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AZTEC HUMAN SACRIFICE AS ENTERTAINMENT?  
THE PHYSIO-PSYCHO-SOCIAL REWARDS OF AZTEC  
SACRIFICIAL CELEBRATIONS

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A Dissertation

Presented to

the Faculty of the University of Denver and the Iliff School of Theology

Joint PhD Program

University of Denver

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In Partial Fulfillment

of the Requirements for the Degree

Doctor of Philosophy

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by

Linda Prueitt Hansen

June 2017

Advisor: Dr. Annabeth Headrick

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Title: Aztec Human Sacrifice as Entertainment? The Physio-Psycho-Social Rewards of Aztec Sacrificial Celebrations  
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## **ABSTRACT**

Human sacrifice in the sixteenth-century Aztec Empire, as recorded by Spanish chroniclers, was conducted on a large scale and was usually the climactic ritual act culminating elaborate multi-day festivals. Scholars have advanced a wide range of theories explaining the underlying motivations and purposes of these abundant and regulated ritual massacres. Recent scholarship on human sacrifice in ancient Mexico has observed far more complexity, nuance, and fluidity in the nature of these rituals than earlier mono-causal explanations. Several recent examinations have concentrated their analysis on the use of sacred space, architecture, movement, and embodiment in these festivals. As an extension of these efforts, this dissertation uses a phenomenological approach to examine the “experience” of sacrificial rituals. It explores the sensory-emotive and physiological responses to the celebrations and the violence associated with human sacrifice. Using modern bio-social-psychological theory, this study reveals that the brutal treatment of captive enemy bodies in human sacrificial rituals provided physiological, psychological, and social rewards that turned these spectacular events into a form of enthralling entertainment. Several other recompenses for officiants and other spectator-participants included a sense of security, management of anxiety, and social bonding. In addition, this dissertation

reveals that these ceremonies incorporated different shamanic elements that fostered communally experienced “altered states of consciousness” which further contributed to physiological rewards, the reduction of social anxieties, and an increase in social solidarity. The significance of this research is that it offers additional explanations for the massive scale and longevity of the practice of human sacrifice amongst the ancient Aztec. It also offers other reasons why the lower echelons of society supported these celebrations despite the possibilities that they could be demoted to slave status and become sacrificial victims themselves. This study also presents possible future explorations of ritual violence in other ancient and modern cultures.

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## CHAPTER ONE: INTRODUCTION

In the ancient Aztec capital of Tenochtitlan, there rose above the bustling metropolis skyline a towering pyramid crowned with two magnificent shrines dedicated to two central Aztec deities. On a massive platform in front of these temples, stood a large pointed stone referred to by modern scholars as a *chacmool*. Spanish chroniclers reveal that the sharp vertical shape of this stone-idol was designed for ease of extracting the heart from human sacrificial victims. One ethnohistoric account described the procedure for this form of sacrifice:

Thus they took (the victim) up (to the pyramid temple) before the devil: the priests) just went holding him by his hands. And he who was known as the arranger (of victims), this one laid him out on the sacrificial stone (on his back facing upwards). And when he had laid him upon it, four men each pulled on his arms, his legs. And already in the hand of the fire priest lay the flint knife with which he was to slash open the breast of his ceremonial bathed one. And then, when he had laid open his breast, he at once seized his heart from him. And he whose breast he laid open lay quite alive. And when (the fire priest) had taken his heart from him, he raised it in dedication to the sun. (Sahagún 1981, 2:197)

Heart extraction was just one form of killing these ancient peoples utilized in their calendared sacrificial ceremonies. In another sacrificial procedure, four enemy captives were slain and their bodies were tossed onto the ground in close proximity to each other, and then a female slave was brought forth, thrown on top of the bloody corpses, and her throat was slit before finally having her heart torn out (Durán 1971, 212). Aztec

captives and slaves were burned, tossed from the tops of high poles, shot with arrows, and subsequently decapitated, skinned, and dismembered for ritual cannibalistic feasts in the homes of those who sponsored that particular victim for sacrifice. These deaths were witnessed by large crowds of spectators and occurred as a central rite during dramatic month-long ceremonies honoring specific deities. Watching mangled cadavers tumbling down the pyramidal stairs after their still-beating hearts had been seized and raised high into the air was indelibly horrifying to the crowds. What do modern scholars suggest was happening in these powerful, violent moments?

A vast body of research is devoted to the underlying thoughts and motivations behind these exceptionally cruel practices. Classical theories of the human sacrifice observed in many different cultures concentrate their interpretive efforts on ideological explanations. They observed that human sacrifice was merely an extension of other types of religious offerings and explain that sacrifice receives moral approbation and legitimacy because it was shrouded in “religiosity” and “sacredness.” Even modern theorists focus on the ways ancient peoples used human sacrifice to facilitate connections between the human world and the realms of the supernatural. Recent examination offers more fluidity and multi-dimensionality related to ideas and practices of human sacrifice. Many recent works focus their attention on the material motivations behind human sacrifice. In these models, researchers hypothesize that human sacrificial rites were supported and generated primarily for political reasons, and posit that societies were similarly motivated by the economic benefits engendered by the practice.

For the Aztec, similar theoretical explanations have been offered which center on ideological or materialistic considerations. Despite these explanations and theories, many unresolved puzzles remain concerning these bizarre rites. Ivan Strenski (2003) shared some stimulating thoughts concerning the perplexities of human sacrifice:

The idea of sacrifice sometimes seems so repellent that the word might just as well be banned from public discourse. In ritual sacrifice what can excuse the often unmitigated cruelty of the act? Some ritualists may argue that sacrifice injects meaning into human affairs. But what meaning gained from the death of a victim—even a simple animal—could ever justify the suffering wrought upon the unfortunate creature? Talk of ‘sacrifice’ seems then only to mask brutality. In the realm of civic or social sacrifice, things are not very different. ‘Sacrifice’ used here is but a cruel euphemism covering up victimization or just a device to conceal injustice...who today entertains appeals to sacrifice in wartime without a measure of cynicism? As the recent actions in Kosovo and Afghanistan showed, it is virtually (and in a way ‘literally’) unthinkable that soldiers today might be expected to ‘sacrifice’ their lives in battle, however popular the conflict...But the talk of ‘sacrifice’ cannot comfortably or indeed totally be avoided. It keeps nagging at us. (2003, 1)

Strenski articulates an uncomfortable quandary: what about the brutality of sacrifice? Could our own scholarly interest in the topic come from a deeper attraction found in all humans to observe and think about vicious actions, sometimes with moral justification?

Another aspect of sacrificial rituals worth consideration is their embodied and experiential nature. In this dissertation, I focus on this inattention by providing a phenomenological approach to Aztec human sacrificial celebrations, and contend that in addition to the ideological and material benefits that accrued from the Aztec sacrificial program (principally benefiting the upper echelons of society), there were also intrinsic physiological and social-psychological rewards that motivated support

from all levels of society. Real and vivid benefits were derived from embodied participation and movement across a spatio-temporal landscape. I propose that face to face encounters with bloodied bodies and arrows sunken into the flesh of real people induced physiological arousal and emotive and sensory responses that were actually rewarding. Furthermore, I argue that the result of encounters with violence in controlled settings was also psychological rewarding, and it also conceptually remedied anxieties concerning death and other uncertainties experienced in life. This examination will not only entertain the biopsychosocial rewards of the violent aspects of the Aztec monthly feasts, but it will also delve into the possible benefits of their more lively and joyful festivities, which were interestingly scheduled immediately after human sacrifices had ended. As such, I conjecture that this wide range of performances—from positive, entertaining activities such as singing, dancing, and feasting to negative-frightful events that sponsored danger and violence—produced further motivation to support the rituals. I argue that these events that swung back and forth between joyful and frightening emotions produced important physiological and psychological rewards in each extreme.

It is the purpose of this dissertation to explore what was actually happening in these ritual moments that sustained extreme and sometimes torturous treatment of victims, and to consider why they were so fervently supported. I contend that the rewards of autonomic arousal and psychological buffering from anxieties offered a powerful source of stimulus and motivation to sustain these ceremonies even among the poorest segments of the populace, who received minimal economic and political

rewards from participation. As a backdrop for my argument, I will provide a cursory review of the general trends in scholarship on sacrifice with a more comprehensive survey in subsequent chapters.

### **Brief Summary of Theoretical Contributions Regarding Sacrifice**

Early theoretical contributions considered sacrifice as a prime mover of original religious thought and action (Tylor 2010; Frazer 1950; Burkett 1996). Subsequent works deliberated upon human sacrifice and promoted the idea that it was as an extension of the concept of sacrifice whereby “offerings,” “gifts,” or “debt payments,” including foodstuffs, incense, and animal sacrifices were ritually destroyed for the benefit of the gods. These early theorists determined that human offerings were of greater value and were given as appeasement in times of crisis or in hopes of reciprocal favor (Tylor 2010; Spenser 1898; Westermarck 1912; Heusch 1985). In concert with these propositions, theories were advanced suggesting that human sacrifice was a form of “communion” or “communication” between humans and the divine world. It was further argued that when ritual specialists ate portions of the sacrifice, they were communally feasting with the gods (Smith 2002; Van Baal 1966; Van der Leeuw et al. 1963). Henri Hubert and Marcel Mauss (1964) analyzed the functions, operations, and logic of sacrifice. They determined that one of the central purposes of sacrifice was the “consecration” or transformation of ordinary objects or offerings into “sacred” forms. For them, sacrifice demarcated the sacred and profane worlds and allowed for contact with higher orders.

The next generation of scholars expanded upon these foundational theories but discerned additional social and psychological motivations behind sacrifice. Sociologist Emile Durkheim (1915) argued that sacrifice was a necessary practice repeated on a yearly basis for the renewal of social bonds. Edward E. Evans-Pritchard (1954) and later Valerio Valeri (1985) established that sacrificial rites recapitulated social hierarchies and expiated communities of turpitude. In other words, sacrifice cleansed the social order of disorder, evil, and impurity. Victor Turner (1969), in his sociological theory of sacrifice, determined that it held the role of transforming and reestablishing social orders in times of crisis. Further psychological theories proposed that sacrifice provided communal, cathartic, and controlled releases of the violent urges that humans attempt to suppress (Westermarck 1912; Girard 1977; Burkett 1996; Sigmund Freud 1898). Other scholars recognized the value of sacrifice in overcoming trepidations concerning death, disease and other unknown dangers. Maurice Bloch (1992) and J.Z. Smith (1987) asserted that sacrificial rituals were beneficial monitored experiences that alleviated commonly held fears concerning social crisis and uncontrollable threats found in the natural world.

Many modern works analyze human sacrifice in the context of each culture and discern that culture's unique ideologies and practices. The latest trend in scholarship reveals the multivalent symbolic value and multidimensional functions of sacrifice while recognizing the diverse orientations and purposes of these rites within particular cultures. The same considerations have been given to complex Aztec sacrificial schemes. For the purposes of this dissertation, I will primarily use the more commonly

known term “Aztec” (which refers to all surrounding groups that became associated with the Mexica through trade relations and domination), even though the peoples that founded the island city of Tenochtitlan in the middle of Lake Tetzco, in the central basin of Mexico in 1325 C.E., identified themselves as “Mexica” or “Tenocha.”

Scholars have been mesmerized by the grandeur of the Aztec ceremonies and the reportedly massive scale of human sacrifice therein. These monthly festivals not only required a voluminous expenditure of time and resources to sponsor, but they also involved wholesale participation in the ceremonies by every echelon of the social order. Much discourse has been devoted to understanding the reasons why Aztec human sacrifice achieved such centrality in their world and why it was so vehemently supported over a prolonged period of time. The ethnohistorical record provides rich details concerning these ceremonies and are primarily derived from two sixteenth-century Spanish chroniclers: Fray Diego Durán and Fray Bernardino Sahagún.

There is consistent theory regarding Aztec sacrifice that Mesoamerican cosmological understanding of creation and destruction was foundational to their rituals (Bierhorst, 1992; Carrasco 1982; Durán 1971; López Austin 1988; Reilly 2012, Sahagún 1981; Taube 2012). The Aztec perceived that they had the esteemed obligation to sustain the gods, to perpetuate life and uphold the motion of celestial bodies through their repeated animal and human sacrifices (Kohler 2001; Leon-Portilla 1997; Ortiz de Montellano 1990). Sacrifice also recapitulated cosmic time, the ordering of space, and concepts of duality (Brady 1997; Kerkhove 2016; Read 1998; Reese-Taylor 2012; Taube 2012).

Several scholars reflected upon Aztec ideas concerning the body and argued that these ideas are essential to understanding their orientation toward human sacrifice. For the Aztec, their bodies were miniature versions of the entire cosmos. In addition, sacrifice of the body released important life forces that empowered the gods, their rulers, and their warriors. (Dicesare 2009; López Austin 1988, vols. 1-2, Townsend 2000). The transformation of the body in death offered fertilizing, regenerative forces that perpetuated both human and agricultural life. The oldest forms of sacrifice in ancient Mexico were based on a fertility cult. Food, copal incense and animals were propitiatory offerings to the rain deities in expectation of needed rains for a good harvest (Reilly 2012). The tradition was eventually expanded to human offerings, and the eating of the flesh of the victims was seen as a source of regeneration (Austin et al. 2008; Brundage 1985; Read 1998).

Expansive works have been generated by scholars in revealing the materialistic implications of Aztec human sacrifice. These works examined the political, military, and economic involvement in reworking and manufacturing Aztec sacrificial ideologies and practices, and based these assertions on available ethnohistoric, archaeological, and iconographic record. These scholars contend that elite institutions had significant roles in transforming every aspect of sacrifice to legitimize the practice and to increase economic appropriation through tribute obligations. This process includes remaking histories and reinventing origin stories, calendars, artwork, and even architecture to reflect a revised state sponsored “solar/military/sacrificial cult” (Broda 1999; Brundage



1972; Demarest 1984; Ingham 1984; López Austin 2010; Serrato-Combe 2001; Smith 2008; Townsend 2000).

These scholars revealed that because of historical modifications, the sacrificial celebrations became intimately linked to tribute obligations and redistribution of goods to the wealthy in Tenochtitlan and surrounding cities (Broda 1991; Davies 1973; Ingham 1984; Moctezuma 1984). The argument made is that the solar/military/sacrificial cult had interlocking sets of economic, social, and religious incentives that motivated the citizenry to believe militarism and conquest was in everyone's best interests (Conrad et al. 1984). Warfare was a necessary component in the Aztec economy and was therefore a central feature in a great number of their sacrificial ceremonies. Many researchers devoted entire works to the significant connection between war and sacrifice in the Aztec world (Broda 1979; Gutierrez 2014; Hassig 1992; López Austin 1997; Milbrath 1997; Pennock 2011). In these feasts, the warrior gods and goddesses were honored, successful combatants were given honors and gifts, mock battles took place, and war captives were paraded around before their deaths on the sacrificial stone (Durán 1971, Sahagún 1981).

This body of scholarship offers significant insight into indigenous perspectives of human sacrifice. It demonstrates that these monthly Aztec ceremonies consisted of a variety of activities and performed a wide-range of functions. For instance, López Austin et al. (2008) conveyed that the Aztec liturgy prescribed different types of victims for manifold sacrificial rituals such as male warriors captured in battle sacrificed in honor of warrior gods, women from Aztec noble families immolated for

important agricultural festivals, children of slaves with certain physical properties thrown into the lake to appease rain gods, albinos offered as precious gifts during fearful times of solar eclipses, and large groups of humpbacks and dwarves sacrificed as retainers for the king in the afterworld. Each of these types of sacrificial rituals were instituted and perpetuated by different ideas and affected Aztec social structures in various ways. These studies, as well as many that I did not highlight above, also demonstrate that Aztec sacrificial symbolism manifests a palimpsest of meaning, including mythical, cosmological, agricultural, calendric, and astronomical. Gavin Flood reminds us that the phenomenon of sacrifice is “truly complex and resists explanation in terms of any single paradigm” (2013, 130). But he also wanted bolder avenues of investigation:

In the study or inquiry into sacrifice, especially across cultures, we arguably need, firstly a phenomenology that allows sacrifice to show itself, as it were, and that allows what shows itself to be seen. This is essentially an ethnographic or descriptive account... We, secondly, need a hermeneutical account that generates theory from description or, rather, that uses description to offer particular interpretative angles (2013, 130).

This dissertation addresses Flood’s request and presents a phenomenological approach with a novel interpretive angle to ancient Aztec ritual human sacrifice. It illuminates a human proclivity toward participating in and witnessing the harmful physical treatment and deaths of other humans. Violence as entertainment is found in modern subjects and in other ancient cultures. This study considers both the violent and ebullient festive occasions observed in Aztec monthly celebrations, and this is done from a biological and social-psychological perspective. In addition, some monthly rituals included

shamanic-like aspects, and I propose that these types of rituals also evoked transformational states of consciousness that were physiologically pleasurable and rewarding on social-psychological levels.

Prior theories have justifiably concentrated a disproportionate amount of analysis on the conceptual realm of sacrifice while giving little attention to its materialized and embodied experience. Henri Hubert concluded that “sacrifice presents itself first and foremost to thought” (2009, 55). He explained that sacrificial myths were formulated prior to the ritual and later became transposed onto the actual rite. Different ruminations emerge when considerations include a journey through the milder territory of mythical memory and cosmological thinking and travel onward to the pulsating shores of real-world participation. My analysis recommends a diversion from standard considerations that concentrate solely on the ideational level of sacrifice. I focus attention instead upon how ideas inform bodily action in performances and investigate the physiological, psychological, and social responses to powerful and violent moments in sacrificial ritual. Below, I outline the theories I will rely on and the methodology used for this investigation.

### **Theory and Method**

In this dissertation, I use a multi-disciplinary approach. I rely upon modern medical studies as well as socio-psychological theories and supporting experimental evidence to ascertain the reasons behind a generalized human attraction to violence. Based on these studies, I use the methodological tool of analogy to interpret the many

violent actions associated with ancient Aztec ceremonies that culminated in the sacrifice of multiple human victims. In addition, numerous elements of the Aztec festivals generated shamanic-like experiences, and I will depend on the works of several scholars on shamanism and “altered states of consciousness” to determine how these ritual embellishments accentuated physiological arousal, communal experience, and further heightened feelings of social solidarity. Additionally, I utilize a historical and contextual approach to examining Aztec rituals. This relies heavily on sixteenth century documents provided by Spanish and indigenous historians, which has its strengths and weaknesses. I will model my inquiry after two studies that used a similar approach and use of analogy. Both analyses utilized modern psycho-analytical and sociological theory to interpret violence and sacrifice in ancient cultural systems.

The first methodological model comes from William Beers. In the work, *Women and Sacrifice: Male Narcissism and the Psychology of Religion* (1992), Biers pursued anthropological, sociological, and psychoanalytic theory to illuminate particular aspects of the “psychocultural phenomenon” of sacrifice. He used all three disciplines to examine the areas of contradiction, gender, and power in male ritual systems of blood sacrifice (1992, 11). He argued that sacrifice embodies and conceals the psychological structure of a male anxiety associated with differentiation, separation, and fears of self-dissolution and ultimately of death. While I will use different theories from within these disciplines, his methodological approach is prototypical of my research.

Another investigator, Garrett Fagan, offered an exemplary analysis which I will also emulate. He examined the Roman gladiatorial games and rituals of sacrifice. In his book, *The Lure of the Arena: Social Psychology and the Crowd at the Roman Games* (2011), Fagan employed a “historical” or “contextual” approach to “social psychology,” examining the cultural expectations and anticipated rewards of spectators who witnessed various violent spectacles of the Roman games. He argued that social psychology is appropriate in examining ancient peoples because certain core psychological structures in human beings or “standard equipment” are shared by all human beings in every epoch. In other words, as a species our psychobiology generates our cultural systems and sets limits on how varied they can be (2011, 40).

Fagan believed that there is an interdependence between contextual stimulus and psychological propensity that shapes individual and social behavior. He adopted the argument that mind and culture have a reciprocal relationship. He was also comfortable with the methodological use of analogy to uncover the behavior of people far removed (chronologically, geographically, and culturally) from modern social scientists. Four areas he applied as part of his social-psychological approach were: psychology of groups, sport spectatorship, psychology of prejudice, and the psychology of attraction to violence as spectacle and entertainment. Fagan further demonstrated how the Roman games recreated their social order and engendered commoner support by offering moments of elevated status.

I will use the same methodology as Fagan and apply modern, biological, social, and psychological theories concerning violence and celebratory rituals (using the

methodological tool of analogy) to the ancient Aztec. Findings from modern medical science revealing physiological and emotional arousal in subjects exposed to violent actions or scenes will be incorporated into an interpretation of possible participant reactions in Aztec ceremonies. Some of these modern studies reveal the habituating and addictive nature of exposure to violence and this will also be considered in the Aztec case.

In addition to pleasurable physiological responses, I hypothesize that there were also social-psychological rewards to the “graphic content” of human sacrifice. One form of psychological reward was possibly an amelioration of anxiety related to death, natural calamities, and foreign enemies. In addition, I argue that these gruesome exhibitions and other elements of the ceremonies were designed to alter the individual and collective states of consciousness in a way that created social solidarity and an in-group identity in opposition to dangerous outsider enemies and supernatural forces.

Some psychological theories posit that humans are fascinated by violence because it confronts instinctual fears associated with a knowledge of the inevitability of death. These same anxieties crop up in sacrifice. Ritual sacrifice meddles with the terms of life and death to manipulate and control a terrifying reality, in some way overcoming it. Gavin Flood considered that the deeper meaning of sacrifice was ultimately a “refusal of death” and a “refusal of meaninglessness” (2013, 115). He noted, “Sacrifice challenges finitude and mortality through the affirmation of life by death and the fundamental revelation or insight that birth in some sense follows death” (Flood 2013, 115). I follow this line of investigation by relying on social and psychological theories

that address death anxieties, autonomic arousal, and social bonding needs. I rely heavily on “Terror Management Theory” and “Optimal Sensory Stimulation Theory” from the field of psychology. The sociological and anthropological theories on social bonding in communities and in ritual derive from the works of Durkheim, Turner, Bell, Rappaport, Smith, and others.

I examine four Aztec ceremonies that lasted for multiple days and apply these bio-social-psychological perspectives to these celebrations, deriving the details from each of these monthly feasts from the written works of Spanish writers such as Bernardino de Sahagún, Diego Durán, Hernando Cortez, and others. These histories have significant value, while at the same being subject to limitations. I acknowledge that there were many purposes and motivations behind each sacrificial act for the ancient Aztec. Classical theories on sacrifice in general as well as modern scholarship on Aztec human sacrifice are foundational to an understanding of Aztec worldviews and lifeways and present an essential backdrop to my argument. Because of this, the classical works will be reviewed first (Chapter Two) followed by a literature review of ideological (Chapter Three) and materialist (Chapter Four) theories related to Aztec human sacrifice (Part I). This will be followed by a chapter (Chapter Five) that presents the biological and social-psychological theories related to the “experience” of Aztec sacrificial ceremonies that are relevant to a phenomenological interpretation of their rituals (Part II). Lastly, the final three chapters (Chapters Six through Chapter Eight) will be an analysis of the biopsychosocial rewards found in each phase of the Aztec festivals based on the theories explicated in (Part III).

## **Organization of Chapters**

Chapter Two presents a brief historical survey of the literature concerning sacrifice and more particularly human sacrifice. This chapter reviews foundational classical theories of sacrifice and the religious nature of sacrifice that are relevant to my study, while the following section contains a survey of modern theories regarding sacrifice. Recent approaches concentrate on complexity, nuance, and contextualization. They disclose important aspects of sacrifice and reveal multi-dimensionality and multi-valency in meaning and purpose. Many of these newer investigations determine that power relationships are central to human sacrifice and rearticulate hierarchal social orders. They also reveal significant dimensions and varied perspectives on human sacrifice.

Chapter Three offers a literature review of the ideological/cosmological aspects of Aztec human sacrifice, and presents studies focusing on cosmological thinking, myth-making, and ideas about the human body as they relate to sacrificial ceremonies.

Chapter Four reviews theoretical consideration of the materialistic interpretations of Aztec sacrificial feasts. These studies concentrated their examinations on the interconnections of the sacrificial cult with politics, economic interests, military initiatives, and the final portion explains what observations and perspectives are missing from the discussion on Aztec human sacrifice and how this dissertation fills some of those analytical gaps.



Chapter Five presents pivotal theories to a phenomenological approach to human sacrifice in the ancient Aztec world. This includes modern biological and social psychological theories and studies that are essential to the thesis of this dissertation. The first section delineates important bio-cultural theories that relate to social bonding and pleasurable responses to violence and celebratory events. Optimal Stimulation Level theory recognizes that there are diverse reactions to and interest in violence. Another important theory I utilize is D. Zillmann's (1983) "excitation-transfer theory," and his supposition that physiological arousal can be transposed into positive emotional and cognitive responses. Finally, medical specialists and psychologists both observe a desensitization or habituation effect from sensory stimuli including exposure to violence.

The second section of Chapter Five reviews studies on shamanism and the production of altered states of consciousness in ritual. These theories relate to many aspects of Aztec rites and offer additional contributions to an understanding of the physiological, psychological, and social rewards found in their sacrificial program.

The third section of Chapter Five provides a condensed explanation of hundreds of studies using Terror Management Theory (TMT). TMT explains that exposure to "death-related thoughts" or "mortality salience" causes individuals within a particular group to adhere more ardently to their group's accepted worldview especially if this worldview offers the idea of immortality. The basic tenet of TMT is that humans develop worldviews to mitigate the "terror" and anxiety they experience as a result of their cognitive awareness of their own ultimate deaths. The more accessible that death-

related thoughts become, the more defensive subjects become of their own cultural worldview and concomitantly more aggressive to outsiders' views. An important observation of TMT is that subjects enjoy violence when they can experience it in a controlled environment or a "parallel reality" and remain unharmed. The final section of this chapter relies on other studies outside of TMT that examine the rewards of violence, and I find that these theories supply additional support for the notions of TMT.

Chapter Six provides an interpretation of the physiological rewards found in three different, sequential phases of several Aztec monthly celebrations. It considers the different emotions produced by a wide range of activities and the potential neurochemical responses to these aroused emotional states. These events, sponsored in feasts dedicated to both agricultural and solar/warrior deities, oscillated between joyous, positive rituals and violent sacrificial rites. This analysis concentrates on the excited states that these rituals likely sponsored and the resulting physiological responses they activated, based on modern biological and social-psychological studies.

Chapter Seven supplies an analysis of the shamanic elements in the Aztec monthly feasts and the biopsychosocial rewards they hypothetically sponsored. This interpretation relies on modern studies of shamanic rituals and the bio-cultural implications they have on groups and individuals. These modern studies concentrate not only on physiological responses to shamanic ritual operations, but also the effects they have on altering states of consciousness. This chapter reveals how and where shamanic-like rituals appear in the three stages of the Aztec sacrificial programs and the

putative implications on the bodies and minds of both participants and spectators of these rituals.

Chapter Eight delivers an analysis of the social-psychological benefits of violent sacrifices and ebullient festivities following these rites in each phase of the monthly celebrations. The interpretive tools used for this endeavor rely upon an application of modern anthropological and religious studies and social-psychological theories to the ancient Aztec case. Terror Management Theory pivotal in this enterprise and its tenets are corroborated by research in other fields.

Chapter Nine summarizes the findings of this research, and the considerations concerning ancient Aztec sacrifice and the violence of the monthly feasts, including how they provided multiple remuneration on many different levels of society, addicting and satisfying physiological, psychological, social, and transformative (altered states of consciousness) rewards. The significance of this research is considered in relation to modern societies and our on-going attraction to violence. The general question is asked, “What can be learned from our ancient forbears?”

**PART I**

**LITERATURE REVIEW**  
**(THEORIES OF SACRIFICE AND AZTEC HUMAN SACRIFICE)**

## **CHAPTER TWO: THEORIES ON THE NATURE AND MEANING OF HUMAN SACRIFICE**

The strongest biological drive in human beings is to survive. Flight and fight responses are built into the DNA of humans to preserve life (Van Gilder Cooke 2015, 31). Ritual killings of human beings directly opposes built-in instincts to preserve life, yet human sacrifice is a prevalent religious practice found in ancient and modern societies. For many scholars, this counter-intuitive behavior can only be explained as a phenomenon that is an outcome of religious thinking. William Robertson Smith (2002), considered sacrifice as one of the foundational principles of religious activity because it was the first form of communion with the supernatural. But Jeffrey Carter (2003,1) argues that it is still difficult to explain how religious ideals, designed to bring humans closer to the divine, demand the violent killing of innocent victims. This apparent contradiction has led numerous theorists of religion and anthropological studies to delve into the territory of sacrificial rituals.

Initial theories on sacrifice from several different disciplines look for universal explanations or root causes, motivations, and operations of sacrifice. Recent comparative studies reveal a complex field of sacrificial rituals and conceptualizations. Albert Baumgarten reminds us that “It is difficult, if not impossible, to reduce sacrifice

to one basic archetype without doing injustice to some aspect of the phenomenon somewhere” (Baumgarten 2002, vii). Yet despite diverse expressions, there also appears “similarity” which also demands explanation. Classical explorations concerning sacrifice offer foundational concepts and heuristic tools essential to exploring the complex nature of sacrifice. For these reasons, I will first offer a historical background of these classical theories and, subsequently, provide a brief survey of modern theories of sacrifice to demonstrate more nuanced and contextualized theoretical understandings. In Chapter Three I will briefly review scholarship concerning ancient Aztec human sacrifice to demonstrate how these classical and modern theories have been exploited by Aztec specialists. As part of this review, I will also consider theoretical models that deliberate upon the unique world-views and practices of the Aztecs.

### **Classical Theories of Sacrifice**

In some of the earliest treatments of sacrifice, theoreticians viewed it as the root cause of religion or the first form of religious activity. They considered sacrifice as the original form of symbolic offering, gift to, or communication with the supernatural realm. Edward Burnett Tylor (b. 1832) in *Primitive Culture* (2010) outlines the development of sacrifice as an evolutionary scheme of religion. He posited that at first, humans expanded the notion of gift-giving from the ordinary realm to a spirit realm. In a second phase of “homage,” humans made a feast for the gods in which they participated. The highest form of sacrifice for Tylor was a final phase where humans

performed acts of abnegation for their own spiritual benefit. During this phase, humans symbolically substituted some items of less value for those of greater value. For instance, strands of hair or an effigy would represent the offering of a whole person. Tylor was one of the first scholars to introduce the concept of gift-giving as an essential principle of sacrifice. His theory applied to every type of offering including child sacrifice. Herbert Spenser (1898) similarly considered ritual offering to the dead as the inspiration for sacrificial ideas. He further identified self-mutilations at funeral ceremonies and before gods as being symbolic of subordination of the ritual specialist to a greater person or beings. His theory offered a generalized approach to all forms of sacrifice.

William Robert Smith (b. 1846) expanded upon the concepts of Tylor with a “communion theory” of sacrifice. In his *Religion of the Semites* (2002), he developed a theory of sacrifice based on ancient Middle Eastern sacrificial rites. He explained that, in its early stages, sacrifice developed as a means to repair a separation that occurred during times of crisis between human groups and their totemic gods. A special ceremony was held where the group consumed their totem with the idea that this mystic communion would repair the breach. As it developed later in ancient Jewish ritual, religious specialists burned sacrificial offerings on an altar and consumed certain portions and sprinkled blood on all others. In Smith’s final stage, the offering was burned for the god to consume entirely. Smith proposed that, in cases of human sacrifice, the gods were the only partakers of the given flesh but in other types of offerings, the people participated in the feast as humans and gods communed together.

Smith recognized diverse expressions of sacrifice in the ancient Middle East and noted, for example, that the agricultural Semites performed rituals wherein they offered portions of their agricultural surplus as a compulsory measure to thwart disaster during the next harvest. Regardless, Smith acknowledged that all forms of sacrifice were designed as some type of communion with the divine.

James Frazer (b. 1854) advanced an evolutionary theory in *The Golden Bough: A Study in Magic and Religion* (1950) wherein sacrificial ideas progressed in concert with the development of religious thinking. He surmised that contagious magic was at work when animal and plant sacrificial offerings became substitutes for totemic gods. Their sacrifice indicated the renewal of the whole by the sacrifice of a small portion. For Frazer, human sacrifice was an advanced form of religious thinking and he gathered that it originated from ideas behind regicide or the killing of a divine king to rejuvenate the god(s). For agriculturalists, sacrifice consistently remained on the level of magical thinking. The commoner farmer believed that when body parts of the sacrificed were buried in the field it would magically produce a good harvest.

Henri Hubert and Marcel Mauss (both b. 1872) in their masterful work, *Sacrifice: Its Nature and Function* (1898) shifted the focus of investigation from tracing the evolutionary path of sacrifice to a study of the underlying logic and purposes of the social practice. They asserted that sacrifice functioned to consecrate or make sacred an ordinary object by ritual:

We see what is the distinctive characteristic of consecration in sacrifice: the thing consecrated serves as an intermediary between the sacrificer (the officiant), or the object which is to receive the practical benefits of the sacrifice, and the divinity to whom the sacrifice is usually addressed...



Thus we finally arrive at the following definition: Sacrifice is a religious act which, through consecration of a victim, modifies the condition of the moral person who accomplishes it or that of certain objects with which he is concerned (Hubert et al. 1964, 11, 13).

The sacrificial schema varied according to the functions of the sacrifice. For instance, in the case of expiation, the religious state affected by the sacrifice is one of “desacralization.” In all cases, they proposed that sacrifice created a state of communion between deities and humans. In the case where a god-impersonator was sacrificed, the victim achieved a state of “apotheosis” or a rebirth. The divination in this instance, “is a special case and a superior kind of sanctification and separation” (Hubert et al. 1964, 80). The work of Hubert and Mauss was considered by subsequent scholars as one of the most influential and foundational theories of sacrifice.

Edward A. Westermarck (b. 1862) was a social anthropologist influenced by Hubert and Mauss, but he incorporated a psychological explanation into his theory. Using cross-cultural comparison in his work, *The Origin and Development of the Moral Ideas, Vol. 1* (1912), he speculated that in crisis situations sacrificing groups believed the gods were threatening them and desired to take their lives. In response, the community offered a limited number of human victims as a cathartic and symbolic substitute for the whole group to satisfy the gods’ demands. He further proposed that, as societies advanced, they were morally conflicted over offering human victims and replaced them with effigy and animal offerings. Westermarck disregarded the theories of totemism but aligned with Tyler’s conception of sacrifice as “gift-giving.” For him, sacrifice was a form of exchange wherein “Men offer up human victims to their gods

because they think that the gods are gratified by such offerings. In many cases, the gods were supposed to have an appetite for human flesh or blood” (Westermarck 1912, 435). He ascertained that the more powerful nations such as the Aztecs could offer grander sacrifices as a result of their stature and power, but they remained in the category of “barbaric” or “semi-civilized,” because they did not advance to the stage where they substituted humans for more benign offerings.

Theories of sacrifice were also prevalent in other disciplines. One particularly noteworthy proposition was set forth by Emile Durkheim (b. 1858). In *The Elementary Forms of the Religious Life* (1915), he provided a sociological explanation of sacrifice that influenced subsequent generations of scholars. He explained that religion was a collective representation that derived from a need to create solidarity. In line with Hubert and Mauss, he conjectured that the foundation of religious thought was a demarcation between the “sacred” and “profane” or what he called the positive and negative cult. He was one of the first theorists to examine the emotive power of religious ritual. He explained that the sacred can be so powerful and awe-inspiring that it creates a communal feeling of “collective effervescence.” This unifying feeling diminished tensions and motivated members to value the group above individual self-interests. It was so essential for social solidarity that it was seasonally renewed to revivify and reestablish communal commitment. Durkheim considered that this feeling of “something greater,” was only the symbolic expression of society itself. For example, aboriginal Australians conducted seasonal sacrificial rituals in which the extermination and eating of the totem of the group renewed the collective identity of

the clan. Many other theorists have utilized Durkheimian perspectives to examine the effects on social solidarity in the enactment of sacrificial rituals. The contribution of sociologists was significant and is still on-going, but there are also other disciplines that have offered other important perspectives.

Psychologists have contributed many different perspectives of the origin and functions of sacrifice. Sigmund Freud devoted an entire work, *Totem and Taboo* (1998), to the subject from his unique psychoanalytical perspective. He hazarded that the origin of religion was embodied in a father figure or symbolic totem, the leading male of the earliest human group. The killing of this initial father figure by a group of conspiring sons was the first known instance of murder. Freud calls this the earliest form of sacrifice and argues that it originated in the unconscious infantile desires of the offspring. Even though this theory is speculative in nature, it reinforced the significant idea that the human psyche can be intimately connected to the violent nature of human sacrifice.

Phenomenologist Gerardus van der Leeuw et al. (1963) promoted an experiential theory of sacrifice. He made the important observation that every phenomenon, including sacrifice, was mutually experienced by all parties involved in ritual and only through the activity was understanding and meaning manifested. Sacrifice, Van der Leeuw posited, was a powerful form of “gift” whereby both the officiant and the recipient of sacrifice equally benefited by a state of “communion.” In a similar fashion to Durkheim, he combined “gift theory” and “communion theory,” but for van der Leeuw, the communal meal was a vehicle for distributing power throughout

the community as well as establishing overarching unity. The only lacuna was that he did not reflect upon the impact upon the victim in this communal operation.

With the turn of the century, a new group of scholars devised theories of sacrifice based on their own experiences in field research. Edward E. Pritchard (b. 1902) was a structural-functionalist who astutely proposed that there was no “universal” theory of sacrifice, but that each culture devised its own “local logic” or culturally specific conclusions. After extensive research among the Nuer of Sudan, he recognized that sacrifice was a primary vehicle for these people to access the spirit realm for two central purposes or functions: reconfirmation of social hierarchies and the expiation of fault or sin. Pritchard deduced that the cattle the Nuer slaughtered were substitutes for the individual or group.

Anthropologist Victor Turner (b. 1920) developed his significant theoretical contributions concerning sacrificial rituals based on four years of field research among the Ndembu people of Zambia. He built upon Durkheim’s sociological theory of sacrifice but addressed the fluidity of ritual and the dynamic nature of social order. His analysis revealed that social action and reactive responses occurred in dynamic “social dramas.” For Turner, ritual was the most important vehicle for establishing equilibrium and order in the face of social crisis and instability. He proposed that sacrificial rituals transformed as well as reestablished the social order. He expanded upon Van Gennep’s ritual processes in rites of passage and determined that during sacrificial rituals, members of a community achieved a state of liminality where social boundaries were dissolved and a feeling of “communitas” was ushered in. Communitas is a term that

Turner used to describe a euphoric experience of egalitarianism and unity. Thus, the transformation that occurred in liminality created a new restructured social order.

In his article, “Sacrifice as Quintessential Process: Prophylaxis or Abandonment?” Turner expanded upon his concepts of ritual sacrifice. He identified a complex ritual process that, in its totality, was a performance “intended to transform the moral state of those who offer them, through the intermediary of a victim” (Turner 1977, 214). He made the astute observation that sacrificial rituals infused relations with two forms of power: “power based on force, wealth, authority, status, tradition, or competitive achievement; and power released by the dissolution of systemic and structural bonds” (1977, 215). One form “destructures” and the other “restructures” the individual and the social order. In Turner’s view, these forms of power mutually use the metaphor of death to reestablish the limits and boundaries of the structures of society. They both revitalize the human condition and the relationship between the human order and the invisible realm.

Two scholars working outside the field of anthropology brought forward their own speculative theories of sacrifice. Walter Burkett (b. 1931) developed a psychosocial, evolutionary theory of sacrifice from the perspective of several different disciplines including classical literature, history, anthropology, and ethology. In *Creation of the Sacred: Tracks of Biology in Early Religion* (1996), Burkett returned to the argument that sacrifice was the root cause of religion. He proposed that it was formulated in the activity of hunting in the Paleolithic era. At that time, he assumes, humans had competitive aggressive instincts that had to be redirected to develop

cooperative hunting strategies. As human societies developed beyond the hunting stage, Burkett conjectured that the activities of the hunt were transformed into abstract forms of ritual sacrifice which served the same psychological benefits.

Cultural theorist Renée Girard developed his own psychosocial theory of sacrifice. In *Violence and the Sacred* (1977), he observed aggressive tendencies and rivalries between human groups that could only be expunged by the sacrifice of a scapegoat victim. The victim saved the community from its own violent urges and, as such, was considered an awesome and powerful entity considered sacred. In this way, violent sacrifice spawned the original forms of religious thinking.

An additional structuralist theoretical model of sacrifice was set forth by Luc de Heusch (b. 1927) who used ethnographic fieldwork and film to determine the underlying symbolic structures of sacrificial rituals. In his work, *Sacrifice in Africa: A Structuralist Approach* (1985), Heusch determined that sacrifice was considered by the African peoples of his study to be debt payments to the ancestors. These offerings to the deceased were necessary to sustain the lives of the current generation. He stipulated that, despite diverse expressions of sacrifice, there was always an “organizing symbolic system” which established a “locus near or distant—in space or time—where a debt of life is to be paid” (1985, 215). Heusch believed that “sacrifice plays with death” and the performance of sacrifice was in actuality a design to “outwit death” (1985, 215). In addition to his theory of “debt payment,” he observed that sacrificial rituals were often accompanied by rituals designed to instill trance-like states. For him, sacrifice and the techniques of trance were both forms of ritual that abolished the boundaries between

the human realm and that of the gods. But in the case of the participants of trance, they transcended the experience, and “the body of the possessed person” was not destroyed but returned spiritually renewed into the land of the living (1985, 216). Heusch’s work acknowledged power relations in sacrificial rites, and because of this each party experienced different outcomes from their participation. Several succeeding scholars similarly focused on the role of authority in sacrificial ideologies and rituals. These studies demonstrate how politics and religion became intertwined in many ancient cultures, and how this intervention subsequently altered the symbolic meanings and practices of sacrifice.

Valerio Valeri (b. 1944) followed Clifford Geertz’s model of investigation and found ritual as deeply symbolic and a reiteration of hierarchal relations in society. In *Kingship and Sacrifice: Ritual and Society in Ancient Hawaii* (1985), he described sacrificial ritual as a “symbolic action” which concretized a conceptual order of society in the consciousness of participants. In the ancient society of Hawaii, sacrifice ensured a “hierarchy of the gods” which was just a reflection of human social hierarchy (Valeri 1985, 109). Social rank was reinforced in special ceremonies where only certain elite members of Hawaiian society partook of the sacrificial meal. Valeri noted that when it came to the higher order of sacrifice, human sacrifice, only the king had the privilege of overseeing it. He states, “Our sources are explicit; the king is the supreme mediator between men and gods. Direct contact with the most important gods of the society is possible only for the king and his chaplains...” (1985, 140). In the Hawaiian case, the

power to control and conduct human sacrifice resided largely with one individual, the king.

Other scholars such as Henri Frankfort similarly identified monarchs with the pivotal role of maintaining cosmic order through sacrificial rituals in many ancient societies. This ruler was often the embodiment of the gods, themselves (Frankfort 1948, 3). This was not always an enviable position, and the king was vulnerable to being overthrown, as in ancient Egypt where an ailing or senile pharaoh was killed to maintain the vigor of crops and cattle (James 1933, 73). These scholars resolved that power was always a precursor to human sacrifice and without political and military might, human sacrifice was not possible.

Another important theory set forth by Jonathan Z. Smith (b. 1938) stipulated that sacrifice was another form of ritual that assisted humans in organizing their world in specialized places and with the goal of mastering uncontrollable and fearful aspects of reality. In his book, *Imagining Religion: From Babylon to Jonestown* (1988), suggested that while rituals were diversely expressed in different cultures the underlying principles of ritual operated in the same manner. Ritual actions were mechanisms to manipulate and regulate the incongruities of life. The result was a sense of order and predictability. For Smith, ritual functioned as a “focusing lens” on categories of difference in the social order and between sacred and profane objects and spaces (1988, 55). Smith’s work heavily influenced a new generation of scholars who investigated many different aspects of sacrificial ritual and distinctive sacrificial



expressions. The next generations of scholars found that there was far more complexity in sacrificial rituals than previously theorized.

### **Additional Modern Theories of Sacrifice**

Later in the twentieth century, scholarly works challenged earlier universalistic tendencies and concentrated attention on multi-valent sacrificial symbolism, ideologies, and rituals in diverse cultures. Many of these studies focused on issues of power, as well. For Bruce Lincoln (b. 1948), religion is the result of ideological creations that recapitulate hegemonic relations. Lincoln made it clear that ideologies are not static constructions but are consistently contested and revised. In his examination of Indo-European societies, Lincoln found that primordial myths concerning the sacrifice of the body of the gods was homologized with human societies to justify hierarchal orders. The upper classes of priests and nobles representing the head of the body controlled rituals of sacrifice that victimized and oppressed lower social orders. In his book, *Death, War, and Sacrifice: Studies in Ideology and Practice* (1991), Lincoln was concerned that in former discussions of sacrifice, the harm that was caused to victims did not receive appropriate attention. He remarked how he was troubled by the “radical asymmetry that exists between the sacrifice and the sacrificed, or between those who call for sacrifices and those who bear the costs” (Lincoln 1991, 204). His model of sacrifice is as follows:

I would argue that sacrifice is most fundamentally a logic, language, and practice of transformative negation, in which one entity—a plant or animal, a bodily part, some portion of a person’s life, energy, property, or even life itself—is given up for the benefit of some other species,

group, god, or principle that is understood to be “higher” or more deserving in one fashion or another. (1991, 204)

Lincoln did observe that this inequality was absent in some sacrificial ceremonies. Commoners engaged in personal and family rituals for a variety of purposes. He ascertained that one of those purposes was to purify and perfect the natural world in an attempt to overcome the evil that is in it (2007, 64). But his overall perspective was that sacrifice was a means to reinforce structures of power. While Lincoln made many astute observations in regards to inordinate advantages in sacrificial rituals for upper class members, he failed to consider the disadvantaged position of women who were often the victims in sacrificial rituals.

Gender relationships received a paucity of attention in theoretical constructions of sacrifice until Nancy Jay (b. 1929) wrote several pieces addressing this topic. In her book, *Throughout Your Generations Forever: Sacrifice, Religion, and Paternity* (1992), she observed, along with Lincoln, that sacrifice created and maintained artificial social distinctions which linked the community together, while at the same time, separated different categories of people based on defilement, disease, and impurity. She maintained that sacrifice was another avenue for bolstering patrilineal descent which in turn disadvantaged women. She offered the example of the Roman Catholic Church where authority descended from the Father to his sacrificed Son in a line of descent that no longer required women’s reproductive powers. While many of these studies shed new light on asymmetrical power relationships, investigators have shied away from

discussing the gruesome nature of sacrificial ritual and the reasons for its support beyond ideological explanations.

Other researchers have examined the actual brutal nature and violence of the sacrificial act. René Girard was one of the first theoreticians to observe the historical and theoretical concealment of the nature of sacrifice. He recorded in his book, *Sacrifice* (1923), that the “true nature of sacrifice” is really a “kind of murder.” He noted that human sacrifice is often mentioned casually as if it were nothing or “foreign to any real violence” (2011, 7). Historian Maurice Bloch explained that violence was an outcome of social life and the violence of sacrifice was part of a ritual response designed to create order and a sense of permanence in the face of chaos. He did not regard violence as Girard did: a means to purge society of threatening violent urges. Instead, Bloch argued that in most societies ritual is a representation of human life that is a “permanent framework which transcends the natural transformative process of birth, growth, reproduction, aging and death” (1992, 4). Bloch’s work was congruent with J.Z. Smith and Lincoln in his determination that ritual sacrifice resolved anxieties that humans have concerning uncontrollable elements found in the natural world. Bloch similarly asserted that ritual sacrifice completely inverted the natural order of things in a controlled spatial and temporal experience. In these ceremonial spaces, ritual actors journeyed from this life into transcendental spaces and returned with additional spiritual powers and an ability to conquer the “here and now” (Bloch 1992, 5).

There were two phases in the ritual journey Bloch observed from the practices of “pig sacrifice” of the Orokavia of Papua New Guinea. In the first phase, the violent

actions of ritual sacrifice represented passage to a transcendental or “over vital” side of an individual, and this state represented a victory of that person and the group over temporality. In the next phase, a “second violence” occurred in the eating of the sacrificed animal. Bloch interpreted this action as a reintroduction of vitality from external sources (the sacrificed pig) back into the body. He explains, Bloch asserted that the symbolism of violence in both these phases was so powerful that it furnished some societies with an “idiom of expansionist violence” or actual violence against neighbors (1992, 6).

Other theoreticians deduced that sacrificial violence in many societies was an essential element associated with expansionist states. Human sacrifice became an indispensable culmination of warfare and victory celebrations following successful campaigns. The position of several of these scholars was that the violent nature of sacrifice was organized, sanctioned, and perpetuated by upper echelons of society via “ideological persuasion” for their own aggrandizement. These violent discourses were disseminated in written and spoken forms, patterns of ritual, performances, and artworks (Lincoln 1989; Schroder et al. 2001). For Ingo Schroder and Bettina Schmidt, any imagined order legitimizing violence became entrenched in the social imagination in accordance with its historicity and “authoritativeness” (2001, 9). Reyna and Downs (1994) stipulated that the “socialization of mistrust” allowed those in power to coopt consensus from all sectors of society by dramatizing the menacing nature of foreign enemies. This tactic is what Grant Wardlaw (1982) identifies as a “psychology of fear” which social organizations exploited in conditions of uncertainty and anxiety. Armit et

al. (2007) agreed that violence is not a “natural” universal but is socially manufactured and an important political prerogative for those in power.

In addition to examining how violent ideology and discourse are manufactured at a social symbolic level, Brian Ferguson focused his attention on “action” and “practice” as dynamic arenas in which pervasive cultural concepts were experienced, recapitulated, and at times challenged and modified. Ferguson (1994) argued that some societies were formulated to be more “war-like” and had a lower threshold for engaging in violence than others. He indicated that psychological perceptions and dispositions as well as active participation in war bolstered a belligerent world-view (Ferguson 1994, 102). Ferguson touted that societies became habituated to a cycle of violence and that the active practice of “war” had a self-reinforcing mechanism that created a “situation” which fostered “societal unification, centralization, hierarchy, and (further) militarism” (Ferguson 1994, 102).

The suppositions that state and warfare cults garnered public support through ritual sacrifice are considered by several other scholars. David Webster (1999) saw an inextricable connection between the concepts of war and sacrificial ritual with the ancient Maya. He identified this merger in the “ideologically charged” superstructures of Maya political organizations. Because participation in war was a royal prerogative for kingly accession, human sacrifice of noble foreign captives legitimized the power of the new ruler. The ritual sacrifice of noble captives taken in battle were purposely humiliated in public displays to demonstrate the power of the king over his enemies (Webster 1999, 349). Evidence of this is found in inscribed stone monuments that

record war events and the numbers of captives a king took in war. For example, the rulers of Yaxchilan erected a stela that recorded up to thirty-four captives taken by the king in war (Webster 1999, 349). These same rulers set up monuments in conquered territories to memorialize the defeat of their enemies. Another indication of the connection of war and sacrifice appeared in images depicting rulers wearing regalia that included the symbolic or real forms of the heads and body parts of slain enemies (Webster 1999, 349).

Inomata and Triadan (2009) observed that in ancient Maya battle the fusion of ideology and praxis had a unifying effect on social orders. This was especially evident for groups that demonstrated military prowess over neighbors who were deemed weaker “outsiders.” Texts and images in several locations in the ancient Maya world, including Aguateca (Stela 2), record the defeat of neighboring polities which affected the political and economic fortunes for the winners and losers (Inomata et al. 2009, 65).

Takeshi Inomata and Daniela Triadan also conjectured that war among the ancient Maya was self-reinforcing and had a chronological trend toward intensification. They determined that many artworks found in city centers reflected the centrality of ritual warfare and demonstrated that the people wanted to re-experience and imagine warfare and “ways of being a warrior” away from the battlefield (2009, 82). Evidence for their conceptualizations of war and warriors were found in images found on stelae, ceramic paintings, and figurines. They note that at the site of Aguateca, thirty-two percent of the male figurines represented male warriors and outnumbered female figurines two to one. For them, the warrior figurines were not easily identified as

historical figures; but rather they, were generic images that reflected “more generalized notions of war and warriors” (Inomata et al. 2009, 75). They detected that in Classic Maya society daily discourses and sacrificial rituals occurred on the household level as well as in “community-wide mass spectacles.” The Bonampak murals are just one example among many artworks they point out as a demonstration of the high visibility of these events. One panel of the murals depicts rulers and war captains presenting their captured enemies on elevated stairways where spectators could see them from a plaza below (Inomata et al. 2009, 77). They concluded that these practices away from the battlefield and in the safety of city centers contributed to the “maintenance of cultural codes” of violence and sustained their war-like identities (2009, 83). The emphasis on the violent nature of sacrifice and its links to ancient warrior cults is one of many avenues of analysis in contemporary investigations that are relevant to my analysis of the Aztecs.

A final theme in recent theoretical designs of sacrifice is the complex nature of sacrifice and multivalent symbolic systems at work within the same ritual program. Several scholars concede multiple levels of meanings and experiences in sacrificial rituals and myriads of functions and purposes comingled in identical operations. Albert Baumgarten (2002) alleged that sacrifice was primarily a religious ritual and at the same time was consumed with multidimensional value and meaning. He recognized that sacrifice emphasized many aspects of human existence at the same time. For example, sacrificial ritual could accomplish all the following purposes in different settings or concurrently: connect propitiators with ancestors, provide control over the

physical body, feed the gods, bring the divine world into closer proximity, celebrate communal achievements (success on the battlefield), divination, expiation, salvation, purification, communal integration, and varying types of giving (Baumgarten 2002, 11).

The general emphasis of most modern theoretical discussions of sacrifice is contextualizing sacrifice in its own unique cultural setting and examining the influence of power relations in sacrificial settings. Investigators have demonstrated increased interest in “social relevance” and “indicators of change” evoked by transformations in sacrificial thoughts and practices (Stavrianopoulou et al. 2008, 2). These transformations usually came about with the advent of increased political, military, and economic complexity. Many of these new theoretical designs have been exploited in the Aztec case.

The next two chapters will attend to a survey of theoretical treatments concerning ancient Aztec human sacrifice based on the foundation of the classical and modern theories just discussed. The following Chapter Three will review theoretical explorations of the ideological/cosmological inspiration behind Aztec human sacrifice, and Chapter Four will provide a survey of materialistic explanations. The general trend in recent scholarship is to present Aztec sacrifice as poly-theoretical, multi-disciplinary, multi-dimensional, and reliant on indigenous worldviews. There are still explanatory gaps, and there remains a lacuna in treatments on the “experiential” aspects of their rituals along with physiological/psychological rewards derived from participation in the Aztec sacrificial system. This dissertation will fill this void and provide an additional



interpretive lens onto Aztec sacrifice, namely, the biological and psychological responses to each phase of their monthly feasts.

