girls (Biniwale, *Medscape.com*). Goretsky, et al., (2004) found that about 25%

of studied cases have a family history of a chest wall defect, which strongly suggests a hereditary cause (p. 468). The most common form is a protrusion in the lower portion of the sternum, known as a chondrogladiolar protuberance, which Biniwale described as “a giant hand crushing the chest from each side” (*Medscape.com*). According to Goretsky, et al. (2004), “most pectus patients have a typical geriatric or ‘pectus posture’ that includes thoracic kyphosis, forward sloping shoulders, and a protuberant abdomen” (p. 455). The deformity can occur in concert with scoliosis as well as with other muscular and connective tissue disorders (ibid: 459). Here I will focus on spinal tuberculosis and osteomalacia/rickets⁸ as the possible cause of the kyphosis and pectus carinatum present in the ceramic effigies discussed below due to the other symptoms illustrated in the figures, but the root cause of the scoliosis will remain ambiguous due to the lack of specific medical evidence. However, even though we do not have enough evidence to make a definitive diagnosis for each of the primary causes of the skeletal anomalies, we can recognize the correlation between these conditions and shamanic power due to the attributes of the effigies.

Scoliosis

A normal human spine has three bends, a low-left, a mid-right, and a high-left when viewed from the back; however, the bends are slight so that the spine should appear almost straight when viewed in profile (Jansen, 1912: 1372). Individuals with scoliosis have extreme lateral curves and longitudinal rotation in their spine that, to quote Piggott (1977), “may become an obvious, even grotesque, hunchback deformity” (p. 35). Jansen (1912) has found that individuals with scoliosis most frequently manifest a lump on the right side of the back due to the inherent right curve of the mid-spine (p. 1372). Structural scoliosis can result from several root causes and can lead to repressed height, cardio-respiratory problems, and an increased risk of lower body paralysis. The disease may have a fatal result if the cardio-respiratory deficiencies caused by the spinal rotation and muscle

⁸ Rickets and osteomalacia are bone diseases that result from the same issue of deficient bone mineralization. The difference between the two diseases will be discussed in the “Osteomalacia/ Rickets” section of this chapter.

weakness are not treated (Piggott, 1977: 35). About 20% of scoliosis cases are congenital, meaning a baby is born with the disease due to the ribs and spine not forming properly during uterine development. Neuromuscular diseases such as cerebral palsy and muscular dystrophy adversely affect the muscles supporting the spine and can result in scoliosis as well. However, 60% of scoliosis cases are idiopathic, which means that no origin can be determined (ibid: 34). The curve and hunch increases over time (ibid: 35), thus an advanced sufferer of scoliosis demonstrates an easily identifiable form.

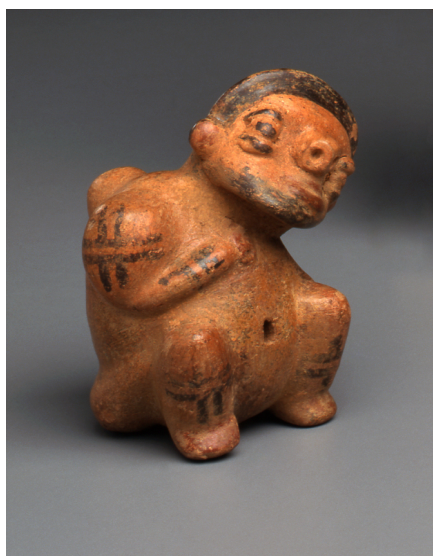


Fig. 7. Front view of seated female figure with scoliosis. Costa Rica, Greater Nicoya, Galo Polychrome, 500-800CE. Michael C. Carlos Museum, accession number 1991.4.22.



Fig. 8. Rear view of figure 7.

Figures 7 and 8 show a ceramic effigy that depicts a female shaman with severe scoliosis. The sex of the figure is slightly ambiguous, but female is probable because of a particularly round, fertile belly, the position of the hands where breasts would be located, and holes in the navel and vaginal areas. She has such an extreme curvature and rotation in her spine that her head and neck thrust violently to her proper left. Correlating to Jansen's (1912) observations of typical manifestations of scoliosis (p. 1372), her upper spine curves to the right. Her shoulders are off-kilter to her proper right and are not even close to paralleling with her hips. The extreme twisted nature of her body very likely attributed to her status as a healer.

The woman's twisted form could have been viewed as a corporeal manifestation of the *Banisteriopsis inebrians* plant spirit since the vine twists around itself as it grows and is a common entheogen (R. Stone, 2011: 133-4). If she was believed to have a special connection to the vine spirit through her twisted body, her abilities to gain knowledge from the spirit world would be particularly enhanced. The shoulders are exaggeratedly large and round, drawing further attention to the effigy's contorted torso. The radical rotation and curvature indicate that she has been afflicted with scoliosis for quite some time; her survival thereby makes her a probable candidate for attaining a ritual healer status. Her shamanic status is also evidenced by the body paint, or tattoos, present on her shoulders, forearms, shins, and head (R. Stone, 2002: 87). The presence of markings on her overtly large and abnormally rotated shoulders indicates the shamanic importance of such bodily anomalies. Shamanic status is further expressed by the obvious trance-state demonstrated with round, bulging eyes that are underscored by black markings, flaring nostrils, and an everted lip. This effigy clearly supports the idea that a contorted spine, modernly identified as scoliosis, was respected as an anomaly indicative of an analogical relationship to a powerful entheogen, as well as "wounded healer" status, and therefore was an appropriate vehicle for spiritual powers.

