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Catholicism, Negotiation and *Taki Onqoy*: How Mortuary Ritual and Biogeochemistry Re-members Identity During the Early Colonial Period at *Iglesiachayoq*, Chicha, Peru

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by

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ABSTRACT

Mortuary practices deeply affect the living as they reflect how the living view death and how the dead re-member the identity of the living. Within the Andes, there was a continuity of mortuary practice that endured from the Middle Horizon (650-1000 CE) to the Late Horizon (1438-1532 CE), creating and maintaining a memory of death, life, and identity. When the Spanish colonized the Andes, they introduced Catholicism and structures that forced local Andeans to accept the religion – and concomitantly, their specific mortuary practices. Catholicism was a substantial disruption to the mortuary ritual that had been sustained for centuries. However, when confronted with Catholicism and its mortuary practice, local Andean groups had varied responses encompassing a spectrum from acceptance to resistance including participation in the *Taki Onqoy* revitalization movement. *Taki Onqoy* was a cultural revitalization movement that preached for traditional *huacas* to defeat the Spanish God. The site of *Iglesiachayoq* (Ayacucho), an Inka settlement in the Chicha-Soras Valley of Peru, was identified by Cristóbal Albornoz as a center of *Taki Onqoy*. The site was excavated in 2015 and subsequent analysis of materials took place in 2016 to investigate *Taki Onqoy* as a cultural revitalization movement through material remains. A MNI of 21 individuals were uncovered during this excavation. I use mortuary, skeletal and isotopic analyses on the burials from *Iglesiachayoq* to address questions about the relationship between indigenous and Spanish actors during the colonial moment. Graves were assessed for structure, grave goods and body positioning, while the human remains were analyzed for information related to demography, paleodiet and mobility These individuals and their graves demonstrate a wide spectrum of responses to the Spanish presence from acceptance of Catholicism to resistance by practicing *Taki Onqoy*, but I find that most individuals were in-between, indicating the negotiated nature of identity during the Early Colonial Period at *Iglesiachayoq*.

I. Mortuary Practice and Social Memory

Mortuary practices profoundly affect the living, as the processes of interpreting death are built upon notions of self-identity. How a group, or in some cases, an individual, views death leads to specific mortuary practices. These mortuary practices, in turn, become physical markers in re-membering[1] how the group perceives themselves – how they identify. Thus, mortuary treatment is a process of ritualizing remains. Considering that the living produce death through these rituals in a mutually agreed upon and culturally acceptable way, analysis of mortuary rituals allows researchers to glimpse how certain peoples conceptualize their orientation in the world and informs on a portion of their identity (Stutz and Tarlow 2013:5). Expanding on these theories of mortuary treatment and the praxis of death, in this thesis I use analyses of human remains, mortuary context and bone chemistry to understand how individuals or groups identified socially, using their dead as a locus of control to navigate conflicting cosmologies. In the following case study, I highlight the way mortuary rituals are re-membered and social identities are navigated within a new and changing cultural environment – the negotiation of European colonization and Catholic evangelization in the central highlands of Peru.

Historically, occupation of the Peruvian Andes has been defined by the interaction of dramatic vertical landscapes with ideological identities. Here I focus on the Chicha-Soras Valley, where the dead were flexed and interred in above ground structures called *machays* or *chullpas*, occasionally with grave goods, such as ceramics and/or *tupus.* This highly visible burial treatment established a locus of social memory – in a sense to delimit boundaries, claim resources and monitor the living – due to the burials' location surrounding and facing the settlements (Mantha 2009; Velasco 2014). Individuals were typically buried among their ancestors, while *revered* ancestors, who were treated and presented as mummy bundles, a literal, physical locus of memory, were often placed in windows or prominent places within the *machays* (Meddens 1984; Kurin 2016; Salomon 1995; Velasco 2014). The physical location and visibility of the *machays* and sometimes, of the revered ancestors, to the surrounding communities, clearly defined territory and lineage rights (Mantha 2009; Meddens 1984; Kurin 2016; Velasco 2014). Clearly, the dead in the Chicha-Soras valley proclaimed the identity of the living through providing a visible reminder of their genealogy as a continuous connection and occupation of the land.