**CHAPTER THREE:**  
**THEORETICAL BACKGROUND CONCERNING THE**  
**IDEOLOGICAL/COSMOLOGICAL ASPECTS OF AZTEC HUMAN**  
**SACRIFICE**

In some of their accounts, invading sixteenth century Spanish soldiers and missionaries recorded their impressions of the amazing city of Tenochtitlan. They stood

in awe at the complex religious and political systems they encountered, but they also detailed their horror and disdain at the bloody spectacles of human sacrifice. While cultural prejudice obviously taints these accounts, their histories are nonetheless rich with information about the religious practices and ceremonies of the Aztecs and their neighbors. Riveted by these accounts, scholars have presented multiple theoretical models explaining the centrality of these rituals in Mexica life, as well as their possible social and political functions. A significant number of treatises examine the ideological/cosmological inspiration and justification of Aztec human sacrifice. These theoretical models recognize that Aztec ideas concerning creation, mythical origins, cosmic organization, concepts of time (including transformation and renewal), agricultural cycles, and human connections to “otherworlds” were the major sources of inspiration for the Aztec sacrificial cult. This follows the general scholarly trend that justifiably categorizes “sacrifice” as an outcome of “religion” and “religious thought.”

### **Scholarly Treatments of the Ideological Aspects of Aztec Sacrifice**

The term “sacrifice” is of European origin and derives from the Latin root words *sacer* and *facere* which together mean “to set something apart in order to establish, maintain, or renew a relationship with the sacred” (Evans et al. 2001, 638). Many investigators propose that Aztec and Maya sacrifice developed unique concepts of sacredness. According to Alfredo López Austin, the Nahuatl word describing Aztec perceptions of sacrifice is *nextlahualiztli* which he translates as “the act of payment.” Sacrificial victims were called *nextlahualtin* meaning “the payments” (1988 1, 74).

López Austin reported that these “payments” were made in special places connected to the “otherworld” where the Aztec gods resided. But, what was sacred to the Aztecs? And, where did they get their concepts of sacredness? How do these relate to their practice of human sacrifice? Some of the investigators discussed below provide their answers to these questions. In general terms, these scholars recognize the importance of examining Aztec concepts of sacrifice in the context of their history and acknowledge the influence of their cultural milieu, as well as the Mesoamerican cosmological system they inherited.

The Aztec state emerged amidst a host of competing polities that each had their own gods and traditions. The Aztec incorporated these traditions and innovated their own versions, but these modifications were conservative. According to Kent Reilly (2012), several Mesoamerican researchers observe variety in ethnicity and language across the geographically diverse region, but find remarkable unity surrounding their religious ideas and practices. Commonalities cited by these scholars include ideas concerning cycles of creation, duality, organization of the cosmos, and sacred calendars and animistic centers in the body and in all material existence. Each of these concepts had sacrifice as a core principle.

Death and sacrifice were the causative forces behind cosmic creation. The Aztec regarded the creation of this world and life upon it as a series of creative-destructive cycles. In the second section of the *Codex Chimalpopoca*, *The Legend of the Suns*, the Nahuatl text described the creation of humans and their ultimate destruction in the first four eras (suns), and it described the fifth and latest epoch as “The Fifth Sun” or “4

Movement” as the present era or those “who live today” (Bierhorst 1992, 147). For the Aztec, the fifth and final era which ushered in the creation of humans is destined to become destabilized and end in cataclysm, just as all previous eras (López Austin 1988, 67). Alfonso Caso recognized that the Aztecs had the same idea of progressive creations as the Quiche Maya (found in their *Popol Vuh*). He recorded that the Aztec gods first created animals and “afterwards trying better and better materials” they finally struck upon the idea of using “corn,” the divine substance from which the “body of man” was formed (Caso 1958, 17). The idea that creation only occurred through destruction is central to the Mesoamerican concept of sacrifice. For instance, David Carrasco surmised that in a vast array of myths, life only reappeared as a result of the death of a god (Carrasco 1982, 99). Sahagún recorded in the *Florentine Codex* the legend of the first sacrifice of the gods to give movement to the life giving sun at the end of the fourth era:

How the gods had their beginning cannot be known. This is plain: that there in Teotihuacan, they say, is the place; the time was when there still was darkness. There all the gods assembled and consulted among themselves would bear upon his back the burden of rule who would be the sun. . . But when the sun came to appear, then all (the gods) died there. Through them the sun was made to revive. None remained who did not die (as hath been told). (Sahagún 1981, Book 3:1)

In another version, also found in the Florentine Codex, Quetzalcoatl “deals death” to the other gods by cutting their throats in an effort to stabilize the wobbling and off course sun. Even after this sacrificial act, the god Ehecatl (another form of Quetzalcoatl) blew a mighty wind to get the sun in motion. It is important to note that the sacrifice of all the gods set things in order (stopped the swaying motion of the sun),

but an additional force was necessary to create cosmic motion (Toby Evans et al. 2001, 638). Taube emphasized (from his reading of Sahagún's accounts in the *Florentine Codices* Book 3 and Book 7), that the first gods offered their hearts at Teotihuacan as an example for humans to follow. The Aztecs believed that by offering human hearts to the Sun God they assisted the movement of the sun in following its path across the sky (Taube 2012, 743). The symbolic message in this myth was that humans owed a debt or obligation to the gods for their lives and were required to offer their own blood and the life force of animals and plants to perpetuate the cycle of life (Ortiz de Montellano 1990, 41).

Several scholars discern that sacrifice is essential to the reciprocal relationship between gods and humans where both parties sacrifice their blood for the life or lives of the other. In another Aztec creation myth (Sahagún's *Florentine Codex*, Book 6), the hero god, Quetzalcoatl, journeyed to the underworld to retrieve the bones of deceased humans from the lord of the underworld, Mictlantecuhtli. After many trials, Quetzalcoatl returned with the bones to a group of gathered gods who pulverized the bones into powder. At this juncture, the hero god fertilized the bones by piercing his penis and spilling his blood upon the ground-up mixture. This sacrificial act allowed the humans of this era to emerge into life. Miguel Leon-Portilla believed that one of the central messages of this myth was that the dead could be brought back to life through penance (1963, 111). He also noted that humans enjoyed life because of the sacrifice of the gods, and in return, humans were obligated to maintain the vitality of the gods through their blood sacrifices (Leon-Portilla 1963, 64).

Researchers have identified other important sacrificial elements in Aztec cosmology. One of the most consistent mythic tales in ancient Mesoamerica was the slaying and dismemberment of a primordial earth monster with crocodilian features. For the Aztec, this creature, Cipactli was also the first of twenty sacred day names in the 260-day divinatory calendar. This symbolically referenced the sacrificial dismemberment of the monster as the cosmogenic ordering of time and space (Taube 2012, 743). According to the account in the *Histoire du Mexique*, the gods Tezcatlipoca and Quetzalcoatl, tore another earth monster, *Tlaltecuhтли*, in two. One half of her body turned into the sky while the other half became the earth (Garibay 1979, 108). Karl Taube conjectured that these two creator gods were emblematic of destruction and creation and the division of earth and sky. Tezcatlipoca or “smoking mirror” was an earthly god who was omnipotent over physical phenomena including “violent chaos, conflict, and change,” and Quetzalcoatl was the “quetzal-plumed serpent” who brought the rains from the heavens with a benevolent, ephemeral wind known as the “breath of life” (Taube 2012, 742).

According to several scholars, the Aztec cosmic design was replicated in city planning and architecture, and this planning was intimately connected to sacrificial ideas. In many Mayan cities, central pyramids were cosmic mountains that acted as an “axis mundi” or portal where ritual sacrifice and bloodletting was practiced as a replication of cosmogenic myths of the emergence of life. Hence, elite rulers were often buried in these pyramid mountains, giving them direct access to the supernatural realms of the gods and ancestors. Several pyramids across Mesoamerica -including

Teotihuacan's Pyramid of the Sun, the Temple of Inscriptions at Palenque, and structures at Dos Pilas- were built over or adjacent to artificial or natural caves and springs, recreations of the entrance to the underworld or the dwelling place of life offering rain deities (Brady 1997; Reese-Taylor 2012).

The Templo Mayor, the central pyramid in the Aztec capital of Tenochtitlan, was correspondingly a powerful sacrificial symbol that installed their civilization as the center of power and of the universe. A great deal of scholarly attention has been given to this multi-layered structure (enlarged seven times) because of its symbolic and material value. Johanna Broda (1987) found that the Templo Mayor was the quintessential "axis mundi" because it was the central meeting place for all the religious ceremonies or "structure of activities" that gathered peoples from all over the empire to witness large-scale sacrifice. It was also a place for the redistribution of great quantities of tribute and luxury goods.

The twin temples atop the Templo Mayor represented both Tlaloc (god of water, fertility and earth) and Huitzilopochtli (god of militarism, the sun, and the sky) and were the place of sacrificial rituals that kept the sun in motion and sustained the flow of moisture for agricultural production. Eduardo Matos Moctezuma observed that the Templo Mayor represented two different mountains: The side dedicated to Huitzilopochtli symbolized the mythical mountain of Coatepec and the side dedicated to Tlaloc signified the mountain of sustenance (1987, 199). Moctezuma (2004) interpreted that these two temples represented the:

....centrality of the gods of rain and war in the Aztec's worldview, symbolism related to Tlaloc and Huitzilopochtli figured prominently in

the architecture of the Templo Mayor and in the elements that surrounded it, from the sculptures with serpents' heads to the braziers that adorned the great platform on which stood the four structures that formed the pyramidal platform, to the upper shrines dedicated to the two deities, painted red and black for Huitzilopochtli, blue for Tlaloc. Each of the temple's two parts corresponded to a specific hill: the Huitzilopochtli side represented Coatepetl, the place where Coatlicue gave birth to the Aztec's patron god to fight her enemies; the Tlaloc side represented Tonacatepetl, the hill where grains of maize were stored and given to men. (2004, 144)

Leonardo López Luján assessed that archaeological data supports ethnohistoric accounts that describe the southern half of the Templo Mayor as the "hill of the serpents" (2005, 73). He identified several features of the pyramid that confirm this association, including the stone carved image of a dismembered and beheaded Coyolxauhqui at the base of the pyramid, the possible presence of the mother goddess Coatlicue-Yolotlicue at the top of the edifice, snake sculptures attached to the base of the pyramid, protruding stones on the balustrades that give it the appearance of a hill, standard-bearers that may relate to the Centzon Huitznahua, and female skulls in offerings associated with the Coyolxauhqui monolith (López Luján 2005, 74). The massive size of the Templo Mayor was also a "tangible symbol of dominance," an architectural feat that was highly visible to all who entered the city, and a location where ritual human sacrifices took incredibly dramatic forms (Serrato-Combe 2001, 109). Durán provided an illustration of the Templo Mayor's twin shrines that shows blood coursing down the stairs on both sides of the pyramid, serpent walls surrounding the courtyard, and a *tzompantli* or skull rack where the skulls of sacrificial victims were displayed (Durán 1971, 326). This illustration demonstrates that sacrifice to both of the



gods kept their cosmos in order. Anthony Aveni et al. (1988) recognized that the equinoctial sun rose between these two temples demonstrating their intimate association with the supernatural powers of creation, sustenance, and sacrifice.

According to the analysis of some scholars, the Mesoamerican concepts of the universe and sacrifice were also mapped onto the human body. Alfredo López Austin determined that the greater cosmos “was conceived as a projection of the human body and inversely explained human physiology in relation to the general purposes of the cosmos” (1988 1: 8). Sahagún related that the body parts of sacrificed warriors or god impersonators had especially powerful essences. For instance, a male priest called Teccizqualcuilli (a tall strong man) donned the skin of a sacrificed woman who represented the goddess Toci. When the priest adorned himself with the skin of the flayed victim, he took on the essence of this goddess, and as he ran toward a group of warriors they scurried away from him as if he (she) was a great danger to them. Thus, Sahagún related that “there was much fear; fear spread over the people,” and this was because of the great power of this goddess representative (Sahagún 1981 2:120). Sacred energy flowed through the body and cosmos through sacrifice and the transformational process was intimately and equally connected to the demarcation of time as well as space.

In Mesoamerican thought, sacrifice was also intimately connected to their sacred calendars and spatially organized cosmogram. Anthony Aveni recognized that the 260 days of the divinatory calendar approximated natural periods of human gestation and the agricultural cycle (2012, 787). The 365-day and 260-day calendars

were combined into a “calendar round” that completed its cycle every fifty-two years. The Aztec believed that at the completion of a fifty-two year time period, this was a critical juncture where the world had the possibility of coming to an end. For this reason, the Aztec held a “New Fire” ceremony where all the fires in the empire were extinguished and material goods were destroyed. Life was reignited only with the sacrifice of a special captive warrior. The new fire lit upon his open chest was subsequently distributed via torch throughout the empire and symbolically established a new era. The origin of the New Fire ceremony is described in the *Leyenda del Soles* (*Legend of the Suns*):

Now, it was in a year 2 Reed that the skies were (again) smoked. This is how we ourselves exist, how the drill ignited. When the sky was established was in a year 1 Rabbit. (Yes) this is how the fire drill ignited, when fire appeared (for the new-fire ceremony). Now it was dark for twenty-five years. Well, it was in the year 1 Rabbit that the sky was established. And when it had been established, the dogs sent up smoke, as mentioned above. And after the fire drill had ignited—after Tezcatlipoca had drilled fire—he smoked the skies once more, and this was in a year 2 Reed. (Bierhorst 1992, 144)

The drilling of the first fire brought life into existence just as subsequent “new fires” renewed life through the death of a chosen captive. In her book, *Time and Sacrifice* (1998), Kay Read linked the concepts of temporality and sacrifice. She concluded that the Aztec concept of time was not linear but transformative. As such, time and space were equal properties. For example, the Fifth Sun (Aztec Fifth Age) was “apportioned” and “divided” in its own “time and place” but would come to an end as all other temporal creations had (Read 1998, 84). She concluded that “...old forms must

continually die to create new forms. Therefore, life is not opposed to death. In the Mexica world, life existed because of death” (1998, 39).

Some scholars also believe that the agricultural cycle was the original source of inspiration for sacrificial offerings. Kent Reilly proposed that religious rituals and ceremonies across Mesoamerica and in different time periods were created to ensure the necessities of life and to balance oppositions occurring in the natural world (Reilly 2012, 764). He found evidence of “fertility cults” at natural shrines located near geological formations such as mountains, caves, and springs that “undoubtedly served as portals of supernatural access to the otherworld and were fitting locations for ritual practice” (2012, 767). He proposed that the link between ritual practice and natural formations is evidenced in the ritual deposits found in the “mineral rich” springs of El Manati in Veracruz, Mexico. Excavators at this site found artifacts from as early as 1,600 B.C.E. that included the remains of what investigators believe were ritual offerings to agricultural deities: child sacrifices, wood sculptures, and jade axes and celts (Ortiz et al. 1997).

A number of Mesoamerican specialists identify an alimentary role to sacrificial offerings. In this perspective, the gods mandated that humans feed them in order to sustain them as they reciprocated the same benefit for humans. Alfredo López Austin and Leonardo López Luján suggested that several pieces of archaeological evidence and artwork reflected the idea that the ancient Aztecs fed their gods with human blood as part of ritual sacrifice. A sculpture of the “God of Death,” found in the House of Eagles (Tenochtitlan), was covered in human blood. Similarly, a stone monolith

representing the earth goddess, Tlaltecuhli, found in 2016 resting at the base of the Templo Mayor also had residues of human blood (López Austin et al. 2008, 143, 151). Alfredo López Austin and Leonardo López Luján believed that these sculptures correlated with the ritual activities illustrated in the *Codex Magliabechiano* where three priests are shown bringing offerings of blood and pouring copious amounts of the liquid onto the top of the head of the “God of Death” (2008, 144).

Burr Cartwright Brundage ascertained that the Aztecs linked divine and human levels by symbolically ingesting the flesh of sacrificed god impersonators or by eating idol gods formed of amaranth dough. For instance, Sahagún recorded that in the thirteenth feast of Tepeilhuitl, at the same time that the bodies of human sacrifices were dismembered in the Calpulcos, the people disarticulated the amaranth seed dough images they had earlier formed into images of serpents, wind figures, and mountains (representing deceased and rain gods), subsequently drying the pieces on their rooftops and then “gradually” eating them (1981 2:133). Read agreed with this conception of sacrifice and observed that for the Aztec, eating food was a form of sacrifice, because in the act of eating, humans sustain their own lives at the same time they destroy plant and animal life for “one must kill to eat” (1998, 85). From the myth of “The Discovery of Corn” in the *Codex Chimalpopoca*, after the god Quetzalcoatl brought maize from the “Mountain of Produce” to the gods in “Tamoanchan,” the gods chewed it up and placed it on the lips of the humans so that they could grow strong (Bierhorst 1992, 147). According to the myth, humans were made out of maize and are sustained by

grain in the same way that the gods and other things are nourished by the sacrifice and mastication of human flesh (Read 1998, 85).

The ideological and religious component of Mesoamerican and Aztec sacrifice is well established in scholarship and foundational to understanding its organizing principles. These conceptions informed the ritual actions of farmers and commoners who offered victuals and animal sacrifices to their idol gods in their homes and neighborhood temples. The ideas of creation, transformation, fecundity, and renewal of life - reciprocal blessings offered by the gods to humans in response to human sacrificial offerings - were equally serviceable to the inspiration and operation of large-scale, state-sponsored sacrifices in the ceremonial centers of Tenochtitlan and other cities.

While ideological/cosmological understandings are basic inspirations for Aztec sacrificial thought, other researchers are more interested in the materialistic aspects of human sacrifice. Some of these scholars focus their attention on the historical transformations of sacrificial ideas brought about by the emergence of the Aztec state and its expanding empire. With the rise of political complexity, these investigators reveal shifts in ideology and related sacrificial practices. They also recognize concomitant economic remunerations which were inextricably connected to these ideological changes. Other scholars recognize the martial orientation of these shifts in sacrificial thought, and they detect that militarism was essential to political and physical survival. These investigations offer additional conceptions of sacrifice and many of these analyses are diachronically oriented. These studies provide a greater

understanding of the complexity of the Aztec sacrificial cult and the multi-layered levels of meanings and functions behind their ritual programs.

**CHAPTER FOUR:**  
**MATERIALIST THEORIES ON THE NATURE**  
**AND MEANING OF AZTEC HUMAN SACRIFIC**

Sacrifice and sacrificial rituals are complex cultural manifestations with important implications that reach beyond cognitive and ideational levels. Some investigators propose that material incentives were equally powerful motivators in reorienting and sustaining sacrificial practices in the ancient world. Researchers

analyzing Aztec human sacrifice from a materialistic perspective argue that the sacrificial program was supported by the ruling elites principally because it buttressed their stature, their grip on power, and their ability to promote expansionism with all its economic remunerations. This group of scholars also perceives a dialectical process between traditional religious discourse, ritual activity, and the development of political, military, and economic institutions. Of course, this transformative process occurred in a social milieu that most likely included reactionary forces and those that resisted change. John Ingham described this as a negotiation of religious symbolism and power relations where elites usually had the greatest power and influence. He argued that in the Aztec world:

...human sacrifice was a symbolic expression of political domination and economic appropriation and, at the same time, a means to their social production and reproduction. The images of the gods reifies superordination (and subordination), and sacrifice to them was symbolically equivalent to payment of tribute. The sacrificing of slaves and war captives and the offering of their hearts and blood to the sun (the religious aspect) thus encoded the essential character of social hierarchy and imperial order and provided a suitable instrument for intimidation and punishing insubordination. (Ingham 1984, 379)

The interactive process described by Ingham occurred over time and involved syncretism of foreign elements with unique innovations or counter-models. Scholars identify different means that the elites utilized to transform sacrificial ideologies, including: reinventing mythical origins and histories; developing new additions to their ritual and divinatory calendars, painted books and iconography; and modeling their cities upon cosmological and sacrificial principles. The principal purposes behind these changes were to strengthen their authority and control over their social order,

conquered territories, enemies, and important resources. To understand this process and how the elites manipulated the program of ritual sacrifice, a brief description of the Aztec social order as it developed in the later stages of their empire is useful background.

### **Aztec Hierarchal Social Order**

Social scientists are intrigued by how societies cohere and develop different strategies to garner stability. Elman Service (1975) conducted a cross-cultural comparison of many ancient civilizations and revealed similar processes in cultural evolution. For Service, “power” or “authority” is essential in the melding of groups in both egalitarian (power of the group) or hierarchal arrangements (power of elites). He defines power as “the relative ability of a person or group to cause another person or group to obey, or conversely, the ability to ‘not to have to give in’” (Service 1975, 11). Service posited that stable forms of authority do not rely solely on physical force but a hierarchal relationship where obedience is not compelled but rather by “custom, habit, ideas of propriety, benefits, or other consideration that effectively reinforce and legitimize the power and make it acceptable” (1975, 13).

Cohesive political structures distribute benefits to different groups in exchange for loyalty. But the structure is not stable if there is more benefit gained by “disobeying” the norms and rules than there is to “obeying” (Bourdieu 1990, 108). Citizenry are supportive if there are tangible and intangible benefits to compliance (Service 1975, 12). According to Wicklund et al., solidarity between individuals and



groups is founded on social exchanges where there are mutual benefits and rewards including reduction of anxieties and solutions to problems (2004, 371). Complex social orders must manage the interests of many specialized sub-groups, and maintaining support is challenging. Many social orders remain solid for long periods of time only later to destabilize and dissolve due to a combination of internal and external fissures and pressures.

The Aztec social hierarchy was innovative, and several strategies to stimulate support from all levels of their social order were adopted over its history. The Mexica were one of four major groups that migrated to and settled near the shores of Lake Tetzaco in northern Mexico in the fourteenth century. According to their histories, they resettled on an island of the lake in either 1325 or 1345 CE. Their island was divided into four quarters representing cosmic orientations as well as the divisions of old tribal clans or *calpullis* with their own temples and cults. Over the centuries, early “tribal democracy” where most of the power resided in the *calpullis* was transformed into a modified form of “imperialistic monarchy” (Soustelle 2002, 37). In this new system, the power of the local leaders was diminished and became largely symbolic, while the supreme leader, the *tlatoani*, and his close family members achieved the greatest clout.

Sahagún described how a dignitary attained the title of *tlatoani* (he who speaks):

The ruler was thus given office and chosen. The lords assembled and deliberated as to whom they would set in office and choose to be ruler. In the same manner assembled the old warriors, brave warriors, men (at arms), and the leaders of youth; lords, and keepers of the gods; fire priests—the long haired ones. All were gathered there at the great

palace, the residence of the ruler, in order to consult and choose him who was to be ruler. They cast votes.... (Sahagún 1979, 8:61)

The elected came from a prominent family (typically chosen by the previous king) and had qualities that were admired by the group, and this ruler was assisted by four elected princes (Sahagún 1979, 8:61). These four acted as a supreme military council and was headed by the chief advisor or *tlaaccatecatl*. Principal advisors often wielded significant power and influence especially when the ruler traveled away from the capital city. For example, in the reign of Motecuhzoma Ilhuicamina (reign 1440-1469), commonly known as Motecuhzoma I, his aging principal advisor, Tlacaelel, continued to consult on military strategies as well as made significant interventions in the religious realm. Durán suggested that this regent ordered an increase in human sacrifices because he had “acquired a taste for human flesh since the lords ate it frequently” (1994, 233). The king and his close advisors oversaw a large administration with leaders over different social organizations.

The two most visible and prestigious hierarchal sub-orders in Aztec society were the priestly and military organizations. One of the most propitious avenues for advancement for any male in Aztec society—nobles or commoner—was through the military. According to Sahagún, with each captive taken in battle, a warrior was given different rewards and regalia. There was careful accounting of the actions of each Aztec combatant so that proper recognition could later be given during sacrificial celebrations. Durán explained that “each man was presented with gifts (from the treasury) suitable to his position, because great care was taken to give each man the

objects and insignia according to his deeds and to the lineage from which he was descended” (1994, 474). After a soldier took three captives, he was given the title and responsibility as a “master of the youths” and after four captives, was considered a “seasoned warrior” and could be placed on a “mat and stool of the warrior’s house” (Sahagún 1979, 8:76). The highest military order consisted of the “Shorn Ones” with the “Otomies” and then the “eagle” and “jaguar” houses below them (Hassig 1992, 142). These elite military orders were mostly populated by sons of the nobility, but there were also exceptional commoners who rose through the ranks due to their expertise in war. There were two separate educational institutions for aspiring warriors (fifteen to twenty years of age); the sons of higher and lower nobility received incomparable guidance from leaders of the upper military orders in the *calmecac* schools and the sons of commoners were trained and educated in the *telpochcalli* schools (Hassig 1992, 142).

The priesthood was also a revered occupation among the Aztecs, and the two highest priests or *tlamacazqui* serving directly under the ruler were the *Quetzalcoatl totec tlamacazqui*, the high priest of the cult of Huitzilopochtli, and *Quetzalcoatl Tlaloc tlamacazqui*, the high priest of the Tlaloc cult (Townsend 2000, 202). The six sacrificing priests were also of the highest rank among this order and achieved this position by primogeniture. Durán expounded that the “sixth priest, whose task it was to slay, was regarded with awe, as if he were a high priest or pontiff” (1971, 90). These higher ranking-priests came only from the *pipiltin* classes who descended from the kings or any of their wives (Aguilar Moreno 2006, 74). Bernal Diaz gave this

harrowing description of eight *papas* (chief priests) in charge of the idols of the most prominent temples:

These *papas* wore black cloaks like those of canons, and others smaller hoods like Dominicans. They wore their hair very long, down to their waists, and some even down to their feet; and it was so clotted and matted with blood that it could not be pulled apart. Their ears were cut to pieces as a sacrifice, and they smelt of sulphur. But they also smelt of something worse: of decaying flesh. As they told us, and we afterwards found out for ourselves, these *papas* were the sons of chiefs and have no wives, but indulged in the foul practice of sodomy. On certain days they fasted... (1963, 123)

The priests were respected in Aztec society for their manifest austerities, spiritual connections to the otherworlds, and for their role as intermediaries to the gods. There were other titles reserved for each priest in charge of specific gods and their temples and they were identified as “keepers of the gods.” They oversaw the ritual activities of their respective temples as well as the *calmecac* or schools for youth who served as assistants. The lower keepers of the gods were supervised by “The Keeper of the God over Others,” and he taught other priests how to train the children who were brought to them to be educated from every stratum of society. He impressed upon the lower priests the importance of training youth on how to speak and act so “that they might live well” (Sahagún 1981, 2: 206). The priestly order was a complex bureaucracy with many positions to fill including: scribes, painters, prognosticators, and diviners. Among the many important roles was that of festival director or *Epoaquacuiltzin*. This honored person “directed everything” regarding their monthly and intermittent feasts, and he had a cadre of assistants who managed singers (“Caretaker of Sacred Songs”) dancers,

costumers, and all others responsible for materials used in the festivals (Sahagún 1981, 2:207).

Commoners, or *macehualtin*, were the majority in Aztec society, and they were considered those who did not come from noble lineage. There was a hierarchy in these lower orders, and the merchants and master craftspeople were well regarded and rose in stature as their wealth increased. In many of their festivals, they gained prestige by purchasing slaves (often referred to as “bathed ones” because they were ritually washed before sacrifice) to offer as human sacrifices. Even though the term “bathed ones” is a term referring to purchased victims, there are also references in the ethnohistoric accounts of prisoners of war slotted for sacrifice as “bathed ones” as well. Warriors who captured enemies on the battlefield for sacrifice at home and merchants who bought victims for sacrificial ceremonies were referred to as “bathers.” The poor of Mexico were those who did not own land in their *calpullis* and “tilled the fields” for others (Sahagún 1981, 2:96).

In Aztec society demotion to slave status was a form of punishment for criminals or those who could not repay a debt. For instance, poor farmers whose crops failed or who could not pay their taxes had no other option but to sell themselves into servitude (Bray 968, 82). In his works, Durán delineated all the different avenues that led to a relegation to slavery and remarked that “the sale of a man, his enslavement, was like a death sentence. For it was well-known fact that on his second sale he would be sacrificed unless he managed to earn his freedom through the laws which permitted him to recover it” (1971, 280). Durán also mentioned that merchants who acquired a

certain degree of wealth could purchase slaves for sacrifice to the merchant god, Quetzalcoatl (1971, 138). After the sacrificial rites, the merchant provided a banquet of the flesh of the man he had purchased for slaughter, and he invited all “the lords and chieftains” - who granted the host with “insignia and high privileges” in turn (Durán 1971, 138). Aztec family heads could sell themselves or their children as slaves to pay off a debt, and this obligation could be rotated amongst family members until their debt was repaid (Aguilar-Moreno 2006, 75). Only idle or delinquent slaves who were traded in the marketplace three times were eligible to be sold as victims of sacrifice (Pennock 2011, 18). In this regard, commoners were under constant dread of demotion to slave status.

Several scholars have set forth arguments that social mobility was a central factor in sustaining morale and cohesiveness in the Aztec social order. Conrad et al. acknowledged that the noble *pipiltin* classes inherited their rank but achieved greater status and economic rewards by becoming a *tetecutin* knight through exceptional accomplishments on the battlefield. The “intermediate classes” were also motivated to support expansionist policies because they had opportunities for rank elevation in the military and in the *pochteca* trade guilds (Conrad et al. 1984, 177). Sahagún declared that these rewards were slanted in favor of the nobles who took captives in war, because they received the right to “rule, to govern cities” and the privilege to “eat with Moctezuma” as their reward; whereas, the lower ranks received less prestigious rewards such as special capes, gifts, and the honor of gaining the title of “master of the youths” (Sahagún 1981, 8:73). According to Broda de Casas, the only significant

avenue for social advancement open to commoners was gaining merit on the battlefield by capturing enemy combatants (1979, 47). Hassig reminded that even this benefit was limited and was ultimately curtailed in the rulership of Tizoc (1481-1486), who mandated that only taking captives from the fierce Huexotzincas would qualify for advancement in the military. This new requirement limited the progression of commoners to the status of *telpochcalli* thus widening the divide between the noble and the lower classes (Hassig 1988, 197).

While there were some forms of upward mobility for the lower classes, the categories of rank were fairly rigid and most of the benefits of the expanding empire were relegated to the upper echelons. The most important and unifying force in Aztec society was the regular observances of their sacrificial cult. The politicians at the top managed this system as a vehicle to garner support from the entire social order. For this reason, several scholars have made the political implications of the sacrificial system their fundamental focus.

### **Scholarly Treatment of the Political Components of Aztec Human Sacrifice**

The founding of the fledgling Aztec civilization occurred in an arena of competing polities with established fertility cults honoring the gods of nature. As the Aztecs conquered or made alliances with these neighbors, they adopted these traditional deities into their own religious system. This strategy was essential in establishing their legitimacy of Aztec rule while placating the conquered populations. Many researchers have traced the rise of the Aztec state and the transformation of its ideological system

and ritual sacrifices based on political imperatives. Because the Aztec were relative newcomers to the area they conquered, they were challenged to incorporate elements of the traditional religious systems of their neighbors. The oldest deities worshiped were Hueheteotl, the old creator deity and the god of fire, and Tlaloc, the rain deity whose adherents worshipped at mountaintop shrines and in caves and springs, embodiments of the earth and ground water (Townsend 2000, 122). The system of nature gods became more complex over time, and by the sixteenth century large groupings of Aztec fertility gods and goddesses had diverse roles and characteristics.

Mexica calendars contained a multifaceted system which honored the fertility gods as well as others they had incorporated. The 365-day solar calendar was divided into eighteen months of twenty days or *veintena* periods, and five days called *nemontemi*. Each month demarcated the ritual celebrations of a different god that was in some way associated with the agricultural cycle determined by the dry and rainy seasons. Both Fray Diego Durán and Fray Bernardino Sahagún devoted large sections of their annals to the Aztec calendar and ceremonies. Sahagún dedicated his second volume, *The Ceremonies* (1981), to these month-long feasts and Durán's *Book of the Gods and The Ancient Calendar* (1971) similarly concentrated on these sacrificial rites. Those in power apparently made sure that the gods who were given prominence in Aztec sacrificial celebrations were those who symbolized success in war, trade, and agricultural fecundity; while at the same time legitimized the rulers' right to govern.

Particular gods and goddesses achieved notoriety through ritual and the writing and rewriting of their histories. Elizabeth Boone stressed that the Nahua peoples had



separate migrations and origin stories and that the Mexica accounts are careful to delineate these differences. The Aztecs claimed supremacy and the privilege to rule because “their ancestors had emerged from Chicomoztoc or departed from Aztlan and migrated to the new land where they conquered and settled” (Boone 2000, 163). Some scholars observed indications that founding histories and mythical histories were rewritten by the rulers of the Mexica. Townsend distinguished that the “official” versions of the migration stories of the Aztec were prepared long after they happened. They interwove legends borrowed from earlier settlers with actual events and attempted to legitimize their control over the area by claiming inheritance from the highly revered Toltec, a venerable and great prior civilization in northern Mexico (Townsend 2000, 54). Durán explained that the Aztec believed they were connected to the revered leader and god of the Toltec *Topiltzin Quetzalcoatl*, and that they were the guardians of the treasure he had reserved for building a temple (1971, 69).

A dramatic shift purportedly occurred in the history telling of the Aztecs when Itzcoatl, the fourth Aztec ruler, ascended to the throne in 1428 C.E. He boldly burned all the historical manuscripts that preceded his reign and replaced them with new histories that positioned the Mexica at the center of the universe (Vaillant 1962, 80). Scholars find evidence of this historical “cleansing” in the words of Sahagún, who stated:

Their history was preserved. But then it was burned when Itzcoatl reigned in Mexico. A decision was made. The Mexica lords said: “It is not advisable that all the people know the paintings. Those who are subjected (the people) will be ruined and the land will be twisted, because much falsehood is kept there, and many have been regarded as gods in them” (Sahagún 1905-1907, fol. 192v).

Miguel León-Portilla (1992) conjectured that what Sahagún described was a Mexica effort to consolidate power and forge a new “historical consciousness” of which they could be proud. The Mexican state became a “sacred nation” with a special political configuration designed to maintain their remanufactured religious cult with the *tlatoani*, supreme ruler, acting as a “pontiff of sorts” (Brundage 1972, 159). Arthur Demarest (1984) called this arrangement a unique “solar/warfare/sacrifice complex.” He proposed that the reworking of the mythology of human sacrifice repositioned the powers of the leaders of the state at the expense of the *capullin* and other traditional institutions. At the same time, Demarest believed that this ideological manipulation altered the causal role of ideology from one of legitimizing the power of the leaders to one of “actively motivating (and eventually necessitating) open-ended expansion” (1984, 235). Similar processes were not invented by the Aztecs and were most likely operational in earlier complex states in northern Mexico such as Tula and Teotihuacan (Headrick 2007).

The new histories included mythical tales which focused on the heroic and supernatural feats of the Mexica warrior god Huitzilopochtli, and each of his legendary acts was ensconced in sacrificial symbolism. Consequently, these reoriented legends supplied the powerful Aztec state with justification for increased military incursions and the sacralization of their political-military-sacrificial cult (López Austin 2010, 31). Annabeth Headrick surmised that Huitzilopochtli was most likely a deified human ancestor and was carried as a “mortuary bundle” by the Mexica on their journey to their new homeland (1999, 70). Boone concurred that Huitzilopochtli was most likely a mere

mortal. Evidence of this was that he did not carry the same attributes as the other gods including being named as a “Lord of the Night” or a god who appeared in their sacred almanacs (1989, 20). The idea that Huitzilopochtli was most likely once a bellicose human leader that was later elevated to the status of a god is implicated in one of Sahagún’s first descriptions of him in Book One of the Florentine Codex:

Uitzilopochtli [*sic*] (Huitzilopochtli) (Hummingbird from the Left) was only a common man, just a man, a sorcerer, an omen of evil; a madman, a deceiver, a creator of war, a war-lord, an instigator of war. For it was said of him that he brought hunger and plague—that is, war. And when the feast day was celebrated, captives were slain; ceremoniously bathed slaves were offered up. (1981, 1:1)

The divine status of Huitzilopochtli is established in legendary founding myths, also found in Sahagún’s Book Three of the same *Codex*. The tale recounts the supernatural birth of the solar/warrior god. His mother, Coatlicue or “she of the serpent skirt” (terrestrial goddess), was impregnated by miraculous means from a ball of feathers that floated down from the heavens. Sahagún related the reaction to this miraculous event by Huitzilopochtli’s siblings and his response:

And when the Centzonuitznaua [*sic*] (Centzonhuitznahua) (400 brothers) saw that their mother was already with child, they were very wrathful. They said: “Who brought this about? Who got her with child? She hath dishonored us; she hath shamed us. And their elder sister, Coyolxauhqui, said to them; “My elder brothers, she hath dishonored us. We (can) only kill our mother, the wicked one who is already with child. Who is the cause of what is in her womb?”

And when Coatlicue learned of this, she was sorely afraid, she was deeply saddened. But her child, who was in her womb, comforted her. He called to her. He called to her; he said to her: “Have no fear. Already I know (what I shall do)”....

(and as Coyolxauhqui scaled the heights leading an army of her brothers) Uitzilopochtli just then was born. Then he had his array with him—his shield, *teuceuelli*; and his darts and his blue dart thrower, called *xiuatlatl*; and in diagonal stripes was his child’s face painting. He was pasted with

feathers at his forehead and at his ears. And on his one thin foot, his left, he had the sole pasted with feathers. And he had stripes in blue mineral earth on both his thighs and both his upper arms. And one named Tochancalqui set fire to the serpent *xiuhcoatl*. Uitzilopochtli commanded it. Then he pierced Coyolxauhqui, and she quickly struck off her head. It stopped there at the edge of Coatepetl. And her body came falling below; it fell breaking to pieces; in various places her arms, her legs, her body each fell. And Uitzilopochtli then arose; he pursued, gave full attention to the Centzonuitznaua; he plunged, he scattered them from the top of Coatepetl...

And upon this, when he had slain them, when he had taken his pleasure, he took from them their goods, their adornment, the paper crowns. He took the as his own goods, he took the as his own property; he assumed them as his due, as if taking the insignia to himself...

This one of the Mexicans respected. Hence they made offering to him, they exerted themselves for him. And they placed their trust in Uitzilopochtli. And this veneration was taken from there, Coatepec, as was done in the days of yore. (Sahagún 1981 3:3-4)

At his birth on the hill of serpents, Coatepec, Huitzilopochtli emerged fully armed with a fire snake weapon (*xiuhcoatl*) and prepared to defeat his menacing sister, a lunar goddess named Coyolxauhqui, and four hundred stellar gods (Aztec enemies, the Mimixcoa) who were his brothers (Soustelle 2002, 102). After defeating the four hundred brothers and killing and dismembering his sister, Huitzilopochtli threw her body parts off the mountain, the first of many great sacrifices that kept the cosmos in order and advocated the triumph of the sun in offering life to all humans. Michel Graulich (2004) posited that these new histories instigated a significant shift from a predominance of animal sacrifice to a greater emphasis on human sacrifice.

The traditional ritual calendar was another mechanism for the Mexica state to organize the celebration of their most significant gods. The spring and fall monthly celebrations (approximately February 12, April 30, August 13, and October 13)

honored agricultural deities and in other months merchant and warrior gods. Broda (1999) alleged that the eighteen months of celebrations were designed by the Mexica state to garner the participation of the entire population as part of a strategy to normalize social stratification and as a means to reify their sanctioned ideology. She argued that the “fiestas” expressed not only a union of the political realm with the cosmological, but also a synthesis of the various social groups of the city: priests, nobles, warriors, merchants, hunters, and farmers (Broda 1999, 50). In some ceremonies, the entire social order engaged in the same ritual activities. Durán explained that during the feast of Huitzilopochtli all the people began the day by eating *tzoalli* (dough) with honey and all the people were required to fast from all food and water until the sacrifices were completed later that afternoon. This restriction was so severe that water was “hidden from the children” (Durán 1971, 94). In many other cases, the rituals provided opportunities for different parties to demonstrate their social stature and elevated position. For example, warriors were presented honors and insignia by the *tlatoani* during sacrificial celebrations and were given the honor of presenting their own captives for sacrifice (Broda 1979, 48). Another example of this ceremonial social elevation is provided in Durán’s account where he commented that merchants were offered social prestige and acclaim when they acquired enough wealth to purchase slaves for sacrifice to the merchant god, Quetzalcoatl (1971, 138). After the sacrificial rites, the merchant could provide a banquet with the flesh of the man he had purchased for slaughter, and he invited all “the lords and chieftains” who in turn granted the host with “insignia and high privileges” (Durán 1971, 138).

Human sacrifice was the staple of each monthly festival. But in many cases, it was the *tlatoani* of the Aztec who achieved the greatest accolades in their ritual activities. Catherine DiCesare claimed that the state-level ceremonies were all under the purview of the ruler who acted as intercessor between the divine and the people, and it was his responsibility to manage the festival calendar and the implementation of key rites (2009, 161). Just one of many examples of the *tlatoani*'s role in the ceremonies is recorded by Sahagún where he mentions that the Aztec ruler was in charge of dances and songs in their ceremonies. He recorded:

The ruler was greatly concerned with the dance, the rejoicing, in order to hearten and console all the peers, the noblemen, the lords, the brave warriors, and all the common folk and vassals. First, the ruler announced what song should be intoned. He commanded the singers to rehearse and practice the song and (to prepare) the two-toned drums, the rubber drum hammers, and the ground drums, and all the properties used in the dance, him who would give the pitch, those who would lead, him who would beat the two-toned drum, him who would play the ground drum. All was first arranged, so that nothing would be left out. And when there was a dance, the ruler (decided) the day. (Sahagún 1979, 8:55)

Sahagún explained that the king led the dance in fine array and offered rich adornment and other favors including food and drink to all the lords and other highly esteemed members of society (Sahagún 1979, 8:56). The *tlatoani*'s control over the ceremonies was enforced with great severity, and even if a "two toned drum was out of tune" or individuals "marred the dance," they were placed in jail where they died (Sahagún 1979, 8:56).

Rulers also demonstrated their supernatural connection and control over nature by expanding the Templo Mayor (the ceremonial and sacrificial center) and by living in

a palace in the sacred core of the city. David Carrasco, in line with Eliade and Wheatly, suggested that the spatial ordering of cities with a “sacred enclave,” the *axis mundi* or cosmic portal between the three cosmic realms, elevated supreme rulers to a special status of harmonizing cosmic order (2000, 71). Carrasco posited that the Aztec installed a “cosmo-magical” symbolic program into the heart of Tenochtitlan by drawing upon the traditions of the Toltecs and idyllic concepts of “Tollan” as inspiration to recreate a symbolic hallowed space. This center incorporated their “sacred genealogies, cosmogenic models, and heirocosmic symbols” (2000, 3). Durán described Quetzalcoatl as the “father of the Toltecs” and the god of wealthy Aztec merchants (1971, 128). The Toltec tradition revered Quetzalcoatl as a creator god and considered him emblematic of the priesthood and political authority. For this reason, a temple devoted to Ehecatl-Quetzalcoatl was located directly opposite the Templo Mayor (Carrasco 2000, 2). Domingo de San Antón Munón Chimalpahin Quauhtlehuanztzin (1997) described the emergence of the Mexica from their home in Aztlan only fourteen years after the “altepetl (city-state) of Tollan had been destroyed” and when their divine leader, Quetzalcoatl, magically disappeared with a promise to return “to settle upon his ruler’s mat and seat,” and because of this covenant, the “ancient ones lived awaiting him.” The insinuation in this record is that the Mexica rose to prominence and symbolically carried the torch forward in the place of the great civilization of Tollan and their revered leader and god. Their city center became the religio-political center where humans made contact with divine realms through the vehicle of offerings and human sacrifice.

Neighboring city-states drew heavily from Mesoamerican planning principles and Toltec innovations in many of the towns across the empire, but in Tenochtitlan the city design was also guided by organizing principles from Teotihuacan (another civilization of mythical divine/sacrificial origin) (Smith 2008, 137). Sahagún revealed that the Aztec honored Teotihuacan as the place where the gods first gathered and sacrificed themselves to animate the sun (Sahagún 1981, 2:1). Michal E. Smith revealed that there were unique innovations in northern Mexico City planning including twin temples and a walled ceremonial precinct in Tenochtitlan (2008, 137). This planning allowed for ritual participation throughout the city while demarcating the city center with its proximity to the ruler's palace, ballcourt, and priestly schools and residences as the most sacrosanct. The island city had an orthogonal layout in which the major avenues radiated outward from the ceremonial precinct to the cardinal directions, dividing Tenochtitlan into four sacred quarters each with their own smaller ceremonial precincts (Smith 2008, 142). In his history of the Aztec, Chimalpahin Quauhtlehuanztin, recorded that after the Mexica laid a foundation for a house or temple for their god Huitzilopochtli in the center of their newly founded island, they were told by this deity to form rulerships in each of the four quarters and to “distribute your calpulli gods, all those you have brought hither” and “let them appear in your four quarters” (1997, 109). This geographical distribution of leaders and their gods in the four quarters with Huitzilopochtli (the solar-warrior-sacrificial god) at the center gave his cult prominence along with the *tlatoani*'s who controlled the worship of his cult.



Other scholars have recognized both political and economic advantages in the solar/warfare/sacrificial cult located in the ceremonial center. For the archaeologist Moctezuma, the twin temples on the uppermost pyramidal platform of the Templo Mayor also represented two different forms of wealth and stature. He suggested that the temple of Tlaloc epitomized the basic components of the Aztec economy of agricultural production, while the temple of Huitzilopochtli, the solar-war god, characterized luxury tribute items received from conquering neighboring polities (Broda et al. 1987, 26). Archaeological findings confirm the worship of both deities and ratify that human sacrifice was an essential aspect of their devotions. Ritual offerings buried in special locations in all levels of its construction provide evidence of the multi-faceted symbolic program of the Templo Mayor. Thousands of ceremonial objects comingled with the skulls and bones of sacrificed children and adults in approximately one hundred offering caches. (Broda et al. 1987, 57). López Luján described remains of sacrificial children contained within a plastered box in Offering 48, found in the northeast corner of the Templo Mayor belonging to Tlaloc (2005, 149). Some of the remains of the children were covered with blue paint associated with the rain god, and the layered cache also held aquatic elements and eight “tezontle” sculptures imitating Tlaloc jars. López Luján asserted that the child sacrificial remains were consistent with sixteenth-century Spanish records that spoke of child sacrifices dedicated to Tlaloc (2005, 153). Roman Berrelleza hypothesized that the forty-two child sacrifices found in the Templo Mayor possibly represented the miniature “ministers” of “tlaloque” who resided in the mountains and assisted Tlaloc in delivering rain (1990, 109). Broda similarly theorized

that the two sides of the Templo Mayor were two mountains that reflected the dual, sacrificial concept of life and death: Huitzilopochtli (death through war) and Tlaloc (life through rains) (Broda 1987, 58).

Some investigators recognized additional binary relationships in the dual temples, including the acculturation of native agricultural groups (Tlaloc) with the conquering Aztecs warriors and their leaders (Huitzilopochtli) (Soustelle 1982, 36). In his history telling, Durán delineated that king Motecuhzoma I desired to expand the temple of Huitzilopochtli with the help of their allies and all subjected territories. In his speech to their leaders he said, “You know that our god, the great Huitzilopochtli, was to help us conquer the whole world; and you can see that it has been subjected. Now that you are all here together you can understand that it is only right that we honor our god by building his temple” (Durán 1994, 225). Durán also revealed that Motecuhzoma I ordered all the “friendly rulers” of the land to gather precious jewels and stones from their territories and each ruler cast this expensive tribute into the mortar of the temple and he explained that they were honored to do so since this god had given them great wealth (Durán 1994, 227). The great Hueteocalli (Templo Mayor) was also the pivotal space where each new ruler was consecrated through elaborate rites. Motecuhzoma I was one of the first leaders to inaugurate his time in power with the expansion of the Templo Mayor, the manufacturing of new sacrificial stones, a victorious campaign against the Chalca, and the mass sacrifice of their warrior captives as a victory celebration (López Luján 2005, 211).

As a result of novel exploitation of sacrificial ideologies by Itzcoatl, Motecuhzoma, and succeeding rulers, “warfare” ideology and practice was assimilated into the state cult. Broda maintained that Aztec religious theory was reoriented to justify their increased bellicosity. The reformulation followed this logic:

...blood had to be spilled to make the cosmos continue to exist. The sun, in order to send its light to earth, needed to be fed on human hearts and blood. The ruler’s obligation was to provide this nourishment to the sun; for this purpose he led his armies into war and exacted tribute in victims to sacrifice. (Broda et al. 1987, 64)

This new expansionist ideology came with additional material recompenses for the empire. It reaped economic benefits and control over the flow of desirable trade goods from conquered regions. The warfare/sacrifice complex was inextricably connected to both the rulers and the income stream generated under their military authority. As the scholar Moctezuma recounted, the sacrificial cult was centrally concerned with economic issues, including tribute from conquered territories (worship of the war god, Huitzilopochtli), and with agricultural production (worship of the rain god, Tlaloc). The following section will consider theorists who concentrated their attention on the economic implications of Aztec sacrifice.

### **Scholarly Treatments of the Economic Advantages of Aztec Human Sacrifice**

Each of the calendared Aztec human sacrificial ceremonies had diverse purposes and significant economic activity was associated with them. They were costly to sponsor, in both time and resources. Durán was amazed at the amount of manpower, the requirements for transportation, and the richness of offerings attributed to a festival

honoring Tlaloc (1971, 169). Durán chronicled that there were so much wealth—jewels, gold, feathers, precious stones, mantles, and other splendid things offered to the idol of Tlaloc—that “a company of one hundred soldiers was formed...to guard the rich offerings and abundant victuals which had been presented” to prevent Mexica enemies from sacking these treasures (Durán 1971, 159). Conquering new territories brought fresh streams of revenue into the growing empire. Eighty percent of the offerings unearthed by archaeologists in the Templo Mayor originated from outside areas ruled by Tenochtitlan, and this is just one of many evidences of the flow of imports into the city center (Moctezuma 1984, 149). The rapid transformation of sacrificial ideology was coterminous with political, military, and economic prerequisites. The Aztec adroitly altered the meaning of the rite, intensified its practice, and used it as a pretext for conquering and plundering their weaker neighbors (Smith 2008, 121).

John Ingham (1984) recognized that human sacrifice was utilized by the Mexica rulers to wield power and influence over subjected territories. Sacrifice was a symbolic representation of the newly established hierarchal order and “tribute obligations,” and the Aztec used insubordinate populations as sacrificial offerings, a fitting punishment for the refusal to pay tribute (Ingham 1984, 394). Ingham acknowledged that mythical accounts provided the rationalization for this punitive practice. He identified the myth of the hostilities between Huitzilopochtli and Coyolxauqui, based on the premise of retribution, as a model for Aztec sacrificial practices (Ingham 1984, 394). In one version of the myth, a group of dissidents, led by Coyolxauqui disagreed with the

leadership of Huitzilopochtli and refused to uproot and travel onward. As reprisal, Huitzilopochtli adorned himself for war, took up his shield, and confronted his “uncles the Centzonhuitznahua” in the “sacred ball court” and defeated them and he ate them along with the heart of his sister (Chimalpahin Quauhtlehuanztzin 1997, 83). According to Ingham, the Aztecs conducted human sacrifice in the name of their god, Huitzilopochtli, and felt his endorsement when they sacrificed enemies as a form of chastisement. Moctezuma recognized that the carved image of the dismembered Coyolxauhqui on a large stone disk was a representation of the defeated faction mentioned in the myth. Captive prisoners were symbolically forced to pass by her dismembered image on their way to being offered as a sacrifice to the victorious god, Huitzilopochtli (Moctezuma 1984, 138).

Aztec sacrificial ceremonies also created preemptive opportunities to terrorize enemy neighbors as well as to demonstrate economic wealth and prestige to allies and enemies. Nigel Davies perceived that during coronation ceremonies of the *tlatoani*, the Aztec invited all the allied and enemy leaders to witness mass sacrifices and gave them lavish gifts “not merely to impress, but literally to strike terror, by display on a gargantuan scale” (1973, 162). For the citizens of Tenochtitlan, they were equally mesmerized by the opulence and power of their leaders. Their loyalty was rewarded when portions of the tribute payments were disbursed during sacrificial celebrations. For example, in the festival called Huey Tecuilhuitl, the *tlatoani* dispensed food and drink to all of the poor of Tenochtitlan and the subjects of the whole valley during a time of drought and food shortages, and in this way demonstrated his power to

overcome the forces of nature (Broda, 1991, 99). Sahagún recorded that during this festival the poor of Mexico “and those who tilled the fields” were invited to a seven-day feast where they received both food (tamales) and drink (1981, 2; 96). He also explained that this feast provided the opportunity for the ruler to demonstrate his “benevolence for the common folk. For indeed there was much hunger; at this time, dried grains of maize were costly; then there was much want; they were tired; it was very much a time of our death” (Sahagún 1981, 2:98).

Tribute payments to the Aztec empire from subjected territories were scheduled on a quarterly basis. It was not coincidental that festivals organized during these months incorporated lavish redistribution of this wealth to the populace. Gordon Brotherson (2003) analyzed the symbolic and practical structure of the eighteen monthly feasts based on the Borgia and Borbonicus codices and on sixteenth-century Spanish accounts. He discerned that there was a clear structure inherent in the eighteen feasts that corresponded to “tribute, weather and planting, and the naming of the years” (Brotherson 2003, 96). The sacrifice of the conquered on these occasions symbolically marked the victory, wealth, and superiority of the Mexica people at the expense of outsiders.

Geoffrey Conrad and Arthur Demarest (1984) offered an exquisite treatise on the rise and subsequent fall of the Aztec and Inca empires, which both followed the same pattern of cultural evolution. They theorized that Aztec ideological adaptation included a merger of the religious, economic, and social systems which gave it a competitive edge as an imperialistic war machine. But ultimately, they conjectured, this

strategy was maladaptive and a cause of irremediable strains and weaknesses (Conrad et al. 1984, 37). The expansionist policies brought economic rewards in lands and luxury goods to the nobles, and the lower classes were motivated to perform well in war since it offered social mobility. Conrad and Demarest concluded that because of territorial expansion, both the Inca and the Aztec received economic and social benefits that flowed downward through the entire society and perpetuated further warfare (Conrad et al. 1984, 178). They contended that:

Through interlocking sets of economic, social, and religious incentives the two states were able to motivate their subjects by making militarism something that seemed to be in everybody's best interests. Incessant propaganda campaigns strove to convince every Mexica and Inca citizen—from childhood on—that he or she stood to gain from conquest, that the state's victories would be his or her victories. No wonder both peoples believed that 'fighting was the natural and proper occupation of any able-bodied man.' (Conrad et al. 1984, 178)

These benefits required incessant expansion and an overextension of military capability. The long distances required for costly military campaigns were increasingly difficult and garnered fewer remunerations (Conrad et al. 1984, 183). Conrad and Demarest conjectured that when the ideology of the Aztec was challenged and when they were defeated in wars, their sense of invincibility waned, bringing malaise and despair. The decreasing material incentives also caused class resentments. It was virtually impossible for Aztec leadership to retract "institutionalized generosity" or rework entrenched ideologies supporting their war machine. For this reason, Conrad and Demarest concluded that even without the intrusion of European conquerors, both the Inca and Aztec empires were destined for downfall. One important aspect of Conrad

and Demarest's theoretical discussion was their emphasis on the connection between Aztec warfare and the changing ideology of sacrifice.