Osteomalacia/ Rickets

As previously mentioned, the bodily symptoms, specifically kyphosis and pectus carinatum, of osteomalacia and spinal tuberculosis are so similar that a clear distinction can not readily be made between the two without the medical history of the individual and tests to prove from what the individual suffers. Of the focus objects analyzed in this section and the succeeding section about spinal tuberculosis, I can only identify one that is more likely osteomalacia due to a specific physical characteristic. The other focus objects must remain ambiguous until further evidence is available to indicate a specific medical identification. Due to this ambiguity and to prevent over-repetition, I will give a visual analysis of the proposed osteomalacia focus object in this section but I will wait to analyze the other focus objects until after the section discussing spinal tuberculosis.

Proper bone formation and function is dependent on a balance of certain types of cells, minerals, and metabolites. Cells called osteoblasts are responsible for transforming collagen into bone using calcium catalyzed by vitamin D, a metabolite that encourages mineralization (Francis and Selby, 1997: 145-6). As explained by Reginato and Coquia (2003), "Osteomalacia (OM) and rickets are metabolic bone diseases characterized by a defective bone and epiphyseal cartilage mineralization" (p. 1063). In simpler terms, both osteomalacia and rickets result from improper formation of bones and cartilage. The difference between rickets and osteomalacia rests largely on age. Osteomalacia is the general term for the inadequate bone mineralization disease in adults. Rickets is the identification of the disease occurring in adolescents because it presents certain different symptoms due to children's bones growing as they form. Rickets may result in enlarged joints, bowed legs, stunted growth and bumps on the ribs, called rachitic rosary (ibid: 1063; Francis and Selby, 1997: 148). The cause of both diseases is vitamin D deficiency, which occurs due to inadequate absorption from dietary deficiencies, abnormal metabolism, or reduced exposure to sunlight.

Osteomalacia most commonly occurs in middle-age women and the elderly and frequently results in kyphosis, scoliosis, leg bowing, and deformities of the rib cage due to the softening of the bones (ibid: 1064-5; Francis and Selby, 1997: 148). The softening of the bones and constant contractions of muscles results in consistent aches and sharp pains (ibid: 148). According to J. S. Stone (1898), pectus carinatum manifests "in the great majority of cases" and "in the more severe cases" the chest wall may have an extreme depression "extending upward along the junction of the ribs...or outward in the form of a transverse groove, known as Harrison's sulcus" (p. 337-8). The transverse groove appears as a retraction along the lowest cartilage attachment to the sternum, making a horizontal depression underneath a pronounced rib (ibid.). As will be further discussed after the spinal tuberculosis section, many shamanic effigies depict these bodily symptoms. Unfortunately, no skeletal remains have been preserved that could be tested for the cause of the vitamin D deficiency so, currently, the only evidence for these bone diseases in Costa Rica is the presence of the characteristic symptoms in shamanic effigies. The following

focus object is distinct from the others discussed in this section because of one specific attribute and thus very likely can be identified with osteomalacia.



Fig. 9. Front view of Osteomalacia survivor effigy. Costa Rica, Greater Nicoya, Corozal Punctate, Ciruelas Variety, 300 BC- 500CE. Michael C. Carlos Museum, accession number 1991.4.514.



Fig. 10. Side view of Figure 9.

Due to its pronounced bowed legs, the ceramic effigy seen in figures 9 and 10 more certainly depicts a case of osteomalacia, despite the relative abstraction of the piece and the structural features that are similar to the other figures discussed below. The frontal view of the figure depicts the outwardly angled legs; the angle of which could have been so extreme for the individual that the stool was necessary due to the inability to properly stand. The stool also marks the high status of the figure, who could have been “elevated to the role of healer” because of his survival of the disease (R. Stone: 2011, 107). Other indicators of osteomalacia are the pectus carinatum and kyphotic back. Previously, R. Stone (2011) has suggested in relation to pieces with a similar ridge of that depicted on the figure, that such a detail could be an “artistic flourish” meant to incorporate trance spirals and bring

attention to the bodily anomalies (ibid: 106). However, a more in-depth understanding of the medical condition links the tubular line that connects and curls around the sides of the bulges to the transverse groove that can appear in severe cases of osteomalacia.

R. Stone also discusses the possibility that the combination of frontal and posterior bulges that make the body more horizontal could relate to an animalistic liminality because most animals' bodies have a horizontal orientation (ibid: 107). Thus, this figure could be another indicator that many types of liminality held shamanic value and could be depicted in artworks together to demonstrate elevated abilities. The shamanic status of this figure is also confirmed by the obvious trance elements throughout its figure: both hands have an extra digit, the eyes are circular like an animal, the nostrils are flared, and the lips are everted. The most prominent shamanistic characteristic is the large elaborate headpiece that could represent trance-state emanations or a headdress, perhaps with radiating feathers (R. Stone, 2002: 76-77). Headpieces are a common feature of shaman effigies because they draw attention to the fontanel, the source of shamanic visions.⁹ This ceramic figure can be definitively identified as a powerful shaman because of the trance characteristics depicted, and I propose that his anomalous body could quite probably be identified as afflicted with osteomalacia.