When the Spanish made contact in the Andes, they introduced dramatic cultural and social changes, ranging from the introduction of Catholicism to new foodstuffs, to which people reacted differently depending on their circumstances. This is especially true when considering the manner in which the dead were interred. Catholic burials underneath churches (with the exception of ossuaries) were individualistic, with bodies in extended positions oriented on an East-West axis, and typically without grave goods (see Ramos 2010). While in some Andean cases the dead represented territory in regards to

[1] Here "re-member" is employed instead of "remember" to emphasize the active performance in burial ritual and the changed or manipulated narrative that surrounds burial rituals (Connerton 1989; Ricoeur 2004; Trouillet 1995).

family tombs and the establishment of lineage lines, in Catholic mortuary treatment burial had more to do with status in life and privilege: those closest to the altar having a higher status or church standing than those further back (Stojanowski et al. 2007; Stojanowski and Larsen 2013). Upon the Spanish introduction of Catholicism in the Americas, compromises arose as indigenous populations navigated these changing situations (Klaus 2008; Voss 2005, 2008; Wernke 2013).

In this thesis, I employ skeletal, mortuary, and isotopic analyses of human remains from the church of a site identified as *Iglesiachayoq,* to explore how the performance of mortuary practices during the colonial period led to resistance, negotiation and revitalization of social identity and social memory. At *Iglesiachayoq*, this negotiation is apparent within the burial contexts, where the indigenous population negotiated their place within the central church and the confines of Catholicism along a spectrum of responses ranging from acceptance through resistance.

Here, I use a framework of social memory and the negotiation of mortuary ritual within the short occupation of *Iglesiachayoq* to document the indigenous response to the colonial period. By focusing on mortuary ritual within the context of social memory, I can better situate *Iglesiachayoq* as one center of the *Taki Onqoy* movement: a cultural revitalization movement that advocated and preached for the resurrection of *huacas* and the rejection of Catholicism, Spanish goods and Spanish foodstuffs (Albornoz 1990 [1584]; Gose 2008; Molina 2011 [1574]; Mumford 1998; Norman 2016). By exploring the archaeological record of this revitalization movement, the narrative of conquest can be nuanced or even reframed (Troulliet 1995). Rather than simply discussing the conquest through the lens of Spanish control, I focus on the ways in which indigenous populations manipulated space and tradition in an agential move to control both of the extreme poles.

The thesis is organized as follows: in the following section I provide an overview of research on social memory, particularly through mortuary ritual in the Andes. Next, I discuss the body of archaeological work involving the colonial period within the Americas with a focus on the theoretical contributions of negotiation. After this, I move to the Chicha-Soras Valley and present the history and excavation of *Iglesiachayoq*. The materials and methods used here are then detailed, including those for stable isotope analyses. Following this is a presentation serving to integrate these disparate data sets. The final concluding section of the thesis summarizes the aforementioned results and discussion and articulates areas for future work.

II. Social Memory and Archaeology in the Andes

Introduction to Social Memory Through Death

In the 20th century, Maurice Halbwachs introduced the theory of collective memory, turning the idea of "memory" and "remembering" from a solely individual enterprise to one of increased scale – to the level of the group. Halbwachs argued that individual memories are, in fact, group memories, structured by the intersection of an individuals' various groups – the intersection of each group an individual is a part of forms a framework of references by which that individual "remembers" (Halbwachs 1992). This theory localizes individual memory into a collective state whilst simultaneously accounting for an individual's perception of their social and individual identity: because "just as people are members of many different groups at the same time, so the memory of the same fact can be placed within many frameworks, which result from distinct collective memories," (Halbwachs 1992:52). However, Halbwachs has been critiqued for his use of "collective" memory as his theory suggested the process – a process that made individuals a result of the social structure – was passive and did not account for human agency (Fentress and Wickman 1992:ix).