In the Aztec world, the religious realm saturated every aspect of life, and the sacrificial program was inextricably connected to political and economic interests. To sustain the sacrificial cult and the monthly sacrificial rituals, a continual flow of war captives was required. One of the primary goals of battle was to capture live victims and warriors were obligated to meet this need, making warfare a sacred duty. Bringing one or more captives home from war was a great honor for soldiers and elevated their status and privileges. Following upon this, the next section will discuss scholarly works that focused their attention on the intimate relationship between Aztec ideas of sacrifice and their emphasis on military engagement.

### **Scholarly Treatments of the Aztec Warrior/Sacrificial Cult**

War and social violence has intrigued scholars from several different disciplines. In the edited volume, *Studying War: Anthropological Perspectives* (1994), the authors used cross-cultural comparison to determine the different ways social groups understand and manage violence. They theorize that war is neither a requirement nor a prerogative but is socially manufactured. Reyna et al. (1994) proposed that "warring societies" develop organizations for war, while "peaceful societies" do the same for peace. Contributor Brian Ferguson conjectured that regardless of the hazardous nature and its high cost in lives and resources, "warlike" groups gravitated towards further military campaigns because of the "self-reinforcing



nature” of war (1994, 101). This is what he identifies as an “evolutionary ratchet effect” of war that made it easier for societies to go to war because “psychological perceptions, dispositions, and world view are molded to make men willing and able to fight” (Ferguson 1994, 102). This appears to be the case for the Aztec, and several scholars concur that war was an effective strategy for their survival and expansion. In addition, the warrior/sacrifice cult that developed because of aggressive military campaigns became integral to each aspect of their everyday lives.

Some investigators of Aztec war focused their attention on how it was “ideologically charged” and pervaded the entire social order. Heather Orr and Rex Koontz (2009) asserted that violence for the Aztecs was “ordered or organized—a way to reinforce culture rather than a purely destructive force.” Andrew Workinger and Arthur Joyce recognized that despite different outcomes of each conflict including stalemates, defeats, conquest, and partial destruction of enemy settlements, each variation of battle was informed by “ritualized elements” and was influenced by the requirement for each combatant to obtain captives for sacrifice (Workinger et al. 2009, 6). According to Caroline Pennock (2011), Aztec culture was saturated with the ideals and values of martial success, and this ethos buttressed the hierarchal structures of both the military and the religious organizations. She maintained that Aztec masculinity was identified with military advancement and rich rewards were given on a meritocratic system based on the numbers captives taken (Pennock 2011, 17). Ross Hassig affirmed that the best prospect for commoners to rise to noble status was to obtain a greater

number of captives in war, which became their prime motivator for going into battle (Hassig 1992, 137).

Several scholars detected that some of the monthly religious feasts were designed for the public to ritually reenact their military superiority. In several of the celebrations, the successful warriors and their captives were highly visible. On the day of sacrifice, the captor accompanied his prisoner to the sacrificial stone, witnessed his death, took the body home (giving a favored portion to the emperor), and invited his close relations to cannibalize the remaining portions at his residence, demonstrating his individual prestige and that of his *calpulli* (Pennock 2011, 17). Durán observed that the goddess Cihuacoatl was “fed” on the flesh of captive warriors and the “leftovers” (the portions of the body she had not eaten) were divided and distributed in equal amounts to the number of warriors who had captured the victim (1971, 216). Pennock reflected that “Just as myth was inextricable from history in Aztec thought, so ritual was inextricable from life,” and sacrificial performances “were perhaps the most enduring element of Aztec public ritual” (2011, 178). She concluded that sacrifice for the Aztecs was just another form of violence that pervaded their social and religious lives and conditioned individuals to accept bloodshed and continual war as a necessity (Pennock 2011, 179).

The monthly feasts accentuated the visibility of this connection between war and sacrifice in Tenochtitlan. Broda emphasized how “mock battles” that occurred during many feasts elevated the stature of the warrior/sacrifice cult by allowing the city to witness war in this semi-controlled format. In the festival of Tlacaxipeualiztli,

Sahagún detailed that there was a mock battle between a group of noble warriors and priests dressed in the “bloody skins” of sacrificed victims as *xipeme* or the flayed god Xipe Totec. The priests or *xipeme* were exhibited in different parts of the city wherever “grass was shaken out” and brave warriors “snatched at their navels” to start a fight, and so in response the *xipeme* went after them “in pursuit” armed with “rattle sticks” (Sahagún 1981, 2:50). Broda conjectured that this ritual exercise underscored the high position and prowess of upper-class warriors and the priests in performing sacrifices of enemy captives (Broda 1979, 57). She also believed that these mock battles exposed tensions that existed between social groups, and at the same time, simulated cosmic forces at war (Broda 1979, 59).

The seasonal festival of Panquetzaliztli arrived on the calendar at the beginning of the dry season when the harvest was complete and the season of warfare commenced. Susan Milbrath (1997) noted that this festival reenacted the birth of Huitzilopochtli by having his impersonator descend from his temple carrying the “Fire Serpent weapon” and prisoners who were sacrificed served as representatives of the vanquished Centzonhuitznahua (1997, 188). Millbrath determined that this festival also reflected the opposing forces of nature between the wet and dry season and between a period of fecundity and life followed by a time of death, sacrifice, and war.

Other researchers revealed that mythical episodes of battle between the gods informed the Aztec ideology of war. Monthly festivals expressed cosmic principles of duality and reflected the Aztec idea of an “eternal war” being waged between the rising and falling sun. Sacrificial rituals of captive warriors were emblematic of important

oppositions of light versus dark and heat versus cold (Moriarty 1969, 31). James Moriarty discerned that the gladiatorial battles insinuated the opposition of night and day with the Eagle/Knight order of knights representing Huitzilopochtli set in opposition to the Ocelot Knights of Tezcatlipoca (1969, 31). In the Nahuatl language, the concept of war is expressed in a couplet meaning either “the dart or the shield” (*in mitl in chimalli*) or “the water and the scorched” (*in atl in tlachinolli*) and graphically displayed as opposing elements of water and fire (Gutierrez 2014, 146). López Austin surmised that this “violent recombination implied creation through destruction, change, and movement” (1997, 12). Gerardo Gutierrez noted that the battlefield was “literally at the edge of the sacred water, at the edge of the place of fire,” or a liminal space where opposing forces of the universe met in combat (2014, 147).

The ideology of war was not only manifested in ritual combat scenes in Tenochtitlan, but it flowed outward onto the actual battlefield in enemy territories. A special group of priests joined the first wave of officials leaving the city on military campaigns. Upon the arrival of the entire army, these ritual specialists lit new fires and blew conch shells indicating the commencement of the war, and they held the important role of sacrificing before the gods the first captive taken on the actual ground where hostilities occurred (all other captives were taken to Tenochtitlan) (Gutierrez 2014, 147). In the aftermath of successful battles, enemy idols were smashed, their temples burned, and their priests executed in potent displays of spiritual as well as physical triumph over the vanquished (Scherer et al. 2014, 11).

Harrison-Buck et al. called the despoliation of the bodies and sacred objects of enemies a “desecratory termination ritual” which was designed to destroy the supernatural power of a defeated community or faction or to “kill” the “animate supernatural power of an object, person, place, or portal to the other world” (2007, 183). From these perspectives, it is evident that the Aztecs had both physical and spiritual warfare in mind when they fought against their enemies. When the subjected city of Guaxaca killed Aztec envoys during the reign of Motecuhzoma I and threw their bodies out in the open to be eaten by vultures, the Aztec leaders decided to completely raze this city and “with the captives... make a solemn entrance into Tenochtitlan” and thereafter “sacrifice them at in the temple’s inauguration” (Durán 1994, 228). The Aztec believed that this was a good military strategy because “Guaxaca was so far away that it would be difficult for the Aztecs to return” and because this severe response would serve as a “warning for all the cities of that region” (Durán 1994, 228). The annihilation of the people of Guaxaca served practical political measures and provided human sacrificial offerings to the Aztec military gods.

Aztec ideas about the sacred nature of war were also utilized to demonstrate the superiority of their cult in relation to their neighbors. Their warrior god was thought to be more powerful, therefore he vanquished the gods of foreigners. Milbrath pointed out that when the Aztec captured the statue of Cihuacoatl from Xochimilco and “imprisoned” the image in Tenochtitlan, they essentially incarcerated the cult of the enemy, and even though they later made sacrificial offerings to this goddess, she was always considered a “conquered woman” (1997, 198). From Milbrath’s perspective, the

Aztec hoped to control the demonic power of the goddess by incorporating Cihuacoatl into “the fabric of their religion and politics” (1997, 198). She represented both the “political threat from the southern cities and the power of the *tzitzimime* (evil forces) to destroy the Aztec world, bringing the Fifth Era to a close” (1997, 198). These studies focused on how mythical events and the worship of the warrior god and other deities was fundamental to ideas concerning violence and war, and these ideas were reflected in hierarchal relationships and monthly sacrificial celebrations.

Hassig devoted several articles and an entire volume to the subject of Aztec war. He understood that their bellicose nature “was internal to Aztec society” and that there was evidence that religion was a motivator, but he points to four well-documented Aztec patterns that suggest that politics, rather than religion, was the prime mover (Hassig 1999, 368). In the first instance, when the Aztec were defeated after an offensive assault they subsequently attacked the same enemies. If they were acting out of divine favor and were repulsed, Hassig believed they would not repeat the aggression. Instead, he asserted that this conduct cannot be taken as a “supernatural charter for long-term behavior that crosscut all social and occupational groups in Aztec society” (Hassig 1999, 368). The greater motivation in this first instance was the defeat of a hated political enemy of the Aztec state. In the second case, Hassig argued that the burning of the temple of a defeated enemy had two important purposes: a symbolic defeat of the enemy’s local gods, and a debilitating practical blow against the most heavily fortified portion of the opponent’s city. Conquering this section of the city would also mean the capture of rulers as well as the armory. In the third example,

Hassig referred to the tactic of capturing enemy gods and returning them to Tenochtitlan to be worshiped as a captive. Most scholars identify these actions as only religiously motivated. Hassig acknowledged that this most likely supplied the justification for the action, but from a pragmatic perspective, moving enemy gods to Tenochtitlan “also meant moving the associated priests and redirecting the flow of wealth from temples in the vanquished cities to the temple of Tenochtitlan... The economic gains were direct and significant” (Hassig 1999, 369). Harrison-Buck et al. also suggested that desecration of conquered sacred spaces had both material and ideological components. The acts were designed to annihilate enemy material culture with the express purpose of destroying the supernatural power of a defeated community or faction which also meant destroying their conduit or portal to the otherworld (2007, 83).

Finally, Hassig determined a political and religious imperative behind King Ahuitzotl’s sacrifice of an unusually large number of captive prisoners during the rededication of the Templo Mayor in 1487 (1999, 369). Ahuitzotl was motivated to demonstrate military vigor because he succeeded a weak ruler whose military failures resulted in rebellion of several conquered domains. Most of these insubordinate provinces failed to send tribute and representatives to Ahuitzotl’s coronation ceremonies to reconfirm their allegiance. Hassig ascertained that the newly established Aztec king instigated the unprecedented massive slaughter of prisoners, “using a religious occasion as a pretext,” as a perfect occasion to demonstrate military strength (Hassig 1999, 369). By terrorizing his enemies, Ahuitzotl did not need to expend an

enormous amount of resources to reconquer rebellious territories. Intimidation was always the preferred mode of conquest because it was economically advantageous (Hassig 1988, 154). Carrasco concurred with Hassig, and perceived that the incremental rise in human sacrifice between 1440 C.E. and 1521 C.E. was a result of Aztec “cosmic paranoia,” or fears that their political rule of peripheral polities was so tenuous and unstable that “sacrificial festivals” were necessary to control resistance and instill terror in rebellious territories (Carrasco 1987, 154). Hassig conceded that even though he discerned economic and political exigencies in relation to Aztecs military engagements, he was cognizant that it is impossible in their case to disentangle religious from political and economic motivations.

Within the discourse on Aztec human sacrifice, numerous sources are cited as motivation or justification for the ritual program, but these causes are not mutually exclusive. Sacrifice was an ancient concept informed by universal Mesoamerican cosmological understandings and based on an ancient agricultural fertility cult. Concepts of sacrificial offerings were transformed by the Mexica as their fledgling nation utilized political alliances and military campaigns to increase their economic and political clout. The ideology of sacrifice was renovated to meet the needs of the growing empire and alterations were institutionalized in rewritten histories, artwork, architecture, and calendared religious festivals centered on sacrifice to their favored gods of war and agriculture. The merger of sacrificial ideologies with political prerequisites had great advantages but also created significant weaknesses in the empire. Regardless of flaws, the sacrificial cult was perpetuated in their major monthly



spectacles for multiple reasons, many of which have not received significant scholarly attention.

### **Summary of Literature and other Rewards Attenuating Aztec Human Sacrifice**

In summary of the general literature on sacrifice, classical theories explain that the enigmatic activity of ritually killing human beings derives almost solely from religious or magical thinking. Conventional perspectives perceive human sacrificial ceremonies as gifts, offerings, debt payments, and as a form of communion between humans and their ancestors and gods. These scholars rely on the notion that humans propitiate the gods in expectation of divine favors especially in times of crisis. Human sacrifice is also conceived as a ritual operation that transformed the ordinary/profane into the extraordinary/sacred, revived social orders, and delivered cathartic releases from societal tensions and violent urges as well as a means of overcoming anxieties regarding uncontrollable elements in the world.

Recent theoretical analyses of ritual human sacrifice have focused on contextualizing the practice in specific nuanced cultural settings. Scholars of the Aztec peoples have accomplished this in successful treatises that observe multivalent symbolic systems and multiple purposes in the Aztec sacrificial ritual program. For some scholars, such as Carrasco, there is still much to contemplate when considering the activities, ideas, and experiences associated with human sacrifice. He commented that the scholarly community has been remarkably hesitant to explore the evidence and nature of large scale ritual killing in Aztec Mexico. He queried:

...How could a people who conceived of the most accurate calendrical systems of the ancient world spend so much time, energy, and wealth in efforts to obtain and sacrifice human victims for every conceivable feast day in the calendar? Why did a people so fascinated by and accomplished in sculpture, featherwork, craft industries, poetry, and painting become so committed to cosmic regeneration through the thrust of the ceremonial knife? The Aztec image that glares at us through the texts is an image of startling juxtapositions of Flowers, Song/Blood, Cut. (1987, 125)

Carrasco surmised that there are many paradoxes in the Aztec sacrificial schemata that receive little or no attention in scholarly analysis. I agree with this assessment and find that the most striking dichotomies or perplexities include: the temporal proximity of jubilant ceremonies to vividly displayed executions of captives or slaves; artistic displays of flowers and feathered costumes in contrast to the sacrificial priests dressed in black with long locks of blood soaked, matted hair; and finally, the beauty of song and dance in disparity with the likely screams, shouting, and cries of the condemned.

One of the most blatant disjunctions is the descriptions of somber processions of sacrificial victims being led by their captors or owners to their deaths followed by festal gatherings of feasting, dancing, and other forms of merrymaking. Some of the mock battles and competitions had comic elements and competitive aspects with rich material rewards for winners. Just one example is described in the *Florentine Codex* of the eleventh month feast of Ochpaniztli. There were five days of sedateness and silence (“five days where nothing was done”) followed by good-humored events including several days of “hand-waving dances” and then four days of “mock battles” (Sahagún 1981, 118). In these pseudo-battles, groups of women (older midwives, young women, and prostitutes) pursued each other and pelted one another with “(matted) tree parasites

(Spanish Beard moss) gathered into balls along with other organic materials” (Sahagún 1981, 119). Sahagún related that the purpose of these comedic skirmishes was to make the sacrificial victim impersonating the goddess, Toci, “laugh that she might not be sad” and so that her levity would prevent evil omens to affect the “eagle-ocelot warriors” when they went to war (Sahagún 1981, 119). Following these days of amusing scuffles, the midwives surrounded the goddess-impersonator and guarded her on her way to her execution by decapitation at midnight (Sahagún 1981, 120). Sahagún reported that during this portion “No one at all spoke, none talked, nor did anyone cough; it was if the earth lay dead. And everyone gathered around in darkness” (Sahagún 1981, 120). After this gloomy rite, festive activities commenced the following morning. The riveting violent ritual was sandwiched between jovial events, thereby fashioning a program of entertainment that engaged a wide range of emotions from fear to exhilaration. There was indeed more going on in this sacrificial celebration and others than is explained by ideological or material theories of sacrifice. The emotive and phenomenological experiences were mystifying, engaging, and influential.

In this dissertation, I contend that the schedule of events in Aztec monthly feasts was purposefully designed to provide participants with powerful “experiences” that were enthralling, entertaining, and even pleasurable. In each of the phases of their ceremonies, participants received significant physiological and social-psychological rewards. The monthly rituals were impactful because they cycled between contrasting emotional states from terror to joy. In addition, the Aztec sacrificial ceremonial program provided additional incentives including opportunities for collective shamanic transformation and

ecstatic states that offered supplementary physiological and psychological benefits on individual and communal levels. It is my argument that in addition to ideological/cosmological and materialistic explanations of sacrifice there are also “participatory” or “experiential” interpretations that reveal meaningful communal and individual responses. These explanations reveal that in addition to ideological inspiration and material incentives to the Aztec sacrificial complex, there was also a combination of underlying biological and social-psychological rewards that culminated in a powerful amalgam of pleasurable stimulants that encouraged even the lowest echelons of Aztec society to heartily participate. Some of these incentives are found in sacrificial rituals of other cultures and are based upon a human proclivity to enjoy engaging in community festivities and in viewing and participating in violence. The following chapter will present theories and scientific studies of modern subjects that support this “experiential” explanation that can be analogically applied to ancient Aztec human sacrificial celebrations.

**PART II**  
**BIOLOGICAL AND SOCIAL-PSYCHOLOGICAL THEORIES**

**RELATED TO THE “EXPERIENCE” OF AZTEC SACRIFICIAL  
CEREMONIES**

**CHAPTER FIVE:  
THEORIES EXPLAINING THE BIOPSYCHOSOCIAL REWARDS  
OF AZTEC SACRIFICIAL CEREMONIES**

Aztec month-long religious celebrations were often colossal productions that featured one spectacular event after another. These ritualized actions oscillated from quiet, reverential moments to incidents of terrifying violence before cycling back to comedic, jubilant proceedings. These events included such diverse activities as filling a courtyard with aromatic and colorful flowers, staying awake all night and engaging in painful austerities, witnessing small children's throats being sliced and dancing for multiple hours in the midst of large crowds accompanied by somber or joyful music. Scholarship on Aztec human sacrifice has focused significant attention on the ideological and material manifestations and functions of these rituals, but there is limited research on what was happening to the bodies and minds of the participants as they engaged in these mystifying and sometimes horrifying ritual activities.

This dissertation addresses this inattention by examining the “phenomenological” characteristics of participation in Aztec rituals. Modern research and theories that focus on the kinesthetic, emotive, and psychosomatic modes of engagement in celebratory and violent ritual activities are essential to this mode of analysis. These contemporary studies reveal that both positive/affirmative and negative/fearful rites sponsor biological, psychological, and social reactions that are generally rewarding for individuals and groups. Several scholars have already examined the embodied aspects of ritual in many different cultural settings, and their work sheds light on the importance of this avenue of investigation. Their research reveals that ritual ceremonies are often more effective if celebrants are transported out of mundane existence and into the realm of the extraordinary.

Social scientists studying festivals in many cultural settings have discovered that rituals are more exciting, rewarding, and memorable if they offer more diverse and melodramatic elements. Roy Rappaport suggested that one way of making ritual activity more riveting and powerful is to communicate many elements over several channels simultaneously, “through words and non-verbal uses of the voice, through instrumental music, through graphic and plastic art, pageantry, dramatic display and physical movement, and even through the sense of smell and taste and variations of touch, including pain” (Rappaport 1999, 256). Following Turner’s ideas concerning *communitas*, Rappaport proposed that with a “multiplicity of significata” along with the overwhelming nature of a ritual space, the experience could be so emotionally and cognitively awe-inspiring as to make it charged with an aura of “ineffability” and “thus force consciousness out of the mundane” (Rappaport 1999, 261). He identified this exciting state as one of “Hyperreality” where ordinary existence pales in comparison to the excitement and euphoria that can be attained in ritual (Rappaport 1999, 261).

Performance studies experts similarly recognize that the kinesthetic qualities of ritual can augment the pleasurable aspects of the experience. They reveal that dancing, singing, chanting, and other forms of active movement increase the impact of ritual and can more productively communicate shared beliefs and enhance social bonding. These types of ritual actions are typical of shamanic performances that alter states of consciousness. Recent investigations have revealed important biological responses to participation in shamanic rituals, and I propose that their findings are remarkably relevant to the Aztec case. These types of performances were prevalent in many



different forms in the Mexica *veintenas* and these studies on shamanism are germane to this analysis of the biopsychosocial responses to ritual activities.

Social-psychologists similarly reveal that ritual activity affects the emotional, biological, and psychological states of participants in positive ways. Social scientists have many theories of ritual, and some of them surmise that one of its central functions is to alleviate individual and societal stresses and trepidations. A large body of research from the field of psychology corroborates some of these hypotheses and reveal how exposure to violence and death, even in a ritual setting, can buffer individual and collective anxieties. They explain that exposure to violence in many different formats has surprising psychological benefits. Other social-psychologists deliberate upon the physiological reactions to extraordinary moments in religious ritual. Garret Fagan determined that heightened experiences evoked by “active stimuli” or artificially manufactured prompts in ritual (such as produced in a modern nightclub) directly impact emotions and physical responses (2011, 204). He also recognized that out of all the different types of stimuli, violence is what engenders the most “excitement.” He identified the term, “excitement” as a psychological state with biological manifestations such as “heart pounding, stomach churning, (and) dry-mouthed sweatiness” (Fagan 2011, 204).

Violence was the pinnacle of Aztec sacrificial ceremonies and was surrounded by dramatic elements, and consequently these modern social-psychological studies are essential to an experiential analysis of Aztec human sacrifice. Amplified inputs and heightened autonomic responses are and were also engendered in joyful and exuberant

moments in ritual and are fundamental to religious experience. The following survey of theoretical models from multiple disciplines enhances an understanding of the experience of ritual and the possible biopsychosocial responses to participation. This review will commence with an appraisal of scholarship on studies of religious rituals of a festive nature.

### **A Bio-Cultural Approach to Celebration and Religious Activity**

There are many theoretical designs applied to the study of human responses to religious ritual and celebratory experiences, though anthropological and religious studies often ignored the biological perspective. Michael Winkelman et al. promote a biocultural perspective in the anthropological study of religion because it as an “explicit recognition that humans are biological organisms whose primary means of adapting to the world is culture” (2010, 6). They explained that individuals have their own unique perceptual and cultural reality shaped by biology and the socialization experiences provided by culture (2010, 55). Biological response to religious experience is both cognitive and emotional, and some scholars regard the emotional response as one of the most crucial aspects of religion. Psychologist Robert Emmons (2005) noted that religious activities are most often accompanied by powerful emotions which can vary widely from ecstatic states of ebullient joy to more meditative and peaceful moments. These emotions are inscribed in cognitive, religious memory and are communicated and commemorated with each subsequent enactment of recurring ritual.

Religious rituals are designed to generate specific emotions which are uniquely religious and momentary but with long-lasting effect. Winkelman et al. (2010, 237) argued that religion did not originate because of emotional experience, but rather one of its fundamental charters is to use emotional states in the socialization and integration process. Humans have evolved with enhanced opioid systems that increase the capacity for bonding, and religion utilizes this aptitude to produce positive emotions that include “physiological and social responses” (Winkelman 2010, 236). To apprehend their argument, it is important to understand their biological terminology. Medical professionals observe that opioids act upon opioid receptors in the nervous system and produce pain relief and a sense of well-being. Endorphins are a type of opioid that are found naturally in the body and are called “endogenous opioid neuropeptides.” They are produced in both the pituitary gland and the central nervous system, and these endorphins function to inhibit the conduction of pain signals and have the powerful effect of producing euphoric feelings.

Communal rituals take advantage of endorphin production. The brain opioid theory of attachment is delineated by Leary et al. (2008) who revealed that “social contact causes the release of endogenous opioids, whereas social isolation lowers basal opioid levels, which motivates individuals to seek social contact.” The release of pleasurable neurochemicals creates a phenomenologically rewarding experience (positive emotions) that reinforces social bonding and an aversion to the opposite painful experience of social isolation (Leary et al 2008, 37). The implications of this biological reward system are that individuals are reluctant to have their social bonds

dissolved, are incentivized to conform and comply with the rules of their social group, and are more willing to engage in intergroup activities of a secular or religious nature (Leary et al. 2008, 28). Anthropologists often refer to religious ceremonies as “rites of solidarity.” From a biological perspective, communal rituals cause individuals to be overwhelmed with “endogenous opiates (opioids)” which foster a feeling of “euphoria,” “certainty,” and “belongingness” (Winkelman 2010, 237). Furthermore, religious rituals can be enhanced with more “active stimuli” with multiple sensory inputs which amplifies the experience.

Anthropologists studying festivals in cross-cultural analyses, determined that these types of celebratory events are designed to enliven the spirits of participants (fun-making) and stimulate their senses, inciting emotions such as “joy and pleasure” (Dorson 1982, 34). They do this through song, dance, chanting, clowning, and competitive games. Ronald Grimes called celebratory events or the experience of “ritually ascending” to augment everyday life with “extroverted” events that allow for “playful actions” (1982, 344). This type of ritual activity is contrasted with “liturgy and decorum” and is lively and unpredictable as it “rises as a bubble in a cauldron” and produces what he calls “actional afterglow” (Grimes 1982, 279). Festivals commonly use concurrent multi-sensory stimulation (such as dancing and singing around a blazing fire) to increase the sensorial and emotional impact of the events.

Various specialists observe stimulating experiential elements in festivals to have different functions. Bruce Lincoln proposed that political leaders use this type of

sensory overload in religious rituals to “mystify” their audiences as a mechanism to obtain their loyalty (1994, 35). Religious studies expert, Carrasco, suggested that introducing multiple stimuli at the same time or “synesthesia” is the vehicle by which sacredness is experienced and sacred knowledge is communicated (1999, 122).

Lawrence Sullivan, with expertise in performance studies, described how synesthesia unifies the senses and simultaneously communicates a corporate body of knowledge.

He stated that synesthesia is:

...usually defined as a phenomenon in which one type of stimulation evokes the sensation of another... Synesthesia translates from the new Latin... as “unity of the senses” ...the point is that performance displays the symbolic expression of synesthesia as it is imagined in a culture. In so doing, it renders perceptible a symbolism of the unity of the senses. The symbolic experience of the unity of the senses enables a culture to entertain itself with the idea of the unity of meaning. (1986, 8)

Synesthesia is also observed to be a central link in human relationships. Wicklund et al. (2004) discovered that human solidarity is largely driven by a “mutual offering and receiving of sensations that can be characterized as esthetic, as beautiful, as pleasing to the senses,” and these are received via the “visual, acoustical, olfactory, and tactile” sensory systems (2004, 370). Biologists concur with this assessment and find that “synchronous multisensory stimulation” blurs boundaries and increases closeness between subjects and others (Paladino et al. 2010, 1202). Other medical specialists have found that in addition to social bonding, there are zones in the brain where multisensory inputs converge and elevate neural responses and at the same time increase autonomic arousal (Driver et al. 2008, 11). As discussed earlier, multiple sensory stimulants elevate mood, incite physiological arousal, and create closeness between participants,

and this results in the release of pleasurable neurochemicals or a phenomenologically rewarding experience (Leary et al. 2008, 37).

Positive experiences that induce elation are rewarding for participants on many different levels. One study noted that positive emotions facilitated “cognitive flexibility,” “social interaction,” and “motivation” (not generalized motivation but to “maintain the positive state”) (Strumpfer et al. 2006, 147). From a biological perspective, positive emotions, including laughter, activate endorphins and opiate receptors creating feelings of “well-being” and “pleasure” (Mathew et al. 2011, 147). What is interesting about these neurotransmitters is that they are released in elevated joyful situations and similarly in instances, as Mathew et al. state, when the “body is active, either through excitement or exercise, as well as during fear” (2011, 147). Modern scholars and medical specialists have been drawn to a study of the biological and psychological implications of exposure to violence and stressful or dangerous situations and their findings are equally applicable to the ancient Aztec ritual programs which often juxtaposed both positive/ joyful and negative/terrifying experiences in close temporal and spatial proximity.

### **Biological Rewards for Viewing and Participating in Violence**

Researchers are intrigued by the Aztec human sacrificial system, and I conjecture that this scholarly interest derives from a basic human proclivity to be curious about violence and death. Modern studies of violence confirm that humans are biologically rewarded by viewing violence. There is general consensus from these

abundant studies that humans experience physiological and emotional arousal as they witness or participate in violent activities and these responses motivate many of these subjects to seek out this stimuli on a repeated basis (Anderson et al. 2001, Anderson et al. 2003, Arriaga et al. 2006, Barlett et al. 2009, Berry et al. 1999, Dar-Nimrod 2012, Guang-Xin Xie et al. 2008, Goldstein 1999, Kim et al. 2013, Mezzacappa et al.1999, Raju 1980, Weaver et al. 2012, Webber 2015). Though extensive, I will draw upon only a few of these numerous studies published in journals of medicine and psychology. The definition of violence I will rely upon comes from Guang-Xin Xie et al., who assert that violence is “any overt depiction of a credible threat of physical force or the actual use of physical force intended to physically harm an animate being or group of beings” (2008, 278).

Jeffrey Goldstein (1999) uses layman’s terms to describe the overall human attraction to morbidity and violence. In a more colloquial manner, he commented that “an undeniable characteristic of violent imagery is its emotional wallop. It gives people a jolt.” Biologists label this “jolt” as “heightened physiological responses.” Mezzacappa found that physiological activity and physical symptoms are “frequent components of the subjective experience of emotion” (1999, 181). Increased release of epinephrine in the body causes greater physiological arousal as well as heightened intensity of emotions (Mezzacappa 1999, 198). Epinephrine is another term for “adrenaline,” and strong emotions such as anger or fear can instigate its release into the bloodstream. If a person perceives a dangerous or stressful situation his or her body produces adrenaline in the central nervous system and in the medulla in the adrenal

glands. These stress hormones send signals to activate the instinctive “flight-or-fight” response, elevating heart rate and increasing the oxygen availability to the major muscles and lungs. Adrenaline acts as an analgesic, and this pain relief causes enhanced strength, endurance, and heightened mental acuity. One result of greater muscular activity is the release of endorphins which are known as the “neurotransmitters of pleasure” (Mezzacappa 1999, 198).

Stressful situations also cause the hypothalamus and the pituitary gland in the brain to activate a neurotransmitter called dopamine that gives a “natural high.” This is one reason that some people repeatedly engage in high-risk activities so they can experience these pleasurable addicting effects. Researcher Fred Previc revealed important functions of dopamine in his book, *Dopaminergic Mind in Human Evolution and History* (2009). He revealed that dopamine is a chemical agent or brain neurotransmitter heavily involved in “motivation” and “reward.” Previc explained further that dopamine “stimulates behavior” and “improves mental focus,” and when cocaine or other drugs interferes with the “reuptake of dopamine back into the pre-synaptic neuron, thereby increasing the supply of dopamine in the synapse” a user experiences a supercharged stimulus (2009, 23). This process is also described by Arnold J. Mandell (1980) as “neurobiological transcendence” or going beyond the “normal limits of mechanisms of adaptation.” To go beyond the limits, Mandell revealed, neurochemical changes are induced in dopaminergic neural systems in such a way as to deregulate dopamine synthesis leading to “runaway excitation in some brain functions” (1980, 387). Previc concurred and noted that “the fact that cocaine and



amphetamine are highly addictive substances reveals how some dopaminergic systems are linked to process of rewards craving” (2009, 23). He described that dopaminergic behavior becomes highly addictive psychologically because of these neurochemical rewards (2009, 162). The final reason that humans seek to experience higher levels of dopamine is that this neurochemical assists humans in dealing with dangerous or stressful situations. Dopamine activity increases during times of stress and activates “motivational drives” and “instills a belief in individuals that they, not fate, are in control of their destiny—i.e., the internal locus of control trait” (Previc 2009, 79). Motivational systems to perform certain behaviors have their origin in repeated incitements of neurochemical pathways and experience with the rewards that they induce. The sense of control that Previc refers to derives from the state of well-being that dopamine provokes.

Psychologists undertaking studies of violence and its varied physiological responses have derived a standard multilevel approach to determine the level of neuro-hormonal release. In these assessments, the physiological signs of autonomic arousal include: galvanic skin responses, blood pressure, and heart rate (Florian 2004, 61). Wolfram Boucsein (2012) explained that galvanic skin response (observed by increased sweating) is one of the most sensitive markers for emotional arousal, and this heightened arousal increases “electro-dermal activity” or “skin conductance.” Skin conductance (sweating) is not consciously controlled but is modulated by the autonomic nervous system, and it can be activated by either happy/positive or threatening/negative stimuli. Measures are often taken of subjects before, during, and

after exposure to depictions of violence or scenes of death. The meta-analysis conducted by Anderson et al. (2001) used three measures to determine physiological arousal: systolic blood pressure, diastolic blood pressure, and heart rate. The thirty-three tests they reviewed determined that all the participants who viewed violence had increases for all three measures as well as more aggressive cognition (2001, 358) and a decrease in prosocial behaviors (empathetic orientation to others). In several meta-analytic reviews evaluating responses to violent video games, investigators found that video game play consistently evoked “aggressive feelings, aggressive thoughts, and physiological arousal” (Barlett et al. 2009, 225).

Several of these investigations revealed that participant responses to violence and violent scenes varied. Researchers identify “higher sensation seekers” as those individuals who have a greater need for arousal and, as such, choose media that have more violent content (Weaver et al. 2012, 176). Anderson et al. explained that certain persons are characteristically more aggressive than their peers and are thus more predisposed to aggressive behaviors (2003, 97). One explanation of these differences derives from a theory called Optimum Stimulation Level (OSL). OSL refers to a person’s preference for a certain level of stimulation from his or her surrounding environment, and if it is not optimal, that person will attempt to adjust it (Raju 2015, 272). M. Zuckerman (2006) conducted thirty years of research on the differences in individual predispositions to seek certain sensations, and he concluded that different OSLs are genetically determined, as well as being influenced by environmental stimulation. The traits of high and low arousal seekers have been categorized, and this

identification has been useful in multiple surveys. Eliassberg et al. (1994) discovered that viewers chose different media based on their OSL traits and surmised that high arousal seekers were more attracted to “hedonic,” emotionally stimulating scenes, whereas their opposites preferred more tranquil scenes. Xie and Lee similarly recognized that high arousal seekers rated violent previews of movies on a higher numerical scale of “anticipated enjoyment” than low arousal seekers (2008, 277). While it is important to appreciate differences in preference, the experience of watching or participating in violent actions appears to elicit emotional, cognitive, and physiological arousal in *all* participants. The difference is that some deem greater violent content more enjoyable than others.

Another important theory related to physiological and cognitive responses to violence exposure comes from the work of D. Zillmann (1983). He posited an “excitation-transfer theory” that explains how physiological arousal can be transposed into positive emotional and cognitive responses. The supposition is that as physiological arousal dissipates there is inconsistency between perceptions of arousal and the actual physical state. This residual arousal is transmuted into cognitive evaluations of new stimuli. Jamie Goldenberg (1999) surmised that Zillmann’s theory explicates the appeal of tragic media material. He asserted that because tragic material often has an “uplifting conclusion” or a traditional “Hollywood style ending,” the arousal elicited by the tragic material carries over to the conclusion which has a more positive outlook. This offers the participant a double reward from the physiological side

as well as the cerebral. Thus, the relocation of arousal intensifies the positive overall cognitive evaluation of the tragic material (Solomon 1999, 315).

A final discovery from several studies is that there is a “desensitization” effect with repeated exposure to real or imagined violence. The term “desensitization” is defined by Jeanne Brockmyer Funk (2005) as the reduction or elimination of cognitive, emotional, physiological, and behavioral responses to stimulus. Anderson et al. explained that habituation to neurophysiological reactions over a period of time is a “well established psychological phenomenon” where repeated presentation of an identical stimulus usually results in smaller and smaller neurophysiological responses to that stimulus (2003, 96). In the case of desensitization to violence, higher levels of violent content or “shock value” is required in subsequent exposure to attain the same level of arousal. Brockmyer Funk (2012) concluded that reduced emotional reactions to witnessing traumatic events occurs because humans “are simply not capable of prolonged arousal to other people’s tragedies,” and Drabman et al. (2001) similarly observed that frequent viewing of violence on television reduced emotional responsiveness to violence in the real world.

Though longer range effects from immersion in any type of violent scene or activity do exist, short-term exposure to violence results in increased enjoyment. This can be measured by emotional responses as well as physiological reactions detected in the frontal lobe of the brain (Brockmyer 2012, 5). In the long term, desensitization caused by multiple encounters with violence affects moral behavior, which results in a loss of empathy and an unwillingness to help others, and in subcultures with high

incidences of violence, victims are dehumanized to diminish the activation of moral reasoning (Guerra et al. 1994). Anderson et al. (2003) determined that “emotional desensitization” results in a heightened propensity to experience violent thoughts and behaviors and a minimization of “prosocial behaviors” (2003, 96).

In summary, the participants of these many studies all experienced some degree of elevated physiological arousal when exposed to violent scenes, and these responses were deemed greater if they occurred in the real world, if the imagery was made to appear more life-like or if the subjects were “high sensation seekers.” Desensitization to violence occurs for all types of persons who are repeatedly exposed to the same level of stimuli and to achieve the same physiological arousal in subsequent viewings the violent content needs to be more explicit and more graphic. While these studies had the advantage of live subjects and control groups to test their hypotheses, my analysis of the violence experienced by ancient peoples relies on the assumption that the biology of humans has not drastically altered in the past five hundred to seven hundred years.

I propose that the mechanisms for physiological arousal in collective religious experience (activating the opioid system) and exposure to violence (“adrenaline rush”) was the same for the Aztec as they witnessed violent deaths as it is modern subjects who watch violent killings on TV or in movies as a source of entertainment. The same habituation or desensitization effects would also have been similarly experienced. For example, some scholars believe that the intensification of war and of human sacrifice for both the Maya and the Mexica followed a chronological trend (Inomata et al. 2009, 82). I suggest that there are many reasons for this possible escalation including political

and economic requirements and an overall culture of violence; and critical to this discussion, there were biological reasons as well. There were significant physiological and social-psychological rewards experienced in their ritual program that typified shamanic activities. The body of research on shamanism and biological feedbacks to their rituals is equally contributive to a phenomenological analysis of Aztec monthly celebrations.

### **Shamanic-Like Rituals and Physiological Rewards**

Each culture manages ritual in vastly different ways and intensifies the experience per their own creative sources of cultural inspiration. Maurice Bloch surmised that ritual activities encompass a “cluster of phenomenon” that should be fully investigated and some aspects of ritual that may seem to be on the peripheral at first are often integral components (1992, 42). Chroniclers provide many clues that Aztec religious rituals contained shamanic types of activities that appeared not only in domestic settings but were also highly visible in their public ceremonies. Some investigators argue that shamanism was a central feature in Aztec daily life, especially in healing maladies (Aguilar-Moreno 2006; López Austin 1988; Ortiz de Montellano 1990). I suggest that shamanistic rituals also appeared in many different forms in their monthly feasts and provided certain groups with physiological incentives for participating.

Some archaeologists and ethnologists believe that shamanism is one of the original forms of human religion. Cross-cultural examinations reveal that this rudimentary form of spiritualism is found in all parts of the ancient and modern worlds, and it usually appears in foraging groups or small villages (Winkelman 2010, 120). Shamanism is a term that derived from European contact with the Tungusic language of Central Asia. The Tungusic term (*saman*) means “one who shakes” referring to the “agitated” condition of a spiritualist who enters an “ecstatic state” where the shaman travels out of body and into a spirit realm where communion with spiritual beings or animals occurred, assist in the healing of individuals, or placate harmful spirits before returning to his or her body (Eliade 1964, 4; Winkelman et al. 2010, 120). The important aspect of shamanic ritual is the ability to enter an ecstatic state, being “outside of the normal mode of functioning” or “standing outside oneself,” and this “soul journey” or “magical flight” is most commonly achieved as a charismatic spiritual healer in a community gathers a small group or his or her entire community together in a special room or outside around a fire for lengthy nighttime vigils of dancing, singing, drumming, and chanting (Winkelman et al. 2010, 120).

Shamanism is multidimensional and contingent upon cultural expectations. According to Bernard R. Ortiz de Montellano, shamanic religion in Mesoamerica incorporated the concepts and practices such as: the idea that all phenomena in the environment are animate; that the soul can separate and stray from the body during sleep, that supernatural forces cause and cure illnesses, that each level of the universe has multiple god-rulers with different powers, that humans have supernatural animal

companions who assist them as guardians, and that shamans were installed into their esteemed position by evidence of something miraculous associated with them such as defying death from an accident or illness (Ortiz de Montellano 1990, 68). Some investigators such as A. Hulkrantz (1985) hypothesized that as hunter-gatherer societies became more complex, shamanistic activities dwindled. But Ortiz de Montellano argued that this is not the case, highlighting the Aztec who retained shamanistic qualities in most of their religious ideas and practices even as they attained a state level of complexity. (1990, 68).

Aztec shamans, according to Sahagún, were an integral aspect of daily life throughout Aztec history, and he described them as “sorcerers” or individuals that regularly manifested malevolent powers that were feared by others. For instance, these “magicians” could be hired to destroy a person’s enemy and cause demons to enter other people, but they could also sweep the path for other people (or positively influence their life or lives) (Sahagún 1981, 4:43). López Austin determined that Aztec magicians (shamans) had special powers to send their *tonalli* or life force into mythical time and to return at a time they did not expect, and they journeyed along conduits used by the gods to escape the earth’s surface and were transported to the underworld or the celestial realm (López 1988, 1:69).

In his second edition of *Shamanism: A Biopsychosocial Paradigm of Consciousness and Healing* (2010) Michael Winkelman produced a biopsychosocial approach to understanding the biologically-based evolutionary process of the striking continuity found among the spiritual and healing practices and consciousness traditions



of many diverse groups across the globe (2010, xvii). His work was a meta-analysis of research from multiple studies conducted around the world. He described shamanism as a primordial form of transcendence of ordinary consciousness that reflected biological adaptations which enabled early human groups to experience ecstatic states (Winkelman 2011, 159). His biological perspective of shamanism was that it was an exaptation of “primate heritage” and was used as a ritual process to enhance psychological and social assimilation in increasingly complex societies. It facilitated the bonding of completely unrelated individuals into an “altruistic dynamic” by modifying states of consciousness and thereby accessing “dream functions” that were manifested in a “presentational (imagistic) symbolic consciousness,” and further provided cognitive tools and a place for the construction of mythological systems representing self, mind, and others (Winkelman 2010, xviii). Winkelman found that these developed symbolic systems were of significant adaptive value:

Ritually induced shamanic experiences produced synthetic symbolic representations that are exemplified in the shamanic soul journey and in guardian spirits. Basic features of these experiences indicate that they constitute forms of self-objectification and role-taking that expanded human intrapsychic and social dynamics. Similar processes are found in the classic shamanic experience of death and rebirth, a symbolic death of the old self that permits the emergence and integration of a higher order self. (2010, xviii)

Shamanic rituals were communal experiences, and the simultaneously induced altered states of consciousness were classified in socially accepted terms and evaluated in light of established conventions. Even though participants may have taken on different roles in shamanic ceremonies, there was a unifying dynamic that Winkelman identifies as

“intrapsychic,” and it was this aspect of shamanism that integrated emerging collectives, and protocols had to be observed for shamanic rituals to be successful.

For shamanic rituals to have efficacy, the state of the spiritualist is altered in such a way that he or she can have an “out of body” experience. From neurological and psychological research conducted on these states, evidence exists that the person’s consciousness is altered in such a way as to make him or her see and experience a totally different modality. Etzel Cardena (2011) suggested that most people do not realize that during the daytime, in a wakeful state, humans ordinarily transit among different states of consciousness without any intervention. From a neuro-phenomenological standpoint there are four different cyclical and systemic states or modes of consciousness: deep sleep, dreaming, waking, and integrative (Winkelman 2010, 5). In his meta-analysis of research on the topic, Winkelman detected from cross-cultural patterns that there are standard biological functions and organismic needs found in all humans that create the conditions for varied states of consciousness (2011, 29). The fourth state, which Winkelman identified as “integrative” or the “integrative mode of consciousness” (IMC) occurs when altered consciousness conjoins various portions of the brain, and this alteration is utilized in shamanistic techniques to take advantage of biological potential. The drive to experience IMC comes from a pleasurable contrast of brain waves from normal waking consciousness - which involves a “sympathetic dominance of and desynchronized fast-wave activity of the frontal cortex,” - to an IMC state, which is dominated by the parasympathetic system of the brain (Winkelman 2010, 5). Mandell (1980) explained that the IMC state:

...engages a parasympathetic dominant condition characterized by synchronized and coherent high-voltage theta wave activity originating in the circuits linking the brain stem and the hippocampal-septal area of the paleomammalian brain with the frontal cortex. These synchronized brain waves ascend from the lower brain areas to the frontal lobes, producing an integration of brain wave patterns across the major levels of the brain and interhemispheric synchronization of the frontal cortex.

In other words, different portions of the brain are linked together by synchronized brain waves, and as a result the mind produces the following effects: different outputs for the visual system (new imagetic structures or internal visionary world), new symbolic forms of communication (spiritual vocabulary), and the capacity to alter emotional states (giving a general sense of well-being, healing, and affective responses) (Winkelman 2010, 5).

One of the greatest adaptive outcomes of IMC linkages in the brain is the emotive, affective response, including a desire to care about the well-being of others. Self-preservation drives are in direct conflict with affective needs and social commitment desires, and shamanic ritual resolves this tension by modulating the drive of self-interest with an interest in others (Cory 2000). According to J. Ashbrook (1993), in the IMC the right hemisphere of the brain is connected with other portions of the brain, and this is critical because the right side of the brain is responsible for emotions and empathetic responses to others.

Experiencing “transcendent states” on a biological level is also observed by Mandell (1980), and he finds that these euphoric sensations occur as the result of the stimulation of different neurochemical pathways in the temporal lobe. A decrease in “serotonin inhibition” to hippocampal cells increases cell activity and produces slow-

wave activity of the “alpha, delta, and theta waves.” These changes produce hypersynchronous discharges (electrical impulses that are synced together) across several different portions of the brain and give the same effects as many drugs ingested for the purpose of inducing these brain-wave patterns (Mandell 1980, 381, 390). According to Winkelman, several of the agents and procedures that elicit these types of neurochemical alterations in the brain are: “hallucinogens, amphetamines, cocaine, marijuana, polypeptide opiates, long distant running, hunger, thirst, sleep loss, auditory stimuli such as drumming and chanting, sensory deprivation, dream states, meditation and a variety of psychophysiological imbalance” (2011, 31).

The IMC also contains a sub-form of consciousness that engenders “out of body” experiences, achieved by prolonged stress to the entire body and observances include preparatory restrictions of fasting, water deprivation, exposure to extreme temperatures, sexual abstinence, sleep deprivation, chanting, drumming, dancing, ingesting psychoactive substances to the point of physical enervation, or profound fatigue, and a period of unconsciousness. These extreme physical activities set the sympathetic nervous system into a state of exhaustion and collapse allowing the parasympathetic system to dominate.

Dance is a universal aspect of shamanism and is associated with the release of important neurochemicals that alter states of consciousness as well as initiate social connections. From their work on physiological responses to dance, Bachner-Melma et al. (2005) discovered a unique genotype related to dancing that more efficiently conveyed serotonin transporters (SL C6A4) and arginine vasopressin (AVPR1a), an

opioid linked to socialization. Winkelman further noted that the interaction between vasopressin and serotonin in the hypothalamus is instrumental in the control of communicative behavior, and he also observed that dance transformed the states of consciousness through a variety of mechanisms including the release of opioids, the rhythmic stimulation of brain waves, and prolonged dancing routines that induced fatigue and collapse of the sympathetic system in the brain (2011, 167). Other social scientists have observed that dance, in addition to altering states of consciousness is important as a religious rite of spiritual communication and of social bonding. In his book, *Anthropology and the Dance* (2004), Drid Williams proposed that dance is “an expression of the choreographer’s and participants’ knowledge of human feelings, ideas, and the universe,” but more importantly, dances unify disparate individuals into cohesive groups. Liz Lerman (2008) studied dance in religious settings for over fifteen years. She distinguished that the “rigor of dance ...could deepen the quality of the religious experience,” and that the act of dancing became a two-way blessing for the audiences and the participants. She found that religious dance synthesizes personal narrative with a larger narrative, and at the same time, fuses movement with prayer (Lerman 2008, 43).

Singing, chanting, and drumming often accompany dancing and are prevalent features of shamanic ritual. Medical specialists have observed their amazing cumulative effects on the brain and nervous system. Prolonged rhythmic auditory stimulation synchronizes with wave patterns of the brain and alters theta and alpha waves (slow wave frequencies) inducing different visual experiences including

hallucinations, movement, pattern, colors and heightened emotional states (Neher 1961, 1962). Music arouses the body and brain in different ways than speech or other forms of communication and the production and reception of music derives from the emotive right hemisphere of the brain (Peretz et al. 2003). P. Newham (1994) substantiated that music has been observed to affect emotions in the same way among all humans and these “holistic” and “analogical brain processes” that include the subcortical portion of the brain evoke unique expressive emotions. Music also stimulates neurochemical releases, and according to Panksepp et al. (2009), music increases the production of the hormone oxytocin, a mammalian bonding hormone that increases desire for physical and emotional closeness. These hormonal outputs alter the individual and influence group dynamics with positive rewards for interconnectedness.

Stephen Marini (2003) described religious song as a vehicle for fusing singers with a mythic identity. He also surmised that music supplies an occasion for social barriers between performers to disappear and a new reality to emerge of “authentic togetherness” (2003, 6). A particularly potent vehicle for achieving an anti-structural state is in musical chanting. In Andrew Welsh’s (1978) comparison of ancient and modern European and tribal lyrics from across the globe, he discovered that chanting had similar social consequences. He wrote, “The goal of the chant is an ambitious one; through the dance, through the social action of the ritual, through the shared knowledge of communal origins, it attempts to create and maintain a rhythm uniting individuals

into a community” and simultaneously a fusion with the sacred and therefore is publicly efficacious (Welsh 1978, 166).

Anthropologist Deborah Kapchan (2008) claimed that the state of communality brought on by collective singing could be realized even in settings where participants did not share the same belief systems. She conducted research at a Morocco interfaith music festival called Fes Festival of World Sacred Music. The eclectic mixture of music ranged from Hasidic songs from Eastern Europe to Sufi music from Morocco. She found that the heterogeneous audience connected with each other in a process she identified as “sonic translation” or a communicative device that translates “affect across cultural and linguistic divides” (Kapchan 2008, 468). She ascertained that “aural codes” were more readily translatable and produced a “festive sacred” or a configuration of experience of the sacred via a heightened attention to auditory and sense-based modes of devotion conceived of as “universal” (Kapchan 2008, 467). The general purpose of the festival was to create a “cultural memory of humanity” and a universal and transnational notion of the sacred (Kapchan 2008, 480). Liz Lerman concluded that ultimately ritual performances including: singing, dancing, and chanting provide a bridge “between thought, action, and spirit” and connect groups of people with common goals and ideas (Lerman 2008, 43).

Ascetic practices, as part of or in preparation for further shamanic rituals, correspondingly produce neurochemical responses and manipulate divisions in the autonomic nervous system (ANS) that evoke similar altered states of consciousness as found in the rhythmic and physically exhausting activities just discussed (Winkelman

2010, 141). Painful austerities such as bloodletting, sensory deprivation, sleeplessness, or restrictions of food and water override natural drives which results in a stimulation of the ANS and an eventual withdrawal of the sympathetic nervous system leading to parasympathetic ascendancy. An interesting outcome of these physiological changes is the release of a flood of endorphins, a similar response observed in subjects exposed to violence or stressful situations (discussed previously). As Winkelman explained:

A variety of stressful stimuli (burns, extreme cold, pain, injury, and toxic substances) all lead to hypertropic activity of the adrenal cortex and contribute to extreme stimulation of the SNS (Sympathetic Nervous System) to the point of collapse and result in a PNS (Parasympathetic Nervous System) dominant state. Endorphin release is provoked by diverse trauma and stress. Extremely painful stimuli can result in the direct stimulation of the hypothalamus and hippocampal-septal area, resulting in the emergence of synchronized slow-wave potentials on the EEG (causing an integrative mode of consciousness). Emotional stress can also provoke the release of endogenous opiates or endorphins (pleasure chemicals). (2010, 142)

Others corroborate Winkelman's work, noting that painful ritual austerities such as self-flagellation or exposure to extreme temperatures activate the release of endogenous opiates and opioid and non-opioid pain-inhibitory systems (Bodnar 1990). As discussed previously, these endogenous opiates are pleasurable. What is intriguing in the study of shamanic rituals is that most of their activities take place at night when humans have the highest level of endorphins (Henry 1982). Also of great interest is the fact that most of the ritual actions involved in shamanism result in increased autonomic arousal.

There is evidence, from the Aztec ethnohistorical records, that ritual participants often ingested or inhaled substances for the purpose of attaining ecstatic flight. The use of hallucinogens in shamanic rituals demonstrates similar physiological responses as extreme exercise and painful rituals. Psychotropics principally affect the serotonergic



neurotransmitter system. Research conducted by A. Mandell (1980) revealed that common reactions to most ingested hallucinogens stimulated the hippocampus with “high-voltage” slow-wave synchronous brain waves, synchronizing the frontal cortex with an overriding parasympathetic state. Natural and synthetic drugs had the same interaction with the serotonergic system in disinhibiting the brain stem and limbic structures, resulting in “enhanced information in-flow, emotional lability, increased visual experiences, and synchronous brain discharges (Winkelman 2010, 144). In addition, psychedelics reverse the repression of dopamine, a result of serotonin suppression, and as a result, the subject experiences higher dopaminergic activity which produces a sense of euphoria and pleasure (Previc 2009) The serotonin disinhibition is most intensely experienced by the release of activity in the limbic system’s emotional processing areas and visual centers in the cortex, and as a result the individual has extremely powerful visual and emotional experiences and inclinations towards social connectedness (Winkelman 2010, 150).

The pattern of parasympathetic dominance is evoked by many different processes and the independent discovery of its effects in diverse cultures has led to the appearance of universal shamanistic practices. Shamanism was, in most cases, integrated into social institutions because they met important human needs of excitation, bonding, and healing (Winkelman 2010, 181). Shamanic ritual practices also contributed to “healing modalities” and “therapeutic transformations” which included psychological health, with stress management and anxiety and fear reduction as one of the significant remedies (Winkelman 2010, 184).