Spinal Tuberculosis

The presence of spinal tuberculosis¹⁰ in the ancient Americas has been proven by an abundance of findings of the tuberculosis bacteria in skeletons excavated in both South and North America (Arriaza, et al., 1995; Daniel, 2000; Mackowiak, et al., 2005). As found by Arriaza, et al. (1995), apart from "numerous skeletal lesions resembling those produced by tuberculosis," evidence of cessation of bone growth and sharply angular kyphotic spines due to the collapse of vertebrae ruined by the tuberculosis infection have been diagnosed in skeletal remains (p. 37). As previously mentioned, it is unlikely that bodies containing the tuberculosis bacteria will be found in Central America because the environment is not

⁹ See Michael C. Carlos Museum's accession numbers 1991.4.321a,b; 1992.15.106; 1991.4.340; among others.

¹⁰ Spinal tuberculosis is also known as Pott's disease.

suitable for body preservation. However, from the evidence of the bacteria in the rest of the Americas, we can infer that the disease would also manifest in Central America, especially since figures depicting symptoms of spinal tuberculosis have been found not only where skeletal evidence has been preserved but also in the jungles of Central America (Daniel, 2000: 397).

Tuberculosis has been and still is a common cause of death worldwide (Neal, et al., 1986: 495). After pulmonary tuberculosis, which affects the lungs, skeletal tuberculosis is the most common form of the disease (ibid: 496). As found by Steinhardt (1911), of the types of skeletal tuberculosis, spinal tuberculosis is the most common because the spine comprises a proportionally large area of the body filled with small pieces, vertebrae, that are susceptible to possible infections and diseases (p. 203). Tuberculosis bacteria can infiltrate if the body is weakened from a previous infectious disease or trauma (ibid: 204). Since the ancient inhabitants of Costa Rica certainly would have dealt with both of these factors, they likely would have been vulnerable to infectious tuberculosis bacteria if exposed.

As mentioned before, spinal tuberculosis presents symptoms similar to osteomalacia. When the tuberculosis bacteria infiltrate the anterior portion of the spine, bones in the spinal column are destroyed without new bone growth, which causes the vertebrae to collapse into a wedge ("Pott's Disease," 1925: 962). The wedged vertebrae form a kyphotic back that worsens with time because growth in the posterior portion of the spine may continue even if the bacteria prohibits growth in the front of the spine. As the hunch in the spine worsens, pectus carinatum can form because the ribs and sternum do not cease growing despite the lack of support from the anterior spine (ibid.). J.S. Stone (1898) found that, as with serious cases of osteomalacia, the chest sides will retract and narrow and a transverse groove may manifest with the pectus carinatum in cases of spinal tuberculosis (p. 338). Studies undertaken by Neal, et al. (1986), determined that these skeletal deformities are usually accompanied by pain throughout the body and weakness in the extremities, which can cause an "electrical tingling" in the limbs (p. 494, 496). The pain and skeletal deformities present in spinal tuberculosis are thus so similar to osteomalacia

that it is not possible to conclusively recognize which of the two diseases could be depicted in the succeeding shaman effigies.



Fig. 11. Seated female hunchback effigy vessel.
Costa Rica, Guanacaste-Nicoya, Rosales Zoned Engraved, 300BCE- 500CE.
Mint Museum, accession number 1996.45.15.

The seated female effigy vessel (fig. 11) from the Mint Museum portrays a shaman with a severely kyphotic spine. The protruding back could be the result of spinal tuberculosis or osteomalacia, but the lack of other body deformities prohibits a definite identification. Nevertheless, this woman has attributes that identify her as a shaman and she was likely chosen to be a ritual healer due to her survival of a skeletal disease. Like aforementioned focus objects, she has body paint or tattoos on her face, round trance-state eyes, everted lips, and large ears; all of which are indicative of shamanic status. The flared opening of the vessel also comprises the top of her head and is distinguished by a lipped brim that could also represent a headband. This attribute relates to visions leaving the shaman and knowledge flowing in through the fontanel at the top of the head, as was discussed in the analysis of the intersexed effigy vessel from the Denver Art Museum. She kneels in the typical pose of a shaman, strengthening the depiction of her being in a trance state. Although the disease that has caused her kyphosis cannot be determined, it can be

strongly suggested that her skeletal anomaly contributed to her status as a shaman capable of intense trance state.



Fig. 12. Front view of Osteomalacia (?) survivor effigy vessel.

Costa Rica, Greater Nicoya, Tola Trichrome, 300-500CE.
Michael C. Carlos Museum, accession number 1991.4.346.



Fig. 13. Side view of Figure 12.