Building off of Halbwachs' theory, other scholars such as Fentress and Wickman adjust the term to "social memory" to relay the fact that "memory, too is a social fact...we are what we remember," making the process of remembering an active endeavor (Fentress and Wickham 1992:7). Moreover, for Ricoeur, memory is multifaceted, often re-membered, manipulated, traumatized or scarred as individuals and groups orient themselves in the world (Ricoeur 2004). This multifaceted, yet fluid articulation of memory represents the process of orienting the self in the world, delineating boundaries, and displaying continuity. Furthermore, a multifaceted dynamic of memory accounts for ruptures, erasures and forgetting and confronting the notion that nothing people do is "original" or "new" as it always stems from earlier memories that have been performed and re-membered (Connerton 1989; Ricoeur 2004; Trouillet 1995). Taking this active paradigm accounting for human agency, it is possible to build a definition of social memory as:

> "a study of the way we remember – the way we present ourselves in our memories, the way we define our personal and collective identities through our memories, the way we order and structure our ideas in our memories, and the way we transmit these memories to others – is a study of the way we are" (Fentress and Wickman 1992:7).

In recognizing social memory functions in constructing who we are, providing the framework in how we orient ourselves in the world, it is then important to study how social memory is formed. To orient ourselves in the physical world, the memories that are

forged must arise from the physical world and to remember them, they must be transferred. Therefore, memories need to have a physical element and relationality, making the continued social memory forged actively remembered through performative acts (Connerton 1989:39). Performative acts, make thoughts, beliefs and the idea of being-in-the-world, material, and therefore, an ideal entry point and consideration for scholars such as archaeologists dealing with the material remains and historians delving into the archives.

The framework of social memory as performative acts is particularly useful for bioarchaeologists because, within these performative acts, we acknowledge that the human body – "the very particular existential that is the flesh, the animate body" – is a very material body (Ricoeur 2004:345). The idea of the fleshy, animated, body stems from the idea of both being-in-the-world, and of being-toward-death as the body literally locates, or orientates, our understandings and localizes our memories – it becomes the central frame by which our very being is based (Ricoeur 2004:348, 352; Connerton 2011:83). In this thesis, I am mostly concerned with the process of being-towards-death because it serves as a central locus of social memory of a group, as well as usually leaving behind material remains (Ricoeur 2004:358). The possibility of dying, or the simple fact that everyone will die, incites a fear of forgetting and of absence. Thus death, that is, the material remains of death, becomes a way groups can orient themselves, reinforce social identities, and crucially, is how social memory is transmitted and group identities are re-enforced and re-membered (Ricouer 2004:358).

Death through ritual becomes a way to control what is remembered and re-membered. Social groups commemorate their dead, which Ricoeur, in his discussion of social memory terms "the act of sepulcher," specifically stating:

> "Sepulcher, indeed, is not only a place set apart in our cities, the place we call a cemetery and in which we depose the remains of the living who return to dust. It is an act, the act of burying. This gesture is not punctual; it is not limited to the moment of burial. The sepulcher remains because the gesture of burying remains; its path is the very path of mourning that transforms the physical absence of the lost object into an inner presence. The sepulcher as the material place thus becomes the enduring mark of mourning" (Ricoeur 2004:366).

When considering the performance of mortuary practices, we reference our framework through the act of marking the performance. In physically marking the mortuary ritual, the primary relationship between the physical world and people are emphasized, localizing and transmitting social memory through death and the fear of being forgotten or erased (Connerton 2011:83). While a great deal of the memorializing and re-membering of the dead occurs through processes of the living, archaeologically, only the material remains survive; meaning much of the data of the ritualization itself is missing. Even though archaeologists have a limited data set regarding mortuary ritual, a

great deal can still be inferred through skeletal and mortuary analysis when considering the context of material remains as more than mere reflections of societal structure (Pearson 1995; Joyce 2001; Silverman 2002). Material remains can be viewed and interpreted as an ideal memory that connected a group identity or group identities to each other and/or carried them to a different web of relationships or status.