The final benefit of shamanic performances was found in the collective nature of these rituals. These intimate shared experiences of self-denial, music making, and euphoric journey engendered social bonding. These connections had physiological benefit of “opioid release.” Winkelman concurred that shamanistic healing evoked “ancient mammalian bonding mechanisms involving neurobiologically mediated forms of attachment that release endogenous opiates and elicit endogenous healing” (2010, 223). In addition, Charles Whitehead (2011) observed that “social contagion,” an amazing human phenomenon, causes a person to unwittingly mimic the autonomic expressions of others such as laughing or yawning. He established that when humans act spontaneously together, physiological indices such as heart rate, respiration, and galvanic muscle response tend to converge in the same patterns among the group (2011, 187). This is just one more indication that an essential interplay exists between biological functions and group dynamics.

Altering states of consciousness is a ubiquitous occurrence around the world. With the advent of writing in the ancient world, numerous accounts record the experiences of participants in these activities. Many writings from ancient Greece concern the methods and experiences of attaining altered states of consciousness. For example, Pausanias (140 C.E.) described ritual preparations of “secluded lodging in a small building, cold baths, prayers, special diet, and sexual abstinence, as well as music and dancing” before entering an oracular cave (a secluded place designed to induce a trance-like state to see visions of possible future events) (Ustinova 2011, 57). Ancient Greco-Roman ritual participants (novices) were recorded to have undergone a

particular staged process which began with fasting, ascetic abstinence, purification rites, and sitting alone in a state of meditation. These rites were held at nighttime and initiates approached “the threshold of death” by an overwhelming experience of meeting with divinity beyond the limits of space and time (Ustinova 2011, 65). In the ancient Mediterranean world, the Grecians expounded upon these experiences and developed an entire philosophical system based upon them, with a central tenet declaring that liberation from the mortal flesh allowed humans to experience a more desirable state of being or a realm beyond materiality where humans could attain an “ultimate truth” (Ustinova 2011, 67).

The questions that arise in relation to the ancient Aztec is whether they engaged in similar activities, whether they derived the same types of multi-level responses that elevated their states of being, and how they managed these possible transformations. As Winkelman et al. reminded us “humans are biological organisms whose primary means of adapting to the world is culture” (2010, 6). The Aztec had their own unique orientation to the natural and human world, and their ritual sacrificial programs served various purposes including mitigating their apprehensions concerning annihilation. In Aztec mythology sacrifice was essential to the continuance of life, and Aztec culture was organized around this idea. These views created unremitting anxiety about cataclysm and a fear of extinction, and as a result they believed that it was their responsibility to prevent catastrophe by spilling the blood and offering the hearts of enemy combatants to sustain the movement of the sun (Betancourt 1997, 25). For this reason, when the Aztecs experienced a period of crisis such as the death of a king, a

solar eclipse, or a drought, they felt compelled to offer more blood to fend off disaster (Betancourt 1997, 25). Ideological systems were crafted to mitigate collective anxieties and ritual was the vehicle used to manage and control those anxieties. Social psychologists have been instrumental in setting forth theories that have great interpretive value in determining the ways that cultures deal with the trepidations of crises and death. These theories offer additional perspectives as to why the Aztecs incorporated violent killings in their religious ceremonies.

### **Social-Psychological Theories: The Attraction/Fear of Death**

Birth, aging, and death is a path that all humans traverse, and each culture manages this process differently, but the “strong emotions caused by violent death” are equally shared by all societies (Inomata et al. 2009, 81). Inomata et al. considered that these ardent emotive responses translate into a universal and intrinsic interest that draws people to spectacles of terror. They found that this “morbid curiosity” is pervasive in art, stories, and ceremonies that have “death” as their prevalent theme (2009, 81). Cross-cultural comparison reveals common anxieties associated with death as well as diverse ways of managing the uncertainties posed by its realities.

In a modern context, a recent traveling exhibit called “*Body Worlds*” demonstrated a ubiquitous concern with death. In this exhibit, “plastinated” corpses (preserved by an innovative technique that turns the human tissues of deceased persons into hardened durable plastic material) are displayed in a way to make them appear to be semi-alive. The promoters of the show exhibit skinless bodies (revealing muscles

and internal organs) engaged in a wide variety of activities found in the living world, such as playing chess, riding a bike, or throwing a discus. The popularity of this art-form has attracted tens of millions of viewers making it is one of the most successful exhibits in the history of science museums. Interestingly, it was referred to by National Public Radio as “America’s new love affair with corpses on display” (Lantos 2011, 1). What are the motivating factors that draw these large crowds to come face to face with the preserved dead? George J. Annas reflected that:

The interplay of life and death, corpse and “real body,” is never far from the surface in *Body Worlds*. It draws us to the exhibit and provides the same attraction-repulsion emotions we have towards our mortality and our own deaths. Plastination puts the corpse on display in a way that seems to provide us with a new alternative to cremation and burial (which hide the corpse from view), giving us the illusion of greater control over our bodies after death (2011, 17).

Medical practitioner Christine Montross reasoned that the exhibit draws upon a common “morbid curiosity” found in different groups in many ages who gathered for public executions, human dissections, and viewings of corpses at funerals (2011, 50). The witnessing of death reassures the survivors that “whatever personhood existed in the body prior to death is now undeniably elsewhere” which is disconcerting and causes the living to wonder: “if their loved one is not in the body then where are they?” (Montross 2011, 51). For Montross, the *Body Worlds* exhibit followed a common proclivity found in all humans to treat death as something that we can “cheat, escape, or conquer” because in this way we feel more comfortable with its reality (Montross 2011, 52).

The same sense of cheating death occurs in the controlled arena of human sacrifice and the spectatorship of other forms of violence where the audience is sheltered from any harm. Jacques Derrida (1995) concluded that humans sacrifice others to avoid being sacrificed themselves. Durán observed that for the Aztec being captured in war for future sacrifice was the worst possible outcome, and warriors “often preferred to be torn to pieces rather than be captured,” and so capturing and sacrificing their enemies may have alleviated these fears (1971, 113). Mark Pizzato (2005) conducted a cross-cultural comparison of the attraction to violence of many societies, ancient and modern, who have been drawn to observe the violent deaths of others. He reiterated:

We may avoid thinking about our own deaths, yet we are attracted to the performances of violence by others, involving life-threatening fears or glimpses of death, onstage and onscreen. (The popularity of *America's Most Wanted*, *Cops*, *Fear Factor*, and *Survivor* as “Reality TV,” plus an overdose of that with the World Trade Center and Pentagon plane crashes are recent examples). Through such spectatorship we experience the fear, suffering, and death of others vicariously. We identify with the struggle of the human offering or feel superior to the doomed victim. We explore the potential meanings of our own mortality, our being towards death, through the sacrifice of others onscreen. (2005, 2)

Perceived control over uncontrollable and fearful prospects is an adaptive mechanism for humans. Miller (1979) asserted that having a sense of control comforts people with the knowledge that their actions can avert future disasters thereby assuaging anxiety and stress. Social psychologists Thompson et al. (2008, 41) revealed that one of the most pivotal motivations in human behavior is to have a sense of control over aspects of life that seem threatening. They found that the participants in their

studies were more motivated to seek control when there was some type of reward associated with the endeavor, and one of the most valued rewards was a reduction in anxiety (Thompson et al. 2008, 41). In some cases, the opposite, a sense of hopelessness or perception of no control over important undertakings, leads to depression, apathy, and negative physical reactions associated with stress (Seligman 1975). As a result, people desire to feel in control to avoid the painful experience of perceived uncontrollability (Thompson et al. 2008, 42). Several anthropologists see ritual as a place where perceived control is experienced on a group level. They also ascertain that in general people resort to “illusory control” and prefer this over real control because it has the same effects of reducing anxiety without arduous effort. They define illusory control as, “overestimating one’s personal control by judging that one has control in a purely chance situation or overestimating their effectiveness to get the desired outcome or to avoid a misfortune” (Thompson et al. 2008, 45). The most uncontrollable event for humans is eventual death. For this reason, humans have contrived collective strategies to deal with this ultimate trepidation. Many theories concerning death and ritual human sacrifice have been set forth from the fields of anthropology, sociology, and religious studies, but there are not many significant social-psychological theories that examine the implications of death and how societies manage the trepidations related to it. The exception is a group of social-psychologists that have conducted research on this very topic and identify their theoretical framework as Terror Management Theory.

Terror management theory (TMT) is a social-psychological theory that explains how and why humans engage certain strategies to mitigate the dread associated with a knowledge of inevitable mortality in the face of basic instincts for self-preservation (Greenberg 1999). The theory was inspired by Ernest Becker's (1973) supposition that development of human cognitive abilities came with an oppressive burden—an awareness of inevitable death. Becker surmised that humans coped with the resulting cognitive dissonance by inventing worldviews that mitigated mal-adaptive anxieties. Solomon et al. (2004) expanded upon Becker's work and pronounced that human intelligence gives people a great advantage over other species, and along with this comes a “self-awareness” which allows them to know that they are alive and that they can ponder their past and reflect upon their future. These cognitive abilities pose two fundamental psychological problems; first, an awareness of a wide range of potential, uncontrollable threats to continued existence; and second, the knowledge that no matter what is done to moderate these threats, “death—the end of existence, the failure of all systems designed to keep us alive—is inevitable” (Greenberg et al. 2008, 116). In turn, Solomon et al. described the fundamentals of Terror Management Theory in the following way:

Terror Management Theory posits that humans share with all forms of life a biological predisposition to continue existence, or at least to avoid premature termination of life. However, the highly developed intellectual abilities that make humans aware of their vulnerabilities and inevitable death create the potential for paralyzing terror. Cultural worldviews manage the terror associated with this awareness of death primarily through the cultural mechanism of self-esteem, which consists of the belief that one is a valuable contributor to a meaningful universe. Effective terror management thus requires (1) faith in a meaningful conception of reality (the cultural worldview) and (2) belief that one is



meeting the standards of value prescribed by that worldview (self-esteem). Because of the protection from the potential for terror that these psychological structures provide, people are motivated to maintain faith in their cultural worldviews and satisfy the standards of value associated with their worldviews. (2004, 20)

Cultural worldviews are important instruments for managing anxieties related to the knowledge of our mortal condition. Even when these worldviews are in opposition to the worldviews of other encountered groups, adherents cling to their own version because of the psychological refuge it provides—shelter from anxiety and terror.

An important aspect of cultural worldviews is that they offer a sense of immortality or a means to overcome death (William 2011, 99). According to TMT, a cultural worldview is a “theory of reality” which includes a set of standards of valued behavior and characteristics that promise adherents that they are appreciated and that reality is meaningful, enabling them to transcend death (Maxfield 2014). Cultural worldviews offer the hope of a “literal immortality” and prescriptions of how to obtain it or a “symbolic immortality” that provides individuals with a perception and belief that they are a worthwhile part of something greater than themselves or that will last in perpetuity (Maxfield 2014, 36). Using the concepts of Terror Management Theory, Williams identified four important psychological anxiety buffering aspects to cultural worldviews: 1) they provide a perception of immortality and reduced dread in the face of death, 2) they facilitate a feeling of social connectedness and an in-group identification, 3) they offer structure and order to existence, and 4) they provide a grand sense of purpose, a feeling that this life happened for a reason, and a conceptualization that this existence is purposeful (2011, 99). These psychological benefits are so

powerful that even in hierarchal societies, worldviews encourage social solidarity amidst different forms of inequity. Becker, in his book *The Denial of Death* (1973), reiterated that humans generally conform to the culture's ways, follow its rules, obey its authorities, and defend their shared beliefs of an immortal condition at sometimes great cost to themselves even of their own lives.

Terror Management Theory has been substantiated by numerous tests all around the world. According to Maxfield, as of 2015, there have been over five hundred empirical experiments conducted in over twenty countries that support various hypotheses using a theoretical framework of TMT (2015, 37). Greenberg et al. (2008) demonstrated that their theory is testable in a laboratory or real world setting by using a concept called "mortality salience" (MS). Mortality salience includes reminders to individuals of their own impending deaths or symbolic or real reminders of the demise of all humans. When MS is introduced to subjects in an experiment, the researchers assess whether this strengthens their defense of their own worldview, increases their self-esteem, or escalates prejudice against others with different worldviews (2008, 117). Greenberg et al. reported that a vast body of research confirmed that Mortality Salience engenders a stronger adherence to a person's own worldview.

In many studies, MS also engendered harsh retaliation and even aggression against anyone who challenged that participant's worldview, while in the same vein encouraged positive reactions to anyone who validated their worldview (Greenberg et al. 2008, 118). Hirschberger (2006) conducted several experiments testing MS in the framework of TMT in Israel, and he discovered that MS increased the blaming of

victims who held opposing worldviews, for injuries resulting from violent acts instigated by the participant's own social group. These injuries were usually very serious which caused an elevation in MS for the participants. This study demonstrated that societies which are constantly threatened with bodily harm or death by outsiders tend to hold onto their worldview more vociferously. Considering these positive results supporting TMT, it is also important to acknowledge that there is not always consensus to a worldview within groups.

Recent work on TMT reveals contestation over competing worldviews as well as undercurrents within encompassing worldview systems. Other scholars such as McAdams (1992) warned against "oversimplifying" ideologies and their modes of attachment to other cultural phenomenon as well as an "overemphasis on coherence and standardization and consequent neglect of subtle and indirect clues to internal social tensions or contradictions." Conrad et al. discerned that "ideology-making" is a process, and worldviews slowly transform, adapt to new conditions, and are sometimes dramatically altered. Some social-psychologists recognize similar nuances with worldviews that have critical explanatory value for TMT. Maxfield argued that for those cultures that sustain worldviews unattainable by most members of a culture, they are "likely to breed psychological problems" (2014, 40). The disenfranchised population does not acquire the "self-esteem" contingency because of "unmet expectations and disappointment," and in these cases, the anxiety-reducing remedies are not available thereby disrupting psychological well-being (Maxfield et al. 2014, 40). Maxfield et al. provided the example of cultures that promote cultural standards

that emphasize an unreachable “ideal” which causes adherents to experience “depression, anxiety, eating disorders, and even declines in cognitive performance” (2014, 40).

On a larger scale, the comprehensive demise and discounting of a cultural worldview has debilitating psychological effects. For example, Saltzman et al. (2004) recognized psychological problems such as anxiety and depression among peoples who underwent “cultural trauma” during the colonization process where their cultural beliefs and practices were eradicated. A similar demoralization process happened, according to Conrad et al. (1984), when the Aztec lost major wars and were no longer the ultimate victors their ideology advocated they should be as guardians of the war god, Huitzilopochtli.

Other researchers, using the TMT framework, investigated how worldviews sustain attacks from competing ideational systems from within and without. Sustaining the authenticity of worldviews is highly regarded when they offer a means of transcending death. A common defensive strategy is to attack the source of “worldview threat” by physical or ideological means. Greenberg et al. (1990) demonstrated that the derogation of an opposing ideology is a frequent protective measure in defending one’s own worldview. Hayes et al. (2008) proposed that some groups resort to drastic measures to achieve ideological survival, and they do this by physically or symbolically annihilating the “source of the threat.”

When an opposing belief system is highly esteemed or is not easily discounted, groups often resort to incorporating some elements of the opposing system into their

own. Hayes et al. (2015) reported that one important defensive reaction to “ideological threats” is “accommodation.” This term, as they explain it, refers to “accepting and incorporating parts of threatening information into existing belief-structures” (Hayes et al. 2015, 521). Using a TMT framework, this group of social psychologists conducted five different studies to determine the various means groups and individuals employ to cope with worldview threats. They found that accommodation involved selective modification of only peripheral worldview beliefs while still preserving fundamental beliefs (Hayes et al. 2015, 521). At their core, worldview beliefs function to manage deeply rooted fears concerning death. As such, threats against these beliefs denigrated the capacity to keep “death related thoughts” or “death thought accessibility” (DTA) distant from consciousness and made them uncomfortably accessible (Hayes et al. 2015, 524). Subjects of their study were motivated to reinforce their own worldview to reduce DTA. They did this by either disparaging the threatening ideological system or by accommodating peripheral elements. The findings of the study demonstrated the tenacity of cultural beliefs. They also reiterated that cultural worldviews offer literal or symbolic immortality especially to those members who meet or exceed expectations or normal standards of conduct (Hayes et al. 2015, 523). Because of the conservative nature of worldviews, outsiders are viewed as menacing and undesirable.

TMT also offers a backdrop for several studies on stereotyping, terrorism, and violence. Pyszczynsky et al. (2008) recognized problems for groups who encounter an oppositional worldview that threatens established anxiety management mechanisms. They discerned three possible responses to maintain psychological equanimity;

“derogating threatening out-groups; attempting to convert them to one’s own worldview; or, if the threat is sufficiently strong, simply exterminating them” (Pyszczynsky et al. 2008, 318). In one of their many trials, Pyszczynsky et al. found that Death Thought Accessibility increased punitiveness toward insiders and outsiders who violated cultural norms. The results also demonstrated more ardor in a subject’s appreciation for symbols of the culture (such as banners or crucifixes) and or charismatic leaders who purported the superiority of their culture over others (2008, 319). Pyszczynsky et al. bemoan that in numerous instances diverse groups of people take up the “tools of mass violence” which has resulted in the massacre of innocent lives in the name of a “greater cause” (2008, 322).

The same findings have also been replicated in studies not using TMT as the framework. Vidal et al. (2003) discovered that violence in the media was deemed pleasurable if it was justified by a greater cause. The participants of their study esteemed the violence more if they could identify themselves with the “aggressive characters.” Antagonistic actions were acceptable if the perpetrators were from the viewer’s own cultural background and they were attacking a character deemed as “bad” or “evil” because they were outsiders or had characteristics outside the norms and values of the viewer’s culture (Vidal et al. 2003, 382). Social comparison theory further suggests that “downward social comparison” elevates a person’s own subjective well-being (Goldenberg 1999, 316). It is also at play when individuals identify themselves with the “good characters” who embrace correct traditions and who attack opposing characters who possess false or different cultural views. In modern media, melodrama

evokes communal strength and admiration of protagonists while the audience anticipates violent revenge against evil characters who terrorize others (Pizzato 2005, 4). Pizzato observed a typical formula for Hollywood films that portray “conventional American stereotypes of good and evil, with righteous justifications for violence,” usually against foreigners (2005, 4). These films of “spectacular sacrificial bloodshed” reveal the terror of potential chaos while “rehearsing an ultimate submission to providential authority—with melodrama’s seductive formula of the good being threatened by evil, yet triumphing in the end (Pizzato 2005, 4).

Jeffrey Goldstein (1999) investigated the causes of attraction to violent entertainment and he identified several motivating factors including a “justice motive.” He discerned that watching films was more enjoyable when the viewer identified with a protagonist who had a similar background and harmed an antagonist who held an opposing outlook (Goldstein 1999, 279). Branscombe et al. (1992) noted that spectators at violent sporting events enjoyed the victory of the winning party to a higher degree if they self-identified with the successful team. For example, when American viewers watched a boxing match between an American and a Russian, their greatest pleasure and physiological responses were reported when the American boxer beat the Russian (Branscombe 1992, 92).

The same “justice motive” is operational in the setting of war. An attacking or defending military force are both inspired by the “group’s ideology” and are motivated by the correctness of their cause. Researchers of terrorist groups acknowledged that they exaggerate the differences between attackers and their victims in such a way as to

dehumanize them. They also deny the effects of their actions and the damage done to their victims because loyalty to the terrorists' superior ideology take precedence (Horgan 2014, 127).

Another interesting outcome of extreme forms of group conformity is a process called deindividuation as discussed by scholars of "crowd behavior." This occurs in groups when they collectively feel threatened by outsiders. Deindividuation occurs when "social restraints are weakened and impulsive and aggressive tendencies released as the person loses individual identity, usually as the result of being part of a large group or having his or her identity concealed in some way" (Horgan 2014, 127). Reduced individuality causes less concern for self and more interest in the concerns of the group. TMT explains that these behaviors are anxiety buffering mechanisms. Reminders of death are constant on the battlefield and anxieties produced by "Death Thought Accessibility" are ameliorated by clinging more ardently to cultural worldviews. Loyalty to the group buffers individuals from these anxieties and categorizing the enemy in a negative light is part of this process. Greenberg et al. stated, "A large body of research has shown that MS (mortality salience) leads to harsh punishment of those who violate values in the participant's worldview" (2008, 118).

Researchers identified one final psychological reward that participants garner from viewing violent media: a sense of empowerment and mastery over uncontrollable events such as death. Goldenberg et al. suggested that people who have death close to their consciousness prefer violent forms of media because they can experience emotional and physiological arousal within an environment that is completely safe and



where they remain unharmed (1999, 317). Goldstein recognized that experiencing violent dramatizations in a “protective frame” offers spectators an outlet for the need for excitement while also giving them a sense of control in a secure environment. The protective frame is operational because the violence occurs in a “parallel but different reality” where it can be observed and experienced without the heightened emotions it elicits and thereby not spoiling the enjoyment (Goldstein 1999, 280).

Gratification is further increased when subjects have closer accessibility to death-related thoughts while remaining in a well-ordered, secure situation. Greenberg et al. revealed that from a TMT perspective, humans have different strategies to suppress death-related thoughts to deny or minimize vulnerability. An interesting finding in their study was that experiential modes of encountering violence (mortality salience) offered greater worldview investment and emotional responses than experiencing the violence in only a “rational” manner, though subjects in both cases remained safe from the effects of the violence (Greenberg et al. 2008, 120). Webber et al. concluded from their research that disagreeable content and the ensuing emotional response plays a significant role in Death Thought Accessibility and the resultant need for psychological structures that shield individuals from the fear of death (2015, 152). This confirms other studies that determined more enjoyment and physiological arousal is garnered in watching video games and television shows that have greater realism.

Spectacles of death were close at hand in ancient Aztec ceremonies and Roman games. Fagan remarked that spectators of the Roman games were exhilarated by “vicarious participation” or “self-substitution,” metaphorically approaching “the

dangerous edge” with all the excitement this entails in a “safety zone” where they remained physically unharmed and “detached” from the uncertainties of action yet still received the enjoyment of vicarious risk-taking (2011, 205). Security of spectators in the Roman Colosseum was ensured by a 2.2 to 4-meter-high *podium* wall that surrounded the performing arena, and by nets that extended even higher to protect the audience from tigers and other cats that could jump over the wall. In addition, large numbers of soldiers were stationed around the amphitheater to protect the audience (Junkelmann 2000, 34). The questions that remain are how the violence in Aztec sacrificial ceremonies was handled and what the possible biological, psychological, and social incentives were as they viewed the actual killings of other human beings.

## **Summary**

Human sacrifice is explicitly violent in nature and has an ethos of brutality. Past scholarship on the ideological, political, and economic understandings of these religious rites have often disregarded biological and psychological motivations that also sustained its practice. The attraction to violence is a human condition, and the theories presented in this chapter reveal that the presence of violence in religious rituals provides physiological as well as social-psychological rewards to viewers and participants. When ritual is experienced by individual bodies in harmony with others, whether they are jubilant fun-filled activities or well-managed violent scenarios, it cultivates collectivization and a sense of well-being and security. In addition, religious rituals create experiences not found in mundane existence that include amplified

sensorial inputs and extreme incitements that activate physiological arousal and pleasurable neurochemical releases that are so powerful as to be addicting. The theoretical models just reviewed reveal that religious sacrificial rituals are experiential and provide three levels of rewards often experienced concurrently, and these three reward systems occur simultaneously on physiological, psychological, and social levels.

The first reward system (level) experienced by religious sacrificial rituals is physiological arousal. Social scientists, biologists, and medical experts concur that religious ceremonies invoke emotional states that range from peaceful-meditative to frightening-jolting and these emotions have biological consequences. Even the act of gathering with others induces autonomic arousal and the release of endogenous opioids in individual members of the collective. This flood of pleasurable neurochemicals encourages a phenomenologically rewarding experience and feelings of certainty and belonging (Leary et al. 2008; Winkelman 2010). Heightened emotional experiences in a group setting amplify these biological responses, and experts from multiple disciplines concur that “synchronous multisensory stimulation” increases social bonding, elevates neural responses, and engenders positive moods (Driver et al. 2008; Paladino et al. 2010).

Violent scenes and experiences in religious rituals correspondingly stimulate an intensity of emotions, but it does so through increased doses of epinephrine (adrenaline) being released into the bloodstream. Epinephrine acts as an analgesic, and this pain relief causes elevated strength, endurance, and heightened mental acuity (Mezzacappa

1999, 198). These same encounters with violence causes the hypothalamus and the pituitary gland in the brain to activate a neurotransmitter called dopamine that produces a “natural high.” Not all individuals respond in the same way to violence, and according to Optimal Simulation Level theory, some people are predisposed to seek out increased stimulation (high-sensation seekers) including dangerous activities and encounters with violence. Responses to stimuli also vary in individuals because of the processes of desensitization which generates requirements for more intense prompts with repeated exposure. Variable reactions also occur based on the types of ritual activities surrounding celebratory and violent moments. Shamanic performances are particularly powerful rites that stimulate transformative experiences on every level.

Shamanic-like rituals activate not only physiological arousal but can also dramatically alter states of consciousness of participants in the rituals, which also have social-psychological benefits. These transformations occur on a neurological level when celebrants engage in long hours of repetitive activities such as drumming, chanting, or dancing (rhythmic drivers). These exhausting activities produce altered conscious states that Winkelman (2010) identified as an “integrative mode of consciousness” (IMC). This conversion to an IMC occurs through three different biological processes including the rhythmic stimulation of brain waves, the release of opioids, and the fatigue-based collapse of the sympathetic system in the brain. In IMC individuals experience different visual presentations and have access to dream functions or states known as “ecstasy.” Other shamanic rituals such as painful austerities, ingestion of psychotropics, or physical deprivations such as fasting, lack of

sleep, and sexual abstinence similarly foster an IMC which involves the collapse of the sympathetic nervous system and an ascendancy of the parasympathetic system in the brain (Winkelman 2010, 5).

The rewarding aspects of shamanic rituals are experienced on physical and social-psychological levels. On the biological plane, individuals enjoy autonomic arousal, the release of endogenous opiates, higher intensities of endorphins, increased dopaminergic activity, and the resulting states of ecstasy. On a social level, these ceremonies engender communality. One manifestation of this social bonding is identified by Whitehead (2011) as “social contagion” where physiological responses and emotional states reverberate through a group and galvanize cohesion amongst members. On a social-psychological level, shamanic rituals produce dynamic visual and potent emotional experiences that incline participants towards social connectedness, anxiety reduction, and different healing modalities and “therapeutic transformations” (Winkelman 2010, 184). Other aspects of violent human sacrificial rituals similarly foster reprieves from individual and social anxieties, and these buffering mechanisms are explained by theories of ritual and other psychological theories.

A third reward system (level) experienced by religious sacrificial rituals is psychological health. As explained by many different psychologists, perceptions of control over uncontrollable and fearful prospects - especially death - is an adaptive mechanism for humans. As Terror Management Theorists explain, exposure to violence and frightening events causes individuals to cling more ardently to collective

psychological structures including worldviews that advocate avenues to escape death and that support ideas of attaining symbolic or literal immortality. These types of controlled violent rituals, redolent with death reminders and mortality salience, cause groups to cohere around shared beliefs and to feel more justified in expunging their social orders of foreign peoples with threatening or opposing worldviews. Group psychologists and TMT recognize that groups feel morally justified to enact prejudicial treatment against outsiders who threaten their worldview. The result of violence against outliers is a buffering of anxieties, a reinforcement of the group's worldview, and a resulting perception of immortality or some form of side-stepping the inevitability of death.

The ancient Aztec present an excellent case-study for examining the experiential modes derived in ritual actions. Their calendared festivals were brimming with exuberant, dramatic, and violent moments, and a vast majority of the population engaged with each of these celebrations in some way. As I will explain in greater detail in the next chapter, these elements appeared in three distinct phases of each month. The following three chapters will examine how their *veintenas* fostered biopsychosocial incentives which increased support of the costly ritual program from all sectors of their society even the lower classes. Chapter Six will offer an interpretive analysis of the biological responses to jovial and fearful events in several different Aztec monthly feasts. Chapter Seven will delve into the physiological, psychological, and social remunerations derived from shamanic rituals found in several of their feasts, and

Chapter Eight will provide an analysis of the psychological benefits produced in each phase of their ceremonies.

**PART III**  
**BIOPSYCHOSOCIAL REWARDS IN THE THREE PHASES**  
**OF AZTEC SACRIFICIAL CEREMONIES**

**CHAPTER SIX**  
**PHYSIOLOGICAL REWARDS**  
**IN THE AZTEC, MONTHLY VEINTENAS**

In the eighteen monthly feasts of the Aztec yearly calendar, diverse rites honored the different gods and goddesses, but the central feature of each feast was the sacrifice of “bathed ones” and enemy captives. In some months, ritual activities



occurred on almost every day, (even overlapping into other months) while in the main celebratory features of others encompassed half the month or just a few days.

Regardless of length, there was an increasing momentum of actions and intensity in dramatic elements in the scheduled events, climaxing with human sacrifice.

I propose that each of the Aztec monthly feasts contained three distinct phases that fostered different sets of emotions, and as a result, produced variant biopsychosocial responses and experiences. As an important reminder, the focal point of each phase was the death of foreign captives or slaves, (whether merely symbolic or an actual killing). I identify these phases as anticipatory rites, violent-sacrificial, and euphoric-celebratory. Anticipatory rites are defined as all the ritual activities that occurred prior to the day or days of ritual human sacrifices in Aztec ceremonies. Sahagún often refers to this pivotal day of sacrifices as the “feast day.” Anticipatory rituals were designed to be suspenseful and to produce an exciting state of awe and an aroused biological state based on expectation of approaching violent sacrifices. The crucial and climactic phase was the actual slaying of victims, and I term this day or phase the “violent-sacrificial.” On this day, and the night proceeding it, captives and slaves were carefully prepared for their deaths, and a few rituals were performed before they were slain in various and dramatic fashions. The emotional states aroused during this phase were both excitement and fear. The final stage followed these sacrifices and often occurred on the same day as the sacrifice. I define this phase as “euphoric-celebratory” because this is the period of time when participants could enjoy the effects of psychological relief from the prior controlled annihilation of their enemies or other elements that threatened them. This

buffering of anxieties also derived from a knowledge that their deities had been fed and that as a result, the Mexica would be prospered with regeneration, fecundity, and supernatural assistance in the next war. In the euphoric-celebratory stage, the Aztec enjoyed controlled and spontaneous activities of a jubilant and fun-filled nature, such as mock-battles, competitions, dances, music-making, feasting, and other jovial activities. In concert with each other, each phase of the month produced a heightened atmosphere of both positive and negative excitement that stimulated neurochemical responses which I argue were enjoyable and addicting in nature. The following analysis focuses on the implications of diverse ritual activities, emotional states, and the resulting biological rewards potentially delivered in each of the three stages I have just outlined in several different Aztec *veintenas*.

### **Interactivity of Religious Ritual, Emotions, and Biological Responses**

The ebb and flow of emotions in ritual activity are intimately related to neurological, cognitive, and behavioral responses. As Berthome et al. state, emotions are not just outcomes of ritual nor are they simply “grafted onto practices” and representations. Instead, they are “constitutive aspects of ritual interactions themselves” (2010, 57). In other words, emotions are neither appendages nor end products of ritual, but they are dynamically interactive with ever-changing stimuli in the moving context of ritual. Scholars call this “relational reflexivity” in context-specific moments where established “patterns of relationship” elicit a “variety of sensory, expressive, moral interactions with others” (Berthome et al. 2010, 69). In their view, “emotions, like the relational configurations they embody, are inherently intersubjective, emerging as much between interacting individuals as arising with them” (Berthome et al. 2010,

69). They also accurately posit, that ritual participants such as “initiates” bring with them a “whole microcosm of *sui generis* relationships endowed with distinctive emotional values,” and these come into play in unique, individualistic responses to initiation rites (Berthome et al. 2010, 69).

Emotional states arise as a response to external and internal stimuli and are directed by emotional memory and internal thought processes. In their research on the interaction between emotional responses to religious ritual, Candace Alcorta and Richard Sosis, discovered that both positive and negative emotional responses to religious ritual provided the substrate for the creation of “motivational communal symbols” (2005, 338). They explained:

Through processes of incentive learning, as well as classical and contextual conditioning, the objects, places, and beliefs of religious ritual are invested with emotional significance. The rhythmic drivers of ritual (especially chanting, drumming, flashing lights, and music) contribute to such conditioning through their “kindling effects” ... Elements of religious ritual that increase neuronal firing rates prime ritual participants for the conditioned association of symbols and emotions, both positive and negative, and create communal conditions for investing religious stimuli with these emotions (Alcorta et al. 2005, 338).

The implications of these conclusions are astounding, and synchronistic with Leary’s “excitation transfer theory” presented in Chapter Five. One example of this transfer of emotional states to positive, cognitive evaluations of ensuing or concurrent incitements is found in the context of Sufi dancing. The dance and music produced emotional states of “ecstasy,” and this strong emotive reaction was transposed onto similar emotional reactions to religious poetry associated with the dance (Alcorta et al. 2005, 338).

Another example is the elicitation of the dopaminergic reward system in the use of hallucinogens in the peyote ceremonies of the Huichol Indians which was transferred into the sacralized experience of the communal peyote hunt itself (Meyerhof 1974).

The question for many scholars is how these affective orientations and conditioned responses to stimuli motivate individuals to actions, learning, and future responses. Geir Overskeid (2012) surmised that emotions play significant roles in “making goals motivating,” and he determined that two vitally important learning systems are also tied to emotion and choice. The first is an “impulsive system” where decisions are made quickly and unconsciously in the brain regions of the amygdala and the ventral striatum; whereas, in a second system (or a second pass) of “conscious reflection,” a person makes choices based on information gathered from memories, and these stored memories come with an “emotional price tag” that the person evaluates to choose the most “appealing alternative” (Overskeid 2012, 126). Positive reinforcement of these choices relies on dopamine neurons being activated in the present moment and in the recollection of reward in similar past experiences.

The “Dopaminergic Reward System” is of greatest interest to scholars concerned with emotional responses and related motivational behavior. The dopaminergic reward system is “an emotional system that has evolved to motivate forward locomotion and search behavior as a means of approaching and acquiring rewarding goals” (Depue et al. 2002, 1071). Dopamine is a neurochemical that acts as a neuromodulator which functions as a reward system. The potentiation of dopaminergic neurons encourages a positive motivational state that induces choices to activate or “self-administer”

stimulation of this pathway (Pearson 1990, 503). Religious rituals are often manufactured to utilize the “dopaminergic reward system” in such a way as to provide a context where participants adjust their future actions, commitments, and dispositions in favor of communality, order, and discipline (Berthome et al. 2010, 67).

Religious rituals are frequently designed to elicit both positive and negative emotional responses. Negatively “valenced features” of ritual are determined to be a more powerful motivation than positive stimuli because they produce more reliable emotional anchors and procure responses where individuals subordinate their own desires in favor of collective goals (Alcorta et al. 2005, 339). The relative success comes of negative from biological as well as social reasons. Negative stimuli activate a rapid, instinctive response in the amygdala, a subcortical collection of specialized nuclei located beneath the temporal cortex. The main function of this specialized area of the brain is appraising dangerous or threatening provocations in the external environment and initiating the neuroendocrine system to respond adroitly and immediately to the threat, and these responses are “hard wired” into the nervous system (Alcorta et al, 2005, 334). From a sociological perspective, brute force or control by fear is highly effective because the risks for non-compliance are too great for subservient populations. Religious systems use both positive and negative emotions to motivate compliance amongst membership of the religious order. Positively “valenced rituals,” also have significant benefits because they evoke compliance motivation based on “affiliative cooperation” and empathy among participants. They are internally activated through “incentive learning” (Alcorta et al. 2005, 339).

Both positively and negatively valenced rituals elicit neurophysiological responses with constructive outcomes on different levels: They communicate and coordinate social behaviors, induce cooperation between participants, and invoke individual health (decreased stress and improved immunological functions) (Sosis et al. 2003, Murphy et al. 2000). Arguably, the Aztec utilized both positively and negatively valenced rituals in their scheduled events, and as a result, participants benefited from all the ramifications of physiological rewards. Based upon these findings and the results of many empirically-tested studies on contemporary populations, I will now turn to an analysis of the ancient Aztec ritual program to discern how they may have achieved many of the same physiological benefits as their modern counterparts in each of the three phases of their *veintenas*. In this analysis, I will be using the methodological tools of analogy, and I assume that the emotional responses to stimuli are the same for ancient people as for contemporary individuals and groups. Modern studies have the advantage of recording subject responses to stimuli on written surveys and with medical instruments (measuring physiological indices). I rely on the findings of modern research surveyed in Chapter Five and hypothesize that in cases where the ancient Aztecs confronted the same types of situations and stimuli they responded with similar emotional and biological reactions.

### **Neuro-Physiological Rewards in the Anticipatory Rites of Aztec Feasts**

The anticipatory phase of the Aztec monthly *veintenas* was filled with rituals that inspired emotional responses of dread, awe, and excitement. This phase usually began with an inaugural ceremony similar to the opening ceremony at modern Olympic Games. At the Olympics, this grand spectacle arouses interest in the myriad sporting events that will follow and is a one-night extravaganza of light shows, remarkable floats, hundreds of dancers, music, the dramatic lighting of the Olympic torch, and a parade of all the athletes from around the world who will be competing in the coming days. This “opening ceremony” is designed to elevate the nature of the games above other sporting events and to draw interest and curiosity for future spectatorship. In a similar way, each new *veintena* was inaugurated with some sort of spectacular display that included the appearance of the god or goddess being honored that month, music, dancing, fire displays, and processions of warriors and the prisoners who were to be killed.

The ethnohistoric record of the Aztec ceremonies provides important details for some of the anticipatory rites of their monthly feasts. These forward-looking performances were designed to evoke a wide range of emotions including: suspense, joy, dread, sadness, and wonder. For utilitarian reasons throughout the rest of this dissertation, I will focus most of my interpretive attention to five different festivals: Panquetzaliztli (Fifteenth Month: honoring the god Huitzilopochtli), Xocotl (Tenth Month: honoring Xocotl), Tlacaxipeualiztli (honoring the god Xipe Totec), Toxcatl (Fifth Month: honoring the warrior god Tezcatlipoca), and Atl Caualo (honoring the rain deities).

The opening ceremonies of the feast of Panquetzalitzli, were heralded with the sounding of conch shells and pottery whistles and with the instantaneous commencement of singing and dancing. This was one of the most important feasts of the year, and so it began with an explosion of stunning auditory and visual movements of dancing men and women. Sahagún relayed that the song that was “intoned was called *Tlaxotecayotl*; it was the song of Huitzilopochtli” (Sahagún 1981, 2:141). For this month, music and dancing were the central features of the anticipatory rites. Sahagún explained that the “women, the pleasure girls, sang and danced. They went between (pairs of men) (as has been told). Daily they did this until twenty days (had passed)” (1981, 2:141). Constant singing and dancing created an environment of expectation and of reverence for their central god.

With the arrival of each subsequent day, different dramaturgical elements were added to the singing-dancing regimen including ritual bathing, fasting, and processions of sacrificial victims. On the fifth day of this month, the owners of sacrificial victims and the old men began to fast for four days, initiating this austerity by washing themselves at the “Mist House” (Sahagún 1981, 142). Together with fasting, ritual bathing often implies purification from the mundane world and suggests that all activities that will follow are of a sacred and important nature. Ritual washing and abstinence from food also advocates that special attention needs to be paid to all ensuing events. These rites, along with parading victims of sacrifice through the city, would have heightened the participants’ emotional responses of awe and expectation. Fasting caused a weakened physical condition and prepared the bodies of bathers for



entry into altered states of consciousness as will be explained in more detail in Chapter Seven.

Sahagún documented that at the end of the fast the victims and their owners danced the serpent dance alongside the escorts, the flag-bearers, and the “women who were the face washers” (1981, 142). The dance ended at midnight when the conch shells were blown. Sahagún provided more details as to the exertion required during the serpent dance. He ascertained that the bathed ones trotted among the other dancers “for much did they run; they continually hopped; they kept hurrying. It was as if they hastened, as if they were breathless” (1981, 143). The combination of fasting and dancing so strenuously for half a day certainly produced the condition for the release of endorphins and the collapse of the autonomic nervous system. Since endorphin levels in the human body are higher at night, the dances lasting till midnight invoked a larger increase in the release of endorphins with all their pleasurable effects.

In addition to the arduous dancing, this preparatory dance was accompanied by another rhythmic driver, the constant beating of drums. Sahagún mentioned that the old men of the *calpulli* were the only ones that sang as they beat the drums, and that a great crowd came to admire the dance. Everyone abstained from food and sexual relations during this time (Sahagún 1981, 143). Sahagún recorded that the onlookers “marveled at (the dance)” and that it was “much admired” (1981, 2:143). There was not only a splendid visual display for dancers and audience members, but simultaneous auditory prompts in the continual beating of the drums and the singing of the “old men” in each of the *calpullis* (Sahagún 1981, 2:143). This portion of the account reveals that the

general populace engaged in austerities along with the bathers and old men. The large gathering enhanced the experience, and the participants' emotional and biological states were aroused by the processes of "social contagion" as set forth by Charles Whitehead. As a reminder, Whitehead discovered that when a group gathers together, their physiological indices such as heart rate, respiration, and galvanic muscle responses are predisposed to converge in the same patterns (Whitehead 2011, 187). In addition to the effects of social contagion, multisensory inputs such as costumes, waving flags, and music amplified the excited emotional states of dancers and spectators.

The ritual activities on the ninth day and each subsequent day focused more attention on the sacrificial victims and their owners because the victims' deaths were approaching. On the ninth day of the month, Sahagún relayed that the old men from all the *calpullis* went to a sacred spring in a cave called *Uitzilatl* to draw water for ceremoniously bathing the victims who were to die a "flowery death" (Sahagún 1981, 141). The old men sprinkled this water on the victims at the foot of the Templo Mayor and dressed them in paper vestments, striped their bodies in blue paint (signifying the blue pigment of Huitzilopochtli as the hummingbird god) and their faces with yellow and blue stripes, adorned their noses with pendants shaped like arrows, and crowned their heads with "reed headdresses surmounted with arrows" (Sahagún 1981, 142). After this ceremonial washing and dressing, the owners of the victims or the merchants brought their human offerings back to their respective *calpulcos* and stored away their costuming before proceeding to sing and dance. Each of these activities built upon the emotional states of the prior one, engendering increased physiological arousal. The

striping of the victims and adorning them in the visage of the powerful god, Huitzilopochtli, had great potential to evoke emotions of alarm and wonderment. This feast in honor of their central warrior god came before a season of anticipated battles with enemies who were often fierce opponents. Uncertainties of future battles would have fostered feelings of unease and trepidation. The “striped ones” were symbolic of Huitzilopochtli’s ability to conquer foes and may have also encouraged feelings of bravery and courage in the onlookers. Both fear and courage to take future risks would have stimulated autonomic responses and released an infusion of adrenaline into their systems. These strong emotions fostered in the activities of the day probably bled over into the subsequent singing and dancing in the evening. This occurred as Alcorta et al. suggested, as strong emotive states are transposed onto ensuing activities or other commemorative symbols or narrations (Alcorta et al. 2005, 338). The emotional states of the participants were elevated in each activity, and the biological consequence was an infusion of neurochemical rewards.

Physiological arousal in the month Panquetzalitzli occurred daily, but to sustain the heightened atmosphere and overcome the effects of “desensitization,” new elements were added to draw further interest. Scientists recognize that the introduction of novel stimuli induces the release of dopamine and the “generalized mesolimbic dopamine seeking system” or “reward system” (Sugu et al. 2010, 109). Responses to novel stimuli are even greater if they are “surprising” or create cognitive dissonance. The main source of biological rewards for a great number of participants and spectators in the anticipatory phase occurred in the singing and dancing. The interplay of music and

dance was a potent formula for neurochemical stimulation because they are both “rhythmic drivers.” These drivers are known to efficiently impact autonomic functions by “synchronizing” oscillators in the brain with “external auditory rhythms,” thereby stimulating a change in brain wave patterns, pulse rates, and diastolic blood pressure (Scherer et al. 2001, 372). The physical exertion required by dancing for long periods of time would similarly have induced pleasurable endorphins or what modern physiologists call the “runner’s high.” Sahagún mentioned that the dances began in the evenings and lasted until the conch shells were blown at midnight (Sahagún 1981, 2:41). As already noted, the human body produces more endorphins in the night, and these nocturnal dances and music making accentuated the already-enhanced supply of endorphins. Those citizens of Aztec society who were categorically restricted from participating in the dance still had opportunities for arousal as they viewed the artistry and movement of the dancers and the display of colorful costuming and waving banners. The pounding of the drums was a commanding source of auditory stimulation available to all. The drum beats could be heard from great distances and were important “rhythmic drivers” that were present in most of the dances and many of the festal ceremonies. They were also emotional triggers for sacrificial acts and for war.

Both Sahagún and Durán repeatedly mentioned drums and other musical instruments being associated with sacrifice and anticipatory rituals. Durán noted that just prior to the sacrifices of victims on the gladiatorial stone, in the feast of Tlacaxipeualiztli, “a drum was brought forth and to the rhythm of its beat they began to dance and sing.” With this music as a background, the sacrificial high priest made a

dramatic entrance “carrying in his hand the great knife of black obsidian” (the knife used for finalizing the lives of each of the injured victims) (1994, 171). In one reference

Sahagún wrote:

After many ceremonies, at last they slew captives on the Pyramid of Uitzilopochtli [sic] (Huitzilopochtli), and also many slaves. And having slain one, they sounded (musical instruments). And on finishing (with one), they seized another, to slay him. And, on killing him, they again sounded (musical instruments). Thus they did to each one until finishing them (all). On ceasing to slay these unhappy ones, they started to dance and to sing, to eat and to drink, and thus the feast ended. (1981, 2:28)

In addition to the sacrificial allusion, drums and other instruments were also utilized in war, and thus drumming sounds incited cognitive associations with warfare. Durán observed that drums and other musical instruments were used to mark the commencement of battle and indicated victory. He recorded that after seven cities had been captured, “messengers were then sent to Tenochtitlan to notify Tlacaelel and the city of the victory. When Tlacaelel received the news, he ordered flutes and conch shells to be blown and drums to be beaten and the event celebrated in the usual manner” (1994, 317). Ancient Mexican warfare typically began at dawn, and hostilities began only after drums were sounded and conch-shell trumpets were blown (Hassig 1992, 140). These auditory cues were not only emotionally moving but had cultural connotations related to the gods, sacrifice, and war.

Conch shells were particularly designed to reference death, war, and sacrifice. They were heard across vast territories and the shell trumpets (*atecocoli*) were blown to signal important events, including the hour of penitence and bloodletting (self-cutting ritual) and the beginning of most ceremonies (Pedelty 2004, 19). Conch-shell trumpets

were blown to each of the cardinal directions at the beginning of sacrificial rituals, the directions signifying the four manifestations of Tezcatlipoca including the “Blue Tezcatlipoca” representing Huitzilopochtli. Mark Pedelty theorized that blowing conch shells to the four directions signified a melding or religious syncretism of the “four-part manifestation or ‘unfolding’ of Tezcatlipoca with the Mexica god Huitzilopochtli, a god of war and sacrifice” (2004, 20). In addition to the conch shells, the songs sung in the month of Panquetzaliztli were “intoned” to the god of Huitzilopochtli because this was one of his main festivals (Sahagún 1981, 2:141). In these instances, the ritualized music “creates the sacred” (Rappaport 1999). The importance of this experiential mode of the sacred is that it is “emotionally charged” and is prepackaged with emotional experiences of the past as well as a cognitive awareness of the Huitzilopochtli-warfare matrix. A significant implication of the “emotional valence” created through participation in ritual is that it motivates cooperative behavior via the “dopaminergic reward system” (Alcorta et al. 2005, 332).

One of the supreme moments that elicited elevated excitement in the set of anticipatory rites of this and many other Aztec *veintenas* was the presentation of sacrificial victims before the populace. These mobile processions were either somber or lively and had deep experiential and emotional impact on the victims, their captors or owners, and those who witnessed their itinerant movements. These grand pageants allowed a vast audience to come into proximity with the condemned before their deaths. The display of victims was designed to draw attention to their impending doom and to the gods who were being honored and sustained by their imminent slaughter.

These interactions were configured with a host of well-established symbolic representations that included: the gods, sacrifice, death, and warfare. All the parties carried with them a set of relational understandings and emotional memories that were conjured up by the presentation of the new analogous stimuli.

Adding to the temporal depth of the anticipatory rites, the first encounter that citizens typically had with captives taken in war was often long before the monthly festival when the Aztec army returned to the city from a military campaign. Durán described the triumphal martial procession of the Aztecs after their defeat of the Chalco:

When the Aztec soldiers reached Tenochtitlan, all the inhabitants went out to meet them with much rejoicing. The priests were also festive and appeared carrying braziers and incense burners. Speaking many words of eulogy and singing songs of praise, they led the warriors to the temple, where these men made offerings of the spoils of war and the things they had brought back with them. They also presented the prisoners of war who would later be the sacrificial victims in the festivities. (1994, 149)

This returning group returned with the booty from war and brought it to the Templo Mayor as an offering of gratitude to Huitzilopochtli. Durán explained that there was a particular order to triumphal marches into the city of Tenochtitlan, and he gave this account of their return after razing the city of Guaxaca:

The Aztec army left the region with a great number of captives, of slaves. The prisoners, all lined up and tied together with ropes around their necks... Within a few days the leaders of the army arrived, followed by the rest of the soldiers and a multitude of prisoners. The priests, dressed in their special attire and adorned with religious insignia, came out to meet them with incense burners in their hands, intoning hymns to their god. They offered incense to the prisoners, telling them of their fate, and giving them flowers and tobacco. This (formal ceremonial type of reception to the returning army and its captives) was customary. As the

captives entered the city, they howled mournfully, they ululated in the way a wild animal cries, whistling, weeping, in such a strange way that those who heard them trembled with fear. (1994, 229-230)

This military parade most likely aroused many faculties that are similarly experienced in modern settings after long and messy wars. For each participant and spectator of the victory march, emotions were piqued in different ways. According to Optimal Stimulation Theory, individuals have various attractions and responses to violence and fearful events. It is likely that “low sensation seekers” opted out of attending the victory celebration entirely unless they were forced to attend, but even if they did remain home, it would have been impossible to ignore the howls and weeping of the condemned as they were forcibly marched into the city. Durán described that these shrieks caused those that heard them to tremble with fear. For parents and siblings of warriors who witnessed the triumphant return of their sons or brothers, there was probably an outpouring of relief, joy, and pride. These emotions, along with the fearful feelings, likely spread through the crowd through social contagion. The entire experience must have been overwhelming for spectators in the jostling crowd. The returning army headed, headed by the captains dressed in impressive military regalia with waving banners and a mass of soldiers marching behind them (some who may have been injured) and the “multitude” of tethered captives bringing up the rear must have been an impressive sight. It surely invoked all the emotions associated with war and the consequences of battle. Other mesmerizing elements included copious amounts of smoke from the censers carried by the costumed priests, the aroma of flowers, and the sounds of drums and music along with the wailing prisoners. The air was not only filled



with clouds of smoke but also with ominous and jubilant tones. The convergence of multisensory stimulants offered the potential for a phenomenologically rewarding experience. As Driver et al. discovered, certain areas in the brain allow multisensory inputs to connect and increase neural responses while at the same time elevating autonomic arousal (2008, 11). The ceremonial presentation of tobacco and flowers to each captive by the richly costumed priests, who announced to each prisoner his fate and stood as his future executioner, were ominous moments that amplified the already portentous atmosphere, resulting in enhanced biological responses that resounded through the crowd.

Those who witnessed these returning victory marches and the subsequent presentation of the same victims in heightened ceremonial settings, would have drawn upon preconfigured emotional packages that aroused parallel neurophysiological responses. Such was the case in the ritual bathing ceremony in front of the *Hueteocalli*, the edifice dedicated to the gods Huitzilopochtli and Tlaloc. There was an “emotional price tag” which informed the emotional responses of the participants and ritual specialists in charge of striping the victims with the blue and yellow paint associated with the god of war and sacrifice and dressing them in the paper vestments and paper adornments in which they were to die (Sahagún 1981, 2: 142). These were awesome representations of the powerful war-god and his ability to strike down his enemies. This part of the ceremony would have elicited fear-based threats known to activate a rapid instinctive response in the amygdala and initiate the neuroendocrine system (Alcorta et al, 2005, 334).

Many of the emotions elicited in anticipatory rites were fear-based, and scholars acknowledge that violence and negatively valenced emotions are more consistent and powerful inducements of physiological arousal than positively valenced emotions. As Alcorta et al. suggested, negatively “valenced features” are more successful in motivating behavior, because they produce more reliable emotional anchors and secure responses in which individuals subordinate their own needs in favor of communal requirements (Alcorta et al. 2005, 339). On the day before the climactic twentieth day of Panquetzaliztli, each of the staged activities was an obvious reminder of the deaths that would occur the following day. After some preparatory rituals of painting door lintels, feasting, and dancing by owners of victims in the middle of each *calpulco*, the victims were moved to the city’s ceremonial center in a grand procession. The bathers led the parade followed by the bathed ones, dressed in their costumes. They were led to the Templo Mayor where they ascended the pyramid, circled the sacrificial stone, and descended the other side (Sahagún 1981, 144). Sahagún suggested that this portion of the ritual was representative of the victims entering “the sand” or death. This route would be the same for the many who would be sacrificed on top of the Templo Mayor the next day, but instead of walking down the stairs, their bodies would be rolled down after their hearts were extracted on the very stone they had circled the day before.

This series of rituals all invoked feelings of dread and excitement for the impending killings the next day. For instance, the painting of door lintels identified the location of the homes of the bathers and the place where the sacrificial victims spent their last moments. These marked homes were mimetic symbols of the painted bodies

of the victims who were stained with yellow and blue horizontal stripes. The victims of sacrifice (or other person's it is not quite clear in Sahagún's account) dipped their hands in the black, blue, and red ochre stains and then placed them on the door lintels of the bather's house (Sahagún 1981, 2:143). This highly visible sign of the painted hands of the condemned with possible dripping streams of dye flowing downward were imitative of the flowing blood of the sacrificial victims. The red ochre color was particularly reminiscent of the blood that would soon course down the stairs of the Templo Mayor, the home of Huitzilopochtli. This evocative spectacle would have conjured emotions of wonder and alarm. Sahagún also mentioned that immediately after this ritual painting, the bathers left their homes, "singing as if they each cracked their voices, as if they were hoarse" (1981, 2:143). The occupants of each neighborhood where the bathers lived had multiple opportunities to both hear the bathers singing and see painted hands, the evidence that sacrifices were about to commence. Physiological arousal would have been almost unavoidable with these multisensory inputs.