Despite the abstract depiction of the effigy vessel seen in figures 12 and 13, several skeletal anomalies are presented naturalistically enough that an identification of osteomalacia or spinal tuberculosis may be suggested. This figure obviously has kyphosis and pectus carinatum that create a horizontal configuration, similar to the effigy associated with osteomalacia (fig. 9 and 10), and therefore could again relate to animalistic liminality (Stone, 2011: 107). Pronounced curved ridges mark the spine, indicating scoliosis, and chest, possibly demonstrating a transverse groove in the rib cage. Raised horizontal lines lie on either side of the mouth, perhaps a reference to the cheekbones in which case the shaman could either be fasting for trance or the disease has weakened the muscles so that the bones are protruding. The angular, thin arms likewise indicate muscle weakness from disease or fasting. The protrusion of spine, ribs, and cheekbones would have made this individual seem particularly powerful because the body seems caught between life and the

decomposition of death. The figure is obviously shown as in an intense trance-state due to the bulging eyes, everted and grimacing lips, and the delineating ridge on the forehead that leads to a flaring opening of the vessel. While there is no certainty concerning which skeletal disease this figure could suffer from, it is certain that whatever caused the skeletal anomalies resulted in the individual becoming a shaman suspended not only between trance-states, but between life and death.

Ambiguity is prominent in the artistic renderings, thus a modern medical diagnosis of these particular skeletal anomalies depicted in ancient Costa Rican artworks is impossible without further evidence. However, the inability to conclusively diagnose the skeletal diseases afflicting the individuals portrayed is not due solely to artistic abstractions. The moist, tropical environment of Costa Rica consumes all bodily evidence and makes medical examinations of corpses and skeletal remains impossible. Nevertheless, the ceramic effigies that have survived from the ancient inhabitants of Costa Rica evidence that bone diseases were present and afflicted many individuals. In addition, the skeletal anomalies of the survivors of these diseases were revered to the extent that the individuals could become high status shamans. These shamans would seem extremely powerful because they were obviously in a corporeally liminal state, such as between man and nature-spirit or life and death. Until researchers find means beyond bodily examinations to determine the definitive identification of skeletal diseases, the analysis of the ancient ceramic effigies remains our only evidence of these diseases and the shamanic value placed on surviving them. However, by proposing possibilities of diseases through close study of the artworks, we can make suggestions for future research in related areas. If the shaman's depicted with kyphosis had spinal tuberculosis then that would lend evidence toward trade movements in the Americas. If the figures were afflicted with osteomalacia then researchers should explore what genetic or environmental cause would result in a vitamin D deficiency. As more information is gathered on scoliosis, perhaps researchers can further explore the shamanistic connections to the causes and effects. Thus, even though no specific conclusions regarding a medical identification can be made at this time, even proposing suggestions could assist with future research and simply having effigies depicting the skeletal anomalies evidences their shamanic importance.

Chapter 3: Ambiguous Anomalousness

This chapter will differ from the previous two due to the conclusions reached in regard to the focus object: the spotted face shaman effigy (fig. 14), which has such ambiguous characteristics that it is impossible to determine what modern medical identification may be applied to the symptoms displayed. The features of the effigy may be ascribed to a great number of diseases present in the tropics of Central America. However, I will propose the three most likely medical identifications and discuss the important implications of each possible diagnosis. New World Screwworm, Leishmaniasis, and Pinta are the most probable causative agents of the shaman's disease due to the similarities of the physical manifestations of each disease and the features of the ceramic effigy. Before I explore the possible medical identifications, I will describe the effigy to demonstrate what the artistic characteristics themselves imply in relation to shamanic power.



Fig. 14. Effigy vessel of man with spotted face.
Costa Rica, Greater Nicoya, Belen Incised, 800-1350CE.
Michael C. Carlos Museum, accession number 1991.4.31

This effigy vessel (fig. 14) depicts a key iconographic configuration characteristic of Belen Incised style ceramics that demonstrates the important shamanic concepts of power and liminality. The Belen Incised style is comprised of dark monochrome ceramics with

incisions and appliqué details. From 700 to 1350CE this style existed in the Northern part of Costa Rica, making this focus object the youngest piece I discuss in this thesis. According to R. Stone (2002), the pieces of this style clearly evidence influence from both Meso and South America due to their compositions: details such as widely spaced eyes suggest influence from the North, and forms such as the double-chambered vessel indicate influence from the South (p. 93, see cat. nos. 177 and 178). The process to create a deep black ceramic vessel requires great skill and dedication of the artist. To create post-fired incised blackware, consistent levels of oxygen must be maintained to allow smooth distribution of dark color and the artist must have a steady hand to scratch the lines into the vessel after firing (R. Stone, 2011: 126). Incised blackwares are difficult to achieve because of the time and skill that the artist must dedicate to the artwork. R. Stone (2011) has proposed that the difficulty was undertaken by many artists because Belen Incised blackwares were viewed as artistic manifestations of the most powerful animal spirit, the jaguar (p. 125-6).