Statement of Problem

Mortuary practices profoundly affect the living, as the processes of interpreting death are built upon notions of self-identity. How a group or individual views death leads to specific mortuary practices, which in turn become physical markers in re-membering how the group perceives themselves – how they identify (Knudson and Stojanowski 2009:1). Thus, mortuary treatment becomes a process of ritualizing remains, which can be used to begin understanding the complex views of how certain peoples conceptualized their orientation in the world and informed a portion of their identity, considering that the living produce death through these rituals in a generally agreed upon and culturally acceptable way (Connerton 2011:83; Connerton 1989; Joyce 2001; Ricoeur 2004:358; Stutz and Tarlow 2013:5). In the case of *Iglesiachayoq*, this is a unique opportunity to investigate a briefly occupied site that experienced Spanish contact and the introduction of Catholicism, which resulted in a negotiated response to this interaction. It is argued that *Iglesiachayoq* is a site where Cristóbal de Albornoz attributed the resistance movement, *Taki Onqoy*, and the burials beneath the church demonstrate the varied degrees of the negotiation or resistance to Catholicism and the Spanish administration (Albornoz 1584[1990]; Norman 2016). Therefore, I hypothesize that individuals buried beneath the Church at *Iglesiachayoq* were central to the process of negotiation and resistance between *Taki Onqoy* practitioners and the Catholic administration. Each individual represented a unique stance and orientation-in-the-world as a sepulcher to re-member Andean traditions and negotiate Catholicism. In this thesis I will use skeletal, mortuary, and isotopic analyses to explore the question of how the body and grave were used to negotiate identity during European colonization.

I detail the methods in subsequent sections and provide a brief summary of the contribution of these three lines of evidence here. Traditional osteological analyses were conducted to arrive at a general assessment of the population that was buried beneath the church. Specifically, information on age, sex, trauma, and general health indicators is usually recorded to understand the population's demographics, general information on group encounters and overall health at the time of contact (Becker 2016; Buzon 2006, 2014; Buzon and Richman 2007; Kyle et al. 2016; Steyn 2003). However, at *Iglesiachayoq*, most of the remains recovered were fragmentary so demographic data was limited. Specifically, biological sex and trauma could not be recorded.

Demographic information was used as a basis to begin the mortuary analysis, which included recording grave goods, or lack thereof, burial position, burial placement and any human interference after burial. Integrating this data with demographics can illuminate key aspects of social identities (Panich 2015; Klaus 2008, 2013; Stojanowski 2005a, 2005b; Stojanowski et al. 2007; Stojanowski and Larsen 2013). Mortuary analysis can reveal evidence of societal structures and a sense of how the living viewed the dead

as connections to themselves, the land and possibly other groups of people. In other words, mortuary analysis has the potential to suggest ways the living oriented themselves toward the dead and navigated through their, or another's, cosmology.

Finally, isotopic analysis was used to provide a more in depth understanding of the lifeways of the population buried beneath the church. The isotopic analyses employed (C, N, and O) allow a glimpse into individual diets in both childhood and adulthood, and can be used to track potential residential mobility and locality. The residential data and the locality of the population at *Iglesiachayoq* is of primary importance here because it establishes the population's status within the region: were they *mitmaes*, foreign leaders or locals who were very much tied to the land? Additionally, diet tells a tale of everyday activity, which can help illuminate patterns of resistance, negotiation and revitalization through food choices and restrictions. This thesis will be situated within the many studies in historic archaeology that documented the complex negotiation of cuisine and diet in colonized areas (deFrance 2003, 2009; deFrance et al. 2016; Hyland 2016; Kennedy and VanValkenburgh 2016; Smith 1997; Spielman et al. 2009; Ubelaker and Owsley 2003; Van Buren 1999).

In this thesis, each category of analysis provides an additional lens with which to answer the question of how the individuals at *Iglesiachayoq* resisted, negotiated and revitalized their social identities and social memory at the time of Spanish contact.