Other Aztec festivals provided diverse environments and rituals in their anticipatory rites. The by-products of these differences were varying degrees of heightened physiological responses. For instance, at dawn on the first day of the tenth month, which honored the idol Xocotl, the inaugural event was the communal enterprise of hauling a large tree (twenty-five fathoms long) from the surrounding hills into the city with the use of ropes. This was done amid a great, widespread clamor of shouting, and upon its arrival to the courtyard of Xocotl's temple, it was stripped of its branches and erected in a great mound of earth (Sahagún 1981, 2:111). This

collaborative project occurred amid a great uproar of sound and movement and involved a host of participants. The physical exertion required to move the massive tree into place would have stimulated physiological arousal in the participants as well as for spectators and peripheral participants who hear the widespread shouting and the commotion of moving dirt for the mound and transporting the tree. Durán recorded that the tree pole that was brought from the woods and into the city twenty days before the feast, on a day they called Micailhuitontli, “which means the Feast of the Little Dead Ones” (1971, 204). While the tree pole was installed, five slaves (four male and one female) were offered up by merchants to represent gods and dedicated for sacrifice, and for the next twenty days they were “honored as if they had been the gods themselves” (Durán 1971, 204). Later in his account, Durán referred to the day of sacrifice of multiple victims representing many deities, “the Great Feast of the Dead, because of the many slaves sacrificed then” (Durán 1971, 205). Emotional reactions of reverence, awe, and fear would have been conjured by to these impressive events which drew great crowds and commotion into the city.

Two days before the important violent-sacrificial rites, carpenters were brought in to further smooth the tree-pole and three elderly fire priests of great physical height decorated it with an assortment of white paper and placed an image of Xocotl fashioned from amaranth dough on its top (Sahagún 1981, 2:113). Durán explained that this dough image was formed in the shape of a bird and was placed on flowery branches and fastened to the top of the pole (1971, 204). Durán ascertained that the Mexica used dough to make images of all their gods or “the ‘flesh’ and ‘bones’ of the deities” and

afterward ate the dough calling it “the flesh of god” (1971, 204). The slender pole of the tree was raised once again with the use of supports and ropes. This was all done with the help of the warriors who were designated to cast victims into the fire.

For propitiators approaching this statuesque tree, a corpus of different elevated emotions could arise, including feelings of reverence, trepidation of the impending sacrifices, and excitement for the upcoming festivities. Durán conveyed that “all the people came to this great feast and solemnity, worshiping the image of dough which stood on top of the pole...they came out with their offerings. These consisted of breads, native wine, pine torches which served as candles, copal, and so on” (1971, 205). The pole, like the Olympic torch, was impressive and highly visible due to its great height. As a supplicant voluntarily approached the *xocotl* with their own offerings, they had to go through a decision-making process or “conscious reflection,” based on information gathered from memories that came with an “emotional price tag” (Overskeid 2012, 126). The possible recollected emotional configurations could have included warfare (warriors were designated to cast victims in the fire), death (Durán suggested this feast referenced the dead), and the power of the gods to provide sustenance (the people brought offerings of breads and copal to these deities and consumed the dough image of the deific flesh and bones). At a biological level, the choice to propitiate was based on positive neurochemical conditioning instigated by previous activation of dopamine neurons in past ceremonial experiences during this annual festival.

The pole was not only the center of the courtyard, but it was the epicenter of the future violent sacrifices and the euphoric-celebratory activities thereafter, and as such it

would have stimulated neurochemical responses to thoughts of prospective future excitement. Indexical and iconic signals such as the tree-pole engage innate mental modules that predispose humans to respond to this specific class of stimuli with the same physiological attributions as similar stimuli encountered in the past (LeDoux 2002). As such, in each ensuing ritual celebration surrounding the pole, participants would have experienced a “compounding effect” of the same neurochemical feedbacks. As mentioned previously, these feedbacks would have possibly conjured associations with warfare, death, and sacrifice. The later phases of violent sacrifice by fire stimulated negative emotional responses while the sporting competitions around the tree-pole would extract positive emotional reactions. The initial rites of this month anticipated both forthcoming events, and the crowd gathered to see the raising of the pole would have recalled similar emotional responses from the same festival in prior years. The compounding effect of past ritual commemorations were also activated in many of the other Aztec annual celebrations.

The extravagant anticipatory rites for the month of Toxcatl began even before the monthly feast. Of all the *veintenas* on the Aztec calendar, Toxcatl seems to draw the most interest from scholars and other writers, largely because of this celebration’s distinctive features. Sahagún established that “this feast was the most important of all the feasts” (Sahagún 1981, 9), and Fray Diego Durán devoted an entire chapter of his *Book of the Gods and Rites and the Ancient Calendar* to the popular god Tezcatlipoca. He identified the twenty-day monthly feast of Toxcatl “on the same level as that of Huitzilopochtli” and one of the most important and solemn with the most splendid

ceremonies (Durán 1971, 98). This god had his own prominent temple in Tenochtitlan, but each city throughout the empire also had a temple dedicated to him.

One fascinating element to this feast was that one chosen captive warrior was rewarded with an extra year of life and treated as a living embodiment of the favored god Tezcatlipoca before his ritual sacrifice. This human double was chosen as a representative of the ideal warrior based on his perfect physical features and was venerated as a god. In the twenty-fourth chapter of the *Florentine Codex*, Sahagún related that there was a rigorous selection process for the archetype of the god, the first to be sacrificed. This unblemished male was chosen out of ten captives who were kept and guarded for this purpose. He says, “Indeed he who was chosen was of fair countenance, of good understanding, quick, clean body, slender, reed-like, long and thin, like a stout cane, like a stone column all over, not of overfed body, not corpulent, nor very small, nor exceedingly tall” (Sahagún 1981, 66).

At the beginning of the new candidate’s year of service, he was ritually bathed and dressed in the attire of the deity and given the name of the god. The chosen specimen was subsequently trained in the home of a steward, who taught the god impersonator how to “talk graciously” and how to greet people before he went out into the public (Sahagún 1981, 68). Moctezuma richly attired this representative and gave him costly gifts, including turquoise and gold jewelry. The captive was labeled as he who “fasteth in black, (for) he went with his face smoke-black. His head was pasted with feathers with eagle down. They only covered his hair for him; it fell to his loins... flowers laid upon his head; they were his crown” (Sahagún 1981, 69). As he walked the

streets of Tenochtitlan, the impersonator puffed a “smoking tube” and played a flute as he walked, and the populace of Tenochtitlan greeted him by bowing to the earth whenever he approached (Sahagún 1981, 9, 68). The new candidate was given privileges other captives did not have, but he was still guarded every night in a cage of “heavy wooden boards to prevent his escape,” and during the day he was safeguarded by supervisors to prevent him from fleeing. According to Durán, a negligent guard who allowed the god impersonator to escape was required to take the sacrificial victim’s place (1971, 127). The impersonator’s eight attendants had their hair cut short like a gourd, and in addition to accompanying the god wherever he went, they “fasted for a year” (Sahagún 1981, 69).

This lengthy engagement of the populace with the sacrificial victim, over the course of a year, impacted participants with substantial affective responses. There were many possible emotive elicitations, but the most probable were related to reverential awe and trepidation. Because of the multivalent virtues of this deity, diverse emotional reactions were probably interpreted contiguously. For instance, Tezcatlipoca was known as the people’s god and was accessible to them to answer their prayers, and he responded by delivering fortune or calamity based upon his capricious nature. Carrasco defined him, based on his many names and powers found in the ethnohistoric accounts, as an omnipresent god who “is near and close, takes the form of the wind, is the enemy on both sides, and knows people wherever they are. In a sense, there is no escaping Tezcatlipoca” (1991, 42). Sahagún delineated in *Book One: The Gods*:

Tezcatlipoca: he was considered a true god, whose abode was everywhere—in the land of the dead, on earth, (and) in heaven. When he



walked on the earth, he quickened vice and sin. He introduced anguish and affliction. He brought discord among the people, wherefore he was called “the enemy on both sides.” He created, he brought all things down. He cast his shadow on one, he visited one with all the evils which befall men; he mocked, he ridiculed men. But sometimes he bestowed riches—wealth, heroism, valor, position of dignity, rulership, nobility, honor. (1981, 1:5)

This description suggests that Tezcatlipoca was an omnipotent and powerful being who had an intimate connection with the lives of humans and could influence their fates at his whim. A sense of awe and dread of such a powerful being would be understandable for those people who met the impersonator, especially if they believed the enemy captive was an embodiment of this capricious god. According to Alfredo López Luján, this was typically the case, and he established that sacrificial victims who impersonated the gods became *ixiptlatin* or images who were receptacles of the “divine fire” or temporary avatars of the gods, sometimes for up to four years before sacrifice (1988 vol. 1, 377). In concert with these thoughts, Carrasco surmised that ritual specialists, rulers, and *ixiptlas* had divine duality within them and cosmo-magical powers because they as containers of divine essence (Carrasco 1999, 193). Clendinnen asserted that the body of the god-representative was a vessel for supernatural forces and this sacred infusion lingered in their dead body parts including the flesh, skin, hair, skull, and garments (1991, 253). If this was the case, encounters with this richly costumed captive, trained to act as a god, would elicit emotions of fear and awe and correspondent neurological reactions that perpetuated stimulation and pleasure.

These physiological responses were also enhanced by the unpredictability of the meetings with the god-impersonator, the movement and size of his entourage, and the

embodied nature of the experience. The kinesthetic quality of this year-long anticipatory ritual embedded cultural experience into the people's bodies and minds. According to Jaida Samudra (2008), the somatic mode of ritual allows people to use their bodies in culturally specific, intersubjective ways to connect socially and as a "tool of inquiry and vector of knowledge." Seeing the image of their god move about the city in a grand procession allowed the citizens to replicate the divine world in their own microcosm. Itinerant ritual performances that moved from the center and into the periphery and back again reflected the omnipresent conception of the gods (especially Tezcatlipoca, who was the god of everywhere), and transported participants into sacred zones that were loaded with symbolic significance as points of creation, places to communicate with the gods, and places of cyclical renewal (Carrasco 1991, 33). This movement also offered the additional advantage of expanded participation of various sub-populations in interactive venues, which strengthened social solidarity (Carrasco 1991, 33). This human god-image was transformed before his sacrifice, and many other features of the actual sacrificial ceremonies heightened the physiological arousal that will be discussed in the next section. The associations that the populace had with the victims of sacrifice evoked differential emotional and physiological responses, as well. For instance, when particularly resented enemy combatants were processed before the Mexica citizens, their emotional reactions were probably heightened by animosity, and when the image of Tezcatlipoca appeared before them, they were most likely filled with amazement and trepidation. The sacrifice of children was an entirely different

presentiment to the affective states of the individuals who witnessed the progressive rites leading to their deaths

The anticipatory rites of the first month, Atl Caualo, honoring the Tlalocs or gods and goddesses of water, pervaded each household and expanded onto the landscape beyond the capital city. This monthly feast was different than the feasts dedicated to gods of war because the victims of sacrifice were children culled from within the Aztec population. Paper banners were posted on mountain tops or in each location where children were to be sacrificed. In addition, paper banners spattered with rubber were set up on long thin poles in each of the houses and in each *calpulco* or barrio (Sahagún 1981, 2:43). These markers were poignant reminders of the proximate deaths of small children called “human paper streamers,” who were most likely the children of slaves, purchased based on certain required physical features, including those “who had two cowlicks of hair” and “whose day signs were favorable” to be sacrificed in petition of rain (Sahagún 1981, 2:42). These prized offerings had their faces painted with liquid rubber, received paper wings and rubber sandals, and were subsequently carried in the same fashion as royalty on litters covered with precious feathers.

The poles bedecked with rubber-spattered paper streamers were evocative symbols implanted into the ritual schema as vibrant stimulants of cognitive-emotional memory. As Berthome and Houseman recognized, ritual devotions are permeable with commonplace actions and dispositions that occur outside of ritual. It is the complex of preceding, established relationships “endowed with distinctive emotional values” that

enliven emotional responses to current similar stimuli in ritual contexts (Berthome 2010, 69). For instance, these relationships are reaffirmed with each new iteration of the same “motivational communal symbols” (Alcorta et al. 2005, 338). As an example, every time a citizen of Tenochtitlan encountered a litter carrying sacrificial victims or the *tlatoani* himself, the spectator would recollect that it was a purveyor of sacrifice, even the sacrifice of little children. In addition, they would recollect that the ruler had the power to send others to the sacrificial stone. As such, the litter had ominous associations and perhaps sponsored empathetic and tender recollections of precious little ones being marched off to their deaths.

Paper and rubber were also symbolic complexes related to sacrifice, and they were both used in diverse context, with each subsequent presentation making the association operational. The symbolic fusion of paper and rubber was a redolent mix of opposing ideas of life and death. Paper banners were “communal symbols” that conveyed emotionally charged emotions associated with ideas of sacrifice and angst concerning the unpredictability of rainfall necessary for survival. Rubber merged with the idea of sacrifice because the rubber ball was the most dominant feature of the sacrificial ballgame. In mythological accounts of the Maya *Popol Vuh*, the ballcourt was the place of sacrifice, and in the case of the Aztec, human sacrifices occurred in the ballcourt during the Panquetzalitzli feast. Drawing upon the insights of Kristaan Villela, Headrick demonstrated that in the artwork of military figures found in the prior civilization of Teotihuacan, rubber was associated with sacrifice and was a “symbolic substitute for blood” (2007, 126). Andrea Stone correspondingly recognized that rubber

was used in multiple instances in Aztec sacrificial rituals. She mentioned that the Aztec not only applied rubber to the oars of a boat transporting offerings during the feast of Etzalcualiztli, but rubber-spattered paper was one of the principal burnt offerings to the gods. In addition, they often coated the lips, face, or entire bodies of sacrificial victims with rubber (Stone 2002, 22). Rubber not only signified death and sacrifice, but renewal of life, as well. It was imported from the Gulf Coast and had many purposes, including medicinal and curative uses (DiCesare 2009, 95).

Paper adornments were correspondingly resonant with the human sacrificial victims and their demise. The use of paper streamers and banners as adornments of the bodies of victims of sacrifice was a common practice in almost every monthly feast of the Mexica. Philip Arnold (2002) recognized that paper made from the *amatl* tree was customarily used for religious ritual purposes, especially the veneration of earth deities such as Tlaloc. Arnold hypothesized that the manufacturing process of paper was symbolic of the destruction and recombination of various forms of life, and as a material object, paper articulated a human connection to the land and the reciprocal nature of life and death (Arnold 2002, 229). Paper was a significant tribute item requisitioned every six months from the districts of Quauhnauc and Huaxtepec, and it was used for Aztec books and paper costumes, paper banners, and paper streamers for ceremonial purposes (Arnold 2002, 230). Durán stated that widows of fallen warriors “went to the temple, where they prayed and made offerings of paper, incense, and ordinary sacrifices” (1994, 286). In many cases the paper banners were stripped off the sacrificial victims and ceremonially burned as Sahagún described in the Panquetzaliztli

performances. The incineration of sacrificial papers was a salient death reminder and emblematic of the impending extermination of foreign enemies and designated slaves from their own population. The paper banners set upon poles in every possible location around the city were symbolic complexes that captured these concepts. The experiential rejoinder was an inescapable, heightened physiological arousal for all those who came across the paper banners or witnessed one of the “human paper streamers” cross their paths.

The anticipatory rites of this month and each of the monthly *veintenas* elevated emotions and autonomic arousal in different manners. Ritual processions with sacrificial victims offered face-to-face encounters with those who would die in a violent manner within a few days, and these were emotionally packed moments. For example, Sahagun recorded the crowd’s reactions as the litters carrying the doomed children passed by the crowds: “There was much compassion. They made one weep; they loosed one’s weeping; they made one sad for them; there was sighing for them” (1981, 2:44). Historian and essayist, Inga Clendinnen, conjectured that the “Aztecs got a lot of excitement, prestige, and addictive emotions out of all these parading and performances” (2010, 183). Her supposition is accurate when examining these processions from a bio-cultural perspective. Medical specialists demonstrate that elevated emotional responses such as joy and fear rouse neurochemical reactions that are motivating and enjoyable to experience. These suspenseful rituals and affective responses had compounding effects and aroused similar neurochemical feedbacks in the next climactic phase of their ritual months. The violent-sacrificial stage of their

monthly celebrations was a condensed one day program that was overloaded with sensorial inputs and visceral displays of blood and gore that encouraged constant physiological reactions.

### **Neuro-Physiological Rewards in the Violent-Sacrificial Phase of Aztec Feasts**

Violent-sacrificial rites escalated emotional reactions and were astounding ritual productions packed with multisensory stimuli. These responses are what Grimes referred to as the “superstructuring” of ritual, where ambience, gestures, postures, rhythm, dress and other symbols “ascend positively” and augment what is normal in every-day life to produce a “ritual hyperbole” (1982, 272). The Aztec used the incredible ambience and grandeur of their ceremonial centers, stimulating concoctions of multi-sensorial elements, and extremely violent content to create a phenomenologically astounding experience. Each violent-sacrificial ceremony had a combination of remarkable visual effects such as fire, smoke, colorful costumes, rivers of blood; acoustical productions of music, drumming, trumpet and whistle blowing, and screaming and shouting; multiple aromas that included flowers, incense and the stench of blood and burning flesh; and tactile experiences that often included touching the bodies of dancers and the body parts of sacrificial victims. The packed program was designed to be riveting, dreadful, and suffused with a supernatural aura. The result was a rush on the adrenal system and a sustained and excited state of physiological and emotional arousal.

In addition to dramaturgical additions, the heightened atmosphere was also accentuated by terrifying elements. Myerhoff observed that “ritual appears in dangerous circumstances and at the same time is itself a dangerous enterprise” (1984, 152). Though puzzling, the addition of violent and distressing elements, even death, to religious ritual, is a common practice in many cultures and not only serviced ideological imperatives but also increased the poignancy and pathos of the actions. The Aztec had the resources and military capability of carrying out one of the most astounding violent programs of their times, patterned after the great prior civilizations of Tula and Teotihuacan, and each of their monthly feasts had unique formats for killing their victims. Each monthly sacrifice had different levels of visibility, and as a result, multifarious sets of participants received varying levels of physically experienced stimulants.

In the violent sacrificial rites of the Panquetzalitzli festival, numerous victims were sacrificed in multiple locations, thereby increasing the conspicuousness of the deaths of enemy combatants. The violence of human sacrifice resonated profoundly in many different spaces and moments throughout the city. Four slaves were slain in the ballcourt in the city center, and afterwards the priest, representing Painal or the embodiment of Huitzilopochtli, “departed and circled the city, running; and in certain places he slew, in each one, a slave.” Thereafter, the warrior captives were martyred on top of the Templo Mayor a place that could be seen at great distances (Sahagún 1981, 2:27). In addition, there was a staged bloody battle between sacrificial victims that resulted in death. This all happened in the passage of one twelve-hour period, the final



day of the month. The action-packed day, with its whirlwind of motion and distribution of bloody rites in so many different districts, had mesmerizing and terrifying effects, and the intensified pace and experience likely spread through the city with infectious contagion.

The concentrated pace of these multiple sacrifices not only created an atmosphere of apprehension, which inaugurated fear-based emotions and attenuating biological responses, but it also served as another source of physiological stimulation derived from the extreme physical effort required by these events. Clendinnen remarked that what was most noticeable about the feast of Panquetzaliztli was the furious pace of the action (1991, 254). She called attention to how “it began with the eruption from Huitzilopochtli’s temple of a running priest who bore the image of Huitzilopochtli’s lieutenant Paynal [sic] (Painal). ‘He who Hasteneth’ representation of Huitzilopochtli’s terrible speed” and continued with a marathon of running, skirmishes, and sacrifices all along a circuitous path that led back to the Templo Mayor in a relay race (Clendinnen 1991, 254). The combination of exertion mixed with highly visible, graphic slayings of other humans near witnesses would have caused a flood of adrenaline with all its previously described side-effects.

Returning to the account of the tenth month, Xocotl, the form of sacrifice was grizzly and would have evoked substantial fear in the victims as well as in those who witnessed their torturous burning in the flames. Sahagún provided a detailed description of this day’s events. In the morning, he recorded, the sleep-deprived group of victims processed to the “skull rack” where the priests lined them up and defrocked them of

their paper ornaments (1981, 2: 114). Subsequently, these ornaments were burned in a special clay pot called the “eagle vessel.” Afterwards, a priest descended dramatically from the top of the Templo Mayor, carrying an idol of Painal in his arms, an impersonator or representation of Huitzilopochtli; and set it before the captives; before ascending the stairs once again. The first captor grabbed his victim by the hair and led him to the foot of the pyramid, where other priests threw *yauhtli* (a powder meant to remediate the pain he was about to experience) in his face, bound his ankles and wrists, and carried the hapless victim on their backs to the top of the pyramid where he was thrown into a fire (Sahagún 1981, 2:115). Sahagun described the sacrifice in the following manner:

And when they had taken him up, then they cast him into the fire. High did the ashes shoot up; they indeed billowed. And the brave warrior’s flesh thereupon sputtered; blisters quickly formed; burning spots quickly arose. Then the old priests quickly seized him; they quickly drew him forth. They stretched him out on the offering stone. They cut open his breast; they split open his chest. Then they cut out, they tore out his heart; they cast it before Xuihtecutli, the representation of fire. And in the same manner died all the captives whom Painal delivered up here. (Sahagún 1981, 2; 115)

Durán offered this description of the fire sacrifice:

When (the pole) had been set up, they went to the Divine Brazier (for so it was called) and lighted a fire, casting into it so much firewood that it made a splendid blaze. The bonfire prepared it was left there until the next morning, (the people) not failing during the night to keep the fire going so that by morning there was an enormous mass of embers as the day of Xoctotl dawned. This was called the Great Feast of the Dead, or Huey Miccalhuitl, . . . It was called the Great Feast of the Dead because of the many slaves sacrificed then. . . After dawn all those who were to be sacrificed were dressed in the garb and habit of the main gods, and according to seniority they were placed in a row next to the great fire. While they stood in that place, a man appeared who bore the name the Fighter. One by one he bound their hands. Then came five other ministers

and one called Tlehua. (This Possessor of the Fire) swept carefully around the glowing coals. When he had finished sweeping, they took the “gods” one by one, alive as they were, and cast them into the fire. Half roasted before they were dead, (these victims) were pulled out and sacrificed, their chests opened...since the gods were many and those slain after each god were also numerous, the entire floor was covered with dead bodies. It was dreadful to behold! (Durán 1971, 205)

Each aspect of this ritual sacrifice evoked fear-based emotions and the victims were not pleased or rejoicing in their fate. In fact, Sahagún describes them as “unhappy captives” (1981, 2:114). The Aztec were aware of the pain they inflicted and mitigated it in a limited fashion by throwing a medicinal powder in their enemies’ faces.

In the Tlacaxipeualiztli feast of the second month (Sahagún called it “The Flaying of Men”), mass sacrifices took place that included “all who were made captive (from war), the men, the women, all the children” (Sahagún 1981, 2: 47). Durán described the feast of the “Skinning of Men” as costlier in human lives than any of the other monthly ceremonies and the most popular feast in all the parts of the land (Durán 1971, 172). The twenty-day festivities honored a god with multiple names and aspects. Durán identified him as *Totec*, *Xipe*, and *Tlatlauquitezcatl*, three gods in one, and he discerned that the meaning of the god’s first name, *Totec*, was “Awesome and Terrible Lord Who fills One with Dread,” while the second name, *Xipe*, meant “Man who has Been Flayed and Ill-treated” The god’s third name, *Tlatlauquitezcatl*, meant “Mirror of Fiery Brightness” (Durán 1971, 174). Durán observed that in Tenochtitlan, sixty victims were sacrificed, and throughout the whole empire and in most of the “wretched villages” more than a thousand human sacrifices were conducted (Durán 1971, 174). Durán described the carved stone statue of Xipe Totec (see photo of stone carving of

Xipe Totec impersonator in Nicholson et al. 1983, 108) as a man dressed in the skin of a sacrificed man, and “on his wrists hung the hands of the skin” of the deceased and in his left hand he held a shield decorated with red and yellow feathers while wielding a rattle staff in his right hand (Durán 1971, 174).

The sacrifice for this month took two forms: heart sacrifice on the sacrificial stone atop the Hueteocalli, and a spectacular and prolonged death of “gladiatorial sacrifice” on a round stone set in the courtyard before the Templo Mayor. In both cases, the corpse was flayed and the skins were worn by different individuals. The first form of sacrifice was described by both Durán and Sahagún. In Durán’s version, he explained that forty days prior to the month of Tlacaxipeualiztli, a slave was chosen in every ward to represent the god Xipe Totec. Durán explained that if “twenty wards existed, twenty men went about impersonating this god of the entire land,” and for these forty days this person was paraded around so that he could be honored and glorified by the people (Durán 1971, 175). At the slaying of this god-imitator, other slaves who represented all the other important deities were also slaughtered. Durán described the Aztec’s unusual treatment of these bodies after sacrifice:

After the god impersonators had been sacrificed, all of them were skinned very rapidly...When the heart had been removed and offered to the east, the skinners (whose task it was) cast the body down and split it from the nape of the neck to the heel, skinning it as a lamb. The skin came off complete. After the skinning had taken place, the flesh was given to the man who had owned the slave. Other men donned the skins immediately and then took the names of the gods who had been impersonated. Over the skins they wore the garments and insignia of the same divinities, each man bearing the name of the god and considering himself divine. (Durán 1971, 176)

Durán explained that the sacrifice of all the gods simultaneously signified their unity, and Xipe's role lay in representing all the gods in sacrifice and death as well as in renewal and resuscitation from death.

Sahagún's account describes that in the first set of sacrifices, the captors turned their victims (called *xipeme*, or representatives of the god Xipe Totec) over to the six offering priests, who seized them and pulled them by the hair up the stairs to the top of the Temple. And as for the captive who lost his strength or threw himself down, "they just dragged him" (Sahagún 1981, 2:48). At the top of the pyramid before the shrine of Huitzilopochtli, the victims were stretched out on their backs on the offering stone, and held down by the six offering priests. "They cut open their breasts with a 'wide-laded flint knife.' And they named the hearts of the captives 'precious eagle-cactus fruit' ... And when the heart had become an offering, they placed it in an eagle vessel" (Sahagún 1981, 2:48). Durán described the six offering priests as high-ranking officials who inherited their position through primogeniture. The priest in charge of slaying the victims was the highest priest and was "regarded with awe" and was dressed as the Lord Topiltzin (Quetzalcoatl) with a red mantle, a "headdress of splendid green and yellow feathers," and golden earplugs inlaid with green jade (Durán 1971, 91). This fine regalia established his high rank and esteemed position as a revered executioner. Both the high priest and the other five priests were smeared with black in their faces and had a white circle painted around their mouths. Their long locks of hair, which they supposedly never washed, were encrusted with the blood of their victims. Durán recorded that "seeing them come out with their ghastly aspect filled all the people with

dread and terrible fear” (Durán 1971, 91). Four of the priests held down the arms and feet of the sacrificial victim while the fifth held the throat and the sixth high priest extracted the heart with a sharp stone knife. Durán described the offering stone as a pointed stone that was as “high as one’s waist,” and it was so sharp that when a victim was stretched across it, the body was so bent that when the “knife dropped upon his chest it split open with the ease of a pomegranate” (Durán 1971, 91).

Several features of this first set of sacrifices made them hair-raising, heart-pounding, and gut-wrenching spectacles. The great number of sacrifices was impressive and the fact that enemy women and children were also sacrificed created another form of novel spectacle. The appearance of the six sacrificial priests struck fear and awe in the spectators, and these officiants were also necessary to physically hold down and restrain a struggling victim. These tussles must have been harrowing to watch, and there were likely screams and shouts of agony and fear from the victims which equally piqued fear-based emotions from onlookers. The specialized form of sacrifice which included the “skinning of the corpses” was most likely a disturbing procedure to witness, as well as the subsequent encounters with individuals wearing the skins of the deceased for multiple days thereafter. Coming into close contact with a corpse is an experience that often arouses fear in people, but it can also give rise to a morbid curiosity. As with the modern *Body World* exhibit, viewing preserved cadavers was regarded by visitors as both attractive and at the same time repulsive. According to Montross, it also draws upon a common inquisitiveness found in different groups and in many ages who gathered for public executions, human dissections, and viewings of

corpses at funerals (2011, 50). From a physiological perspective, witnessing a series of killings by heart sacrifice, including visualizing the still beating hearts and the subsequent tumbling of the bodies down the grand pyramid to be flayed and then decapitated and dismembered, was undoubtedly frightening and sure to stimulate the neuroendocrine system of all participant observers.

The Spanish chroniclers called the next portion of the feast of Tlacaxipeualiztli, the “gladiatorial sacrifice” perhaps because of their familiarity with the ancient Roman spectacles that had similar one-on-one battles. The victims of this type of sacrifice (called the “striped ones”) also had a night-long vigil before their slaying and had a portion of their hair taken by their captors. These captives were led in procession by their owners to a special circular carved rock called the “gladiatorial stone” where they would fight a battle to the death with an experienced Aztec eagle or ocelot warrior. Durán called this sacrificial altar a “stone wheel” that stood in the middle of the courtyard near another stone called “eagle vessel” (Durán 1981, 177). He provided an illustration of this scene showing the almost naked captive tethered around the ankle with a rope fighting a well-dressed Aztec warrior wielding an obsidian bladed sword (Horcasistas et al. 1971, Plate 15). At this point, four elite Aztec eagle or ocelot warriors each made a dramatic entrance, dressed in their warrior garb and armor and danced a warrior dance before the gathered crowd while brandishing their shields and “obsidian-bladed clubs” (Sahagún 1981, 2:51). After this performance, a leading god-impersonator dressed as the god Totec made a grand entrance by descending the stairs of the pyramid, followed by a troupe of other proxies in the garb of all the other deities.

After circling the stone of gladiator sacrifice, the costumed figures seated themselves on royal “large backed seats called roseate spoonbill feather seats” around the gladiatorial stone (Sahagún 1981, 2:51). Durán added that these proceedings included drumming and chanting in honor of the idol Xipe Totec (Durán 1971, 177).

The next portion of the ceremony began with singing, whistling, and music (conch shells blown), and then the captors entered the courtyard accompanied by their captives and circled the stone together. Sahagún delineated the preparations for the rigged battle:

One (of the captors) quickly seized a captive. The captor, he who owned the captive, went holding him by the head in order to bring him to the round stone of gladiatorial sacrifice. When they had brought him, they gave him *pulque* (alcoholic drink); and the captive raised the *pulque* four times in dedication, and afterward drank it with a long hollow cane... When this was done (offering a quail sacrifice for the captive), then they made (the captive) climb upon the round stone of gladiatorial sacrifice; and when they had set him up... a man, a bear (priest), confronted him... Then he took the “sustenance rope” which reached to the center (of the stone) which was fastened to it. Then he tied it about the waist of the captive. And he gave him a war club decked with feathers, not set with obsidian blades. And he placed before him four pine cudgels, his missiles to throw at one, to defend himself. (Sahagún 1981, 2:52)

The ill-equipped combatant, who was only armed with a feathered club, was tethered to the stone and forced to engage one of the thoroughly experienced eagle or ocelot warriors who were free to move about with their shield and sharp obsidian blades. In Durán’s version of this ceremony, he explained that the captive warrior was “naked,” the rope was tied around one foot, and each time he was struck and wounded “trumpets, shells and flutes” sounded to dramatize his injuries (Durán 1971, 178). If by chance, a



captive was valiant enough to fend off the blows of one warrior, he had to meet all “four of the eagle and ocelot warriors” in turn until they wounded him to the point that “he faltered, he fainted, he fell on the surface, he threw himself down as if dead, he wished that breath might end...that he might cast off the burden of death” (Sahagún 1981, 2:53). Before the maimed victim expired, he was brought to the edge of the gladiatorial stone and laid on his back. The leading priest representing Totec gashed his breast with a sacrificial obsidian blade, seized his heart, and raised it as a dedication to the sun, “thus giving the sun to drink” (Sahagún 1981, 2:53). Durán added that the entire city was present for this ceremony and that forty to fifty men died in this manner, taking up most of the day (Durán 1971, 180). Inga Clendinnen noted that there is “desperate excitement” in lethal contests and an “excitement which can infect actors and audience alike” (1991, 89). In the case of the Mexica, she observed that the “bureaucratic calculation” of elaborated brutality in combination with the apparent impersonality of violence instigated a normalization and habituation to violence (Clendinnen 1991, 89). The problem of desensitization was possibly overridden by the incorporation of additional dramatic elements such as the costuming and music, and in the case of the gladiatorial contests, there were always different and unexpected outcomes to the dual to the death.

The popularity of this controlled battle probably derived from its unpredictability. The ritual had stringent controls and the death of the enemy captive was always ensured, but each tethered warrior could still be resilient and put up a good fight, a surprising outcome. As Panksepp (1988) discovered, when humans are

presented with unanticipated environmental stimuli, the novel situation “provokes more sustained attention” because dopamine is released via the “generalized mesolimbic dopamine-centered seeking system.” The other rewarding aspect of this close encounter with bloody violence is the protective frame in which the audience witnessed the infliction of injuries and death on the enemy combatant. In their studies, Goldenberg et al. found that modern subjects preferred violent forms of media when thoughts of death were close to their consciousness because they could experience the emotional and physiological arousal in a setting where they remained unscathed (1999, 317).

Goldstein had similar findings in his studies, and these results demonstrated that when spectators viewed violent content in a protective frame, or a "parallel but different reality," they had a sense of control because they could experience heightened emotions elicited by the violence, as well as all the pleasure and excitement attenuating it, while knowing that they remained in a secure environment (1999, 280). The Mexica audience members watching the lopsided gladiatorial battle were in an obvious state of control and security as they witnessed the sharp obsidian blades of their eagle or ocelot warriors slice into the flesh of tethered and poorly armed captive warriors. The audience knew that they would receive no harm from him because of the rope and especially because he was surrounded by well-armed and renowned Aztec warriors. The rope was also symbolic of all forms of incarceration of criminals, slaves, and prisoners of war and would have evoked emotions of power over an inimical enemy.

Other studies have determined that the enjoyment of violence is enhanced when it is incorporated into a narrative that classifies the victim of violence as an outsider or

an antagonist. This was certainly the case with the sacrifices in the Tlacaxipeualiztli *veintena*, where the victims of sacrifice consisted of incarcerated enemy combatants who had been captured on the battlefield. But in the cases of the monthly observances of Toxcatl and Atl Caualo, the relationships with and feelings for the victims were different. Interestingly, and maybe because of the different relationships the Aztec had with these particular victims, these sacrifices were less visible to the general populace.

In the Toxcatl festival, the relationship of the citizens of Tenochtitlan and the victim of sacrifice was complex. He was an outsider, culled from a group of victims and chosen for his perfect physical deportments. He was also taught and trained to act like a god by religious specialists, and he walked among the people for an entire year wearing the regalia of the god Tezcatlipoca. As a result, when the citizens met him, they responded with obeisance and great admiration. But while they revered him as a god, they were also aware of his “outsider-hood” and of his impending fate, especially since he was always guarded, “lest he should flee.” At the beginning of the month of the feast of Toxcatl, the god impersonator was forced to shed his godhood as he was transformed by the priests into a regular warrior. Sahagún expounded that the impersonator “abandoned his ornaments,” had his hair cut and braided like that of a seasoned warrior, and was adorned with a “quetzal feather spray” attached to the “forked heron feather ornament” (Sahagún 1981, 70). He was married to four women, representing goddesses, for the entire month up until his death. Five days prior to his expiration, these four wives “began to sing and dance” in four different locations accompanied by the likeness of Tezcatlipoca. These latter comments suggest that even

though the impersonator now wore the regalia of a warrior, the people still honored him as the warrior-god Tezcatlipoca, cohort of Huitzilopochtli. Sahagún further related that the final journey of the victim was by boat to a place called Acaquilpan or Caualtepec, where he was abandoned by his wives, but still escorted by his servitors. This trip outside the city and across the lake to a sequestered location prevented most of the population of Tenochtitlan from participating in this part of the sacrificial ceremony, but even those who witnessed the slayers and their victim embarking on the canoe and drifting out onto the lake with its somber crew would have had harrowing thoughts concerning the rapidly approaching demise of their beloved god, transformed into a warrior.

Sahagún continued the narrative by revealing that the isolated location of the sacrifice was where the victim made his final ascent, supposedly without any prodding, up the stairs of a small temple called Tlacochalco (Sahagún 1981, 71). As he mounted the pyramid stairs, the image of the god broke his ritual implements including, his flute and whistle, in symbolic gestures of his own termination. For those present, the gesture of breaking the flute must have produced a flood of emotions as they recalled how this gallant warrior had masterfully played this joyful-sounding instrument over the course of the previous year. They most likely experienced heartbreak as they witnessed this flute being broken into pieces along with all the god-impersonator's other precious ritual implements. These actions were poignant portents of the imminent expiration of the god and man who ascended the stairs. His sacrifice was just as bloody and

traumatic as all other human sacrifices and most certainly induced heightened biological responses. Sahagún's description of what follows reads:

And when he had mounted all the steps, when he had risen to the summit, then the offering priests seized him. They threw him upon his back on the sacrificial stone; then (one of them) cut open his breast; he took his heart from him; he also raised it in dedication to the sun. For in this manner were all (these captives slain). But his body they did not roll down; rather, they lowered it. Four men carried it. And his severed head they strung on the skull rack (Sahagún 1981, 71).

The more reverential treatment of carrying down the body from the pyramid versus rolling it down attested to the victim's divine stature, yet despite all these indications of reverence for this captive, his head was still impaled on the skull rack alongside the crania of victims who did not receive such honorary treatment.

A more developed discussion of the skull rack will be offered in Chapter Eight, but it must be noted here that the skull rack was a powerful symbolic and real reminder of death, and the evocative presence of the grand *tzompantli* in the vast courtyard of the Templo Mayor must have been riveting. Imagine for a moment, entering the walled ceremonial precinct to be confronted by a palisade of skulls in various stages of decomposition. It most likely had an inescapable pungent smell, and the rows upon rows of lifeless skulls would have been a terrifying sight, a reminder of all past executions and those that were forthcoming. For anyone who saw this gargantuan display of death, their pulse rate would have increased and their palms would have become sweaty. The shock value of this monument memorializing often torturous executions instilled fear in enemy leaders invited to witness human sacrifices in Tenochtitlan and would have fostered feelings of dread for the lower

classes of citizens who knew that being demoted into slavery could end in their own skulls being vividly displayed there one day.

The Toxcatl festival did not have the same quantity and visibility of violence as in many other months, and so it likely did not evoke the same elevated levels of arousal. Even so, both sympathetic and indifferent attachments to victims of sacrifice elicit strong emotional reactions and corresponding autonomic reactions. This assertion has two possible implications. In the first case, some ritual participants or spectators might have sympathized with the victims, such as young children or human god-impersonators they came to adore, and thus, the sadness and violence of their deaths still elicited strong doses of epinephrine in their bodies, thus heightening physiological arousal. In the second case, the observers remained relatively unattached to the victims and recognized their outsider-hood, but still experienced elevated arousal based on apathetic or acrimonious feelings toward the victim. Modern specialists conclude that exposure to any type of violence by all types of spectators and against all category of victims, whether they are high or low sensation seekers, instigates pleasurable elevated biological responses.

Feasts honoring agricultural deities offered human sacrifices of several sorts, and these included both captive warriors and children or women drawn from the Aztec slave population. This latter category was not viewed as evil outsiders, but neither were they taken from high-born society, with rare exceptions. The treatment of both categories and the visibility of their sacrifices were diverse and offered potentially different physiological responses. For instance, in the month of Atl Caualo, child

sacrifices were conducted in several places outside the city, such as on mountain tops and in the middle of the lake (Sahagún 1981, 2:43). The people wept for the children as they saw them leave, carried away on litters or in a canoe, but only a select few religious specialists were likely present when the victims' hearts were taken from them in "honor of the gods of water" (Sahagún 1981, 2:1). This month's energy level was more somber and perhaps less physiologically arousing because the violent ceremonies were not witnessed by most the populace. The celebratory-euphoric phase of this month is not mentioned, by the chroniclers, perhaps because celebration was only warranted after the rains finally came or perhaps because there were less psychological recompenses for seeing members of their own population killed as opposed to enemy combatants who they rejoiced in seeing exterminated.

In the months dedicated to the gods of war, there were typically a wide-range of celebratory events commemorating the defeat of their enemies on the battlefield and finally on the sacrificial stone. There was great satisfaction in witnessing staged battles where Aztec warriors were elevated to a supreme status while the only outcome for their sworn enemies was defeat. The final euphoric-celebratory phase consisted of joyful celebrations of dancing, music-making, drinking, feasting, and fun competitions, and these activities were an emotive experience which commemorated victory over death and unwanted enemies. These sporting activities instigated heightened physiological responses that were pleasurable and derived from both positive emotions and from physical exertion.

## **Neuro-Physiological Rewards in Aztec Euphoric-Celebratory Rites**

Ritual celebrations offer cultures opportunities to commemorate memorable events of the past, to hail current victories, and to honor important moments of status elevation. Festivals are heightened experiences because they have unique purposes and were joyful responses to important collective accomplishments or events. Victor Turner recognized that religious celebrations are often filled with “impassioned” actions of relief from anxieties concerning dangers and stressors that have been overcome by human actions or by outside forces or “transhuman” powers (1982, 218). For the Aztec, celebrations occurred at inaugural ceremonies of a new ruler, temple dedications, military victories, and in events found in the third and final phase of many of their monthly feasts. In the *veintenas*, the final celebratory portion was inspired by this sense of psychological relief that Turner identifies as appeasement of the gods who offered agricultural fecundity and security from evil forces. In the world of the Mexica, this psychological reprieve also originated from an absolution from the negative, fearful emotions accumulated in the “violent-sacrificial” phase and from mitigated trepidations concerning outside enemies who were obliterated through sacrifice. As already discussed, humans enjoy violence more if it is circumscribed in a narrative where the violence is perpetrated against villainous characters, and such was the case in many of their monthly feasts. The annihilation of enemy combatants on the gladiatorial stone during the feast of Tlacaxipeualiztli and the mock battle between slaves and prisoners of war during the feast of Panquetzaliztli were both dramatic instances where residents of Tenochtitlan could witness the brutal deaths of hated outsiders first-hand.



Researchers have additionally determined that there is a limit on how much violent content is enjoyable, even if the spectator is a “high sensation seeker.” A modern example is found in Hollywood films that add humorous elements or quieter, more tranquil moments to break up scenes of horrifying violence. In a similar fashion, the third phase of Aztec ceremonies swung the emotional pendulum away from terror and violence to positive, joyful moments as a form of “comic relief.” As in the prior two phases, experiences during the third phase were amplified and elements exaggerated in extravagant ways not found in mundane existence, stimulating further physiological arousal.

The “euphoric-celebratory” stage of the Mexica monthly feasts had set structures, but they also had copious opportunities for innovation and spontaneity. Physiological arousal occurred via several different strategies including novelty, multi-sensory inputs, and intensified positive emotions. Anthropologists offer ethnographic examples of modern festivals and present their own theoretical interpretations of festive moments as well as tactics utilized by different social orders to foster collective enjoyment, excitement, and bonding. In his study, Roger Abrahams, discerned that modern festivals often start with “attention grabbers” such as a cacophony of sights and sounds including drums or loud musical instruments, and afterwards other extreme experiences are brought in that are a dramatic “contrast to everyday life such as costuming, masking, lively décor, etc.” (1982, 167). He also found that the festivals had grand displays of singing, dancing, gaming, feasting, and ludic events. Mass participation and states of egalitarianism or “communitas” is often discovered in

abundance in these types of celebrations. As part of these intensified events, every-day items were exaggerated in what Abrahams calls “a new festive vocabulary” of “gigantism” or its opposite “miniaturization” where often the “same symbolic object, produces the memento, the souvenir, the means by which one can recapture through memory the pleasure of the experience (Abrahams 1982, 171). These types of multi-sensory inducements, surprising elements, and positive emotional responses are observed by biologists and social-psychologists to contribute to increased physiological arousal, and each of these motivational features was present in the positively oriented phases of the Aztec festivals.

In the celebratory stage of the month of Panquetzaliztli, there was a festive atmosphere after the human sacrifices of enemy captives. The owners of the victims sponsored a great feast for friends and family in their homes accompanied by music (ground drums, gourd rattles, and turtle shells), and there was an offering of gifts to many groups of people including workers and all members of the neighborhood. This localized celebration gave honor and recognition to the owner of the captive for his prowess in war and for his moral commitment to the community for sacrificing his captive for the good of the collective. The feast and gift-giving was an extension of the actual sacrifice of the victim, as the owner of the household doled out his wealth for the benefit of neighbors, families, and employed workers (Walens 1982, 189). These feasts took place all over the city and created a buzz throughout the neighborhoods with movement and the sound of drumming. The festive atmosphere was extended to the

next day, when those who had the privilege of drinking the alcoholic beverage *pulque* did so (Sahagún 1981, 148).

In the festivities of Xocotl, many of the activities engaged large crowds of people in one central space. After the torturous sacrifices by fire, an atmosphere of celebration started with great feasting in neighborhoods and then a subsequent great gathering (“press of people”) occurred at midday where all the inhabitants of the city performed the “serpent dance” at the great courtyard where the xocotl tree still stood (Sahagún 1981, 2:116). Using sharp pine staves, certain masters of the youths protected the tree from the “jostling” crowd by swinging at any who drew too close to the tree. After the dance, the young men competed to see who could be the first to climb the ropes supporting the standing tree and reach the dough image of Xocotl that rested on top. When the victor emerged, he spread the seed dough pieces upon all the people below. This activity resulted in shouting and brawling among the spectators to obtain keepsake pieces (Sahagún 1981, 2:116). The champion of the competition was brought to the Templo Mayor, the place of sacrifice, where he was honored with great gifts and dressed in a brown cape adorned with feathers. From there he returned home with a procession of musicians playing wind instruments and shell trumpets as they lead the way (Sahagún 1981, 2:117).

Each stage of this particular feast had great religious and symbolic meaning as well as entertainment value. Large crowds of people were allowed to participate in this ceremony by witnessing the procession of captives before their deaths. Subsequently, they communally witnessed their actual torturous final moments of death by fire and

heart sacrifice. Lastly, the multitudes participated in the capture, dismemberment, scattering, and eating of the dough image. The energy of the crowd and the competitive nature of the events were elements that generated amusement and enjoyment for those who participated. Social psychologists recognize that huge gatherings involve a greater degree of “emotional volatility,” and behavior spreads through the crowd by contagion, a process whereby individuals lose their sense of individuality (deindividuation) and are less able or completely unable to resist stimuli that are disseminated through the assembled mass (Fagan 2011, 88). Sahagún repeatedly mentioned that the “courtyard was well filled, it was well crowded, it was well packed...there was much jostling...there was shouting...Indeed there was continual trampling; indeed there was hurrying; indeed there was a press of people” (Sahagún 1981, 2:116). This description suggests a large and rowdy crowd influenced by the behavior others in the mass of people.

For an ancient person, this would have been an exciting day, and the following scenario was probable. At midday, a person arrived with other family members and friends, bumped against many other sweaty bodies, and heard a cacophony of sounds including gleeful shouting. These moments of arrival were filled with anticipation, not for violence, but for a good time, and this excitement would have increased their heart rates, perspiration, and breathing. They would have been struck by the image of the pole that stood as a specter above the crowd, and the sight of it most likely invoked a condensation of emotionally laden memories.

This emotional package included all memories of the tree-raising ceremony in the center of the courtyard, which included reminiscent moments on the first day of the month when all the people shouted with a great outcry as the tree-pole was pulled into a standing position by many brave warriors straining against ten ropes attached to the middle of the tree (Sahagún 1981, 2:112). The next recollection would have been of the pole's imposing presence for the duration of the month, as a symbolic reminder of forthcoming deaths, and of the next phase of the month when cowering victims appeared for the snake dance where dancers undulated about the pole, two-by-two, in long, sinuous lines. These victims were costumed and painted as mystifying apparitions of death. Chalk covered their bodies, red paint surrounded their lips, and black dye encircled their eyes (making the whites of their eyes stand ghoulishly), and red flaming butterfly devices were attached to their backs (Sahagún 1981, 2:113). The sight of these victims in such terrifying paint and costume would have elicited fearful emotional responses. Another poignant memory would be the silhouette of the pole against the backdrop of the central pyramid, a bright blaze atop its platform. The memory included the billowing smoke and ashes that shot up from the burning flesh of the prisoners of war (Sahagún 1981, 2:115). The symbolic program of each event triggered these potent memories, insinuating warfare, bloodshed, and the sacrifice of enemies. The combination of these manifestations would have aroused the same emotions in spectators as the pole came into their view.

After the courtyard was filled to the maximum, participants would have been roused by many new spontaneous and action-packed events. If they wandered too

close to the pole, the priests positioned around the xocotl to fend off the crowds would have brutally struck at them with the pine staves (Sahagún 1981, 2:116). The fear of heavy blows and the challenge of avoiding them also elicited an animated atmosphere and most likely produced game-playing and laughter amongst the crowd. This lively activity was followed by the rope climbing competition which Sahagún described as follows:

Thereupon was the climbing on the ropes. On one rope maybe twenty climbed as if each were hanging. Not all reached the top; only some reached the top. The one who went leading, he indeed could reach the xocotl image. It was only of amaranth seed dough. He took all—its shield, its tipless arrow, and its dart thrower. And the amaranth seed dough pieces he cast down there; he scattered them on the people. All the people below looked up. When the amaranth seed dough fell, everyone stretched forth his hands. As if there were brawling, so there was shouting. (1981, 2: 116)

These activities were both fun and daunting at the same time, and injuries were likely for those who were attacked with pine staves or who fell from the ropes. The brawling actions must have come with physical tussles, shouting, and possible injuries.

Dangerous activities elicit arousal in the same fashion as frightening violence, and so these moments of laughter were also filled with apprehension. The noise and clamor heightened the sense of urgency and excitement. There was also the thrilling prospect of being the one who attained the amaranth dough image or perhaps a morsel of it before others. There were multiple and variant doses of arousing emotions and bodily responses to each of these events as they unfolded in the euphoric-celebratory stage of this feast.

From a bio-cultural perspective, communal rituals such as this celebratory occasion caused individuals to be overwhelmed with “endogenous opiates (opioids)” which foster feelings of “euphoria,” “certainty,” and “belongingness,” and this can be enhanced by crowd size (Winkelman 2010, 237). Joyful moments of levity also activate similar biological processes. These affective states were most likely enhanced by the “masters of the youth” who waved pine staves at the crowd if they got too close to the xocotl pole and the brawling actions of some of the participants as they scrambled to snatch limited pieces of scattered “amaranth seed dough” before their compatriots could.

Anthropologists and socio-biologists have uncovered many positive cultural and physiological reactions to ludic events and the communal laughter associated with it. In their research, Guillaume Dezecache and R. Dunbar (2012), detected that laughter played a critical role in social bonding and increased the community size or “grooming group” that could be bonded with, as a result of its occurrence. Similar results are reported by anthropologists who see laughter as spontaneous, contagious, and relational in the sense that it expresses communal vitality, *communitas*, and unlimited creative possibilities within a group (McHugh et al. 2012, 381). Comedic performances are known to cross the boundaries of convention to call attention to that order and to invent new strategies to reorient the group (Keisalo 2014, 60). Other researchers find that humorous events not only represent pleasure and excess, but they also deconstruct “high minded seriousness” and flirt with unhampered pleasures and creative moments of play, which result in relief from societal pressures and other stressors experienced in

life (McHugh et al. 2012, 386). Mirthful laughter is also recognized to have empirically established health benefits that improves immune functions in the short and long term (Bennett et al. 2003, 38). Even though Sahagún does not mention laughter in the *xocotl* celebratory phase, it is not difficult to conjecture that these types of events would have produced laughter.

Emotional responses were also amplified, with many exaggerated elements representing the larger cosmos such as the *xocotl* pole (gigantism) that stood erect in the center of the courtyard. The smaller aspect (miniaturization) of the same deity was found in the dough-image placed atop the pole, the pieces of which were scattered and eaten by members of the crowd or taken as mementos of the ritual occasion. In addition to the exaggerated elements in this celebratory stage, multifarious and multi-sensory stimulants were utilized in multiple combinations for different effects including music, dancing, and competitive games. Other feasts had the same types of multisensory stimuli. For example, after the sacrifice on the gladiatorial stone during the final stage of the Tlacaxipeualiztli feast, the offering priest, acting as the “old bear man,” pulled up the sustenance rope (the rope that tethered the victim to the stone while he fought to the death), raised it to the four directions, and then went through the city “weeping, he went howling like one bereaved; he wept for those who suffered, who had died” (Sahagún 1981, 2:54). The sound of the wailing was both mesmeric and piercing and most likely reverberated through the neighborhoods, provoking emotional responses from all who heard the wailing. On the very next day, the mood of this feast shifted as two groups of costumed dancers (offering priests from neighboring Tlatelolca and Tenocha peoples)



merged in two rows and entered the palace entrance to be joined by the ruler, Moctezuma and the rulers of Texcoco and Tepaneca who together formed a political confederation called the “triple alliance” (Sahagún 1981, 2:55). Sahagún described the costumes thus:

They adorned themselves, they danced in quite mixed things, quite various arrays: butterfly nets, fish banners, clusters of ears of maize, coyote heads made of a paste of amaranth seeds...and red amaranth (only it was red feathers), and maize stalks with ears of green or tender maize. (Sahagún 1981 2:55)

The varieties of costumes, masks, and banners created quite a colorful and mesmerizing visual display. These elements, combined with the music and movement of the dance were very likely emotionally and neurologically stimulating for the many spectators who saw the dancers coursing through the city.

The multi-sensory stimulation also had a unifying effect among the audience and the performers, who both received sensorial inputs. All who were near the ceremonial precinct could hear the music, commissioning anti-structural effects and closeness between those who were present. As P. Newham (1994) observed from a physiological perspective, music incites “analogical brain processes” that include the subcortical portion of the brain, a zone that evokes unique expressive emotions. Further, according to Panksepp et al. (2009), music evokes the hormone oxytocin, which enhances the craving for physical and emotional closeness. In relation to dance, biological studies have uncovered evidence that dance enhances the interactions between vasopressin and serotonin in the hypothalamus, the area of the brain in the control of communicative behavior (Winkelman 2011, 167). Intriguingly, anthropologists confirm this role of religious dance in communicating emotions and

ideas between participants, and they recognize a unification process between dancers, audience, and the cosmos (Lerman 2008, 43). In the same Aztec ceremony, another group, including the warriors who had taken captives and designated sets of noblemen and noblewomen, performed a second round of dances from nightfall until midnight. I speculate that both drummers and dancers were enthralled by their actions and were mesmerized with the bright costumes and the intensity of the combination of all the sights and sounds. They also most likely felt the gravity of their roles as pivotal actors in this monthly celebration, as important victors in war. The increased load on their senses must have provided natural physiological tonics, and the long hours of dancing also produced activated pleasurable neurochemical responses.