Typically, Belen Incised blackwares are comprised of an expanse of blank space with a figure, usually a jaguar, at the top of the vessel and a twisting motif incorporated into the figure (R. Stone, 2002: 94-95). R. Stone (2011) has suggested that the dark plainness of the majority of the vessel “holds space for that which is unknown, potential, and transitional” (p. 132). The dark, unembellished body of the vessel conveys the importance of looking for essence or spirit of all beings. In addition, a shaman’s goal with trance is transcendence into the spiritual world and transformation into a being greater than his human self. Transformation into a jaguar is the ultimate shamanic achievement because the jaguar is viewed as the most powerful spirit in Nature. The darkness of the vessel reflects the melanistic jaguar since they appear to be completely chocolate brown or black. One of the seemingly magical qualities of the melanistic jaguar is that they can produce tawny, light-colored, babies; thus an anomalous shaman could be viewed as particularly powerful due to its connection to the anomalousness of jaguars (ibid, 127). The twisting motif characteristic of this style could be a representation of textiles, tattoos, *Banisteriopsis inebrians* vines, geometric trance patterns, and/or snakes, a configuration that implicates high-status as a shaman (ibid, 133-140). This particular vessel also demonstrates a blend of

two-dimensional and three-dimensional aspects that enhance the concepts of transformation and liminality. The plain base of the vessel gives way to the two-dimensional twisting motif that then draws the eye to the three-dimensional face. The multi-dimensional qualities of the piece create a dynamic effigy that strengthens the transformational concepts demonstrated by the anomalous shaman in trance. The combination of color, composure, and iconography indicate that the effigy depicts a powerful shaman, but it is his spotted face that separates him from the typical Belen incised ceramic.

As has been discussed in the previous chapters, cephalocentrism frequently characterizes shamanic artworks. The face of the effigy clearly attracts the viewers' attention with its three-dimensionality and contains the most important aspect of the effigy, the ambiguous holes. We know that the figure depicted is a shaman due to this anomaly as well as the trance features. Like many of the other focus objects described in this thesis, the figure displays elements indicative of trance such as: being a literal and metaphorical vessel for the shaman, ridges and a broadened opening of the vessel that draws attention to the fontanel, and flaring nostrils. This shaman differs from the others, however, because his eyes are concave and his mouth forms an oval. The eyes likely once held precious stones that were removed from the effigy at some point, as evidenced by the abrasiveness of the eye sockets. The abrasions would help secure an inlaid jadeite, obsidian, gold, or other valuable material to make a special trance eye reminiscent of a reflective jaguar eye (R. Stone, 2011: 91). The stones would have brought attention to the eyes and therefore the vision state of the shaman. The mouth could be in the process of "sucking out" an illness, a typical shamanic practice used to heal (ibid, 65). Additionally, the effigy's face has an edge around its entirety. This could imply that the spotted face is a mask, which would evidence that the shaman was using a representation of anomalousness to strengthen his abilities. On the other hand, the edge could be an artistic choice to further pronounce the shaman's cephalocentric anomaly. Either way, the edge evidences the value of the shaman's spotted face. The most interesting aspect of the face is, of course, the

abundance of holes. Like other Costa Rican artworks demonstrating holes in the face,¹¹ the holes could signify decomposition and liminality between life and death. This shaman would seem exceptionally powerful because he would constantly bridge the terrestrial and spiritual worlds. Therefore, because of the iconographic configuration and the anomalousness, we can say with certainty that this effigy depicts a high-status shaman. However, I believe even more information about the social and cultural aspects of the shaman could be garnered by suggesting possibilities for what caused his particular anomaly, especially since this style evidences trade to both the North and South.

New World Screwworm

The New World Screwworm (*Cochliomyia hominivorax*) is a member of the Blowflies family and is a parasite of mammals, including humans (World Organisation for Animal Health, 2008: 266). The adult female flies are attracted to open wounds on a warm-blooded host, and lay their eggs either within the wound or at a body orifice in an overlapping, roof-shingle-like, pattern, allowing the eggs to remain more securely attached to each other and to their host (ibid; The Merck Veterinary Manual, 2011). Between two hundred and four hundred eggs are in each batch; the sheer number of eggs ensures that some of the worms will survive even if the vast majority of the eggs are rubbed off by the host. The eggs hatch within a twelve to twenty-four hour range and the larvae begin to burrow deep into the wound, where they will feed on live tissues and fluids emitted from the wound. After five to seven days, the worms emerge from the wound and throw themselves to the ground in which they will transform into their adult fly form (ibid). According to the World Organisation for Animal Health (2008), "If the eggs are deposited on mucous membranes, the larvae can invade undamaged natural body openings such as the nostrils and associated sinuses, the eye orbits, mouth, ears, and genitalia" (p. 266). This means the host may not only have growing and deepening lesions, but may develop new lesions as the worms navigate susceptible tissues. A reddish-brown fluid and an odor seep from the wound as the worms feed on the tissues, which can attract other females and therefore increase the egg and worm infestation (ibid; The Merck Veterinary Manual, 2011). As the worms

¹¹ See R. Stone, 2002: 82-83, cat. no. 154, 155

continue to spread the infection, the tissues in and around the wound undergo necrosis. The dead and infected tissues can continue to attract additional parasitic flies and eventually the host may die from the infected lesions (ibid). If the host does not die, the lesions will heal but ghastly scars remain.

The population of the New World Screwworm once ranged from the Southwestern United States to halfway down South America, but in modern times the population has been limited to Central America and the Caribbean Islands with occasional outbreaks in Northern South America (The Merck Veterinary Manual, 2011). The warm, humid environment allows the worms to maintain year-round populations (World Organisation for Animal Health, 2008: 266). In ancient Costa Rica, the Screwworm population would have been high since there were no insecticides. Humans infested with the worms would have had a higher risk of death due to the lack of medications to treat infections. Thus, a human surviving such a horrific experience would seem particularly strong, and probably destined to heal.