III. Archaeological Background in the Andes from Pre-Contact to the Colonial Period

Death in the Andes

Ancestor veneration is a cultural custom in which the dead are worshipped and consulted with by their living descendants. Within Andean cosmology, ancestor veneration becomes the source of legitimization and the core that keeps a lineage connected (Salomon 1995). In this way, the dead become "a source of entitlement among a group of people who share rights or identity" (Salomon 1995:320). *Ayllus*[2] claimed descent, whether real or imagined, from a common ancestor(s) and represent a nested social unit within Andean society (Salomon 1995). Each *ayllu* maintained control over a resource through establishing territory and shared communal burial crypts, to which they were bound to through a collective identity – mostly focused around the mortuary spaces as the locus of social transmission (Isbell 2004; Kurin 2016:4; Salomon 1995). These mortuary spaces were either seen as or had carved into them *ttocos*, which were windows or passageways to the supernatural world (Isbell 2004; Kurin 2016; Salomon 1995). *Ttocos*, therefore, connected the living with the dead allowing constant, fluid communication between the natural and supernatural; creating an aura of life beyond death and life beyond the living group into the landscape itself.

The landscape represented an animated lived space in the Andean cosmology. Andeans focused on unique, powerful or important features of the landscape through the knowledge of *huacas*. *Huacas* are "superhuman beings whose physical substance inhered in monoliths, statues or other sacred objects" as they were "sometimes imagined as the progeny of major permanent land features or natural forces such as great snowcapped mountains or lightning" (Salomon 1995:321). These animated features of the landscape were usually the origin of *ayllu* ancestors (Salomon 1995; Kurin 2016). In having origin myths connect ancestor origins to *huacas*, "ancestry could be imagined as a seamless web expanding from family organization to geographic and even cosmological order" (Salomon 1995:321). Thus, the discussion of the transformation of mortuary practices becomes central as the veneration of ancestors and *huacas* are practices that stretch far into the past and yet still remain the locus of social memory. These practices became especially salient during the initial period of Spanish contact and control (1532-1580s). In a new, changing cultural atmosphere fraught with rising tribute demands, disease and death, indigenous individuals initiated revitalization movements centered around *huacas* in order to reclaim some form of power. As physical marks – sepulchers – upon the landscape, *huacas* remained central to social memory transmission; *huacas* represented performative acts imprinted upon the landscape. Physical markers upon the landscape are particularly well suited to address questions of how memories of the far past – of performative acts and cosmology – can be re-membered at times of social change.

[2] An *ayllu* is a social unit in the Andes that are based on real or imagined kinship, sharing a common origin story and rights to community land/resources (Salomon 1995).

Mortuary practice, most noticeably, reveals an intricate web of bodily orientation the dead and the landscape represent. The ancestors, specifically chosen to unify the group and to demonstrate both the boundaries and the power of the group, were a constant locus of memory storing frameworks of origin and views of the animated space of the land and the dead in relation to the living's place. This notion of continuity of mortuary practices through time allows us to better understand the effects of Spanish contact.

Mortuary Practices in the Andes Pre-Contact

The history of human social organization in the pre-Hispanic Andes is punctuated by broad periods, or "horizons" of unification and coalescence, and intermediate periods of fission and community fracture. In the Huamanga region, where *Iglesiachayoq* is located, the powerful Wari were the first imperial presence. During this time, known as the Middle Horizon (650–1000 CE) independent groups of Andean peoples began to increase connectivity and agricultural production (Isbell 2004; Isbell and Schreiber 1978; Meddens 1984, 1991; Moore 2014; Pink 2013; Tung 2007, 2012). The Wari implemented an imperial agenda through the imposition of specific styles of ceramics and architectural patterns. The Wari interred their dead in specific types of burial structures, although these goods and structures were often hybridized as they mixed with local, non-Wari traditions (Bauer et al. 2010; Isbell 2004; Isbell and Schreiber 1978; Kellet 2010; Kurin 2016; Meddens 1991; Moore 2014; Tung 2007, 2012). With these new burial structures, which often took the shape of D-ring structures or structured entrances to small cave/rock shelters (see Isbell 2004), the Wari instituted collective internment of the deceased, as opposed to cemetery and individual internments found during previous time periods in some areas (Isbell 2004; Moore 2014). This trend is supplemented by building visible, although still exclusive, mortuary structures to inter the dead as venerated ancestors (Isbell 2004). These structures served as a new conception of territoriality and identity; as noticeable and marked structures of the elite became claims of lineage and legitimization of their place within the landscape – a locus of transmitting social identity (Isbell 2004). Overall, this perception is translated into the landscape of the dead as the dead themselves had a physical and metaphysical role in negotiating settlements and social ties that served as a framework to understanding being-in-the-world and being-toward-death.