The feast of Toxcatl included additional sensorial inputs in this euphoric-celebratory phase. Before the commencement of the dances, large braziers were filled with coals and wood then lit on fire. The brilliant flames must have reached to the sky for the fires “burned exceedingly” (Sahagún 1981, 2:74). Shortly thereafter, offering priests raised smoking censers, emitting white clouds of incense into the air as offerings to the great temple, and all the gods were simultaneously honored with incense in each *calpulco* and home (Sahagún 1981, 2:74). The bonfires and smoky air made a mysterious backdrop for the lively dancing of the women. The dancers were “rich women” who painted their faces and adorned themselves with pasted red feathers, and they danced a leaping dance while holding canes attached to paper streamers and “thin cotton blankets” (both with scroll designs). The music for the dance came from the beating of loud drums played by old men in each *calpulco* (Sahagún 1981, 2:74). As in

other euphoric-celebratory festivities, multiple dramatic features enlivened the energy and atmosphere of the ritual celebration to make them seem “other-worldly.” As Wicklund et al. recognized, social solidarity is largely driven by a “mutual offering and receiving of sensations that can be characterized as aesthetic, as beautiful, as pleasing to the senses...visual, acoustical, olfactory, and tactile qualities” (2004, 370). The unifying element of these rites was their simultaneous distribution to various locales. While the noble priests were lighting censers in the prestigious ceremonial center, billowing smoke also emitted from the doorways of humble homes and over residential altars where revered idols of the gods took a central place. The sight of smoke billowing from every precinct would have offered feelings of communality and perceptions of ideological unity. A similar invocation of accord was produced in the spatial organization of music and dance. While the high-class women of the city engaged in an unusually arduous dance in the center, the driving beat of the drums that accompanied the dancers came from the aged men who pounded on their drums strenuously within the local neighborhoods so that the sound carried across the city. The physical placement of participants in diverse corridors of the city, in both high class and low class neighborhoods, incited typical neurochemical responses in individuals everywhere, supporting social bonding on physical as well as cognitive levels. This final phase of the monthly *veintenas*, as in the prior two, produced an aura of ineffability and a sense of “awe.” The by-product of this design was experiences that were embodied, emotionally oriented, and neurochemically rewarding.

## Summary

The monthly sacrificial celebrations of the Mexica promoted social cohesion on ideological and materialistic levels, and concurrently elevated the emotional and psychological deportment of individuals and the overall health and climate of the city. This powerful ritual program conceivably mitigated stressors stemming from the people's highly stratified social arrangement. For instance, bathers who owned victims for sacrifice were central actors in the ceremonies, but these principal figures could potentially have been commoners who were elevated in status by expertise in warfare or an increase in economic wealth, such as a merchant who could purchase a "bathed one." These ritual ceremonies provided opportunities to focus attention on their rise in stature and possibly motivated others to achieve excellence in these same areas. In addition, the lower social orders were present for most of the ceremonies, and in the Panquetzaliztli festival they could join in the fast that occurred leading up to the serpent dance (Sahagún 1981, 2: 143). In the same month, while the bathers conducted an all-night vigil with their bathed ones, the commoners engaged in similar austerities by making a bed for themselves on mats, or "old maguey fiber capes" on the cold ground outside (Sahagún 1981, 2:144). Experiencing physiological arousal at the same time allowed for social contagion to become operational and linked the otherwise stratified society in anti-structural bonds.

This bio-cultural analysis of the three phases of Aztec feasts reveals that there were also substantial experiential and embodied benefits for both participants and spectators. Throughout the month, they enjoyed a communal roller coaster ride of

emotions and physiological states that occurred on individual and collective levels. In the month of Tlacaxipeualiztli, or the Flaying of Men, each *calpulli* sponsored a god representative of the god Xipe Totec, just like the one in the main temple. This arrangement augmented mutual participation, because each *calpulli* or barrio had their own god image walking in their midst, and this allowed each person to experience the same interface with a “walking corpse” (Durán 1971, 175). In the next phase of the month, the entire citizenry was present to see their particular god-image slain by heart sacrifice before being quickly skinned. This skinning process must have made audience members queasy as they witnessed knives diving into each corpse. They further witnessed the same knives splitting the skin of the cadavers from the nape down to the heel, as if the priests were skinning lambs (Durán 1971, 176). The people’s emotions of horror were elevated even more dramatically as they witnessed other men immediately donning the skins, with blood still dripping from them. These men who shrouded themselves with the still flimsy, sopping skin also took on the same insignia of the slain impersonator. This costume would have captured emotions of terror as well as sympathy for the deceased impersonator who had walked in their midst just a few days before. In the euphoric-celebratory phase after the last naked victim was vanquished and then executed on the gladiatorial stone, the singing and dancing commenced in the ceremonial center for all to enjoy, and in the following twenty days the festivities continued on a more localized level. In each neighborhood, residents could encounter an individual who begged for gifts wearing the skin of the deceased (the skin belonged to the captor, and he lent it out to neighbors and friends to go about begging for food

and gifts wearing it) (Sahagún 1981, 2:54). The appearance of these beggars wearing grotesque, dried crackling skins that reeked of decay would perhaps have evoked a feeling of surrealism and maybe even nausea and revulsion. The skins were definite death reminders and came with an “emotional price tag” that aroused all past emotions related to this skin when it had been a living medium, as well as again in its decimated form. These emotions incited powerful neurochemical responses that were motivational and addicting.

Each month sponsored similar emotional swings that ranged from suspenseful trepidation and reverential awe to terrifying horror and finally to euphoric ebullience. Remarkably, each of these intensified emotional states produced similar types of rewarding physiological responses. Medical researchers have determined that positive affect found in joyful, playful experiences such as the races to the top of the temple of Tezcatlipoca or the competition to climb the xocotl pole have several constructive outcomes. These rewarding benefits include cognitive flexibility, social interaction, motivation, and simultaneous activation of endorphins and opiate receptors, creating feelings of “well-being” and “pleasure” (Mathew et al. 2011; Strumpfer et al. 2006). Stressful or dangerous situations arose in multiple instances in Aztec ceremonies. One example was the slaying of four victims in the ballcourt in the Panquetzaliztli ceremony, followed by the spreading of their blood all over the court. These frightful rituals had biological consequences including stimulation of the hypothalamus and the pituitary gland in the brain and a subsequent release of dopamine, a chemical agent involved in “motivation” and “reward” also produces a “natural high” (2009, 23). The

sacrificial program arced from suspense, to terror, and then to joyful-euphoria, and this allowed participants to experience novel sensations and new sources of stimulation, which also enhanced autonomic arousal.

Many elements of the monthly feasts included “active stimuli” such as bonfires, processions, flagellation, and dances for maximum prompts to exhilarate both performers and spectators (2011, 204). A “multiplicity of significata” was not only physiological arousing, but also emotionally and cognitively overwhelming, producing amplified sensations and creating an aura of “ineffability” (Rappaport 1999, 261). The emergence of the idol Tezcatlipoca on a regal litter (associated with sacrifice) from his hidden shrine atop his massive pyramid amid clouds of incense is just one example. The intense level of embodied participation also contributed to the amplified emotional and physiological states. In Aztec rituals, there was often significant movement, physical exertion, and stimulation of all the senses, and the combination of all these experiential elements increased the level of excitation and the production of pleasurable neurochemicals.

The repeated nature of Aztec ceremonies proffered “contextual conditioning,” whereby symbols, places, objects, and the beliefs associated with them were invested with emotional significance and became a substrate of motivation and arousal on subsequent encounters with these same material items in the next round of ritual (Alcorta et al. 2005, 338). Some of the more evocative and oft-repeated material implications of death, war, and sacrifice in their ceremonies were skull racks, paper banners, royal litters, the gladiatorial stone, and the skins of the deceased. There were

additional shamanic-like elements embedded in their ritual program that equally served the conditioning of positive and negative emotional responses. The “rhythmic drivers of ritual” such as chanting, dancing, and drumming sponsored altered states of consciousness and spiritual conditions for individuals not found in everyday life. The following chapter will illuminate where and when these shamanic elements appeared in their ritual program and who were the beneficiaries of these altered states. It will also consider how these additions to the Aztec ritual schema in different months fostered additional biopsychosocial rewards.



**CHAPTER SEVEN**  
**SHAMANIC ELEMENTS IN AZTEC MONTHLY FEASTS**  
**AND THE BIOPSCYHOSOCIAL REWARDS**

In Aztec cosmological thought, the upper and lower worlds of the gods were accessed through ritual sacrificial acts. Offerings consisted of a wide variety of inert substances and living forms. These propitiations renewed the lives of the gods, who reciprocated the favors by sending life-endowing rains, success in war, and other benefits to humans. In addition to offering material goods and living sacrifice, the Aztec utilized another vehicle for propitiating deities: embodied, self-denying performances. These types of offerings included painful bloodletting practices, different forms of abnegation, and arduous and prolonged dance and drumming routines. In the context of their monthly feasts, “performative offerings” (“shamanic-like” ritual activities) also conjured changes in the physical constitutions of individuals and evoked transformed states of consciousness. In Aztec ceremonies, painful austerities were often reserved for smaller groups of elite religious specialists, but portions of their ceremonies were for wholesale participation, an extension of the typical format of shamanic ceremonies.

Through cross-cultural studies, we find that shamans customarily conducted ritual healings in domestic settings such as households but also in expanded venues that

included all the members of a village. Winkelman and Baker described a prototypical shamanic ceremony, mentioning that it was led by one central figure or religious healer, the shaman, often attended by assistants and local community members (2010, 120).

They observed that the shaman was the chief actor who danced

around the group while drumming, shaking a rattle, or clapping, and exhorting the spirits through ancient songs and chants. Often, other members of the community join in... The key to the ritual performance of the shaman is his ability to enter an “ecstatic” state. (Winkelman et al. 2010, 120)

While Hulkrantz (1985) argued that as hunter-gatherer societies became socially complex shamanistic activities became less relevant and eventually disappeared, Ortiz de Montellano observed a different scenario among the Aztec who sustained shamanistic attributes in their religious ideas and practices even while achieving a state level of complexity (1990, 68). I agree with his latter assessment, and recognize that shamanistic practices were not just present but expanded in scope, especially with increased numbers of participants and key religious specialists leading the ceremonies. In a setting with larger numbers of propitiates, achieving ecstatic states used the same procedures and incitements as in more intimate settings. I conjecture that with broader participation, the ceremonies were more impactful emotionally and physiologically because of the grandiosity of the ceremony’s scale, added features and dramatic elements and because of the influence of “social contagion.” This is a bio-cultural process where biological rhythms sync with each other in settings where gathered individuals are near each other and where similar experiential elements invoke communality (Whitehead 2011, 187).

For shamanic rituals to have efficacy, the states of participants were altered in such a way that they could see and experience a totally different modality or “soul flight.” I hypothesize that even in the grander scale of Aztec ceremonies active participants and even peripheral spectators still achieved different states of consciousness as exemplified in the archetypal “shamanic journey.” This different modality is identified by Winkelman as an integrative mode of consciousness (IMC), and the drive to experience IMC comes from a pleasurable contrast of brain waves to normal waking consciousness which involves a “sympathetic dominance of and desynchronized fast-wave activity of the frontal cortex,” to an IMC state which is subject to the parasympathetic system of the brain (Winkelman 2010, 5). When the brain is linked together by synchronized brain waves the result is different outputs in the visual system where new symbolic forms are generated and communicated to others. Another intriguing ramification is that IMC transforms emotional states towards a sense of well-being, euphoria, and even a desire to care more about others (Winkelman 2010, 5). Mandell explained that these affective responses and feelings of ecstasy are a result of stimulation of various neurochemical pathways in the temporal lobe (1980, 381, 390).

Chroniclers described various types of rituals in the monthly Aztec *veintenas*, which were classic shamanic-like rites. These rites arose in each stage of the Aztec monthly ritual schemata, but appeared most predominantly in the first portion of the month in anticipatory rites and in the night-long vigils beginning on the evening prior to the violent-sacrificial phase or the feast day. These anticipatory shamanic austerities

intensified the physiological responses to the actual human sacrificial acts, and probably increased the enjoyment of the euphoric-celebratory activities following the sacrifices. On rare occasions, some bloodletting rites occurred in the last days of the month, and I conjecture that these were forms of gratitude-offerings to the gods for their compassion in granting favors and for the successes of each phase of their ceremonies. In addition, painful experiences induct the sufferer into altered states of consciousness, even causing hallucinatory experiences on occasion. The most common form of shamanic ritual activity in the Aztec feasts was long sessions of chanting, drumming, and dancing. They were also some of the most abundant forms of shamanic ritual activities available to the greatest number of participants and onlookers. The combination of these rhythmic drivers was a commanding source of stimulation that could have sponsored altered states of consciousness and the desired experience of euphoria and soul flight. Dances and music were prevalent in each of the three stages of most of the monthly *veintenas*, and as discerned by specialists studying shamanism, from cross-cultural perspectives, these two types of performances were central features of most shamanistic rituals.

### **Rhythmic Drivers and Altered States of Consciousness in Aztec Monthly Veintenas**

Cross-cultural comparison studies of shamanism reveal that four of the most prominent ritual activities in achieving shamanic ecstatic states are drumming, chanting, singing, and dancing, and these activities usually occur simultaneously in

prolonged nighttime rituals. In the eighteen monthly Aztec feasts, these combined performances were central features of anticipatory rites preceding human sacrifices. Researchers examining the biological responses to such protracted ceremonies discovered that the repeated and synchronized motions, cadences, and “external auditory rhythms” influence autonomic functions. They do this by “synchronizing” oscillators in the brain with external stimulants which produces a change in brain wave patterns, pulse rates, and even diastolic blood pressure (Scherer et al. 2001, 372). Neher observed that the alteration of theta and alpha waves (slow wave frequencies) in the brain also produce different visual experiences including hallucinations, movement, pattern, colors, and heightened emotional states (Neher 1961, 1962). In addition, extended periods of drumming and dancing activate a collapse of the sympathetic nervous systems in exhausted participants and an ascendancy of their parasympathetic systems or Integrative Mode of Consciousness (IMC).

The Aztec ethnohistoric accounts refer to multiple instances of dances associated with the monthly feasts. There were several features of these shamanic dances that would have produced IMC states: prolonged duration, night-time hours, physical exhaustion, and accompanying drumming and chanting. An example of a dance with all these features came in the feast of the seventh month of Tecuilhuitontli where the female sacrificial victims held a vigil and sang and danced all night long, and in the morning “the priests arrayed themselves and performed a very solemn dance” (Sahagún 1981, 2:13). The serpent dance, which involved both men and women, was conducted in several different feasts and usually lasted from midday until sunset or

sunset to midnight, five to seven hours (Sahagún 1981, 2:110). Not only were dances held for long periods of time, but some descriptions of the dances indicate intense physical exertion. In the feast of Toxcatl, the women leapt while dancing (Sahagún 1981, 2:75). Winkelman mentioned that out of all shamanistic healing activities, extensive rhythmic dancing and clapping were the most fundamental mechanisms for “opioid elicitation,” and mimicked the same “behavioral, analgesic, and cardiovascular effects of exercise” (2010, 226).

There are multiple references in the ethnohistoric record to the lengthy and strenuous nature of the dances. Durán recognized that the Aztec had long and arduous dance and singing rehearsals for many days prior to the arrival of the feast (Durán 1971, 295). In the feast of Tlaxochimaco, honoring the solar/warrior god Huitzilopochtli, there was a public dance which included all the noblemen and noblewomen. This dance was accompanied by drumming and chanting, preceded by a night of wakefulness. The dancers circumambulated an altar called *momoztli* in the ceremonial center of Tenochtitlan, and they danced for hours even until nightfall. Sahagún mentioned that the drumming and dancing was not limited to this central space, but in all the houses of the “common folk” and the “leading men” there was lively chanting and drumming creating a “great din until night” (1981, 2:16).

The importance of these lengthy and repeated dances and music was that it connected participants with the otherworld and the deities they were propitiating. In some months, such as the *veintena* of Panquetzaliztli, also honoring the solar-warrior god Huitzilopochtli, there was dancing, chanting, and drumming on every day of the

month. A common dance associated with Huitzilopochtli was the serpent dance which appeared in many of the monthly feasts. Sahagún revealed important details concerning this dance in several different sections of his Second book on *Ceremonies*:

And when midday came, then there were singing and dancing. Verily, they ornamented all the youths, the leaders of the youths, the seasoned warriors, the shorn ones the Otomi, there in the courtyard of the (The Temple of) Uitzilopochtli [sic], there was dancing. And those who led were the shorn ones, the great, brave warriors, each of whom was considered (equal to) a battle squadron, who did not hide themselves behind something in war; they who turned (the enemy) back, they who wheeled them around. Also the women danced—not one's daughters, (but) the courtesans, the pleasure girls. They went, each one, between (pairs of the men); they each went grasped in their hands; they were grasped about the waist. They were all in line; they went all in line; they went winding to and fro...very much as a serpent goeth, as a serpent lie, was the dance... and when there was an end to the dancing; already the sun was about to set. (Sahagún 1981, 2:110)

In the month of Panquetzaliztli, Sahagún related that the dancers included the owners of victims of sacrifice and the victims themselves and were accompanied by “women who were the face washers” and the “flag-bearers” (1981, 2:142). As usual, the dance commenced at nightfall or at sunset and ended at midnight when the conch shells were blown. Sahagún provided more details regarding the exertion required during the serpent dance. He ascertained that the victims or “bathed ones” trotted among the other dancers for “much did they run; they continually hopped; they kept hurrying. It was as if they hastened, as if they were breathless” (1981, 143). He also recollected that the old men of the *calpulli* were the only ones that sang as they beat the drums and that a great crowd came to admire the dance, and at this time all the people fasted and abstained from sexual relations (Sahagún 1981, 143).

The combination of these activities: fasting, sexual abstinence, multiple subsequent hours of rigorous dancing at night and limited sleep replicated traditional shamanic practices. As already discussed, scientists studying the physiological responses to austerities such as sleeplessness, restrictions of food and water, and physically demanding activities discovered that combining these physical demands causes an over-stimulation of the autonomic nervous system and an eventual withdrawal of the sympathetic system leading to parasympathetic ascendancy or in layman's terms, a trance-like state or altered states of consciousness (Winkelman 2010, 141). These states were designed to transport ritual specialists and participants into an "other-worldly" dimension where the gods and ancestors could be accessed. The exhaustive serpent dance was most likely designed to propitiate Huitzilopochtli for the upcoming season of war.

The ninth-day performances of the feast of Panquetzaliztli shared another characteristic of shamanism: the timing of the serpent dance which started after dusk and lasted until midnight. Eliade explained that night was the traditional time when the shaman could battle against malicious spirits, and this was accomplished by vigorous dancing that lasted until the shaman(s) collapsed into an ecstatic "trance during which his soul is believed to leave his body" (Eliade 1964, 5). From a biological perspective, humans have the highest level of endorphins in the nighttime, and this is one reason why modern humans typically go to nightclubs in the evening (Henry 1982). Most vigils during shamanistic activities were held after dark and the Aztec followed this typical pattern in many instances.



One of the questions that arises is how widespread the participation was in these shamanic activities and who benefited from their effects. In the case of the dances, the commoners were often restricted to spectatorship. Because of this exclusion from the physical exertion of the dance, they arguably did not have the same physiological experience, but according to the work of some researchers, even peripheral participants of shamanic rituals were positively influenced and derived psychological and physiological rewards. Religious, shamanic experiences, according to J. P. Valle and R. H. Prince (1989), offer individuals a sense of belonging and feelings of euphoria and empowerment engendered by elevated levels of endorphins. Collaborative rituals where all participants contribute in some way provide healing modalities including: enhanced spirit relations, transformed states of consciousness, and social bonding (Winkelman 2010, 185). In addition, music played a pivotal role in social integration, and the old men of each *calpulli* were responsible for constant drumming and singing (Sahagún 1981, 2:143). The wide distribution of sound resonating throughout the city had profound effects. Both performance study experts and medical researchers have discovered profound positive emotional, psychological, and social responses for individuals exposed to the auditory and visual sensorial inputs of chanting, singing, and other forms of music (Neher 1961, Newham 1994, Peretz 2003, and Winkelman 2010). These benefits were available to all those who could see the dances and hear the music, even if they did not dance themselves. The addition of drumming and chanting to dancing were common to shamanic rituals and were also typical supplementary requirements for Aztec celebrations.

Drumming, music playing, and chanting were integral to Mexica sacrificial ceremonies, and they were ubiquitous in nature and available to the whole populace. Sahagún noted that during the feast of Tlaxochimaco, the dancers “went step by step, to the rhythm of those who beat the drums,” and the drumming, dancing, and chanting created a “great din” and lasted until nightfall (Sahagún 1981, 2:16). Each of these activities occurred in multiple spaces including in homes, in the *calpulcos*, and in crowded plazas. For instance, Sahagún mentioned that in the feast of Panquetzaliztli in the homes of the bathers “there was singing, ground drums were beaten, gourd rattles were rattled, turtle shells were beaten” and this occurred during or prior to ritual gift-giving (Sahagún 1981, 2:149). Durán recorded that the drums positioned in the temples were so big that their hoarse sounds were heard throughout the city, and these drums marked different times of the day and night as well as reminded the city of the deaths of each sacrificial victim (1971, 134). This last passage reveals that drumming, as many of their other ritual apparatuses, had a variety of purposes. Drumming was used in shamanic rituals but was also used to mark the passage of time and to herald the sacrifice of victims as well. It is important to recognize that each phase of their rituals served a variety of purposes and elicited different emotions and responses.

The dancing, singing, and music making in the celebratory-euphoric stages of their ceremonies appeared to serve dissimilar purposes than shamanic-like dances and chanting found in anticipatory rites. In the ebullient atmosphere following the violent sacrifices, dances were accompanied by feasting instead of fasting, and they were combined with other forms of merrymaking such as drinking *pulque* and entertaining

competitions. For example, in the month of Toxcatl, Durán recorded that after the human sacrifice of the image of their favored god, the crowds moved to a place called Ixhuacan for dancing and singing accompanied by musicians, and copious amounts of eating and drinking (1971, 107). These dances were not restricted with the prohibitions associated with the serpent dance in the same month of Toxcatl which preceded the sacrifice of Ixteuacale (a victim acting as a counterpart of Tezcatlipoca). Sahagún observed that the snake dancers themselves were heavily guarded that “none might fall into covetousness” or sexual relations, and those that were found in violation were “struck to the ground” and dragged, kicked, and beaten (Sahagún 1981, 2:76). Durán observed great variety in the dances and mentioned that some songs and dances were “sung slowly and seriously” while others were more animated and known as “dances of youth” (1971, 295). Thus, shamanic dances seemed to fit the category of serious and reverential, although they were often intense in the requirements of physical exertion. They were special ceremonial rituals where sterner rules applied and because of their import, violators were strictly punished.

The central purpose of shamanic rituals such as chanting, drumming, and dancing was to placate menacing spirits, appease the gods, and connect with the divine world by entering ecstatic states. From his research of Maya and Aztec ritual performances, Looper deduced that “dance was explicitly cosmological, rather than humanistic in focus” (2012, 12). He interpreted that the Aztec term, *ihotia*, referred to dance as a “medium for divine revelation and communion through sacrifice,” and another word for dancing, *macehu(a)* (related to several other Aztec terms), suggested

that it was a format for penitential acts or “making merit” (Looper 2012, 12). Viewed through this interpretation, the Aztec dancers were conveyed into a spatio-temporal experience where the cosmo-mythical and human-terrestrial realms merged. Looper also assumed that through their dance movements, god impersonators, *teteo ixiptla*, or sacrificial victims, “opened a path to the spiritual world, simultaneously enabling the sacrifice of the god for human benefit as well as transforming human life into a form suitable for divine consumption” (Looper 2012, 12). This was one reason why dance was so prolific and why the captors and owners danced alongside their respective sacrificial victims; the body movements represented divine contact. Therefore, two of the key benefits of shamanic singing and dancing was to make connections on cosmic and human levels.

For the Aztec, singing not only created interconnections with the gathered crowds who witnessed various ceremonies, but it also linked the sacrificers with their victims. In the feast of Tepeilhuitl, five sacrificial victims—four females—representing the mountains and a one male representing a serpent, were processed through the city of Tenochtitlan on decorated litters carried by women who “went singing for (the victims)” (Sahagún 1981, 2:133). In the case of the hand-waving dance, both Aztec warriors and sacrificial victims were observed. In this dance women honored departing Aztec warriors by raising a “tearful cry” for the men because they perhaps would be “gone forever.” In the same dance, the women (midwives, old women, and pleasure girls) paraded behind the hand-waving dancers and sung in a piercing “high falsetto”

like a mockingbird, crooning on behalf of the female impersonator of the goddess Toci, who was soon to be slain (Sahagún 1981, 2:124).

Aztec monthly feasts were designed to cohere the hierarchal social order around a standardized cosmological system, and the added shamanic elements in the ritual program accentuated this purpose especially in the anticipatory rites. Drumming, chanting, singing, and dancing were highly visible, experiential performances that either progressed through the city of Tenochtitlan (serpent dances) or took place in multiple locations to galvanize the citizens into an emotionally charged group who pooled together in their effervescent transcendent states. These ecstatic states of consciousness were brought about by extended hours of physical exertion, constant auditory rhythmic drivers, and late night observances. In addition to these accessible rituals there were other shamanic-like activities in the monthly veintenas that were more exclusionary in their level of participation. Penitential rites were often reserved for the priestly population who received great accolades and honor for their self-sacrifices, but there were many exceptions and often the whole populace was integrated into these more painful austerities. Ascetic practices for small and large groups included fasting, bloodletting, long periods of wakefulness, ingesting hallucinogens, among others. Each of these practices had different underlying cultural meanings, but they all had the central purpose of evoking trance-like states and mutually connecting propitiators with the supernal and the sublime.

### **Fasting in Aztec Veintenas: Spiritual Connections and Biological Responses**

In the perspective of many scholars, ritual is not just an “externalized representation,” but an internal experience that directly influences the emotions, bodies, and psyches of participants (Bloch 1992, 35). The same was true for the ancient Aztec, and they had different observances that influenced them differentially. A common practice was restricting natural bodily drives such as abstaining from sexual relations or fasting from food and water. In many religions and cultures, fasting is utilized as a form of spiritual preparation for an important up-coming hallowed event or anticipated mystical experience. Eliade noted that for several cultural groups severe forms of fasting were conducted by initiates before becoming full-fledged shamans. The future shaman of the Tungus (Siberian peoples) went for a whole summer with greatly restricted eating or drinking, and in South America a young Jivaro initiate had to symbolically die by “fatigue, tortures, fasting, blows, and so on” for him to have the future ability to contact the spirits of the dead (Eliade 1964, 84). For the full-fledged shaman fasting was an essential prelude to the ecstatic journey. Among the Carib of “Dutch Guiana,” there was a period of fasting, exhausting night of dances, and intoxication before a shaman entered an ecstatic experience (Eliade 1964, 129). In all the major world religions food restrictions and fasting are observed as communal rites leading up to major religious celebrations.

From a neuro-physiological perspective, fasting induces a hypoglycemic state in the body, altering the central nervous system and these changes also transform states of consciousness (Kehoe et al. 1981). In addition, diet restrictions disturb serotonin absorption and this imbalance can result in emotional and cognitive operations that

even induce hallucinations (Gussler 1973). The adjustments in brain functioning and in the operations of the nervous system is predicated upon the severity and longevity of the fast, but even short term food and water deprivations can produce, as Winkelman states, “visionary experiences associated with mystical shamanistic ASC” (altered states of consciousness) (2010, 143).

Almost every monthly Aztec celebration included observances of fasting and other forms of self-denial for different groups that engendered similar types of powerful, neurological responses and spiritual experiences. Some of these austerities were conducted as anticipatory rites long before the monthly feast or as part of priestly year-long preparations for the feast, and in other cases, the fasts were incorporated into the ritual regimen of the twenty day observances. There was also variability in the number of participants, ranging from smaller groups of priests to larger crowds. For instance, in the feast honoring Huitzilopochtli, the “offering priests” endured extenuated fasting prior to the feast month while other members of the community (involved in sacrifices and peripheral rituals related to them) participated in fasts in preparation of the violent sacrifices within the scheduled twenty days. Sahagún stated that on the fifth day of the month of Panquetzaliztli, the owners of slaves began a four day fast, including sexual abstinence, along with the old men of the *calpullis*, and it ended on the ninth day at nightfall when the bathers danced with their bathed ones in the serpent dance (Sahagún 1981, 2:27). Sahagún recorded that during the serpent dance, “Some looked on; they marveled at (the dance). And it was much admired; much was the fasting respected. Indeed everyone abstained, especially the bathers. No

(man) lay with a woman, nor did any (woman) lie with a man” (1981, 2:143). This account indicates that even audience members were peripherally involved and influenced. They empathetically abstained along with the more pivotal participants, the dancers. In preparation for this same month, the offering priests fasted for eighty days and on each night at midnight they spread out fir branches on circular altars on the tops of the mountains. Sahagún described these nightly rituals:

And this they did until (the month of) Panquetzalitzli arrived. When they were laying down the fir (branches), they were quite naked; nothing went on them. They went out carrying fir (branches; actually) they were green reeds and thorns. And they went blowing their shell trumpets and the pottery whistles. (Sahagún 1981, 2: 141)

Durán explained that the priests in charge of the temple of Tezcatlipoca were also highly revered for the many awful penances they conducted all year long. These austerities included fasting for up to ten days, sexual abstinence by cutting “their virile members in the middle to become impotent,” and they slept little because their activities occurred mostly at night where they kept the temple fire going uninterrupted, and they conducted sacrifices in the hills on behalf of those who requested it (Durán 1971, 121). The eight attendants assigned to be special guardians of the captive who impersonated the god Tezcatlipoca were set apart from all other priests by cutting their hair short like a gourd, accompanying the “god” wherever he went, and fasting for a year (Sahagún 1981, 69).

The austerities of the dignitaries devoted to attending the popular deity, Tezcatlipoca, undoubtedly changed their physical states, altered their states of consciousness, and concurrently accumulated social accolades (Looper 2012, 12).



These ministers not only fasted for five days in a row (only eating one meal a day) and remained in a state of celibacy for the same period, but also flogged themselves with ropes until their backs were bloody (Durán 1971, 106). This public demonstration was socially rewarded with an exclusive feast taken to their private apartments called “*Calmecca teteuctin*,” and when the food was brought to them, the men gorged themselves with that “divine nourishment” and desired it “as salvation itself” (Durán 1971, 106). In this case, the priests received special privileges as well as physiological rewards associated with their severe penances. As indicated earlier, the general populace took part in a limited fashion by their own self-denying actions and observing and admiring the actions of the priests.

In many cultures, fasting is a private affair, but for the Aztec, it was usually a collective operation. There were several occasions when the entire populace engaged in communal fasting. In the twice-yearly observances of the deity Nauholin, the god of the sun, the entire city fasted so rigorously that not even the sick or young children were exempt, and all the people were required to come to the temple and witness the sacrifice of the victim designated as the “Messenger of the Sun” on the same day of the fast (Durán 1971, 188). At noon, the victim’s throat was slit, and his heart extracted and after this ceremony was completed the conch shells blew indicating that “everyone could eat and that the interdict and ban of fasting was lifted” (Durán 1971, 191). In another month venerating Atlatonan, a goddess of lepers and sufferers of other diseases, there was a great feast given to all the people followed by a seven-day fast observed by the population of the “entire land,” in which all the people were only allowed to eat

“scraps of old dry tortillas without salt, or anything except water” (Durán 1971, 223). In each of these cases, the denial of food was for a communal purpose of great significance to the entire social order. Communications to the sun were imperative for life-giving blessings for all Aztec, and similarly, propitiations to the goddess of disease were responsible for the health and well-being of the entire population. Communal bonds were strengthened in engaging in simultaneous and united fasting. The fact that some of these fasts were highly regulated and enforced instead of voluntary may have fostered resentment and non-cooperation among some of the population, thus negating some of the uniting properties. Nonetheless, fasting was a powerful practice for achieving altered states of consciousness for all who willingly participated. It was often accompanied by other austerities as well which magnified their physiological impact and increased the likelihood of spiritual connections with the deity being honored.

### **Sexual Abstinence and Wakefulness: Spiritual Meanings and Biological Rewards**

Another prevalent ascetic practice incorporated into many of the Aztec feasts was sexual abstinence. Scholars see multifarious reasons for the institution of celibacy in different social orders. Hector Qirko surmised that state-owned religious institutions benefited from celibate religious specialists because they devoted all their energies to their duties and religious functions without the distraction of sexual activity, and furthermore, without the ability to propagate, they were unable to siphon resources away from the religious order to posterity (Qirko 2002, 322). Scholars of shamanic ritual activity find that restrictions on natural drives such as sex, food, and sleep were

typical preparations for entering a trance-like state. According to Winkelman, “these efforts to override normal adaptive behaviors...provoke neurochemical alterations of consciousness” (2010, 141). In cross-cultural studies, sexual abstinence was highly regarded as a condition of purity and was an important prerequisite for spiritual contact. Aztec priests often remained celibate for years or mutilated themselves to make this a permanent condition. From a physiological perspective, Winkelman explained, based on several studies, that:

Sexual activity requires a simultaneous increase in the activity of both the sympathetic and parasympathetic nervous systems. When a peak of sexual excitation is achieved, the sympathetic system collapses exhausted and the parasympathetic state becomes dominant. Shamanic alterations of consciousness induce similar patterns of excitation to collapse, a sympathetic activation followed by a parasympathetic dominant state. Prior sexual activity leading to a similar physiological collapse could preclude the profound parasympathetic collapse (dominant state) that typifies shamanic SoC (States of Consciousness). Sexual prohibitions can be seen as functional in facilitating more powerful ritual ASC (Altered States of Consciousness). (2010, 143)

There were many instances in Aztec ceremonies where sexual abstinence and sleeplessness preceded ceremonies in which ecstatic states were desired. For example, in the feast of Panquetzaliztli, fasting and refraining from sexual activity was required by the owners of sacrificial victims for four days prior to the lauded serpent dance (Sahagún 1981, 2:143). In this dance, which lasted from nightfall until midnight, the victims trotted and hopped amid rows of bathers, and they did this with such exertion that they were “breathless” (Sahagún 1981, 2: 143). This nighttime dance set to the pounding of drums in every *calpulli* was a significant rhythmic driver and was followed by four days of sexual abstinence and fasting. This conflation of shamanic activities

installed a quintessential combination of physiological conditions for achieving altered states of consciousness. The serpent dance held symbolic meaning and sacred reference to a great fire serpent weapon wielded by the most highly respected Aztec solar/warrior god, Huitzilopochtli. The undulating lines of dancers simulated this weapon through their snake-like meandering. The dancers who offered their own victims to this god would have benefited from a state of euphoria and ecstasy prior to presenting their precious victims, won in battle, to this god of war for sacrifice.

Another example of sexual abstinence as a form of preparation for a more powerful result in achieving an ecstatic state is found in the month of Quecholli. In this feast, there were extensive preparations for a hunt in honor of the god of hunting, Mixcoatl, and this included a combination of fasting and bloodletting. In addition, the old men did not drink *pulque* and “no (man) lay with a woman” (Sahagún 1981, 2: 135). These austerities were all done prior to a night-long vigil before the sacrifice of many victims to the god Mixcoatl, who would give the Aztec future success in hunting. The sexual abstinence and fasting prior to this night-time ritual produced conditions for a heightened neurochemical response and shamanic-like journey.

The night before human sacrifices would have been a fitting juncture for soul flight or a journey to the supernatural realm, providing opportunities for the Mexica to communicate with the god(s) being propitiated by human sacrificial offerings the following day. In the month of Quecholli, this type of wakeful vigil began at midnight and the activities were centered on preparing victims for sacrifice on the next day by burning all their worldly possessions:

And when midnight arrived, thereupon there was the taking of hair (from the crowns of their heads). And thereupon when they had taken the hair, thereupon (their belongings) were burned. (If the bathed one was) a man, he burned his streamers, and his cape, and his breechclout, and whatever his comforts had been, and his water gourd. All of them he burned.

(Sahagún 1981, 2:138)

Cross cultural studies reveal that shamanic journeys typically occur at night and are often conducted around fires. Flickering flames have the same effect as flashing lights and their pulsating, repeated stimulus are similar to auditory drivers in changing brain wave patterns and inducing hallucinatory visions. Sahagún explained that the prelude to most human sacrifices were night-long vigils with captives and captors and sometimes the entire city accompanied them by lighting torches and keeping brilliant fires burning until dawn. In certain conditions, according to Mark Levy “when light meets the eye, it can render objects within the eye visible, producing floaters, blue fields, bowtie or hour glass patterns, images of retinal blood vessels,” and other visual manifestations associated with hypnosis and ASC (altered states of consciousness) (2011, 328). In addition, fires are traditional elements in nocturnal shamanic activities and are associated with the sacred powers of the shaman (Winkelman et al. 2010, 130). In many cultural traditions, Eliade suggested, the shaman is a “master over fire” and has “mystical heat” that can even be emitted from his or her body during trance (1964, 474). This combination of prior celibacy, sleeplessness, and auditory and visual rhythmic drivers most likely induced altered states of consciousness in these all-night performances.

In some of the feasts all the people engaged in celibate periods along with the captors, slave owners, and priests. For instance, in the month of Atemoztli, the commoners celebrated the arrival of the rains by making images of the mountain gods, and in the days that they made these paper covered figures, they also abstained from sexual relations and “did not soap themselves when they bathed themselves” (Sahagún 1981, 2:151). Bathing restrictions accompanied celibacy in other months as well, and it was considered a supplementary anticipatory penance to sexual abstinence and fasting (Sahagún 1981, 2:200). In the euphoric-celebratory phase cleansing rituals were often performed as part of the joyous festivities.

Long periods of wakefulness were also required of all members of Aztec society for many celebrations. In the feast honoring Xilonen, vigil was kept by everyone and songs were sung the entire night in the honor of the impersonator who was to be sacrificed the next day. This night of sleeplessness was followed by dancing by the entire population to the sound of drumming and wind instruments (Sahagún 1981, 2:105). In reverence of Chicomecoatl, the people of Tenochtitlan filled all the temple courtyards with incense and with “lights and bonfires” and each ward (*calpulli*) remained awake all night around its own bonfire. They did this again on a second night of wakefulness (“no one dared leave the temple”) before a girl was decapitated the following day inside the temple honoring this goddess of agricultural fertility (Durán 1971, 224). In the seventh month of Tecuilhuitontli, it was the salt makers, women of all ages, who were involved in salt production, who held a night-long vigil with the female slave who impersonated the salt goddess and with all her attendants who would

also die the following day. Sahagún described that in this nocturnal ceremony “at no time did they sleep; they made themselves go without sleep, thus the night went,” (1981, 2:93). These ceremonies also had great symbolic value and were typically attended by those ritual specialists designated to care for the deity interminably. For example, in the ritual activities of Xocotl, the priests took center-stage and were the chosen shamanistic figures who kept vigil all night on top of the pyramid along with the victims, who “slept but little,” as Sahagun mentioned, as they cut the hair of their captives and guarded them the remainder of the night “lest those who were to be cast into the fire should flee” (Sahagún 1981, 2:114).

One of the biological consequences of sleep deprivation is physical exhaustion, and in many Aztec ceremonies, other activities followed sleepless nights and fasting such as dancing or protracted processions before victims were sacrificed that compounded this enervation. To achieve the collapse of the sympathetic nervous system, over-stimulation is necessary for the parasympathetic system to gain dominance which in turn is necessary to attain a shamanic ecstatic state. Whenever individuals inhibit natural drives such as sleeping and eating, they are forcibly overriding natural drives and these severities provide the conditions for neurochemical changes to consciousness (Winkelman 2010, 141). Another consideration is that inhibition of natural drives along with strenuous physical exertion depletes oxygen levels which also dramatically influences conscious states. As Vaitl et al. (2005) concluded, to achieve a dominant parasympathetic state, there are several common procedures including a lack of food, water, and sleep and exhaustive or painful

activities that deplete oxygen levels or alter neurochemicals such as drumming, dancing, and chanting. The Aztec were unaware of the modern science behind their ritual activities, but what they did know was that these ceremonial rites induced alterations in their minds, and the visions and hallucination they experienced were relevant to communicating and venerating the divine world. These rites were essential preparations for the hallowed events of the next day and the imminent sacrifices of their precious victims. Other painful ritual austerities were similar in purpose and designed to create the conditions where contact with supernatural realms was possible. Painful penitential rites appeared in almost every Aztec monthly celebration and were also commonly-held characteristics of shamanistic rituals that further altered the biological states of propitiators.

### **Painful Austerities: Cosmological Significance and Biological Responses**

In the ancient Aztec world, painful austerities were not exclusively reserved for ritual specialists, and bloodletting activities were one of the most common forms of penitential, self-sacrificial offerings. Auto-sacrifice was a traditional form of propitiation in Mesoamerica and was and still is a widespread phenomenon in other cultures around the world. Cross-cultural studies reveal that bloodletting rites had the same purposes as other sacrifices designed to propitiate or communicate with the gods for divine favors. Lincoln observed that in the ancient Old World self-mutilations including “lopping off ears, tearing one’s flesh, and piercing oneself with arrows... were acts of (limited) self-sacrifice” (1991, 194). By slowly dying in this restricted



fashion, Lincoln maintained, ritual actors “freed themselves to continue living, and to resume their identity” when their austerities were completed (1991, 194). In other words, they came to the dangerous edge but did not ultimately die, and because of these participants were also able to commiserate more fully with the real human sacrificial victims, and yet never suffer their final state. There were many purposes related to auto-sacrifice for the Mexica including: expiation of sins, offering thanks, enacting humility, gaining merit, divining the future, and transmitting messages to the gods (Graulich 2005, 305). In agreement with Lincoln’s assessment, Michel Graulich asserted that, for the Mexica, bloodletting rites were substitutes for “death—the ultimate debt (payment)” but perhaps with less cosmic influence or effectiveness as actual human sacrificial victims (2005, 305).

The context of a shamanic ritual makes the experience more powerful if it is a collaborative affair and is endowed with significant meaning for the participants, and this certainly was the case for the Mexica. Bloodletting was a common form of austerity filled with cosmo-magical meaning. They believed that the gods initiated its practice for the purpose of creating humans and giving them life. In the mythical story entitled “The Restoration of Life” from *Leyenda de los Soles*, it is stated that the gods talked to each other and asked “who will there be? (referring to the non-existence of humans),” and in response to the question, Quetzalcoatl decided to go to the land of the dead to retrieve the “precious bones” guarded by the lord of the “land of dead” (Bierhorst 1992, 146). After many difficulties, Quetzalcoatl did indeed retrieve the bones and at this point:

...he gathered them together, picked them up, (and) wrapped them. Then he carried them to Tamoanchan. And when he had brought them, the one named Quilaztli, Cihuacoatl, ground them up. Then she put them into a jade bowl and Quetzalcoatl bled his penis on them. Then all the gods, who have been mentioned did penance... Then they said, "Holy ones, humans, have been born" It's because they did penance for us. (Bierhorst 1992, 146)

The Aztec believed that offering their own blood was a reciprocal act, providing life for the gods in the same manner that the deities gave sustenance to humans. This superlative linkage between terrestrial and celestial beings was further enhanced by the many pleasurable physiological responses and enhanced states of consciousness attending auto-sacrifice.

For the Aztec, the more painful the penances, the more effective the spiritual connections and achieved and value earned (Graulich 2005, 303). A detailed description of bloodletting rituals was delineated in a section Sahagún called "The Drawing of Straws" (Through Parts of the Body). He witnessed that bloodletting or drawing straws through various body parts was done "quite of one's own will." In other words, it was as a matter of choice to increase the significance and quantity of their painful and bloody offerings. He explained the process:

And quite everywhere (was it done), perchance on one's ear (lobe), or, whoever willed it, his tongue or his thigh. And to pierce one's flesh, a thorn-like obsidian point (was used). And then they drew through there a twig or straw. And in order to pull them through the flesh, the twigs (were tied) with a cord in order to draw them through there, in order to perform the penance. The offering of thorns was thus performed: they plucked fir branches and cut maguey spines, and they bloodied them. Thus they laid two maguey spines on the fir branches as offerings. Everywhere one laid the maguey spines as offerings in perhaps two places, or three places, or five places. It was quite of one's own will. (Sahagún 1981, 2:197)

In some cases, the auto-sacrificial rites were quite visible to others and possibly drew more attention to the suffering, giving penitents greater social stature and spiritual merit.

The bloodletting rites of the Aztec ruler was always conducted with great pomp, visibility, and acclaim. On one occasion, when King Ahuitzotl returned from a successful military campaign and completed a grand procession into the city, his first act was to offer his own blood in autosacrifice on the top of the temple of Huitzilopochtli (Durán 1994, 356). After a speech extolling the greatness of their supreme warrior god, Ahuitzotl went on a pilgrimage to all the important temples in the city with a large entourage before traveling to Chalco where he visited the temple which housed images of both Huitzilopochtli and Tezcatlipoca, the latter receiving greater devotion in this part of the land (Durán 1994, 358). He burned incense before both idols in this main temple, sacrificed quail before the statue of Tezcatlipoca, conducted auto-sacrifice with the bone of an eagle in the “fleshy parts of his arms and legs,” and offered rich valuables and garments to dress the idol from the spoils of war (Durán 1994, 358). Durán suggested that this pilgrimage was an important ritual to thank the most important gods for their assistance in the war and to share the rich booty with them.

The priests of the different temples and their associated deities often conducted their bloodletting in secluded environments out of public view, but in the monthly feasts, their austerities were frequently more visible. In the feast of Toxcatl, for instance, “the dignitaries of the temple” who had fasted for five days and who had

abstained from sexual relations for the same period, flagellated themselves on their backs feverishly with a “hemp rope six feet long with a knot at the end” (Durán 1971, 104,106). Other groups were also offered opportunities to demonstrate their spiritual merit in the feasts. Durán described one such ceremony where noble youths (young warriors) lined up amid the great crowds before the temple, seated themselves on the pavement and:

...on their own persons they practiced a strange sacrifice. With those blades (knives) they wounded the fleshy parts of their arms between the skin and the flesh in such a way that a finger's width would allow the passing of the blade from one part to the other, and through those self-inflicted wounds reeds were passed. One by one they were put in and pulled out on the other side. Covered with blood, (the reed) was cast in front of the image of the sun, and he who extracted the most reeds was considered to be the bravest, the most penitent, the one who was to obtain the greatest glory. (Durán 1971, 191)

The physiological ramifications of bloodletting were amplified when other austerities or exhaustive activities were also present. In the fourteenth feast of Quecholli, all male warriors and even young boys were brought to the top of the pyramid to the temple in the condition of fasting where they sat blowing shell trumpets and bleeding themselves by cutting their ears (Sahagún 1981, 2:134). The blowing of conch shells is difficult and requires extensive and powerful breaths, which exhaust oxygen supply, and the loss of blood similarly stimulates “hypertropic activity of the adrenal cortex.” These extreme forms of nervous system stimulation evoke a state where the parasympathetic nervous system is dominant (Winkelman 2010, 142). As Winkelman and other researchers have observed, “austerities such as self-flagellation, self-inflicted wounds, exposure to temperature extremes, and feats of endurance all result in the release of

endogenous opiates” and the activation of “both opioid and nonopioid pain-inhibitory systems (Bodnar 1990, Winkelman 2010).

As in many of their ceremonies, bloodletting rites also occurred in nighttime ceremonies typical of shamanic activity. The last ritual activity of the month of Toxcatl occurred at night on the last day of the month in honor of the mysterious god of the night, Tezcatlipoca. This was not a self-administered ritual, but it was conducted by the offering priests who “cut the skin of the people (with a stone knife), they cut the skin of youths, young boys, and even small children who lay in the cradles,” and this was done on “the skin on their stomachs, on their breasts, and on both sides of their upper arms and on their forearms” (Sahagún 1981, 2:77). The enforced and painful nature of this ritual may relate to its gravity and significance. In the Aztec view, the numerous wounds inflicted enhanced the rite’s effectiveness. The possible reasons for enacting this austerity following celebratory rites may be that it presented another stark divergence in the ritual cycle and conjured further heightened emotional and physiological responses in the opposite extreme. Another possible explanation is that these bloody rituals were final gestures of appeasement to a capricious deity who could inflict great sorrows and reversals upon them as well as favors. Even though the prior impersonator of the god was dead, another was chosen in his place to walk again amongst them, so there was an on-going need to propitiate the new formulation of the same god. Finally, another possible explanation was that the enforced auto-sacrifices represented a substitute sacrifice in commemoration of the real sacrifice of the god-impersonators. Regardless of the reasons, this finale had painful yet physiologically

stimulating responses as well social implications. Extreme stimuli, even very painful ones, have the same neurochemical reactions as sleeplessness and extreme physical exertion. Even emotional stress can provoke the release of endogenous opiates or endorphins, and these neurochemicals are at their highest levels during wakefulness in the nighttime just when these final bloodletting rights of Toxcatl occurred (Winkelman 2010, 142).

Experts studying the physical and socio-psychological impact of shamanistic rituals have discovered that individual psychophysiological dynamics are inextricably linked to the social world, and the production of emotional empathy is a critical process whereby experiences are transferred from one body to another (Winkelman 2010, 212). A by-product of emotional empathy is emotional contagion, where emotions co-occur emotions among members of a group who are gathered in the same setting (Winkelman 2010, 212). These empathetic responses arouse heightened autonomic responses and are one reason that those who flagellated themselves in the crowded courtyard of the temple of Tezcatlipoca and those that looked on received similar stimulation. In the same manner, parents who witnessed the cutting of their youths and babies on the last night of the month of Toxcatl would have had empathetic responses and co-occurrence of the same emotions. These contagious emotions must have reverberated through the city of Tenochtitlan as the offering priests moved from place to place inflicting these lacerations.

Similar sympathetic responses must have been evoked for other painful/torturous ceremonies such as one rite described by Durán in which the priests burned their own skin in an excruciating manner. He recalled:

... all the priests of the wards came, each placing near the fire a folded mantle of his deity, a breechcloth, and a belt. On the top of these (he placed) a small image. After having made these offerings, each sat down and stripped. Each took incense torches, each about a yard long, in his hands and lighted them in the sacred fire. Squatting, they held the torches in their hands; the burning, melting resin ran down their arms, bodies, and legs roasting them alive in their fiery penitence to the god Xiuhtecuhtli... and all that had dripped on their bodies, arms and legs was torn off and cast into the fire... While it was smoldering, they danced around the hearth, intoning chants about fire and sacrifice. (1971, 214)

In another month, called Uauhquiltamalqualiztli, the children of the *calmecac* had the lobes of their ears perforated at midnight, and as Sahagún described the children “yelled as the pointed bone thus pierced the lobes of their ears” and after this ceremony the parents kept a vigil with the children—“they sat awake; they sat waiting the time dawn would break” (Sahagún 1981, 2:170). The parents were not injured physically but felt empathetic pain as they watched over their wounded children through the entire night. Here again, a combination of stimulants including sleeplessness and bloodletting released a flood of endorphins and intensified the brain wave activity of all family members.

Painful ascetic practices, as part of or in preparation for further shamanic rituals, produce neurochemical responses and manipulate divisions in the autonomic nervous system (ANS) (Winkelman 2010, 141). Penances such as bloodletting, sensory deprivation, sleeplessness, or restrictions of food and water override natural drives

which results in a stimulation of the ANS and an eventual withdrawal of the sympathetic nervous system leading to parasympathetic ascendancy. An interesting outcome of these physiological changes is the release of a flood of endorphins, a similar response observed in subjects exposed to violence or stressful situations. Winkelman explained:

A variety of stressful stimuli (burns, extreme cold, pain, injury, and toxic substances) all lead to hypertropic activity of the adrenal cortex and contribute to extreme stimulation of the SNS (Sympathetic Nervous System) to the point of collapse and result in a PNS (Parasympathetic Nervous System) dominant state. Endorphin release is provoked by diverse trauma and stress. Extremely painful stimuli can result in the direct stimulation of the hypothalamus and hippocampal-septal area, resulting in the emergence of synchronized slow-wave potentials on the EEG (causing an integrative mode of consciousness). Emotional stress can also provoke the release of endogenous opiates or endorphins (pleasure chemicals). (2010, 142)

Others have corroborated Winkelman's work and noted that painful ritual austerities such as self-flagellation or exposure to extreme temperatures activate the release of endogenous opiates and the activation of opioid and non-opioid pain-inhibitory systems (Bodnar 1990). As discussed previously, these endogenous opiates are pleasurable, and participants in ascetic rituals can experience states of ecstasy, while the pain experienced in the ritual activity is mitigated. What is intriguing in the study of shamanic rituals is that most of their activities take place at night when humans have the highest level of endorphins (Henry 1982). Furthermore, the ingestion of psychotropics was another vehicle to enter shamanic trance states, and the chroniclers give us a few indications that this was an additional element in some Aztec ceremonies.



## **Pulque and Hallucinogens in Aztec Ceremonies and Biopsychosocial Responses**

A final ritual element that appears in the Aztec ethnohistoric record is the ingestion of alcoholic beverages and other types of hallucinogens, typically occurring in the euphoric-celebratory stage of the *veintenas*. The Aztec had strict rules surrounding intoxicating substances, and only certain groups were allowed to partake. For instance, *pulque* (alcoholic beverage) was usually reserved for the elderly, but Aztec ceremonies contained regulated exceptions, and sometimes the whole populace - including children - drank *pulque* as part of the euphoric-celebrations after sacrifices. In the ebullient phase of the month of Uauhquiltamalqualiztli, amid joyous singing and dancing there was “the giving of *pulque* to the people,”—“*pulque* ran like water,” and everyone got drunk and even the children were caused to taste of the *pulque* even those who “still lay in the cradle” (Sahagún 1981, 2:170). According to Sahagún, the copious drinking caused the following effects:

It was as if there was a reddening of faces, as if there was a din, as if there was panting, as if there was a glazing of the eyes, going in disorder, quarreling, going from side to the other... Thus it was said ‘indeed it is verily the feast day of *pulque*; indeed, there was the drinking of *pulque* by the children.’” (1981, 2:171)

This is consistent with a description of a person who is inebriated. In the final euphoric-celebratory stage of the Panquetzaliztli feast there were many joyous festivities including mock battles, the drinking of *pulque*, feasting, and in the home of the bathers, there was “singing; ground drums were beaten, gourd rattles were rattled, turtle shells

were beaten” (Sahagún 1981, 148). Researchers have discovered that ingesting psychotropics, including *pulque* (alcoholic beverage), in a ritualized social context of positive reinforcement and emotional support enhances a subject’s emotional response and overall experience related to consumption (Winkelman 2010, 198).

Drinking *pulque* in the last phase of the ritual month was done in the context of collective jubilation and psychological release as anxieties were quieted after the brutal violence and deaths of mostly enemy outsiders. Sahagún identified a larger participation in this drinking session than the older population that was usually allowed. He stated:

And upon the next day there was the drinking of *pulque*; the leftovers were distributed. The *pulque* that was drunk was called blue *pulque*. Every-one of the old men, the old women, and the seasoned warriors of noble lineage who already had wives, the men of marriageable age, and the lords, and the leaders of the marriageable ones were those who drank *pulque*. (1981, 2:148)

Another aspect of the social context of drinking *pulque* was its cosmological significance. Carrasco discerned that “the gods gave in mythic time, alcoholic drinks to humans to bring them happiness. Humans were required to consume this happiness in moderation because drunkenness meant one was possessed by the god of *pulque* (2002, 223). Their deity Ometochtli was the very embodiment of the liquor they drank. Durán recorded in a section on “Feast Games” that,

it was inevitable that the wine they drank was held as a god in ancient times. This (deity) was called Ometochtli, and all the men and women who sold wine celebrated his rites, ceremonies, and offerings with all the crude native solemnity and devotion...they kept *pulque* like a god. (1971, 306)

The feast of Panquetzaliztli was in honor of Huitzilopochtli, and the drink they imbibed in this month was “blue *pulque*,” a color directly associated with him.