The shaman effigy's facial holes could very well be due to an infestation by the New World Screwworm. The ability of the worms to invade undamaged areas could support this diagnosis since the effigy's face is littered with holes. The black coloring of the effigy might have been utilized to reflect the necrotizing flesh of the worms' host. The individual would seem especially invested with divine powers since they would appear to bridge life and death. Open wounds that multiply and grow across the face can be likened to a person's face decomposing, which was a process that clearly fascinated the ancient Costa Ricans as evidenced by the death masks in the Michael C. Carlos collection (R. Stone, 2002: 82-83; see cat. no. 154 and 155). These masks contain such details indicative of putrefaction as cheek and nasal holes and swollen lips, which evidences the interest in the process of decomposition undergone before the individual was considered truly dead (ibid). Worms emerging from the wounds and dropping to the ground could be correlated to insects eating and crawling through a corpse. The shaman depicted in the effigy would seem attached to both the spirit world and terrestrial world due to his gruesome worm-eaten body, thus indicating his role as healer and communicator between the two worlds.

Leishmaniasis

The World Health Organization ([WHO] 2012) describes Leishmaniasis as an often-fatal disease caused by infected adult female Phlebotomine sandflies. When the sandfly ingests *Leishmania*-infected blood from a mammal, the parasite remains within the stomach for four to twenty-five days, during which time the parasite develops so it can be transmitted to a new host (ibid). The parasite can cause either Visceral or Cutaneous Leishmaniasis in the new host (Chance, 1981: 1245). Cutaneous Leishmaniasis is the form of the disease that affects the skin; Visceral Leishmaniasis infects the internal organs, predominantly the spleen, liver, and bone marrow (ibid). In Central America, most individuals with Leishmaniasis present the cutaneous form; only a few small areas have a history of the visceral form (ibid). Since the shaman effigy is Costa Rican and the facial skin is obviously the area infected, I will focus on the cutaneous manifestation of the disease.

The three strains of *Leishmania* found in Central America are *Leishmaniasis braziliensis*, *L. panamensis*, and *L. mexicana* (Reithinger, 2007: 581, Table 1). *L. mexicana* is the strain most likely to have infected the shaman depicted because of the symptoms this strain manifests. Like the other strains, *L. mexicana* is transmitted to the host through the sandfly bite, which forms a nodule and then a shallow ulcer in the skin (Chance, 1981: 1246). The host may have a single lesion or develop several lesions due to multiple bites or metastasis, a process that spreads infected cells (ibid). The World Health Organization (2012) has found that Cutaneous Leishmaniasis can produce up to two hundred lesions on the body, leaving the host severely disabled and the body permanently scarred, if indeed the body survives at all. The host can spontaneously heal in three to eighteen months, but in such a humid environment healing is inhibited and often other infections will manifest in the lesions (Chance, 1981: 1246). *L. mexicana* differs from the other strains in that it can cause diffuse Cutaneous Leishmaniasis (ibid). This means that the parasite covers the body in nodules and many of those become open lesions. Due to this characteristic spread of the disease, the shaman depicted in this effigy could be diagnosed with *Leishmania mexicana*, a diagnosis that would imply several things about the shaman depicted.

As discussed above, the holes in the face would make the shaman seem especially connected to the spirit world because the body would appear to be decaying and yet alive.

Diffuse Cutaneous Leishmaniasis would account for the entire expanse of the effigy's face being covered in holes. The abundance of lesions would make survival of the disease particularly difficult, hence the effigy's high status of healer. If the shaman could be diagnosed as having diffuse Cutaneous Leishmaniasis caused by *L. mexicana*, this would strengthen the notion that Costa Rica was directly trading with Mesoamerica. Since the style demonstrates a connection to the North, the presence of this disease would indicate that this shaman had to have come in direct contact with traders or might have traveled to Mesoamerica himself. Artworks such as this effigy can help researchers explore not only the conditions that make the anomalous bodies that indicate shamanic power but also the cultural and social relationships between different areas of the Americas.

Pinta

Pinta, Yaws, Endemic Syphilis, and Venereal Syphilis are the four human diseases caused by the Treponemal bacteria (Hackett, 1963: 8; Hollander, 1981: 34). The parasitic bacteria that cause the diseases are morphologically indistinguishable and yet cause vastly different symptoms (ibid, 34). Pinta (*Treponema carateum*) is a non-venereal disease endemic to the Americas (ibid, 8). This means that Pinta is indigenous from Mesoamerica through South America and is transmitted by skin-to-skin contact, as opposed to transmission from an animal source or from exchange of fluids during sex. The Pinta bacteria enter the skin at a break, then spread through the blood stream and manifest three to nine months later as lesions in the skin (ibid, 10-11; Schmid, 1989: S1462). According to Hollander (1981), Pinta manifests as lesions in the distal regions of the body, which are the head, lower arms and hands, and lower legs and feet (p. 36). The initial lesions are scaly and take on a bluish hue after a few weeks then lose their pigmentation after several years. (ibid). Hackett (1963) determined that as years pass the host typically experiences relapses of infectiousness and the formation of new lesions (p. 9). This means that the bacteria has spurts of re-growth over the years, thus the host will develop new lesions filled with bacteria that potentially could infect a new host. Those infected with Pinta are not only disabled by the painful, recurring lesions but also are left horrifically scarred with

discolored pockmarks. Therefore, Pinta continues to transform the host's body throughout the rest of its life.

Hackett (1963) also found that, unlike the other Treponematoses diseases, Pinta only affects the skin and not internal organs (p. 14 Table 2). According to Schmid (1989), the host can remain infectious for several years because of the recurrent of lesion formation, but there is a low infectivity rate because the bacteria within the lesion must come in contact with an open wound on the next host (p. S1462). However, as Hackett (1963) explains, "A communicable disease of lesser infectivity but of longer duration of infectiousness or having infectious relapses from latency during a number of years could maintain itself in a smaller population" (p. 22). Thus, the small populations habiting ancient Costa Rica would have retained the disease. Costa Rica is also a perfect region for the disease to endure because of the hot, humid environment. The replication of the bacteria is greatly influenced by temperature, a tropical environment being the most beneficial to the multiplication process (ibid, 12). Due to the environment and small populations of ancient Costa Rica, Pinta would have flourished and many shamans likely came into contact with those infected.

Given the similarity between the characteristics of the disease and those of the ceramic effigy, the shaman depicted could likely have been infected by Pinta. The attributes of the effigy can easily be correlated to the symptoms of the disease. His facial markings would obviously relate to the lesions and scarring caused by the disease. The gray-black coloration of the vessel could relate to the unnaturally pigmented flesh of the lesions. Black would be the closest the ceramic could be made to the bluish hue of the host's skin. The bluish coloration of the skin would be particularly significant to the shamanic culture because, as R. Stone (2011) has stated, blue was considered a high status color due to the difficulty to reproduce the color materially and the prevalence of blue in visions (p. 33). The most interesting correlation can be made between the twisting motif on his shoulders and the scaly appearance of the lesions. The spiraling overlap design incised on his shoulders is reminiscent of snakes coiling around each other. Since snakes have a defining quality of scaly skin and the infected shaman's skin would appear scaly, the shaman may have seemed particularly connected to a snake spirit. Snakes are often the first non-

geometric element seen in visions and tend to lead the shaman toward the wisdom of the spirits (ibid, 40). Thus, a shaman transforming into a snake would seem especially tied to the spirits and able to utilize their knowledge of healing. The shaman's anomalousness would have been extreme due to the multitude of lesions, the changes in pigmentation, the relapses of lesions over the years, and the permanent scarring. His survival of the initial lesions would have promoted him to a role of healer and survival of relapses of lesions over the years would strengthen his status and shamanic abilities. Recurring phases of apparent decomposition and self-healing would create a strong bond between the shaman and the spirit world, in addition to his transformation into a snake-self. If the Pinta bacteria were the cause of the shaman's anomalous face, his healing abilities and power to communicate with the spirits would certainly be strengthened as the disease progressed over the years.

Although the traits of the anomalous shaman's effigy are too ambiguous to definitively tie a single medical identification to the symptoms, the proposed diagnoses remain helpful to researchers. Each of the aforementioned diagnoses manifests as lesions on the host's face illustrated in the ceramic effigy. However, each of the diseases also has distinctive characteristics that imply other concepts. New World Screwworm would further evidence the ancient Costa Rican's fascination with decomposition and the concept that a decomposing, yet living, shaman would seem otherworldly. Cutaneous Leishmaniasis caused by *L. mexicana* could confirm a trade network between Mesoamerica and Central America and might even suggest that the shaman himself traveled to Mesoamerica. Pinta speaks to the importance of transformation and transcendence in visions. Just as the iconographic configuration of the Belen Incised style of ceramics evidences certain shamanic values, the proposals of medical identifications for the anomaly of the figure can elucidate the shamanic principles of power and the connections between various parts of the Americas.

Conclusions

Each chapter of this thesis served a dual purpose: proposing modern terms to identify specific anomalies present in ancient Costa Rican shamanic effigies and arguing that the unusual bodies depicted served to strengthen the shamanic abilities of their subjects. The focus objects presented combinations of attributes that either clearly correlated to a particular disease or whose identification remained hypothetical due to the ambiguousness of the artistic rendering and the current inability to distinguish between specific diseases without testing actual human remains. In looking at shamans who are intersexed, have skeletal anomalies, or evidence particularly unusual and ambiguous characteristics, I have endeavored to show that an application of the modern understanding of these conditions can support the relationship between art and shamanistic beliefs.