Mariana Ramirez, in her book *El Pulque, la Bebida de los Dioses (Pulque: the Drink of the Gods)* (2012) discussed the relevance of this alcoholic beverage for the ancient Mexica and even today among modern Mexicans. Sacrificial victims were often given *pulque* before their deaths, as in the case of captive warriors given *pulque* before their battle on the gladiator stone in the ceremony commemorating Xipe Totec.

Ramirez commented that *pulque* was a powerful substance that gave vigor to warriors, increased health to the ailing, allowed divination, and relieved hunger. Its presence is found in each of the eighteen monthly feasts on the Aztec calendar (Ramirez 2012, 11). In celebratory festivities, drinking *pulque* was an ultimate celebration of the demise of outsider enemies, and this rite was normally reserved for the mature populations of Tenochtitlan and the elite rulers of the city. Sahagún commented that the “rulers of the youths who were already mature, drank *pulque*, but they only drank in secret,” and if any person discovered them, all the miscreants had their heads shaved and they were soundly beaten with “pine staves” and stones, which caused great injury and sometimes death (Sahagún 1981, 2: 148). These restrictions safeguarded the Aztecs from some of the social ills and problems associated with unregulated drinking, but they still utilized it in ritual settings to enhance the stimulating experience of their celebrations.

The ethnohistorical records also reveal that that the Aztec ingested or inhaled other substances to alter their physical constitution. The priests made a “divine food” or ointment from a combination of tobacco and the ashes of incinerated venomous

animals such as “spiders, scorpions, centipedes, lizards, vipers, and others” and this ointment was used for medicinal purposes to deaden pain and to calm and soothe anxieties (Durán 1971, 115). Durán also mentioned that the priests ingested a ground-up seed called *ololiuhqui* which allowed them to see visions in addition to experiencing its inebriating effects (1971, 116). He further explained that after some sacrificial ceremonies, the people celebrated by eating raw mushrooms. He noted that this food almost drove them out of their minds, and the people became “so inebriated and witless” that sometimes they took their own lives or “saw revelations about the future” (Durán 1971, 407).

The use of hallucinogens in shamanic rituals demonstrates similar physiological responses as extreme exercise and painful rituals. Psychotropics principally affect the serotonergic neurotransmitter system. Research conducted by A. Mandell (1980) revealed that common reactions to most ingested hallucinogens stimulated the hippocampus with high-voltage slow wave synchronous brain waves, synchronizing the frontal cortex with an overriding parasympathetic state. Natural and synthetic drugs had the same interaction with the serotonergic system in disinhibiting the brain stem and limbic structures, resulting in “enhanced information in-flow, emotional lability, increased visual experiences, and synchronous brain discharges” (Winkelman 2010, 144). In addition, psychedelics reverse the repression of dopamine, a result of serotonin suppression, and as a result, the subject experiences higher dopaminergic activity which produces a sense of euphoria and pleasure (Previc 2009). This serotonin disinhibition is most intensely experienced by the release of activity in the limbic system’s emotional

processing areas and the visual centers in the cortex, resulting in extremely powerful visual and emotional experiences and enhanced orientations towards social connectedness (Winkelman 2010, 150). These biopsychosocial benefits were available to participants who communally consumed *pulque* and other psychoactive agents such as mushrooms and psychotropic seeds. In combination with other shamanistic techniques, they produced inescapable physiological responses that were enjoyable as well as addicting.

Aztec celebrations offered repeated opportunities for intensified spiritual experiences that were socially-bonding, and biologically stimulating. Shamanistic practices were integrated into their religious institutions partly because they met important human needs of excitation, bonding, and healing (Winkelman 2010, 181). Researchers have discovered that shamanic ritual practices also contribute to “healing modalities” and “therapeutic transformations” that included psychological health. One of the significant remedies is the management of stress and the reduction of anxiety and fears (Winkelman 2010, 184). The combination of music, dance, drumming, chanting, physical exertion, sleeplessness, painful austerities, and ingestion of inebriating substances in Aztec shamanic rituals produced states of ecstasy and had curative physiological influences. In their amalgamation, they offered a potent form of physiological and psychological therapy, and as sacred medicines caused strong emotive responses along with feelings of euphoria (Winkelman 2010, 197). These curative effects were felt in exclusionary, small-group settings as well as in rituals that included massive crowds with similar if not pronounced responses.

## **Summary**

Aztec monthly celebrations fostered unity around a shared identity as the supreme civilization in their known world, and they celebrated their unique gods along with traditional deities of the peoples that they had conquered. This grand sense of purpose was reiterated in the majesty of their city and in the spectacular celebrations they sponsored from the streams of tribute flowing in from around their ever-expanding empire. Twenty-day festivals commemorated this superior Aztec identity while they also offered a break from the profane world of mundane activities. The ritual program catapulted participants into mystical, cosmic realms where they could cavort with supernatural beings and wield other-worldly powers. They achieved this by transforming their states of consciousness through ancient techniques developed in shamanism.

Aztec ceremonies were dramatic expansions of shamanic rituals that typically took place in the more intimate settings of households and small villages. In feasts, such as Panquetzaliztli large number of participants sang and danced on every day of the twenty-day month, and this was heard and seen by large crowds. These repeated dances, along with chanting and drumming, had powerful emotional and biological consequences. Scientists have revealed that long periods of chanting and dancing have commanding influence over states of consciousness. They are the fundamental rhythmic drivers that synchronize with oscillators in the brain to alter theta and alpha waves in such a way as to induce hallucinations, heighten emotional states, and alter

states of consciousness or incite IMC (Neher 1961; Scherer et al. 2001; Winkelman 2010). The dances in Aztec celebrations had many elements that were characteristic of shamanic ceremonies: prolonged hours, physical exhaustion, nighttime hours, and accompaniment of drumming and chanting. Not surprisingly, these conditions combined enabled entrée into ecstatic states of consciousness. Just one of many examples is found in the feast of Tlaxochimaco where a public dance was accompanied by drumming and chanting, and though not held at night, it was preceded by a night of wakefulness. One of the essential aspects of these protracted ceremonies was invoking a connection with the particular deities they were propitiating, and these types of dances were usually sponsored in the more reverential anticipatory phase of their feasts and should be differentiated from the ethos and purpose of the ebullient dances at the end of the month following the human sacrifices.

The Aztec *veintenas* had many austere observances in the anticipatory phases of their celebrations. They were sacred observances of self-sacrifice that were offered as gifts to their deities. Ritual specialists or priests in charge of a particular god and temple throughout the year were key partakers of these rites in the months honoring the deity in their charge. For example, in the feast of Toxcatl, the dignitaries of the temple of Tezcatlipoca fasted and abstained from sexual relations for five days prior to the main sacrificial feast, and then on the climactic day of sacrifices and before all the large gathered crowds, they flagellated their backs with great fervor with a “hemp rope six feet long with a knot at the end” (Durán 1971, 104,106). Their weakened condition in addition to the painful injuries provided a perfect amalgam of physical incitements to

the nervous system to induce states of ecstasy. As many researchers have observed, severities such as bloodletting and other self-inflicted wounds along with inhibition of natural appetites and actions requiring physical endurance, result in copious discharges of endogenous opiates and a collapse of the sympathetic nervous system leading to altered states of consciousness (Bodnar 1990, Winkelman 2010). Aztec priests underwent such extreme and often deleterious ascetic practices including burning themselves, auto-sacrifice, and multiple nights of sleeplessness, with the idea that they were sacrificing themselves for their gods and for the greater good of their social order.

The general populace was also invited, and even required by authorities in some instances, to engage in severe austerities as part of their monthly sacrificial ceremonies. These activities also customarily appeared in the anticipatory phases of these months. There were many instances of wholesale participation in fasting, sexual abstinence, bloodletting, sleeplessness, sleeping out in the cold, and arduous physical activities. As Winkelman explained,

A variety of stressful stimuli including burns, extreme cold, pain, injury, and toxic substances all lead to hypertropic activity of the adrenal cortex and contribute to extreme stimulation of the SNS (Sympathetic Nervous System) to the point of collapse and result in a PNS (Parasympathetic Nervous System) dominant state. (2010, 142)

He further noted that these same practices released endogenous opiates or endorphins (pleasure chemicals) (2010, 142).

Another important and reliable inducement of altered conscious states for religious specialists and the populace at large was the ingestion of psychotropic substances. For example, Durán recorded that the Aztec ingested a pulverized form of an inebriating seed called *ololiuhqui* to see visions (1971, 116). Consuming



hallucinogens was most commonly done in the euphoric-celebratory phase of their monthly feasts and was part of their enjoyment of jubilant festivities. Durán commented that after the human sacrifices were completed, the people celebrated by eating mushrooms, noting that this ritual caused them to go out of their minds or give them “revelations about the future” (Durán 1971, 407). *Pulque* was the most common form of celebratory substance, but its consumption was also highly regulated. However, there were occasions such as the Uauhquiltamalqualiztli festival where *pulque* was offered to everyone, and they drank so much (“*pulque* ran like water”) that everyone became intoxicated (Sahagún 1981, 2:170). *Pulque* was also revered as a substance of the gods and partaking of it was a sacred honor. Psychotropics of all kinds make significant changes to the serotonergic neurotransmitter system by disinhibiting the brain stem and limbic structures, resulting in enhanced visual and emotional experiences along with synchronous brain discharges (Winkelman 2010, 144). In addition, psychedelics have the significant dopaminergic effect of serotonin suppression which produces a sense of pleasurable euphoria and offers motivational rewards (Previc 2009).

Aztec ceremonies were different than localized, traditional, and small-scale shamanic ceremonies. They were filled with energy and excitement and had multiple dramatic elements, massive participation, and increased numbers of ritual specialists. The physiological and social-psychological impact of these shamanic-like rites were not diminished in these amplified venues, but instead were magnified via the effects of “emotional empathy” and “emotional contagion.” Even for spectators and peripheral participants, they experienced a “co-occurrence” of the same emotions and

physiological responses as other members of the group who were gathered in the same setting (Winkelman 2010, 212).

The “contagion” was even more influential in the monthly celebrations where all members of an Aztec crowd were performed the same activity at the same time. The impact was heightened even more when there was a simultaneous confluence of a variety of shamanic-like rites. Winkelman established that “running and extensive dancing and other exhaustive rhythmic activities (e.g. clapping); temperature extremes (e.g. sweat lodges); stressors such as fasting, self-flagellation, and self-inflicted wounds; emotional manipulations, especially fear; and nighttime activities” release the floodgates of endogenous opioids (2010, 226). The overall effect of this surge of opioids is a remarkable reduction in pain, an enhanced toleration of stress, and improved physical health (Winkelman 2010, 226). This elicitation also had therapeutic effects including psychological healing. The relief from anxieties and stress was the third major reward system attributed to the sacrificial ceremonies of the Aztecs and was another reason for their violent content. The following chapter will examine this third system of rewards: the psychological attraction and fear of death.

**CHAPTER EIGHT**  
**SOCIAL-PSYCHOLOGICAL REWARDS OF**  
**VIOLENCE AND CELEBRATION**  
**IN THE AZTEC MONTHLY VEINTENAS**

The violent content of Aztec sacrificial ceremonies was remarkably visible and omnipresent, and because of this, several religious scholars and social scientists, have set forth ideological and materialistic explanations for the continuous displays of their bloody rites. Other investigators believe that these theories often gloss over the gruesome nature of these rituals and other underlying motivations. Pierre Bourdieu (1990) called human sacrifice a “denied murder,” and Ivan Strenski (2003) understood talk of sacrifice to seemingly only mask brutality, a “cruel euphemism” to “conceal injustice.” In this dissertation, I have presented other important reasons for the preservation of gory and sometimes torturous rituals in Aztec monthly feasts, and one of the most substantial incentives for sustaining the violence was the pleasurable neurochemical responses produced after exposure to these fearful productions. Furthermore, shamanic-like elements embedded in the ceremonial program correspondingly fostered enjoyable autonomic responses, emotional arousal, social connectedness, and reprieve from psychological stressors. Yet, this phenomenological approach to the embodied experience of their sacrificial rituals remains incomplete without a consideration of the violent content’s psychological allure and how the well-managed ritual system of the Aztec mitigated anxieties concerning the overwhelming and uncontrollable aspects of their existence, including the trepidation of death itself.

The ancient Aztec were not unique in their attraction to violence, and this compulsion to come close to death while remaining in a safety-net or protective frame, is a common human proclivity (Goldstein 1999, 280). In modern societies, violent media productions, video games, and sporting events are immensely popular. The

ancient Romans were similarly well known for their regular sponsorship of circuses and *munus* or, “gifts to the people,” which were day-long, violence-filled spectacles that began with animal hunts, midday criminal executions, and afternoon gladiatorial combats (Dunkle 2013, 6). Emperor Caligula (who lived from 12 CE to 41 CE) was adored by the lower classes in Rome because he often distributed “bread baskets and food to every man” at enormous banquets and provided a great variety of circuses and theatrical *muneras* (gladiator contests), importing many fighters from Africa (Mahoney 2001, 48). Scholars of ancient Rome have examined the reasons for the popularity of these games and concur that the bloodshed was most anticipated and expected (Ewigleben 2000, 131). Ancient commentators such as the Roman philosopher Seneca recorded their disapprobation of the crowd’s behavior, encouraging attendants in the arena to force reluctant combatants to fight (Dunkle 2008, 91). Seneca (Source: Lucian, *Tox.* 59) preserved the words that audience members shouted:

“Kill him, whip him, burn him! Why does he face his opponent’s sword so timidly? Why is he so tentative in killing his opponent? Why is he so reluctant to die? Force him with blows to risk being wounded! Make them exchange blows with their unprotected chests!” (Dunkle 2008, 91)

To further enhance interest and attendance of the games, Roman authorities invented new types of martyrdom. They devised many forms of torturous execution for the intermission hour: burning (sitting on an “iron seat” till the flesh roasted off the body), dismembering (being pulled apart by two chariots driving in opposite directions), hanging, or being pulled apart by pulleys and weights while sitting on a wooden horse. Sometimes, the victim was taken out of the arena, half-alive, to be dragged through the streets of Rome for further humiliation and viewership of a wider audience (Dunkle

2008, 92). In both modern and ancient peoples, modern medical science reveals that engaging in and watching violence encourages individual and collective emotional and neurochemical arousal. In addition, multitudinous studies explain that there are also significant psychological benefits to witnessing violence perpetrated against perceived objectionable insiders and loathsome outsiders.

Anthropologists ascertain that regulated and repeated ritual activity, even if it is violent in nature, ameliorates individual and collective anxieties and provides perceptions of control over a disorderly and threatening world (Bell 1992, 1997; Bloch 1989, 1992; Carrasco 1999; Rappaport 1999; Smith 1987; Turner 1969, 1977). Research conducted in the field of psychology similarly reveals that watching death and violence in secure environs has constructive psychological ramifications such as remediation of anxiety. Terror Management Theory (TMT) has significant explanatory value regarding the fear/attraction of death and the psychological ramifications of exposure to violence associated with it. Their findings are corroborated by investigators who did not necessarily use TMT as a framework. In each of the three phases of Aztec ceremonies, violence was invoked in symbolic and real formulations, and the anticipation of violence, actual killings, and celebration of death(s) were a powerful amalgam for resolving stress and other debilitating societal and individual trepidations. Anthropological and psychological theorists identified here are useful in interpreting the affirmative influences of violence in the Aztec monthly feasts regarding its buffering effects on anxieties.

## **Aztec Ritual Programs and Management of Anxieties and Trepidations**

The Aztec lived in an age of unease, and despite the power and magnificence of their empire, they were continually troubled by insurrections and natural calamities such as flooding and drought. Soustelle ascertained that Mexica mythology had incorporated a “shifting and threatening world” in their creation mythology, in which during each era “mankind had been wiped out,” and the same destiny was determined to eventually occur in the current epoch or “fifth sun” (2002, 95). Human sacrifice was the remedy to mitigate these rampant fears. Carrasco observed that large-scale human sacrifice increased in the face of conquered peoples threatening rebellion and in times of drought (1999, 87). He concluded that human sacrifice became a “religious strategy carried out to conserve the entire cosmogonic structure of the Aztec city-state” (Carrasco 1999, 87). Human sacrifice induced remediation of anxieties on both individual and societal levels, and the greatest level of comfort occurred in the context of witnessing the deaths of enemy outsiders who had oppositional worldviews. Coming close to death in controlled ritual spaces, while remaining unscathed, instilled in the Aztec a sense of empowerment and control over their own destinies including confirmation of their own perceptions of immortality.

Since the Aztec experienced endemic war and thrived based on their military success, they were continually concerned about martial supremacy. Their monthly feasts provided a secure venue to bring the battlefield back home onto their city streets for the populace to experience and witness the “perfect war.” Carrasco surmised that in ceremonies such as *Toxcatl*, “the image of the perfect life and ideal death of the elite

warrior” was revered (1999, 136). Warfare in northern Mexico was a risky business and did not always turn out as perfectly as in their ritual reenactments. Taking a live captive meant the possibility of becoming a captive yourself, with all the brutal treatment that entailed. Durán recorded that during confrontations, the Aztec sacrificed the warriors of their inimical enemies, the Huexotzincas, in exceptionally cruel manner. The Huexotzincas retaliated by delivering the same sacrifice for captured Aztec warrior.

Durán revealed that:

After they learned of the frightful sacrifices of their soldiers, the Huexotzincas invited the king of Tenochtitlan to a feast they wished to hold for their god Camaxtli (for this was his name), but since Motecuhzoma did not wish to attend he sent some of his principal lords. In their presence and in honor of their god the Huexotzincas flayed many Aztec captives, cut out the hearts of others, burned some alive, and shot arrows into others, with the same cruelty the Aztecs had shown with their prisoners. (1994, 459)

For the Aztec, living a long life brought no accolades unless the individual had faced jeopardy on multiple occasions and survived (men in the battlefield and women in childbirth). Durán explained the difficulties faced in a battle the Aztecs waged against the people of Tliluhquitepec:

When the fighting started, one side mixed and clashed with the other in such a disorderly manner that they wounded and killed their opponents with much cruelty, each side struggling to capture those of the other. The Aztecs began to tie up so many prisoners by their hands that they thought surely they had won the battle, but on counting their own men they saw they had lost four hundred and twenty soldiers...Although they were grieved, were deeply sad, to have lost so many of their own sons and brothers, Axayacatl consoled them by saying that the sun had wished to eat warriors on both sides. (1994, 287)



The messiness and cruelty of real battle is captured in these statements, and the prospect of defeat created prolific collective and individual anxieties that were only assuaged by victory and in collective rituals where the Aztecs were enduringly the winners.

Several anthropologists recognize the crucial aspects of ritual in offering a spatial/temporal experience where chaos is managed and controlled. Mary Douglas suggested that ritual participants recognize the “potency of disorder” and respond by engaging in a collective space for healing, an escape from danger, and a place and time where powers and truths are revealed without conscious effort (Douglas 1966, 95). Catherine Bell concurred that ritual was a stable force in life and was dialectically opposed to the chaos of reality (1992, 119). Clifford Geertz (1973) likewise proposed that humans need cultural structure and a sense of order, and without these cultural patterns they are necessarily incomplete. He found that disorder is the worst form of anxiety, deriving from restrictions found in the process of living that limit rational capacities causing “metaphysical anxiety,” and he conjectured that ritual restores this needed order (Geertz 1973, 107). From a social-psychological perspective, William Beers observed that ritual and sacrifice absolve deep-seated human anxieties concerning disorder, and the utmost fears derive from “fragmentation and disintegration and breakdown of cultural boundaries” (1992, 118).

Jonathan Z. Smith likewise conjectured that ritual provides the opportunity to overcome the paradoxes and anomalies in everyday life. It does this through a specific process of reasoning and the unique capacity it has to make ordinary objects, places,

and people become extraordinary by directing attention to them in a special way (1988, 55). In his book *Imagining Religion: From Babylon to Jonestown* (1988), Smith argued that one of the fundamentals of religion is the capacity to rationalize. For instance, nothing is sacred except when it is determined to be so, and these are not “substantive categories,” but rather “situational and relational categories” that can shift according to prescription (1988, 55). Ritual is an outcome of these rationalization processes and Smith determined it to be an elegant strategy of choice and an important vehicle for “struggling with matters of incongruity” (1988, 57).

Smith uses ethnographic examples of bear hunting rituals of paleo-Siberian peoples to illustrate the logical capacities of religious ritual. In preparation of the hunt, the Siberian tribes conducted rituals designed to assist in their success, and these included the purification of the hunter and mock face-to-face battles with an effigy animal or a real animal who was tethered and controlled. There is a discrepancy between the successes in ritual and the uncertain outcomes of the actual hunt. Smith assured that the hunter in these situations is aware of these inconsistencies, but this is the prime function of ritual, to perform “the way things ought to be in conscious tension to the way things are in such a way that this ritualized perfection is recollected in the ordinary, uncontrolled course of things” (1988, 63). Ritual recognizes what ought to transpire in the real hunt but did not, and it informs the hunter that if he were in control of the actual hunt, things would go in a prescribed manner. Smith summarizes this argument:

Ritual is incongruent with the way things are or are likely to be, for contingency, variability, and accidentality have been factored out. The

ritual displays a dimension of the hunt that can be thought about and remembered in the course of things. It provides a focusing lens on the ordinary hunt which allows its full significance to be perceived, a significance which the rules express but are powerless to effectuate. (1988, 65)

In the Aztec gladiatorial sacrifice, the death struggle results in the demise of only the enemy, whereas the Aztec warrior is guaranteed success in this staged combat. Carrasco concluded that this battle “incorporated the battlefield into the city,” but in a romanticized way in a “controlled environment.” He declared:

In this stirring scene, the combat of the battlefield is represented before the populace of the city but without the variables, accidents, and defeats of the battlefield, or in modern terms, without the fog of war... The Aztecs had constructed a dramatically controlled environment in which the spectators could perceive the perfect power of their warriors in a condensation and idealization of Aztec warfare. (1999, 152)

The Aztec warriors knew that this ritual perfection was only momentary and that when they went out on their next military engagement, it might be they who were captured or killed.

Ritual is defined by Jonathan Z. Smith and other scholars as momentary, collaborative projects that have significant impact upon identity and social and psychological well-being, which effects are sustained long after the ritual moment. In his cross-cultural comparison and analysis of narrative production in many different social settings, sociologist Christian Smith (2003), revealed that ritual recapitulates collective narratives that represent the ideal construction of reality (2003, 77). He commented that ritual provides an opportunity for all the ritual actors to be placed in a fundamental and lasting moral order with specific meaning and purpose. Significantly,

Smith asserted that ritual marks time by designating specific dates and seasons that recall what is hallowed by retelling collective, idealized stories. An example of this in the Aztec case, was the heart sacrifice of a woman impersonating their Salt Goddess, Uixtociuatl, in the seventh monthly feast. She was adorned in the costume of this important goddess and then sacrificed to this beloved deity who had discovered the important commodity of salt (Sahagún 1981, 2:91). The result is that individuals attain confidence in the larger social order and feel assured in their roles and know “how to act, why, and what meaning that has in a larger scheme of reality” (Smith 2003, 78). Sociologist Robert Wuthnow concurred that in a metaphorical way, ritual activity functions as a “social thermostat.” It provides immediate feedback as to how behavior should be regulated so that the group can achieve their collective goals (1987, 107). These theoretical proposals offer poignant arguments for why and how religious rites promote social and ideological attachments and moderate the anxieties and disorder found in daily-living.

Social-psychologists likewise observe that one of the most pivotal motivations in human behavior is to have a sense of control over aspects of life that seem threatening, and the opposite feeling, a sense of hopelessness or no perception of control fosters apathy, depression, and negative reactions to stress (Seligman 1975: Thompson et al. 2008). The greatest trepidation in life is the prospect of its inevitable termination, and because of these deep-seated fears, human cultures develop tactics to cheat death. One common vehicle is the production of collective narratives or religious ideas that explain how the effects of death can be circumvented. One example in the

Aztec case, was their idea that warriors who died in battle and women who died in childbirth would have the important task in the next life to keep the sun moving across the sky.

Terror Management Theory (TMT) is a social-psychological theory that has been widely tested over several decades, and it explicates how and why humans engage in certain strategies to mitigate the dread associated with a knowledge of inevitable mortality and conflicting self-preservation instincts (Greenberg 1999). According to TMT, cognitive awareness of the inescapability of death presents two fundamental psychological problems: first, an awareness of a wide range of uncontrollable threats to continued existence; and second, the knowledge that no matter what is done, “death—the end of existence, the failure of all systems designed to keep us alive—is inevitable” (Greenberg et al. 2008, 116). As a reminder, the basic tenets of TMT are as follows:

Terror Management Theory posits that humans share with all forms of life a biological predisposition to continue existence, or at least to avoid premature termination of life. However, the highly developed intellectual abilities that make humans aware of their vulnerabilities and inevitable death create the potential for paralyzing terror. Cultural worldviews manage the terror associated with this awareness of death primarily through the cultural mechanism of self-esteem, which consists of the belief that one is a valuable contributor to a meaningful universe. Effective terror management thus requires (1) faith in a meaningful conception of reality (the cultural worldview) and (2) belief that one is meeting the standards of value prescribed by that worldview (self-esteem). Because of the protection from the potential for terror that these psychological structures provide, people are motivated to maintain faith in their cultural worldviews and satisfy the standards of value associated with their worldviews (Solomon et al. 2004, 20).

Cultural worldviews are critical for managing anxieties, especially if they offer a notion of an immortal condition (William 2011, 99). The Aztec cultural worldview offered hope of a literal and symbolic immortality via the death of sacrificial victims, prisoners of war, demoted slaves, or other insiders who were designated by the gods (physical features, age, and vulnerability) to suffer for the greater cause of continued life for the collective whole. Human offerings on the sacrificial stones were believed to be debt-payments to the gods in exchange for continued assistance in war, rain for future crops, and other life-giving blessings. The death of these victims engendered the continued existence of these blessings (Lopez Austin 1988 1:74).

The other important anxiety-buffering outcome of their human sacrifices was the symbolic vanquishing of threatening outsiders. In some of their celebrations, the Aztec placed greater emphasis on supplicating warrior gods and consequently, the victims of sacrifice in these months were habitually foreign enemies. In other months, which honored agricultural deities, victims of sacrifice came from marginalized sectors of the Aztec's own population. Even in these months focused on agricultural fecundity, sacrifices of enemy captives augmented the killing of native victims (usually females or children). Most significantly, sacrifices of outsider enemies in many of the Aztec monthly feasts proffered social-psychological benefits.

### **Aztec Veintenas and Psychological Buffering from Threatening Outsiders**

Modern studies of media violence reveal that subjects respond most favorably to violence if harmful actions are perpetrated against antagonistic characters with different

backgrounds and orientations than the viewer. For example, subjects in some studies reported that they enjoyed the violence they watched if it was justifiable and if they could identify themselves with the protagonists (“aggressive characters”), who came from the viewer’s own cultural background, and if their hero-figures were attacking a character deemed as bad or evil because they were outsiders or had characteristics outside the norms and values of the viewer’s own culture (Vidal et al. 2003, 382). Investigators using TMT as a framework confirm these results and have determined that social orders cohere around their worldview more zealously in the face of threats from different believing outsiders. From the compilation of responses from multiple studies, TMT reveals that prejudice against foreigners escalates with the introduction of “mortality salience” (MS), death-related thoughts that arouse uncomfortable anxieties related to reminders of the subject’s impending death or symbolic or real prompts of the demise of all humans. The reason for this protective stance is that a major function of worldviews is managing deeply rooted fears concerning death by offering symbolic or real immortality (Hayes et al. 2015, 523). Threats against these beliefs make death-related thoughts or “death thought accessibility” (DTA) uncomfortably accessible or undermine the capacity to keep them distant from consciousness (Hayes et al. 2015, 524). Subjects of several TMT studies were motivated to reinforce their own worldview, and thereby DTA, by disparaging the threatening ideological systems of outsiders or by exterminating those who held these oppositional views (Hayes et al. 2015, 523). Greenberg et al. revealed that, “a large body of research has shown that MS (mortality salience) leads to harsh punishment of those who violate values in the

participant's worldview" (2008, 118). Insider slaves did not incite this type of menace, but hated enemies such as the Tlaxcalans would have fit this category of threat.

For the Aztec, mortifying enemy captives in anticipatory rites, exterminating them in full view of large gatherings in the violent-sacrificial phase, and rejoicing over their demise in the euphoric-celebratory portion of the monthly sacrificial ceremonies elevated their collective identity while denigrating the inferiority of their enemies' menacing belief systems. On a practical level, these sacrifices were an important military strategy to demoralize and intimidate enemies and discourage insurrections. The monthly feast of Panquetzaliztli was rife with mortality salience and incorporated multiple venues for demeaning and eliminating prisoners of war. This month venerated the Aztec ultimate hero and warrior god Huitzilopochtli, who stood at the center of their origin stories as a supreme, Mexica combatant who conquered death through prowess in war and in the subsequent sacrifice of enemies. As caretakers of this mighty warrior/sacrificial god, the Aztec believed that they were bound to conquer their enemies in the same fashion that Huitzilopochtli did in their mythological accounts. This powerful god administered death to his sister, Coyolxauqui, in decisive and quick blows. In recollection of this mythical dismemberment, Aztec warriors symbolically brought their captives to the center of their known universe, the Templo Mayor, to be killed by heart sacrifice and their bodies were rolled the down the pyramidal steps for decapitation and dismemberment.

The Aztec believed they could obliterate death by expertise on the battlefield in the same manner as the god Huitzilopochtli, but even so, they still had trepidations



concerning their martial. Brundage interpreted that Aztec warriors did not want to die in war and therefore sought diviners who could prognosticate future success (1985, 192). One Aztec poem reflects this aversion to death:

#### The Anguish of Death

I feel inebriated, I cry, I suffer,  
When I know, I say, and remember:  
May I never die!  
May I never perish!  
What place has no death?  
Where is the victory?  
There's where I should go...  
May I never die!  
May I never perish! (Garibay 1965, 68).

Defeat in war was the worst possible scenario leading to the gradual disintegration of the honor and the body of a warrior. As Clendinnen explained, the captive had his “regalia stripped from him, his scalp lock shorn, his heart excised, his emptied body broken into its parts and dispersed to be eaten” (1991, 146). As Andrew Scherer and John Verano surmised (2014). The bodies of victors and the defeated took center stage in Mesoamerican ritual systems, and the flesh of captives became symbolic of their demise by their public display, torture, and subsequent dismemberment far from the battlefield in the city centers (Scherer et al. 2014, 10). The ritualized slaughter of defeated members of threatening polities was performed in the center of Tenochtitlan without any risk to the urban Aztec population, and in these ritual moments, anxieties concerning the outcome of the next war were ameliorated.

In the anticipatory rites of the month of Panquetzaliztli, as in many other months, the victims of sacrifice were paraded from the *calpulcos* to the ceremonial center and back again. At the foot of the Templo Mayor, they were publicly displayed in a bathing and striping ceremony where their bodies were painted and they were adorned with paper adornments (signifying sacrifice) and then later forced to perform the serpent dance (Sahagún 1981, 2:142). These preparations led up to the violent-sacrificial phase of this month, which cultivated several venues for sacrificial rites. The first location was at the sacred ballcourt, where four victims were slain and their corpses were dragged around the surface of the court: “it was if they painted it with (the victim’s) blood” (Sahagún 1981, 2: 145). A priest, representing Painal, then moved to several locations outside the city to slay a series of other victims and at Acachinaco, they organized a real battle between two categories of sacrificial victims: slaves or bathed ones and prisoners of war (in this case representing the *Centzonhuitznahua* or the four hundred brothers that Huitzilopochtli routed in their origin legends). In this well-managed fight, spectators witnessed an actual life-or-death battle from within a protective frame. The spectacle was monitored by an individual who was chosen to oversee the battle, and this referee ended the melee when the god-impersonator of Painal arrived on the scene (Sahagún 1981, 146). The ritual contest exemplified the weakness and inferiority of maligned groups in contrast to the expertise and superiority of the Aztec warriors. For instance, the group of slaves were only armed with bird arrows (most likely used for hunting small birds), and they fought another group of captive warriors who represented the *Centzonhuitznahua* who only fought with “pine

staves in their hands” (Sahagún 1981, 2:146). Some were allowed to assist the brave (captive) warriors who fought with spears. The limited weapons and lack of training for domestic slaves must have made this a ridiculous display, however there were actual, bloody deaths and the slaves were forced to sacrifice any of the warriors they captured (1981 2:146). Witnessing this artless battle was psychologically satisfying for three important reasons. First, it demonstrated to the Aztec the inferiority of their enemies’ fighting skills. Second, it commemorated the Aztec cosmological mandate as superior warriors, and third, it provided the opportunity to witness the deaths of their enemies in close proximity while they remained unharmed.

The first psychological reward for Mexica spectators was watching disabled combatants fighting each other in a substandard manner. This most likely fueled every level of prejudice that exists in crowd dynamics, as outlined by social-psychologist Garret Fagan: cognitive, or harboring negative beliefs concerning others, affective, or sustaining negative feelings about outsiders, and connotative, or harboring negative intent toward others (2011, 156). In the case of the group of slaves, these victims of sacrifice (as noted earlier by Durán) were demoted slaves or undesirables (being sold in the market two or more times qualified them to be sacrificial victims) (Durán 1971, 281). At times, they were demoted into slavery for infractions of the law such as stealing or adultery (Durán 1971, 97,283). In other cases, a father requested (with the license of judges and justices) for an “incorrigible, disobedient, shameless, (and) dissolute” child (Durán 1971, 281). When slaves were sold in the marketplace as victims of sacrifice, they were collared around their necks with wood or metal (Durán

1971, 279). In general terms, slaves were demoted and denigrated “insiders,” and as such, they threatened the internal peace and security of Aztec order. Their martyrdom secured the populace from objectionable elements within and was therefore probably psychologically satisfying.

Captive warriors were the greatest threat to the Mexica and their lifeways. Durán remarked that for men captured in war, “it was certain that such captives were to serve as victims in sacrifice (unless they escaped), because they had been brought exclusively to be sacrificed to the gods” (Durán 1971, 286). Aztec ceremonies were designed with multiple mortifications for these foreign captives, including stripping them of their clothes, cutting their hair, keeping them in cages, rolling their cadavers down from the temples, and hanging their skulls on the skull rack. The hair cutting ritual, according to Carrasco, was symbolic of a loss of social value. The same occurred when prisoners received generic new names, *totecci*, the “Dead in Honor of Totec,” which gave them a novel identity as a “walking corpse” (Carrasco 1999, 156). After a final procession and visit to the skull rack, the bodies of these captive warriors were further denigrated as they met their deaths by various means, usually by ripping out their still-beating hearts. Subsequently, their bodies were tossed and rolled down steep pyramid steps, possibly tearing off limbs on the way down. As described by Sahagún and Durán, at the foot of the pyramid, ritual specialists severed their heads, in some instances flayed their skin, and dismembered the rest of the body for dissemination all over the city for cannibalistic feasts and trophy displays. As Carrasco discussed, “From the moment of the captive’s appearance as a whole body to his last manifestation as a

thigh bone, a ‘god mask’ in the captor’s domestic space, he undergoes a process of fragmentation and transportation” (1999, 156). The enemy combatants did not receive honorific treatment in life and certainly not in death.

In cross-cultural studies on warfare, according to Charles Cobb and Bretton Giles (2009), there were greater fears for warriors than death, and this was a concern for the manner of one’s death. They also observed:

A widespread if not universal fear among communities of warriors is defilement and dismemberment of the body. In pre-Cartesian understanding of the world that makes little distinction between body and spirit, the violent death of a foe does not guarantee his extermination. In fact, his body must be ravaged to extend the corporeal disorder to the soul (2009, 99).

For the Aztec, the slain bodies of slaves and enemy captives were at times handled quite differently in their postmortem state. Sahagún indicated that the slaves killed in the feast of Panquetziztli were more honorifically cremated. He mentioned that the ashes of these bathed ones were scattered four days after their deaths so that their souls would depart to the land of the dead (Sahagún 1981, 2:150). On the other hand, the bodies of captive warriors were not so nobly treated. As memorialized in Sahagún’s account, in the feast of Tlacaxipeualiztli, the cadavers of those slain on the gladiatorial stone were taken back to the *calpulco* where each body was flayed before they “cut it up, so that it would be eaten, so that it would be other’s people’s lot. And it was said that they would be considered gods” (1981, 2:54). Pierre Bourdieu (1990) cited cross-cultural studies that suggested that cannibalism had similar strategies in ancient societies, with a central function to incorporate the soul of the deceased into that of the living who consumed the body. Bourdieu also posited that cannibalism was excused as

a “resurrection of the dead in the living, in an ultimate application of the axiom ‘a life for a life’ and ultimately for the perpetuation of the group” (Bourdieu 1990, 247). The Aztec thought that a feast of enemy flesh was a life for a life and an infusion of divine presence into the devourer. The other purpose for Aztec cannibalistic feasts was to completely obliterate and swallow enemy outsiders to protect their own continued existence.

In the feast of Panquetzalitli, pitting enemy combatants against ill-equipped and untrained opponents (domestic servants) with insufficient weapons, was the ultimate humiliation for a warrior. The same demoralizing treatment was proffered to enemy warriors who fought in the imbalanced battle on the gladiatorial stone. The vast audiences who witnessed the demise of their enemies in rigged battles received pleasurable psychological relief from the trepidations of war against these inferior enemies, and they did so with the knowledge that no harm would come to them as spectators.

The second psychological benefit of these staged battles was the buttressing of cultural identity and the commemoration of past glories. The ancient Romans offer an example of how they used prisoners of war in their spectacles as commemorative reminders of their past military victories. Roger Dunkle conceded that Roman gladiators were not a homogenous group, and each one was trained and classified as one of many different historical Roman enemies such as *samnis* (Samnite), *gallus* (Gaul), *thraex* (Thracian), *provocator* (‘challenger’), and *eques* (‘horseman’), with their classification representing different styles of combat, armor, and weapons (2008, 98).

Dunkle surmised that the use of ethnic gladiatorial types kept “the memory of Rome’s past military success alive by re-enacting them in the arena” (Dunkle 2008, 98).

Gladiators, who took on the personae of the ancient enemies of Rome, were chosen for their martial abilities, but they were culled from outcast populations, from within Rome (slaves or criminals), or from captured enemy warriors.

In the staged battle in the Aztec feast of Panquetzaliztli, the contenders were made up of one group of slaves or “bathed ones,” with the other side comprised of captive warriors who represented the ancient Aztec enemies, the *Centzonhuitznahua* (Sahagún 1981, 2:146). This battle was in commemoration of the enemies Huitzilopochtli slayed shortly after his miraculous birth. Eduard Seler noted that “the plural *uitnaua*, denoted a class of evil spirits, which were conquered and destroyed by Uitzilopochtli, and *uitzauac* or *uitznauatlampa* is the region of the south (where a former enemy of the Aztec resided)” (1904, 171). Millbrath confirmed that this feast recalled the elimination of the *Centzonhuitznahua*, or the four hundred brothers, by Huitzilopochtli (1997, 188). The Aztec, and similarly the ancient Romans, pitched staged battles between outsider enemies and gave them mythical identities as former enemies to reestablish the glory of past victories. In killing them during these controlled, ritualized clashes, the Aztec and Roman reconfirmed their identities as a superior people. Futrell argued that the Roman used enemy humiliation and public sacrifice as an important “means of reestablishing group identity,” and presented Roman military success as necessary for the continuance of the community (Futrell 1997, 194). The Aztec correspondingly imagined that the captive warriors in their

manufactured fight were an ancient enemy conquered long ago by their revered God through miraculous means. This live and violent reenactment commemorated their past victories and psychologically and symbolically proffered their continued military success.

In the euphoric-celebratory phase of Panquetzalitzli, after the final sacrifices of enemy captives and slaves atop the Templo Mayor were completed and the victims' corpses unceremoniously rolled down, there was drinking of blue pulque, feasting, gift-giving, and mock-fights between Aztec priests and their youths (Sahagún 1981, 2:148). These were obviously joyous, fun-filled moments where psychological relief was expressed and victory over enemies was celebrated. It was in these collective moments of ebullience where their identity as the supreme civilization in the ancient world was commemorated.

In other months, where captured warriors played the part of venerated Aztec gods, the "outsider-hood" of these sacrificial victims was more complex. In the feast of Toxcatl, Sahagún focused most of his attention on the god-impersonator of Tezcatlipoca, who had the idealized body of a perfect warrior and who lived among the people for an entire year before his predestined demise. In this case, mortality salience pervaded the community for an entire year, and the populace encountered death face-to-face every time they met the god-impersonator as he walked daily on their city streets. They honored and revered him, but they knew that his perfect form and melodious sounding flute would be shattered to pieces on a temple mount at the end of the month.



Even though Sahagún testified that the representative of Tezcatlipoca ascended the steps of the pyramid in his final moments of his own free-will, the reality was he had to do so (Sahagún 1981, 2:71). The god-impersonator was not ignorant of his destined fate, and this is one reason why he was heavily guarded. Durán offered the perspective that the deity-double was watched over by twelve supervisors during the day to “prevent him from fleeing,” and every night until the day of his sacrifice, he was kept in a cage of “heavy wooden boards to prevent his escape” (Durán 1971, 127). These are indications that he was not a willing victim and that he was still considered an enemy combatant who required regulation.

Indeed, both Aztec citizens and the enemy captive recognized that even though he was acting the part of their revered god, he was still a walking corpse, and extending his life beyond a year was impossible. As such, whenever the populace encountered him before the feast of Toxcatl, they greeted death knowing that the man, the god, was really a foreign enemy whom they controlled and who would soon be sacrificed for their continued existence. Several elements in his visage and costume, which symbolized death, provide supporting evidence for his deathly identity. He had his head “pasted with feathers with eagle down” and “flowers laid upon his head; they were his crown” (Sahagún 1981, 69). Eagles and eagle down were both connected to war and sacrifice, and it was typical for prisoners of war to be pasted with eagle down and covered over with white chalk and white feathers (Keber 1995, 180). Soustelle argued that white down represented the “sacrificial warriors’ departure to the heaven,” while Seler’s opinion was that the down “represented the clouds” and the souls of the dead

(Graulich 1988, 396). Graulich offered a more nuanced interpretation and surmised that feathers and chalk served to indicate that the victims belonged to heaven and to earth simultaneously. Feathers are aerial elements; balls of down were said to be the “clothes of heaven” (from Durán). On the other hand, chalk is terrestrial because ritually “eating earth” was called “tasting chalk” (from Sahagún) (Graulich 1988, 396.). The eagle down was also reminiscent of the military associations of eagles. For instance, the highest Aztec military order were the “Eagles” or “Knights of the Sun,” who had their own special building called the “House of Eagles” where they practiced the martial arts (Durán 1971, 192). In addition, several Aztec shields that have survived in the archaeological record are surrounded with eagle feathers (Carrasco 1998, 179). The eagle vessel, or the stone vessel where sacrificial offerings were incinerated and where the severed hearts from sacrificed warriors were placed, also reflects the linkage between the eagle, war, and death on the sacrificial stone. The people who encountered the well-supervised god-actor, crowned as he was with flowers and pasted with eagle down, were familiar with these associations and with his looming annihilation.

The symbolic value of the god-impersonator as an archetype of death, as well as a representation of immortality, is explicated by the social-psychological theory of Terror Management.

As a reminder, the perspective of Terror Management Theory states:

Humans share with all forms of life a biological predisposition to continue existence, or at least to avoid premature termination of life. However, the highly developed intellectual abilities that make humans aware of their vulnerabilities and inevitable death create the potential for paralyzing terror (Solomon et al. 2004, 20).

Because of this trepidation, humans develop psychological structures to alleviate this painful awareness. The most important structures are a sense of individual and social self-esteem, along with cultural worldviews that manage and overcome anxieties related to the mortal condition. These strategies give order, meaning, and a sense of permanence to life (Greenberg et al. 2008, 116). The year-long anticipatory rites of the Toxcatl feast fits closely with this theoretical model. The itinerant-god impersonator of Tezcatlipoca propagandized important Aztec cultural worldviews. One of their significant ideas was that the gods sacrificed themselves to initiate renewed life for mankind. The god-impersonator was forced into this very role as a sacrifice for the continued life of the Aztecs. He also symbolically supported their cultural perception and self-esteem as the dominant military power of their ancient world.

Another important factor related to TMT in the anticipatory rites of Toxcatl was that the Mexica had complete control over the mortality of an outsider and expected the figurative/actual demise of their god of darkness, war, and death. This is what Thompson et al. identified as “illusory control,” which humans often favor over “real control” because it has the same anxiety reducing effects of anxiety without requiring strenuous effort. Illusory control is the psychological tool of “overestimating one’s personal control by judging that one has control in a purely chance situation or overestimating their effectiveness to get the desired outcome or to avoid a misfortune” (Thompson et al. 2008, 45). The Aztec physically regulated the body, movements, and ultimate destiny of their victim and this ability magnified their illusory control over death. As the image of Tezcatlipoca and his eight to twelve guardians walked amongst

them, he served as a transient symbol of mortality that conjured the misleading notion that they somehow had side-stepped its effects.

In the ritual program of the feast of Toxcatl, animosity towards foreign captives is less obvious, veiled as it was by a year of honorific treatment of the victims bearing the personae of their beloved gods. A similar seemingly contradictory, situation presented itself in ancient Rome. The gladiator battles between two combatants usually ended in the death of one or both competitors, depending on their performance and the mood of the crowd. Many spectators gambled on their favorite fighters, and some gladiators who survived multiple matches achieved fame and renown. As such, crowd sentiment was more complex, and were often mixed reactions when two prize fighters fought each other. Gladiators also played a symbolic role as living exemplars of Roman virtues, martial values, and expectations of perfected manhood (Fagan 2011, 262). Fagan observed that this paradox of spectator gratification in the annihilation of their heroes was resolved by the fact that they glorified the art of the combat but ultimately despised the actor. The gladiator was only a “breathing medium” of the skill. A slave might assume the “gladiator’s personhood,” but he returned quickly to the position of outcast slave after the bout was over (Fagan 2011, 272). Gladiators were enslaved captives from war or were vilified criminals, and they were heavily guarded while they were learned different types of fighting in gladiator schools (*ludus*). Even when they fought in the arena, there were legions of Roman sentinels watching over them. In victory or defeat, replacements stood ready in the vast number of enslaved captive

warriors in the capital, and their outsider-hood status was well established, as Fagan elegantly explained.

A similar set of circumstances surrounded the three stages of the Aztec Toxcatl proceedings. Two enslaved captives who had been defeated in war were chosen as elected representatives of the Aztec's favored military gods, just as gladiators were selected as prime exemplars of martial expertise and to showcase Roman military mystique. As the prisoners took on their respective roles in these ancient cultures, they were heavily guarded and their participation was enforced by a substantial cadre of guards. In both cases, all parties involved in the ceremonies were cognizant of the ultimate fate of the defeated foreigners. During the time that the god images (Aztec) and gladiators (Roman) performed their roles as imagined glorified beings, they were honored and revered. Roman victors of arena combat were treated with great acclaim and were presented with palm branches, a symbol of victory, and a sum of money along with other rewards as dictated by the sponsor of the games (Ewigleben 2000, 132). The heavily monitored Tezcatlipoca representative also received great honors, an impressive costume, and treasures from Moctezuma. In addition, he was revered by the people for an entire year, however these riches and stature began to dissolve, and his identity transformed when the actual feast of sacrifice arrived. At the commencement of the month of Toxcatl, the god-impersonator was forced to shed his ornaments representing Tezcatlipoca, and he took on the persona of a seasoned warrior with cut and braided hair and a "forked heron feather ornament" (Sahagún 1981, 70). In this transformation, he became a breathing medium of the ideal Aztec warrior. But after his

termination, the sacrificial victim speedily returned to his former identity as an enemy of the Aztec, and his head was skewered on their skull rack amongst the remains of all the other sacrificial victims.

The psychological rewards for the Aztec in this prolonged ceremony and in the sacrifices of other months reinforced their social identities as a superior people. Further, the destruction of their enemies in well-managed rituals bolstered their worldview that sacrifice necessarily remedied calamity. The control they held over their imperiled captives gave them an “illusory” sense of control over their own mortalities. Additionally, pervasive Death Thought Accessibility, in all phases of their ceremonies, contributed to strengthened social bonding and adherence to Aztec cosmological thinking.

### **Mortality Salience and Psychological Ramifications in Aztec Feasts**

In each phase of the Mexica feasts, symbolic, real, and experiential reminders of death were pervasive, and these fear-based elements conjured heightened physiological responses in the participants. Mortality salience also resulted in psychological retreat into the shelter of their collective orientations to the world and reinforced the importance of continuing their ceremonial programs. To recap a major tenet of Terror Management Theory, mortality salience includes reminders to individuals of their own impending deaths or the symbolic or real reminders of the demise of all humans, and when death reminders or mortality salience are introduced to subjects, it strengthens their defense of their own worldview, increases their self-

esteem, and escalates their prejudices against others with different worldviews (Greenberg et al. 2008, 117). According to the perspective of TMT, Williams identified four important psychological “anxiety buffering” aspects of cultural worldviews: 1) they provide a perception of immortality and less dread in the face of death, 2) they facilitate a feeling of social connectedness and an in-group identification, 3) they offer structure and order to existence, and 4) they provide a grand sense of purpose, a feeling that this life happened for a reason, and a conceptualization that this existence is purposeful (2011, 99). In the anticipatory phase of Aztec *veintenas*, there were multiple reminders of death, especially in relation to imminent demise of the sacrificial victims. The violent-sacrifices phases instigated actual deaths, and in the concluding euphoric-celebratory stage, the body parts of the victims served as poignant reminders that the Aztec conquered death in the decimation of their enemies and the weak, marginalized, or undesirable elements within their own populace.

In most of the Aztec monthly celebrations, the anticipatory phase took up most of the month. In this stage, all the preparation revolved around the warriors and slave owners and their captives and slaves who were destined for sacrifice. The sacred centers of sacrifice were instilled and adorned with symbolic reminders of the upcoming slaughter, and the victims themselves were festooned with accoutrements symbolizing their future deaths. As mentioned above, the victims, often in very public ceremonies, were dressed in sacrificial paper costumes, their bodies were painted or chalked, and their heads were crowned with down or different bird feathers and flowers. With these obvious death reminders, they were paraded around as walking

corpses. These trappings, along with all the other death reminders, were endowed with multi-layered cultural traditions and meanings that enhanced their evocative power. Flowers were ubiquitously used in anticipatory rites and were iconic of warfare and death. Other features of their ceremonies evoked mortality salience, and they were often closely associated with the victim.

The first activity in the ninth month of the Aztec calendar, Tlaxochimaco, was the administration of death to quail and dogs. In addition to this obvious death reminder, the people spent the following morning decorating all the idols throughout the city with flowers. Flowers were not only pleasing to the senses, but they also held deep symbolic value. Mary Miller and Karl Taube (1993) denoted that flowers were viewed as sacrificial offerings and were also connected to ideas concerning human sacrifice. For example, the Aztec term *xochiyaoyotl* meant “war of flowers” and referred to a special type of warfare devised by the Aztec, from the mid-fifteenth century on, in which battle was conducted with the central purpose of capturing sacrificial victims from the closest independent polities (Miller et al. 1993, 88). In addition, marigolds were seen as “ancient offerings to the dead,” and so the prolific use of flowers in this feast and many others was emblematic of passing from this life to the next (Miller et al. 1993, 88). Sahagún confirmed this association when he referred to sacrificial victims as those who were “to die the flowery death” (Sahagún 1981, 2:141). Durán similarly described this association when he mentioned that when captives were paraded into the city of Tenochtitlan, the priests told each prisoner his miserable fate offered him incense, tobacco and flowers (Durán 1994, 230). Flowers that are removed



from their stems quickly wilt, and this may be the primary association between flowers and the brief moments of life left for enemy captives.

Paper was similarly a potent “aide-mémoire” for death and sacrifice in many of the eighteen Aztec monthly celebrations. On the ninth day of the month of Panquetzaliztli, the Mexica held great ceremonies for those individuals “whom they were to slay,” and these included striping their bodies with multi-colored paint, adorning them in “many papers” or the “paper vestments in which they were to die,” placing upon them a reed headdress topped with feathers, and forcing them to dance in a winding pattern in the courtyard of the temple of Huitzilopochtli (Sahagún 1981, 27). On the day of sacrifice, the high priest brought down sacrificial papers from the top of the pyramid, raised them to the four directions and placed them in an eagle vessel (Sahagún 1981, 2: 147). The fire serpent was subsequently brought down which was described as a “blazing pine firebrand” with a long tail of paper that appeared as a real serpent, and this blazing torch was cast upon the sacrificial papers to burn them up (Sahagún 1981, 2: 146). As discussed earlier paper banners, paper costumes, and paper offerings all signified sacrificial offerings to the gods. In the anticipatory-rites of the month of Atl Caualo, paper banners were posted at places of sacrifice on near-by mountain tops and were set up on long thin poles in each of the houses and in each *calpulco* or barrio (Sahagún 1981, 2:43). These banners were emotional reminders of the nearing deaths of small children, purchased for sacrifice (Sahagún 1981, 2:42).

The Aztec also used the tool of “gigantism” to evoke emotional responses in their ceremonies, with massive numbers of participants, loud musical instruments, large

bonfires, or in massive architectural features such as the Templo Mayor. This great pyramid was the pivot around which sacrificial activities revolved. Because double shrines crowning this central pyramid represented both gods of “fire-and-water” or the Aztec metaphor for war, fire, water, and blood were all potent symbols associated with the pyramid and with the Aztec ritual sacrifices (Miller et al. 1993, 94). These elements appeared in several moments in the Panquetzaliztli festival. On the ninth day, before the crucial and violent sacrificial rites, the victims were ritually sprinkled with sacred water upon their heads at the foot of the temple of Huitzilopochtli. This precious water was drawn from a revered spring by the old men of the *calpulli* (Sahagún 1981 2:142). The owners of the slaves subsequently bathed themselves in the “Mist House,” and a woman “who was to bathe the (sacrificial victims)” washed herself by a river leaving behind a standing “thorn, stained with blood” on the bank (Sahagún 1981, 2:142). The thorn stained with blood signified the act of sacrifice as well as bloodletting rites. Fire was introduced with the fire serpent or the “blazing pine firebrand” (Sahagún 1981, 2:146). In turn, this fiery serpent was an impressive yet terrifying archetype of the fiery weapon Huitzilopochtli used to incinerate his opponents on Coatepec (Moctezuma 1987, 200, 202).

The fused representation of fire and serpent had multiple levels of meaning, but the strongest association was with sacrifice or a transition from one form to another. Jill Furst recognized that in the Aztec New Fire ceremonies marking the dangerous period of a fifty-two year period ending, the Mexica extinguished all fires and then relit a new fire on the open chest of a victim of heat sacrifice in order to renew the sun and the

earth (Furst 1992, 32). Fire and smoke were also both vehicles of communication with the gods. For those noble Aztec who were privileged to receive cremation after death, their surviving life force, called “*teyolia*,” could receive offerings via fire for their journey to the land of the dead, Mictlan (López Luján 2005, 177). Priests incensed the idols of the gods in the temples, and during the feast of Toxcatl, copious amounts of incense filled the courtyard when the image of Tezcatlipoca emerged from his shrine. Incense and fire were prevalent in all their monthly celebrations and were both reminiscent of the transition from one form to another.

Serpents were also evocative reminders of death, and the Templo Mayor had serpent symbolism built into its structure. For the scholar Moctezuma, the Templo Mayor was a living embodiment of the myth of Huitzilopochtli, and the edifice itself represented two mountains: Tlaloc Mountain (for Tlaloc) and Coatepec for (Huitzilopochtli). In their archaeological excavations of the ancient pyramid, investigators found at the base of the balustrades four serpent heads marking it as Coatepec, and not surprisingly, the enormous statue of Coyolxauqui was placed in the platform on the Huitzilopochtli side of the pyramid at the base of the stairs (Moctezuma 1987, 192). Moctezuma hypothesized that the joining of the two mountains into one structure symbolized the “first stage in the journey each person takes after death to Mictlan” (1987, 194). Karl Taube interpreted the pair of sculpted stone frogs found beside an altar at the base of the Tlaloc side of the temple as a representation of the entrance into an afterlife called *Tlalocan* (Sahagún’s *Primeros Memoriales*) (Taube 2004, 175). In addition to sculpture, there were real serpent offerings discovered in

archaeological excavations of the Templo Mayor. In several places within the *Hueteocalli*, López Luján discovered numerous remains of serpents in several offering caches found in various locations and levels of the Great Temple (2005, 125, 174, 183, 190, 243). These observations recognize that the primary symbolic program of this massive edifice was the passage from life to death for sacrificial victims at the behest of the gods Huitzilopochtli and Tlaloc. The temple was impressive and visible from great distances, and it was endowed with a whole complex of sacrificial symbols that undoubtedly aroused death thought accessibility during each phase of the Aztec ceremonies, especially those that occurred within or near its precinct, and one of the most obvious reminders were the blood stained steps of the pyramid.

Aztec feasts, including Toxcatl, were rife with mortality salience-inducing encounters with copious amounts of blood. The conquistadors often referred to the shocking amounts of blood spilled in Mexica rituals. In Cortes's Second Letter, he pronounced that "the principal idols in which they (Aztecs) have the most faith and belief I overturned from their seats, and rolled down from the stairs, and I had those chapels, where they kept them, cleansed, for they were full of blood from the sacrifices..." (Cotes 1908, 260). Durán considered the complaints of other witnesses who responded to the stench of blood on all the idols and temples with great disgust. The steps of the Templo Mayor were often so slathered in blood that it was truly a "bloody mountain." While rain and blood were both considered "precious liquids" reciprocally exchanged for the lives of gods and humans, it was additionally a salient reminder of painful injury and the torturous death of adversaries (Carrasco 1991, 101).

One of many images representing the Templo Mayor with a cascade of blood descending down the stairs is found in the *Codex Telleriano-Remensis* (Folio 38V). What is stunning in this illustration is the unquestionably brutal treatment of a female sacrificial victim. This page illuminated the events of the temple dedication inaugurating the reign of Tizoc (“The Bled One” or “Bloody Stone”) in 1483 CE. Keber described that the individuals on the top of the page were “sacrificial figures” connected to rebuilding rituals who flanked the platform:

To the left another sacrificial warrior (white spotted figures emphasize human sacrifices connected with the building of the temple) and to the right an unidentified naked woman who is being struck with a club wielded by a warrior wearing an ostentatious feather backed standard. (1995, 224)

In the glosses below, one writer commented on the “harsh punishment the Mexicans inflicted on inhabitants of the rebellious town of Cinancantepeq (Tzinancantepec)...The vanquished were taken to Mexico and sacrificed to the still unfinished temple” (Keber 1995, 224). Another author on the same page noted that “such punishments were inflicted in order to instill fear, since the Mexicans were conquering the land” (Keber 1995, 224). In these instances, blood was emblematic of punishment and decimation of rebellious outsiders and representative of bold Aztec dominance.

For ritual participants in the feast of Toxcatl, the experience of blood was vivid and real. From the perspective of modern investigators, experiential modes of encountering violence (mortality salience) presented greater worldview investment than those individuals who were exposed to violence in only a rational or representational manner (subjects in both cases remained safe from the effects of the violence) (Greenberg et al. 2008, 120). In these studies, experiential modes fostered greater

emotional responses and corresponding death thought accessibility with the ensuing need for the psychological structures that shielded individuals from the fear of death (Webber et al. 2015, 152). This close encounter with real injury, with actual blood, and with real, brutal, physical deaths exposed the Aztec celebrants to an “experiential mode” of violence, with all its attendant physiological and psychological responses.

The experience with bright red and still warm blood occurred on multiple occasions in palpable ways. In the feast of Tlacaxipeualiztli blood was the life-force offered to the sun and all the idol gods for their nourishment. Sahagún described the sacrificial scene on the gladiatorial stone:

He (offering priest) gashed (the captive’s) breast, seized his heart, (and) raised it in dedication to the sun. The offering priest, carried the (hollow) eagle cane, set it standing in the captive’s breast (cavity) there where the heart had been, stained it with blood, indeed submerged it in the blood. Then he also raised (the blood) in dedication to the sun. It was said: “Thus he giveth (the sun) to drink. And the captor thereupon took the blood of his captive in a green bowl with a feathered rim. The sacrificing priests poured it in for him there. In it went standing the hollow cane, also feathered. And then the captor departed to nourish the demons. He went everywhere; he went every place; he omitted no place; nowhere did he forget in the *calmecacs*, in the *calpulcos*. On the lips of the stone images, on each one, he placed the blood of his captive. He made them taste it with the hollow cane. He went with his warrior’s insignia” (Sahagún 1981, 2:53).

The movement of blood, as described here in Sahagún’s account, in the violent-sacrificial and euphoric-celebratory phase of the month, had cosmological significance as well as phenomenological implications. The blood was made available for all to see, smell, and touch and caused an upsurge in autonomic response. The crimson liquid was also an emotionally charged prompt that referenced its psychological, safeguarding

aspects. The blood splattered on the lips of each of the idols symbolized the renewal of the lives of the Aztec and of their gods, at the expense of the hated outsider enemies who were defeated in a humiliating manner on the gladiatorial stone. The blood was spilled and subsequently encountered in all of their sacred spaces in a protective frame. Goldstein concluded that observing violence in a secure setting provided an outlet for the “need for excitement” while also giving participants a sense of control over their environments (Goldstein 1999, 280).

In the feast of Toxcatl, encounters with blood were equally experiential. The first and last bloody rituals were derived from painful, but not lethal, autosacrificial ceremonies. Tangible blood was seen rising to the surface of lacerations on the backs of priests who flogged themselves with six-foot long, knotted hemp ropes in the courtyard of Tezcatlipoca’s temple (Durán 1971, 104,106). Furthermore, the final rites of the month were bloodletting rituals where the offering priests cut the skin of “youth, young boys, and even small children who lay in their cradles” with a stone knife (Sahagún 1981 2:76). Everyone, both men and women, felt the blood drip across their hands as they wrenched off the heads of quail and saw it splatter across the ground as they tossed the dead birds at the figure of Huitzilopochtli (Sahagún 1981, 2:73). In addition, one of the final appearances of blood occurred in the mockery of defeat and sacrifice of two captive warriors. According to Durán, the sacrificial ceremonies were visible to vast crowds of people. The defeat of these antagonists and the supremacy of the Mexica were saliently expressed when the hearts of the victims, dripping with blood, were raised upwards for graphic display and in “dedication to the sun” (Sahagún 1981, 2:76).

As the major pump for the human body, the heart was another explicit marker of the expiration of enemy warriors and was “experientially” present in most Aztec human sacrificial ceremonies. The powerful muscle was also a source of life, and the still beating heart was what the sun required to keep traversing across the sky. It was offered as a “sacrifice to heavenly fire” and so to appropriately conduct the rite, “only a flint knife could be used, for flint was or contained a spark descended from heaven” (Graulich 1988, 401). Per the account of Spanish chronicler Fray Toribio de Benavente Motolinia, after the heart was removed, the sacrificers offered it to the sun and thereafter sprinkled the blood on their idols and either burned the heart, buried it, or on other occasions, elderly ministers cannibalized it (Motolinia 2001, 95).

In each case, the central, life-giving organ of the victim was obliterated. The idea of wiping out every trace of the enemy, even his or her very core, originated in the Aztec mythical founding stories. One version of the Aztec founding their city (*Codex Chimalpahin*) heralded the momentous occasion of their establishment based upon heart sacrifice, and this account also portended a future mandate to conquer other peoples to capture them for sacrifice:

And then at night, when Huitzilopochtli saw and came upon the god carrier...he said to him: Quauhcoatl, you have seen all that lies in the reeds, you have marveled at it. But listen: there are other things you have not seen. And (do) this: go look for the tuna cactus. There you will see that upon it stands an eagle. There it eats; there it suns itself. And now are your hearts content. For it is Copil's heart; you threw it from where you stopped at Tlacocomocco. And Copil's heart sprouted there; it is now called Tenochtli (Tenochtitlan). And there is where we are to remain, where we shall be on our guard, where we shall wait and contend against various peoples (in battle with) our breasts and our heads, our arrows and our shields. Thus we shall find all who lie surrounding us, all whom we shall conquer, whom we shall capture (Anderson et al. 1997, 103).



From the very beginning, according to this origin legend, the Mexica were destined to be war-like and were obligated to conquer their enemies for their own survival. Their philosophy was that any group who opposed or rebelled against them should be violently brought into submission. This legend also sustained the idea of heart sacrifice. It was an invasive and depersonalizing form of killing that penetrated deep into the center of an opponent and pulled out the life-source of their being.

Another form of mortification for Aztec enemies was dismemberment and decapitation. There are vital correlations between the mythical events on the hill of Coatepec and the treatment of the bodies of sacrificial victims who were decapitated after their bodies were rolled down the stairs of the Templo Mayor. Priests took the heads off these cadavers upon or near the carved stone at the base of the temple hill that depicted the severed body parts and head of Huitzilopochtli's defeated sister, Coyolxauhqui (Moctezuma 1987, 58). This image reminded the Aztec that their warrior god had decisively conquered his rebellious sister and dismembered her in the same way that they were sacrificing and cutting into pieces their enemies. Decapitation had polysemic meaning and intent in the ancient Americas, but in the context of war, the possession of an enemy head signified control over the spiritual powers of the rival, protection from further harm, and an effective way to commemorate victory in battle (Nielsen 2009, 234). In the case of the feast of Toxcatl, even the more reverential treatment of the body of the victim (lowering the body instead of rolling it down the steps), still ended in decapitation and skewering the head on the skull rack for all to see.

This was one of the most shocking exhibitions of defeat and was emblematic of the extinction of all outsiders.

As a perpetual reminder of their capacity to banish and manipulate death, the Aztec constructed a colossal structure holding the skulls of thousands of victims in their main plaza. This monument of trophy heads was the most notable of the eight skull racks constructed throughout Tenochtitlan and stood directly in front of the sacrificial hill, the Templo Mayor (Carreon Blaine 2006, 18). Sahagún referred to the skull rack as one of the major edifices or “houses of the devil” (Sahagún 1997, 117). Emile Carreon Blaine averaged the number of skulls on the racks found in the accounts of chroniclers, including Adres Tapia, Motolinia Diego, Durán, and Alvarado Tezozomoc, and based on these different versions he determined that there were an estimated sixty-two thousand skulls on this main skull rack (2006, 25). These numbers were most likely inflated, but even so, the appearance of this enormous structure filled with gruesome skulls and decomposing heads must have been visually striking and probably emitted the horrendous smell of rotting flesh.

There were several layers of meaning regarding the *tzompantli*, but it was first and foremost associated with militarism and warrior gods. Aztec mythology relayed that Huitzilopochtli was the first to establish the skull rack. Volume 1 of the *Codex Chimalpahin*, recorded that when his home was established, Huitzilopochtli built “his ballcourt; then he laid out his skull rack” (Anderson et al. 1997, 81). Displaying the skulls of the defeated on a palisade of poles was not unique to the Aztec. Bernal Diaz Castillo chronicled that in their military adventures in the towns near Veracruz, there

was one town square (like many others they encountered) where there were more than a “hundred thousand” skulls stacked in neat rows, piles of human thigh bones and “a large number of skulls and bones strung between wooden posts” and there were three great men, “papas,” who were guarding them (1963, 138). Diaz believed these massive displays were merely for propagandistic purposes. He later described how during the heat of the battle with the Mexica, they “displayed six heads of Cortes’ men they had (just) killed” and the Spanish soldiers were threatened that they would meet with the same fate (1963, 383). The purpose of this act was obviously for intimidation and to weaken the morale of the Spanish soldiers during the fighting.

Skulls were believed to hold special powers of rejuvenation and were used as offerings to the Aztec gods. López Luján and other archaeologists discovered hundreds of buried human remains, both decapitated adults and children, in the lower portions of the Templo Mayor alongside other gifts to the gods (2005, 104). Other archaeological evidence has emerged relating skulls to the act of human sacrifice. In offering number 17 of the Templo Mayor excavations, there was a cache of many items related to sacrifice including the remains of human skulls and manufactured “skull masks with knives (placed) in the nasal openings” (Moctezuma 1987, 44). The placement of the knife in this manner insinuated the act of sacrifice.

Other archaeological findings have corroborated the existence of skull racks and confirmed the writings of the conquistadors and the friars who came after them. For example, archaeologists discovered the base of a structure referred to as Building B

(one of two possible skull racks in the courtyard) which was unearthed on the northern patio of the Templo Mayor precinct and is described by López Luján:

Like Building A, B is a base with vertical facings standing...On the Western side, there is a stairway with two slope balustrades, decorated with moldings in the form of knots. The distinctive feature of this structure is visible on the north, east, and south sides, where more than 240 tenons of plastered tezontle representing human skulls adorn the structure-the reason why the building was named *tzompantli-altar* (2005, 57).

The sculpted skulls on this foundation mirrored the terrifying spectacle of actual human skulls hung on a wooden framework above. In August 2015 news agencies reported that archaeologists from the National Institute of Anthropology and History had uncovered a “massive *tzompantli*, or trophy skull rack, that was built between 1485 and 1502,” and in this discovery they found thirty-five skulls with evidence of many others buried in underlying layers. The Associated Press in Mexico City (August 20, 2015) announced that this was the discovery of the “main trophy rack” where the heads of sacrifice victims were displayed on wooden poles and “suspended on vertical posts” (<https://www.theguardian.com>). A remarkable aspect of this find was that part of the platform was comprised of actual skulls that were mortared together and arranged in a circle, with each one facing inward to a now-empty center, as the wooden upper structure presumably rotted away. These findings confirm reports and illustrations of the early Spanish writers concerning massive skull racks. For instance, Diego Durán provided an illustration of the Templo Mayor with a skull rack adjacent to it (Durán 1971, 78). It was such a horrifically imposing structure that it was well remembered by those who saw it. It was a dreadful and constant reminder of the outcome of battle with

the brazen Aztec and also commemorated their victory over death, seen by vast crowds of citizens and visitors. Durán offered that the courtyard was so immense that it accommodated eight thousand and six hundred men, dancing in a circle (1971, 78). The palisades of skulls in the plaza before the Templo Mayor, in other locations around the city, and in other towns were significant “death reminders” in every phase of the Aztec sacrificial celebrations and served as gigantic memorials commemorating all past sacrifices and heralding all future martyrdoms.

Skulls and bones were abundant death reminders, and they both appeared in real formulations or in artistic representations in all the Aztec ceremonies. Thigh bones became private possessions or trophies belonging to the warrior who had owned a sacrificed captive. In the euphoric-celebratory stage of Tlacaxipeualiztli, the captor fleshed this prized thigh bone, wrapped it in paper, “provided it with a mask,” and named it “the god captive” (Sahagún 1981, 2:60). After the costumed thigh bone was hung up in his household, the captor summoned his friends and kin to a feast where “there was eating; there was drinking” (Sahagún 1981, 2:60).

Artistic representations of bones and body parts appeared in each phase of the month of Toxcatl. The idol of Tezcatlipoca appeared amidst smoke and fire, adorned with splendid garments that consisted of “a red mantle with skulls and crossbones” (Durán 1971, 99,109). In the race to the top of the temple in the euphoric-celebratory phase, the prize for young men who reached the top was dough-based tamales, called *tzoalli*, that were covered with a cloth painted with skulls and crossbones (Durán 1971, 107). During the same month, the idol of Huitzilopochtli appeared before the people

dressed in a cape painted “with severed heads, the palms of hands, hip bones, ribs, tibias, lower arm bones, footprints” (Sahagún 1981, 2:72). Each detached body part was a poignant warning of the treatment of all enemies of the Aztec.

Very forcefully, the remains of corpses were blatant reminders of death and appeared in each of the Aztec ceremonies in the context of both large and small gatherings. The experience of actual violence and symbolic icons of death in the midst of large crowds had cumulative effects. According to scholarship on group behavior, enormous gatherings of people engender greater emotional volatility, and behavior spreads by contagion, or a process whereby individuals lose a sense of their individuality (deindividuation) and are less able to resist stimuli that are dispersed through the crowd (Fagan 2011, 88). The infectious atmosphere entreats in-group sentiments with parallel feelings of prejudice to any outliers. For the ancient Aztec, death reminders presented during large gatherings similarly produced emotional volatility and contagion.

Psychologists proposing the ramifications of Terror Management Theory have correspondingly discovered that when a particular group is confronted with mortality salience, they protect their own worldviews and if the threat presented by outsiders is sufficiently strong, they simply exterminate the perceived antagonists (Pyszczynsky et al. 2008, 318). Multiple studies using TMT as a framework conducted by Pyszczynsky et al. revealed that Death Thought Accessibility increased punishment toward insiders and outsiders who violated cultural norms (2008, 319).

In the ancient Aztec historical record, adversaries and rebellious territories received retribution of enormous proportions, and examples of this type of brutal retaliation have already been reviewed. Even those Aztec ritual participants who did not conform perfectly to correct dance moves were treated with harsh retribution. From a psychological perspective, these punitive measures were generated from ubiquitous reminders of death in Aztec ceremonies and resulted in stringent adherence to their own worldview, and ratifying this worldview required exact recital of their life-sponsoring rituals.

### **Summary**

In summary, Mexica sacrificial ceremonies had manifold levels of meanings and multiple sources of inspiration and justification. The ritual programs, in addition to their ideological and material motivations, also possessed biopsychosocial rewards, sponsored by participation. On an experiential and psychological level, the three phases of the monthly ceremonies offered anxiety-buffering systems to deal with terrors related to death, warfare, and uncontrollable natural forces. Because of the constancy of war for the Aztec, captives taken in battle and the warriors who captured them were spotlighted in each of the three stages of Mexica *veintenas*. In each of these phases, death reminders encompassed and reflected the deteriorating state of the prisoners of war from walking corpses to disassembled carcasses. The anticipatory rites included death reminders which forecasted impending expiration; the violent-sacrificial stage opened the flood-gates for visceral experiential responses as actual killings occurred;

and the celebratory-euphoric phases made use of singing, dancing, feasting, and merry-making, which often revolved around the disarticulated body parts of enemy combatants who had just been slaughtered before the peoples' eyes. Psychological reprieve occurred as they manipulated the bodies of the vanquished and exterminated them (along with their worldview threats) while remaining unharmed in a secure protective frame. Each phase of these ceremonies offered rich physiological, emotional, and psychological rewards that impacted the population positively by reinforcing concepts of immortality and a shared identity as the caretakers of the supreme gods and civilization that kept the cosmos functioning and in perfect order.

## **CHAPTER NINE: CONCLUSIONS**

Why does human sacrifice work? This is a question that scholars have grappled with in manifold ruminations. Human sacrifice is a counterintuitive construct with its



comingled elements of graphic violence and religious rites designed to purify, sanctify, and elevate. Despite this puzzling combination, human sacrifice was a prevalent practice in many cultures in the ancient world with significant overtones in our modern world. What was happening in these gripping moments that made them so salient to multiple social orders? For instance, what were the motivations behind a ritual specialist as he (she) raised the sacrificial knife and plunged it into the flesh of a restrained victim? There were diverse perceptions at the moment the sharp blade was raised in a hovering position above a hapless subject. The priest and his attendants likely concentrated intently on correct performance of the killing, perhaps enthralled with their own self-importance as pivotal actors on a public stage. The victim had a dissimilar viewpoint at this juncture as he or she was filled with terror and grief that life was now at an end. The spectators were a complex assortment of individuals and sub-groups who garnered different remunerations from witnessing the bloody rite. For each party, sacrifice was perceived differentially.

Scholars have studied human sacrifice from a wide variety of angles and their personal spatio-temporal perspectives. The result is a multiplicity of theoretical models explaining how and why sacrifice is effective in diverse cultural settings. Early classical theorists posited that sacrifice was the origin of religious thought and action. Subsequent works built on this ideological perspective and proposed that human sacrifice was a rationalized extension of other types of inert and incarnate offerings to deities. In these theoretical models, the purpose of sacrifice was propitiation of ancestors and gods for divine favors or a means of communication with supernatural

realms. Sacrifice was an operation that transformed mundane objects and persons into sacred forms with enhanced powers. For these theorists, human sacrifice was a pivotal ritual that secured the well-being and fecundity of propitiants via the enhanced connection to the divine. Sociologists and psychologists perceived that human sacrifice accomplished other important social functions including purification, expiation, unification, and reification of social order. For them, human sacrifice worked to strengthen social bonds and was a vital mechanism in mitigating collective and individual anxieties.

The following generation of scholarship discerned that human sacrifice was more complex and multivalent than distinguished by ideologically based theories. They detected a deficiency and universalization in these initial interpretations. They also promoted the contextualization of sacrifice in its own cultural milieu. A new body of research emerged that focused on the material aspects of human sacrifice and other forms of institutionalized violence. These studies revealed that power relationships installed into merged political/religious conglomerates had the resources and legitimacy to sponsor the annihilation of humans for political and financial benefit. These analyses focused attention on how human sacrifice politically and economically benefited the elite social class in different cultures. Some works devoted attention solely to interconnections between warfare and human sacrifice. These investigators contended that human sacrifice was refashioned to support hierarchal social orders, infused polities with a reliable income stream, and was transformed into a tool to terrorize subjected territories and foreign enemies.

In consideration of Aztec human sacrifice, analytical efforts have emerged from either of these theoretical camps (ideological or materialistic explanations). Many researchers investigated the cosmological and mythical inspiration behind Aztec monthly human sacrificial celebrations. These scholars suggested that creation myths (narrating that initial sacrifices of the gods gave life to humans) provided a model for sacrificial rituals conducted by their human counterparts. In their monthly festivities, sacrifices were pivotal performances designed to nurture the lives of the gods with an expectation that human ritualists would receive reciprocal benefits of rain or other life-giving blessings from these same deities. Scholars further explained that, upon death, the bodies and blood of sacrificial victims released cosmic forces which were consumed by the gods and the owners of victims in cannibalistic feasts, thus continuing life. A majority of these foundational scholarly works contextualized the practice of human sacrifice of the ancient Mexica based on their unique cosmology and orientation to the natural world. They characteristically conjectured that human sacrifice worked for the Aztec because it proffered them necessary life sustaining benefits from divine sources.

The second major theoretical school investigating Aztec human sacrifice perceived materialistic motivations and implications. These scholars proposed that, because of the political and economic benefits accrued from human sacrifice, ancient Aztec leadership instigated and perpetuated a program of such significant proportion that it likely decimated inhabitants of conquered territories and eradicated the “undesirables” of their own population. These materialistic interpretations focused on

how the Aztec solar-warrior-sacrificial cult operationalized substantial advantages for the upper classes. These theorists argued that monthly feasts promoted a Mexica military-political cult based on a rewritten mythical past where militarism and sacrifice were inaugural actions that gave birth to their supreme nation. This cult gained acclaim and power by sustaining ritualized human sacrifice. Invited guests across the empire and from local neighborhoods beheld the economic power of the Mexica in the display of surplus goods, dramatic costuming, and the grand architecture in their monthly sacrificial feasts. Spectators recognized Aztec military might when witnessing the slaughter of massive numbers of prisoners of war in humiliating and horrific manner. The weakness of these materialistic explanations is that they concentrated inordinate attention on the remunerations received by the upper echelons of Aztec society while offering limited considerations of how and why the lower classes supported the state sponsored sacrificial cult.

While ideological and materialistic explanations are fundamental to understanding important functions and motivational aspects of Aztec human sacrifice, there are other interpretive angles yet unexplored. In his treatise *Society and the Holy in Late Antiquity* (1982), Peter Brown queried whether modern scholars are immobilized by traditional theoretical models. He perceptively observed,

We must ask ourselves whether the imaginative models that we bring to the study of history are sufficiently precise and differentiated, whether they embrace enough of what it is to be human, to enable us to understand and to communicate to others the sheer challenge of the past. (Brown 1982, 8)

Brown was keenly aware that traditional theoretical orientations can become so concretized in specific fields of knowledge that innovative interpretive models are challenging to produce.

Several scholars have called for new investigative avenues in specific consideration of religiously oriented violence. Intellectuals have treated the vicious and sometimes torturous treatment accompanying religious ceremonies of animal and human sacrifice as a different category of violence. It is exculpated from ethical judgements because it is clothed in cultural, religious, and spiritual understandings that give the otherwise heinous practices legitimacy. Some scholars, discussed in this dissertation, are unsettled with traditional interpretations of human sacrificial rituals. Girard called this a “theoretical concealment of the nature of sacrifice.” He proposed that the “true nature of sacrifice” is a “kind of murder,” and it should not be mentioned casually as if it were nothing or “foreign to any real violence” (2011, 7). Bourdieu concurred with this view and identified human sacrifice as a “denied murder” (Bourdieu 1990, 247). Lincoln was concerned that there was a lack of analysis of the “radical asymmetry that exists between the sacrifice and the sacrificed, or between those who call for sacrifices and those who bear the costs” (Lincoln 1991, 204). As a reminder, he proposed the following sacrificial model:

I would argue that sacrifice is most fundamentally a logic, language, and practice of transformative negation, in which one entity—a plant or animal, a bodily part, some portion of a person’s life, energy, property, or even life itself—is given up for the benefit of some other species, group, god, or principle that is understood to be “higher” or more deserving in one fashion or another (1991, 204).

In the body of Aztec human sacrifice scholarship there is a similar lacuna of theoretical work devoted to the ramifications of the visibility and routinization of violence in their social order. For example, Carrasco was perplexed that the scholarly community has been curiously tentative about exploring the evidence and nature of large scale ritual killing in Aztec Mexico. He queried:

How could a people who conceived of the most accurate calendrical systems of the ancient world spend so much time, energy, and wealth in efforts to obtain and sacrifice human victims for every conceivable feast day in the calendar? Why did a people so fascinated by and accomplished in sculpture, featherwork, craft industries, poetry, and painting become so committed to cosmic regeneration through the thrust of the ceremonial knife? The Aztec image that glares at us through the texts is an image of startling juxtapositions of Flowers, Song/Blood, Cut. (1987, 125)

Carrasco noted that there are significant paradoxes in the Aztec sacrificial system that receive little or no attention in scholarly analysis. I, too, found striking dichotomies in the Aztec sacrificial schema including the temporal juxtaposition of festive activities before and after horrific violent executions, and joyful, costumed dancers in close spatial proximity to priests dressed in black with uncut, blood-soaked locks of hair and finally, the beauty of the sound of singing and flutes incongruently intermingled with the likely screams and cries of those who were tortured before they were killed. One of the most striking disjunctions is the description of tossing the deceased bodies of sacrificial victims down the pyramidal stairs for subsequent decapitation followed by joyful festivities of feasting, dancing, and drinking. The unanswered questions are: what was at work in these paradoxical formulations and what were the experiential implications of these dichotomous activities? Gavin Flood reminded us that the phenomenon of sacrifice

is “truly complex and resists explanation in terms of any single paradigm,” and he also urged scholars to pursue new and intrepid avenues of investigation:

In the study or inquiry into sacrifice, especially across cultures, we arguably need, firstly a phenomenology that allows sacrifice to show itself, as it were, and that allows what shows itself to be seen. This is essentially an ethnographic or descriptive account... We, secondly, need a hermeneutical account that generates theory from description or, rather, that uses description to offer particular interpretative angles (2013, 130).

This dissertation presented such a phenomenology of sacrifice and a novel interpretive approach to ancient Aztec ritual human sacrifice. It not only illuminated a human proclivity towards violence, but an attraction to heightened experiences of a positive joyful nature. The experiential elements of the month-long celebrations were the leading concern in this investigation. This analysis explicated what was happening to the bodies and minds of Aztec participants as they engaged in their awe-inspiring and sometimes terrifying ritual activities. The conclusion of this dissertation is that sacrificial ceremonies were polyvalent rituals with many levels of meaning and reverberated with ideological inspiration and simultaneously spotlighted Mexica economic wealth and military superiority; but just as significantly, they were also installed with important underlying experiential activities that proffered enjoyable biopsychosocial rewards. In addition, shamanic-like aspects of their rituals also evoked transformational states of consciousness that were physiologically pleasurable and rewarding on social-psychological levels. The significance of these findings is that these rewards were so powerful that they motivated participation on all levels of the Aztec hierarchal social order. Human sacrifice worked for the entire populace of

Tenochtitlan because it met ideological and material expectations, and at the same time, it was satisfying to them on a physiological, psychological, and social level.

This mode of investigation into the experiential aspects of ritual has been utilized by specialists in many different fields including performance studies scholars, medical specialists, psychologists, and experts in all of the social sciences. Some modern ethnographic research focuses entirely on the kinesthetic, emotive, and psychosomatic modes of engagement in celebratory and violent ritual activities. Contemporary biological studies reveal that positive/joyful and negative/fearful ritual activities sponsor biological, psychological, and social reactions that are pleasurable and rewarding on individual and collective levels. The research on modern celebrations and violent media presentations reveals that autonomic arousal occurs in both heightened situations. Social scientists observe that because of this biologically-based motivation to seek out heightened emotional states, rituals are effective because they usually include surreal experiential elements with added melodramatic features.

The conclusions of all this research are that humans are intrinsically attracted to exciting events of a celebratory or violent nature, and there are multiple avenues for future investigations into the consistent appearance of sanctioned violence all over the world and in every temporal frame. Modern peoples are inundated with electronically produced violence, and there is growing consensus among experts of the harmful influence this has on individuals and societies. Garret Fagan's work on the psychological reactions to violent spectacles in ancient Rome is an exemplary model of correlative application of modern multi-disciplinary research to ancient peoples. Fagan



employed a historical-contextual approach and analogically applied modern psychological studies to spectatorship of the ancient Roman games. He argued that modern social psychology is apposite in undertaking an analysis of ancient peoples because they had the same core psychological structures or “standard equipment” as contemporary peoples (2011, 40). He argued that both plebeians and patricians were emboldened to come into the Roman Colloseum and other arenas to witness spectacular displays of violence, because they had the same psychological motivations to witness violence in a protected environ as their modern counterparts. Four areas he applied as part of his social-psychological approach were psychology of violence, sport spectatorship, psychology of prejudice, and crowd psychology.

I incorporated some aspects of Fagan’s methodological model in this dissertation, but I have also augmented my analysis with a phenomenological approach that ascertains, not only psychological implications, but biological reactions to the experience of violent and positive rituals as well. The conclusions here are based on analogical applications of modern medical science and psychological studies to an interpretation of negative/violent and positive/euphoric moments in Aztec sacrificial ceremonies. This analysis, based on ethno-historic accounts, has focused on the experience of participation in Aztec ritual ceremonies. For instance, this enterprise entertained what it was like for the ancient Aztecs to watch naked prisoners of war, bound by ropes, being dragged by victorious comrades into the city of Tenochtitlan amid plumes of incense smoke placed in front of each miserable victim by shrouded priests. It speculates upon the possible emotions experienced by the multitudes when

they heard the howling cries of these condemned war prisoners, along with the brassy calls of conch-shell trumpets and the deep throb of incessant drums. Per the findings of modern studies, we can conjecture that spectators in this ancient setting would have experienced many stimulants that would have induced physiological arousal and relief from anxiety. These incitements included multiple sensory-inputs, the dramatic setting and energy of the crowd, and the memories that everyone brought with them that were charged with emotional associations (i.e. drumming with the death of each sacrificial victim). They would have derived psychological relief from witnessing the return of the successful Aztec army along with the physical control their warriors had over the bodies of their enemies.

In this dissertation, I ascertained that there were three distinctive stages in each of their monthly celebrations which elicited powerful emotional, physiological, and psychological responses. I applied the findings of the social psychological theories and modern biological studies to an interpretation of the rewards that the Aztecs received in each of these phases. This type of analysis has never been undertaken in the study of the ancient Aztecs. The first phase of their ceremonial months were “anticipatory-rites,” and in this stage activities emphasized the up-coming deaths of sacrificial victims. These preparatory rituals evoked emotions of suspense and an overall state of excitement. The second and climactic phase called “violent-sacrificial” contained the pivotal slaying of victims. These violent deaths produced emotions of fear and excitement that undoubtedly stimulated a rush of neurochemicals and promoted evocative psychological responses. The final stage followed these sacrifices, and I

defined this phase as “euphoric-celebratory,” because this was the period when participants enjoyed the effects of psychological relief from stressors experienced in the prior two phases. In this culminating phase, the Aztecs celebrated the annihilation of their enemies and enjoyed spontaneous and regulated activities of a positive/joyful or fun-filled nature. These festivities included such events such as singing, dancing, feasting, drinking, competitions, mock-battles, and competitions. The entire program took spectators and participants on a roller coaster ride of heightened emotions from suspense, terror, and finally to joyful euphoria. These swings created novel stimuli that enhanced physiological and psychological responses.

Biologists reveal that physiological arousal occurs in the human body when it is exposed to extremes of excitation (fearful violence or immoderate festive activities). The conclusions of my research are that events in each phase of Aztec ceremonies elicited heightened emotional responses that oscillated between states of amazement and horror to exuberance and euphoria. Biological experts reveal that communal rituals incite the release of endorphins or endogenous opioids (Leary et al 2008, 37). The advantage of endogenous opiates is that they foster feelings of euphoria, well-being, and social connectedness (Winkelman 2010, 237). In the case of exposure to violence, medical specialists discern that the human body is instantaneously overwhelmed by a triple dose of neurochemicals: adrenaline, endorphins, and dopamine. In combination, these stimulated neurochemicals instigate supercharged responses of improved muscular strength, increased heart rate, pain remediation, and euphoric sensations. Each

phase of Aztec monthly feasts were surprisingly fashioned to prompt maximum neurochemical responses that were both pleasurable and addicting.

Modern medical studies reveal that the ebb and flow of emotions in ritual activities are interrelated with neurological, cognitive, and behavioral responses. As Berthome et al. state, emotions are not just “grafted onto practices,” but they are “constitutive aspects of ritual interactions themselves” (2010, 57). These studies reveal that behavioral responses to both positive and negative emotional responses provide a substrate for the substantiation and communication of “motivational communal symbols” that reappear with each re-occurrence of the same situation or symbolic representation (Alcorta et al. 2005, 338). What this implicates in the Aztec case is that each time a ritual participant encountered an iconic symbol related to sacrifice, war, or death their physiological state was altered based on manifold memories related to this same representation. For instance, when their senses were piqued by the sight of a skull rack or paper banner, the smell of burning incense, or the touch of blood coursing down their legs after autosacrificial rites, the memories of past arousal and the emotional package that came with it resurfaced and activated dopamine neurons in their systems, which offered a pleasurable positive reinforcement (Overskeid 2012, 126).

The infusion of agreeable chemicals into the body is one of the most rewarding aspects of religious ritual especially those that sponsor both joyful and frightening experiences. Dopamine functions as the neuromodulator of a powerful reward system. The stimulation of dopaminergic neurons enlivens a positive motivational state that rewards choices to activate or “self-administer” stimulation of this pathway (Pearson

1990, 503). Aztec sacrificial celebrations happened to contain a potent concoction of all the experiential elements needed to take advantage of this impressive neurochemical motivational system. In each phase of their ritual months, there were multiple rituals that required large and small assemblies of citizens, and even the simple act of gathering provided biological recompenses. As Leary et al. revealed, social contact arouses positive emotions and causes the release of endogenous opioids that reinforce social bonding (Leary et al. 2008, 37). Furthermore, the activation of social contagion in large crowds reverberates through a crowd and intensifies the emotional states of all participants.

Dramatic elements and multisensory inputs also amplify emotional and physiological arousal. Many of the Aztec ceremonies, situated in their awe-inspiring ceremonial precincts, included abundant stimulants costumed and painted dancers, brilliant fires, copious amounts of flowers, the piercing sounds of conch shells, the constant sound of beating drums, and all this combined synchronous multisensory stimulation increased social connectivity (Paladino et al. 2010, 1202). In addition, other medical specialists have discovered that there are zones in the brain where multisensory inputs converge to activate neural responses that increase autonomic arousal (Driver et al. 2008, 11). In every pivotal stage of the Aztec ceremonies, there were multiple and amplified sensations not found in mundane existence making these moments pleasurable and memorable.

In the euphoric-celebratory phases of Aztec *veintenas*, there were abundant ceremonies with positive/joyful as well as negative/frightful experiential elements that

elevated autonomic responses. There were staged mock battles that caused actual injuries but were simultaneously spontaneous and comedic. Grimes identified celebratory events as “ritually ascending,” or a vehicle to augment everyday life with extroverted actions that allow for “playful actions” (1982, 344). Biologists have discovered that positive emotions, including laughter and surprise, activate endorphins and opiate receptors, creating feelings of well-being and pleasure, and interestingly, the same responses are produced when the “body is active, either through excitement or exercise, as well as during fear” (Mathew et al. 2011, 147). The Aztec had many entertaining events that were also dangerous, such as climbing the xocotl pole or racing to the top of the temple of Tezcatlipoca to snatch a morsel of food. These active competitions incited autonomic responses on all these levels.

The anticipatory phases of Aztec ritual feasts were equally rife with active events and filled with emotions of dread and suspense for upcoming violent sacrifices, and the climactic sacrificial stage had actual violence and up-close encounters with human deaths. Negatively valenced emotions incite greater and more instantaneous physiological responses, because as Goldstein suggested, encounters with violence give an “emotional wallop” or jolt that other specialists rephrase in medical terminology as instantaneous release of epinephrine (adrenaline) into the bloodstream (1999, 181). In addition to the enhancing effects of adrenaline, stressful situations also cause the hypothalamus and the pituitary gland in the brain to release dopamine, a neurotransmitter which is profoundly involved in motivation and reward. Previc

explained further that dopamine motivates behavior, improves mental focus, and offers a supercharged stimulus (2009, 23).

The violent-sacrificial rites often condensed multiple events into a day or even several hours, and the furious pace of action incited further excitement and awe. For example, on the feast day of Panquetztliztli there was a dramatic dash from one ceremonial precinct to another for a series of dramatic sacrifices and a controlled battle of slaves and captives. The amalgamation of physical exertion and graphic slayings would have produced a flood of fearful emotions and adrenaline alongside the release of dopamine, with all its pleasurable effects. Similarly, in the month of Xocotl, the procession of victims around the skull rack, the descent of the Painal representative with a flaming torch resembling a serpent, and the subsequent deaths by fire and heart sacrifice would have encouraged heightened fearful emotions that sponsored the same types of autonomic arousal (Sahagún 1981, 2:114).

The Aztec monthly rituals were collective projects but were experienced differentially on individual levels. For the masses, there were various levels of accommodation and interest in supporting every aspect of the rites. Similar to the plebeians in Rome, some may have remained home, but many others poured out into the streets and jostled through the crowds to get a place to view the proceedings in the ceremonial centers. In the Roman and Aztec cases, many in the crowd came just for the sporting fun or the occasional distribution of bread or tamales and other material gifts, but the greatest motivation for a majority was likely the entertaining program of violence. For the Mexica, the violence in the capital city of Tenochtitlan was not just

gratuitous; it was embedded in a grand narrative of Aztec mythic past, emblazoned with superlative sanctions from the highest military deities. All Mexica, both nobles and commoners, were part of an extraordinary empire that stretched across vast areas, and because of their superior wealth and military strength, they saw themselves as legitimate guardians of both subjected and unconquered territories. In the context of this narrative, prisoners of war from treasonous or independent polities were demonized and depersonalized, and their deaths offered satisfying retribution against those peoples who threatened Aztec peace and prosperity. The eighteen monthly feasts regularly retold these narratives, commemorated the “perfect war,” and created spatio-temporal experiences where commoners and nobles alike experienced vivid and up-close encounters with the deaths of reprobate outsiders.

The conclusion of this research is that there were multifarious features in each phase of the Aztec monthly feasts that produced active stimuli and negatively and positively valenced emotional states that induced pleasurable neurochemical responses. The events such as competitions, music playing, and sacrifices sponsored exhilarating and terrifying reactions for both performers and spectators. A multiplicity of significant and surprising elements, such as the unexpected appearance of Tezcatlipoca’s god-image dressed in stunning regalia and playing a flute, amplified emotional and physiological states. The combination of experiential elements such as massive crowds, dramatic elements, and comedic and violent events elevated moods and the excitation of pleasurable neurochemicals. The caveat to this conclusion is that not all participants were influenced to the same degree, and there were some low-sensation seekers who



likely had an aversion to the charged atmosphere and bloody ceremonies. Furthermore, the processes of desensitization may have blunted the effectiveness of autonomic arousal. There were always new additions to their programs to mitigate these routinizing effects. Furthermore, the ceremonies also possessed traditional shamanic-like elements that heightened biological arousal and transformed states of consciousness.

Shamanism was a traditional religious system that pervaded the daily lives of the Mexica and was a prominent feature of their monthly feasts. This form of ritualism was multidimensional and influenced by the contextualization of the experience as well as the people's unique cultural expectations. The central goal of shamanistic rituals was to transcend this worldly realm and take itinerant journeys or "soul flights" into otherworlds where deities and ancestors dwelt. The suppositions of this research are that even with mass participation, the multiple shamanic-like ritual activities in each phase of the Aztec ceremonies likely induced important transformative states and fostered social and cosmological connections. These communally oriented rituals also produced biopsychosocial enhancements that were rewarding and motivational, which created feelings of euphoria, connectedness, and a sense of well-being.

Aztec ceremonies incorporated many rituals that traditionally took place with fewer participants and in smaller settings. Dancing rituals, in the Aztec case, had vast numbers of participants and spectators, but they were still similar in format to shamanic rituals in that they occurred mostly at night, lasted for many hours, and were accompanied by drumming and chanting. All three of these elements are

rhythmic drivers that harmonize with oscillations in brain waves, producing altered states of consciousness (Neher 1961; Scherer et al. 2001; Winkelman 2010). In many Aztec feasts, including Panquetzaliztli, singing, dancing, and drumming occurred every evening until midnight for twenty days (Sahagún 1981, 2:141). The extended ceremonies during this month were of a serious nature and propitiated the central Aztec god, Huitzilopochtli. These types of shamanic-like dances were differentiated from other types of joyful dances conducted in the euphoric-celebratory stages of their celebrations.

Although the Aztec do not appear to have the traditional cultural institution of shamanism, there are many similar elements embedded in the Aztec *veintenas*. For instance, they had multiple rituals of abnegation and painful austerities that, when combined with dance and other forms of physical exertion, led to a likely induction into trancelike states. While many of these severities were reserved for ritual specialists, there were also multiple instances where the entire populace joined in. Durán explained that in the third month, Tozozontli, all children under the age of twelve had their tongues, ears, and shins pierced in bloodletting rites in honor of Aztec deities (Durán 1971, 419). As biologists have discovered, painful rituals such as self-inflicted wounds conflated with the inhibition of natural appetites and activities requiring physical endurance result in the discharge of endogenous opiates and overstimulation of the sympathetic nervous system producing altered states of consciousness (Bodnar 1990, Winkelman 2010).

A final communal ritual practiced on large and small scales and which paralleled traditional shamanic rituals was the consumption of hallucinogens and alcoholic beverages. Durán recorded that the Aztec ritually ingested a ground-up seed called *ololiuhqui* to see visions, and they also ate mushrooms while seeking revelations concerning the future (1971, 116, 407). The alcoholic drink pulque was strictly regulated but was often ingested in copious amounts during the euphoric-celebration stage of the Aztec feast (Sahagún 1981, 2:170). Pulque was also revered as a substance of the gods, and partaking of it was considered a sacred honor. Psychedelics are known by scientists to have a dopaminergic effect, suppressing serotonin and stimulating emotional responses of euphoria and altered states of consciousness (Previc 2009).

Aztec ceremonies differed from small-scale shamanic ceremonies in many ways and did not contain all the elements found in prototypical shamanic rituals. Another difference is that Aztec ritual, similar to traditional rites, had large-scale participation and dramatic elements, including human sacrifice. The influences of these shamanic-like performances garnered the same physiological results and most likely prompted emotional empathy and social contagion in the same manner as in more intimate settings (Winkelman 2010, 212). In the monthly Aztec celebrations involving widespread participation, “contagion” was even more influential. All the features of shamanic rituals were present in Aztec feasts, which Winkelman established were typical combinations in traditional ceremonies, and these included

running and extensive dancing and other exhaustive rhythmic activities (e.g. clapping); temperature extremes (e.g. sweat lodges); stressors such as fasting, self-flagellation, and self-inflicted wounds; emotional manipulations, especially fear; and nighttime activities. (2010, 226)

The combined effect of these activities were floods of endogenous opioids coursing through the participants' bodies that reduced pain, offered a sense of well-being, and improved social-psychological health (Winkelman 2010, 226).

The important revelations of this dissertation are that the Mexica *veintenas* had important biological, social, and psychological benefits. From a psychological perspective, using Terror Management Theory as a backdrop, these rewards derived from controlled ceremonies that buffered anxieties concerning warfare and other chaotic elements found in the natural world. These ancient celebrants watched regulated battles, such as the gladiatorial sacrifice, from secure locations or in a protective frame where they witnessed the Aztec warriors' perpetual victories against hated outsiders who were always vanquished, along with their threatening worldviews, in a mortifying manner.

In each of the three phases of their monthly ceremonies, anxiety mitigating systems were available. Because of the constancy of warfare, the greatest threats to Mexica survival were powerful and rebellious polities, and because of these threats, enemy warriors were central antagonistic figures in their ceremonies. Because of their status as enemies, these outsiders were treated in humiliating manners when they were captured and returned to Tenochtitlan for sacrifice. Each phase of the monthly feasts contained rituals focused on the anticipation of their deaths, the observation of their actual execution in vivid ways, and the celebration of their demise. There were also multiple death reminders in each phase of these rituals that underscored the deteriorating bodies of outsider enemies. In the feasts of Panquetzaliztli and Xocotl,

victims of sacrifice came in close contact with the residents of the city of Tenochtitlan before their deaths, and different body parts of their deceased carcasses were hung from rafters (thigh bones) or paraded around (skins of the deceased). Terror Management Theory explains that this type of treatment is characteristic of social orders that feel that their worldviews are threatened. Additionally, consistent death reminders in the Aztec ceremonies increased feelings of unease concerning death and war, resulting in further prejudicial thoughts and violent actions against their enemies as well as enhanced ebullience once the sacrifices were completed. The importance of these ceremonies was the implied control over otherwise uncontrollable circumstances, such as the possibility of defeat in the next up-coming battle.

The conclusions of this research are that human sacrifice worked for the Aztec in every social station because it was biologically and psychologically satisfying to them. Each phase of their ceremonies promoted heightened emotional responses that correspondingly engulfed their bodies with pleasurable neurochemicals that created sensations of euphoria, well-being, pain mitigation, physical strength, and social connectedness. These varied responses occurred in positive/joyful moments but were more instantaneously and powerfully experienced in the violent-sacrificial phases. In addition, shamanic-like rituals potentially altered all participants' states of consciousness and further enhanced states of physiological arousal. Finally, psychological rewards were invoked in encounters with the controlled deaths of enemy outsiders or denigrated insiders. This third reward system was equally motivational in perpetuating the sacrificial system. The confluence of each of these rewards was

memorialized in cognitive perceptions and memories that were recalled with each new experience employing the same iconic symbol or ritual activity.

The advantage of this phenomenological approach to ancient Aztec sacrifice is that it allows a modern person to speculate upon what it might have been like to live in the ancient Aztec world and to embrace for a moment “what it is to be human” and to reflect upon the “sheer challenge(s) of the past” (Brown 1982, 8). For instance, what was it like to dance in the massive courtyard of the Templo Mayor precinct for multiple hours with your captive dancing at your side? What would have been your emotional response as you smelled incense comingled with decaying flesh and heard the belabored breaths of your dancing victim in concert with the pounding of the incessant drums and the cheers and jeers of the crowds surrounding you? And what were your feelings as you cut the lock of hair from your victim in the midst of a night-long vigil or looked into the eyes of your frightened victim as you smoothed paint upon his or her body and face in preparation for death? Modern scholars are temporally and spatially removed from these poignant moments, but a participatory examination based on biological studies can make reasonable assumptions that the ancient Mexica human experience was not dramatically different than our own.

Attraction to violence and celebratory events is not atypical, and there are multiple examples of other peoples in many different time periods who have similar penchant for riveting violence and festivals of celebration. Humans are biological beings who have cultural experiences, and biology has a powerful influence over our behaviors and motivations. From the ancient world, the Romans demonstrate that they

were attracted to violence as a form of entertainment for all members of their social order. In the Colosseum in Rome spectators gathered to witness a day of violence that began in the morning with “animal shows” or *venatio* which consisted of a wide variety of spectacles where violent fights were initiated between two different species of animals or ferocious predators against human beast fighters (Dunkle 2008, 78). The *bestiarius* were condemned criminals who were required to fight ferocious predators such as lions in the same fashion as a gladiator, but they were given inadequate armor and weapons. The purpose of providing them derisory equipment was to make their death assured while still making the “show” entertaining. Dunkle suggested that this part of the spectacle allowed the Roman people to experience and witness the vastness of their empire and their stunning ability to import exotic animals from distant lands; and at the same time, provided the violence they expected to experience from the safety of their seats above the arena floor (2008, 86).

In the modern Western world there are abundant examples of staged and ritualized violence. In medieval Europe large crowds gathered to witness torture and executions in the same way the Aztec watched gladiatorial fights. Modern Spanish bull fights and other controlled animal contests elsewhere are not different than the ancient Romans who had a compulsion to watch animals and humans kill each other. In modern times, there are ubiquitous examples of ritualized violence including lynch mobs in the United States and filmed beheadings by various terrorist groups. The fascination with death and dead body parts is a common theme in many cultures. In Nazi Germany the skins of their sacrificial victims were used to make lamp shades (Lantos 2011, 4).

Publicly viewed dissections of deceased bodies of former criminals was legalized in Europe in the sixteenth-century. In these large “anatomic theater(s),” scented with candles, the audience witnessed experiments on live animals and the cutting of the flesh of human cadavers while a “flautist or harpist played background music,” and after the dissection the audience was treated to a banquet paid for by entrance fees (Lantos 2011, 9). This interest in the bodies of the deceased was not greatly differentiated from Aztec skull racks or witnessing the flaying of cadavers. Montross mused upon this common human interest in death:

There is nothing new about the curiosity that we, the living, harbor for the bodies of the dead. We peer into coffins, stare at fatal accidents, and populate our prime time television shows with forensic investigations of gruesome deaths. Throughout history, examples abound of large crowds at public executions. (2011, 50)

This importance of this dissertation is that it reveals that ancient Mexica were attracted to death, violence, and exciting euphoric states in the same way as many other cultures, but they displayed violent actions in the context of their own unique cultural configurations and were inspired to perform their ceremonies based on their own ideological understandings. This research reveals that human biology is as relevant and critical in understanding motivation and behavior as ideological and materialistic explanations. The human body is hard-wired with a complex neurological system that is indispensable to motivational and behavioral responses. Scholars studying violence should not ignore the powerful influence of the dopaminergic reward system. This is the system that rewards and motivates the behavior of drug addicts, chocoholics, video-gamers, extreme sports enthusiasts, and those that “get a charge” out of watching



ultimate fight club opponents bludgeon each other. It is not a system observed by the naked eye, and as such, is often underappreciated and understudied in scholarly analysis of warfare and violence in many cultural settings. Bio-cultural studies is a recent addition to anthropological studies, and the works of Michael Winkelman and his cohorts represent an exemplary model of this type of analysis. His multi-disciplinary scholarship and the studies of many other specialists reveals the importance of the interactions of ritual, emotions, autonomic responses, and states of consciousness.

The contribution of this biopsychosocial interpretative analysis of the ancient Aztec provides a fruitful model for future examinations of violence and celebration in many settings. Mesoamerican cultures (including prior civilizations in Mexico and the ancient Maya peoples) had elaborate ritual programs that included festive gatherings and public human sacrificial ceremonies. Comparative analysis of these magnificent civilizations should glean important revelations of commonalities and differences in cultural interpretations and management of violent impulses. There are potentially fruitful grounds for future research in diverse cultures and settings throughout the world. The biological and psychological implications of violence and celebration have been well-studied in laboratory settings but not as extensively in field research. One exception is the investigatory work of John Horgan on several different modern terrorist organizations. From his collection of field research and interviews from members of different groups, he produced a book entitled, *The Psychology of Terrorism* (2014). This important and timely book discusses the psychological factors behind

individuals that join terrorist organizations, group psychology within these orders, and psychological reactions of victims of violent terrorist actions. He makes the important determination that those that join terrorist groups are not usually pathological but are remarkably “normal” and unexceptional in psychological terms. The implications of his research are that there are pathways to counter and disrupt future violent extremism. What is missing from this study are the biological manifestations and incitements of this type of randomized violence. A more robust consideration would consider the physiological and psychological arousal engendered by risky behaviors and possible biologically oriented addictions or desensitization to violence.

A similar deficit is found in Fagan’s psychological interpretation of violence enacted by English football club fans or “hooligans” (Fagan 2011, 93). His analysis of their loyalty to a team, firm, city, and nation from a psychological perspective is significant, but their violence that seemed to them as “tantamount to a religious experience” could also be understood from a physiological perspective (Fagan 2011, 93). A biological interpretation would reveal that this euphoric emotional state derived by beating up opponents and fans was supplied by a rush of neurochemicals of dopamine, adrenaline, and pleasurable endorphins. Recognizing that most humans are rewarded by these valuable neurochemicals has far-reaching implications in many avenues of research on individual and group behaviors in both modern and ancient settings.

The importance of this research is a recognition that modern proclivities and attraction to violence, death, and other forms of excitement were equally relevant to

ancient people. It also contributes to knowledge that cultural expectations regulate biological and psychological impulses. For the ancient Aztec, their extraordinary ceremonial program sponsored incredible spectacles with multi-sensory stimulants enhanced by whimsical and joyous festivities and amplified by horrific violent killings and injuries. Unbeknownst to the Mexica, as participants in this grand ceremonial program, their bodies were receiving an influx of pleasurable neurochemicals, and the sense of security they felt was anxiety remediation related to witnessing violence performed against outsiders. They were cognitively aware, though, that they indeed belonged to a supreme civilization with the most powerful gods watching over them as they continued to feed these divine beings with the blood of their enemies.

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