The first chapter discussed the dual sex characteristics of intersexed shaman effigies and the importance of liminality to shamanistic practices and beliefs. I proposed that Klinefelter's Syndrome inspired the kneeling intersexed shaman's traits—the effigy's anatomy corresponds specifically to the syndrome's known combination of symptoms. By applying the modern identification to the combination of symptoms, I demonstrated that other characteristics of Klinefelter's Syndrome would have played into the individual's call to be a shaman. While the kyphotic back would intensify his unusual nature, the intensified visual processing would have influenced the shaman's recollection and understanding of visions. The intersexed figures communicate the essence of dual sexuality, androgyny, and multiplicity as important shamanic concepts. The seemingly ultra-fertile intersexed shamans, created to celebrate the power of sexual liminality, were paradoxically physically infertile, thus epitomizing the shamanic role as contradictory and even impossible. By identifying the more realistic portrayal of an intersexed shaman as having Klinefelter's Syndrome, the connection can be made to the more abstracted iconographic configurations. This chapter concentrated on a combination of particular symptoms depicted in several ceramic effigies that could be attributed to a single modern diagnosis; the subsequent

chapters, on the other hand, necessarily took a different approach due to the more ambiguous nature of the characteristics illustrated.

The second chapter was less definitive in its discussion because the symptoms depicted in the ceramic effigies could correspond to a number of causative agents. However, the effigies analyzed in this chapter still evidence the connection between anomalies and shamanic abilities, as well as the value of proposing modern identifications. Scoliosis was the most definitive of the modern diagnoses, but the causative agent of the spine contortions is not currently understood so we may only look at the anomaly itself and its corresponding shamanic symbolism. I demonstrated the conceptual links between the twisted scoliotic spine and the twisting elements of nature such as the vine and snake, which signified the connection between the shaman and the spiritual world. The proposed identifications, osteomalacia and spinal tuberculosis, for the abundance of effigies that demonstrate protruding spines and chests were not conclusive due to the lack of bodily remains needed for comparison. These two skeletal diseases are the most probable causes since spinal tuberculosis bacteria have been located in human remains in nearby regions of the Americas and given that the particular symptom of having bowed legs is so common to osteomalacia. Regardless of the multiple possible identifications, the portrayals of shamans with bone protrusions evidences their importance as liminal beings—obviously alive but with skeletons emerging from within—bridging the spiritual and terrestrial worlds. My intention with this chapter was to demonstrate that, even though we cannot absolutely pinpoint a particular disease that caused the skeletal anomalies depicted in these effigies, we can recognize the importance the ancient Americans bestowed on these anomalies due to their spiritual connections between the living and the dead, which could be the starting point for productive future research. By proposing preliminary diagnoses perhaps future researchers will be better equipped to study the diseases and determine a stronger likelihood that one disease is represented instead of another.

The final chapter differed from the previous two in that only one effigy served as the basis for the exploration of medical identifications. Due to the ambiguity of the pitted-faced effigy's anomaly, I proposed the three most likely diseases that would cause the figure's appearance: New World Screwworm, Leishmaniasis, and Pinta. The intent of this final

chapter was to further implicate that proposing diagnoses can be helpful to future researchers even without certainty of the cause of the anomaly. All three conditions juxtapose living flesh and decay, the skeleton emerging from within, and thus conform to the shamanic value of liminality. This effigy strengthens the argument that anomalies were of great shamanic importance since his pitted face is fully three-dimensional and the most detailed portion of the piece. The cephalocentric iconographic configuration highlights rectilinear eyes and the twisting motif of the *B. inebrians* vine as elements of trance and symbolizes a deeper connection to plant spirits and the non-terrestrial experience. Each modern identification that I proposed could be helpful in more extensively analyzing the effigy. Worms erupting from the facial holes would increase the shaman's power since he would be living yet seemingly decomposing. If Leishmaniasis were the cause, this would implicate an interaction with Mesoamerica. Pinta would establish a stronger connection to the coloration and twist motif due to the characteristics of the lesions and would strengthen the shaman's power through his recurrent transformations. This final chapter evidences that ambiguity in ancient effigies may prevent a conclusive modern identification of the anomaly, but nevertheless should serve to inspire future research in botany, epidemiology, and pathology.

This thesis serves as a preliminary consideration of anomalous physicality in ancient Costa Rican art as it relates to the shamanic worldview, through the application of modern medical identification. By focusing on a few key focus objects, I demonstrated the connection between certain specific anomalies and shamanic power, suggesting how our understanding of the depicted shamans may be strengthened if we apply modern medical diagnoses. Additionally, the diagnoses could support further epidemiological research concerning interactions between various parts of the ancient Americas: if spinal tuberculosis bacteria spread from north to south and/or leishmaniasis from south to north. With the application of modern medical knowledge, I believe the contemporary audience will find these effigies more accessible, which could inspire a larger interest in the often under-appreciated ancient American arts. This is especially important in this case because the art and culture of Costa Rica is virtually ignored in the modern dialogue.

Costa Rica is but one area of the Americas in which ancient artworks depict shamans with bodily anomalies and it has been neglected in favor of its better-studied neighbors. By relating this Central American research to Mesoamerica and South America to propose identifications of depicted diseases, a better understanding of ancient Amerindian cultures' views concerning anomalous shamans will be achieved. Researchers may find evidence that will further their understanding of the interactions between these societies culturally, artistically, and epidemiologically, adding to the interdisciplinary dialogue and furthering new knowledge. Hopefully, future research connecting fields ranging from Art History to Anthropology to Medical Pathology and Epidemiology will broaden our understanding of the depictions of anomalous bodies in ancient Costa Rican artworks and their connection to shamanistic beliefs.

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