When the Wari collapsed (1000–1438 CE) during the Late Intermediate Period, populations scattered, formed smaller and defensible (but see Arkush and Stanish 2005) settlements in higher-altitude, more remote spaces of the landscape in response to both decreasing resources and increased hostility between groups. Materially, the Late Intermediate Period groups can be differentiated through the new local ceramic trends developed in different regions (Bauer et al. 2010; Bauer and Kellet 2010; Kellet 2010; Kurin 2016). The need for collective group identity and a legitimate place in the landscape became crucial to the survival of the group and massive, impressive mortuary structures were neither practical nor necessary (Covey 2008; Kurin 2016). Ethnogenesis occurred as groups isolated themselves, performing new identities, specifically through mortuary ritual as *machays* and *chullpas* became convenient and easy ways to delineate territory and legitimize *ayllu* lineages, because these collective tombs were visible to

others and to the village itself, literally allocating territories (Kurin 2016; Mantha 2009; Salomon 1995; Velasco 2014). The collective internment of each *ayllu* represented a move toward collective identity and territory, as group representation became more important because the collective group, as a whole, represented the continuity of the *ayllu* lineage and their place within the landscape (Salomon 1995). While certain ancestors (*mallqui)* were often consulted with through offerings and feasts, the focus was on the collective origin, not the individual, and their legitimate claim to *be* in that space (Kurin 2016; Mantha 2009; Velasco 2014). The *machays* and *chullpas* became the physical loci for group cohesion and identity and therefore, the transmission of memory.

In this tumultuous time period, the Inka initiated a century of conquest and expansion, eventually streamlining and consolidating resources in what is now known as the Late Horizon (Covey 2008; Moore 2014). As the Inka expanded, they used a mosaic of control strategies, but harnessed the connection between the living and the dead most aptly to their advantage (Bauer and Covey 2002; Kaulicke 2013). As a critical part of their imperial agenda, the Inka incorporated local cosmologies into one centralized ideological structure in which the Inka ancestor dominated. In this process, they highlighted the importance of memory and how the process of burial can emphasize the memory of origin and legitimization (Bauer and Covey 2002; Kaulicke 2013; Salomon 1995). The Inka built "villages of the dead" where ancestors were displayed and cared for by their own servants, whilst ceremonies and feastings made them both accessible and exclusive (Kaulicke 2013; Salomon 1995). There is still evidence that *machays* and *chullpas* were used as mortuary practices for those who were not of the elite class (Meddens 1984), but the visibility and the active incorporation of ancestral mummies of the elites, especially the Inka king's, emphasized a memory of legitimization of all resources over the controlled territories.

Mortuary Practices During the Colonial Period

When the Spanish conquistadors came to Cusco in 1532, they were awe-struck at the wealth and power of the Inka – despite their main interest in material wealth, the pretense of "saving" Andeans through Catholic evangelization became justification of their conquest (Seed 1992). Spanish religious authorities intentionally separated Andean peoples from their *huacas* and ancestor worship practices through the destruction of these important monuments. The connection to the dead was thus distanced – the Spanish emphasized the everlasting soul and the corruptible body, an idea at odds with the Andean conception of the afterlife. Yet, this distinction was blurred by Spanish practices of worshipping Catholic Saint relics, providing an analogous tradition to Andean groups the Spanish encountered throughout the Americas (see Gose 2008). For the most part their conquest was deadly and explicitly attempted to erase the social memory of origin myths and legitimization that ancestors preserved (Klaus 2013; Klaus and Tam 2009; Stojanowski and Larson 2013). Initially, Spanish religious authorities were willing to negotiate some aspects of Catholic worship in order to help Andeans convert. However, the Spanish did not want to compromise on mortuary practices because controlling such a performative act connected to social identity and memory provided them with a key piece in maintaining social control (Klaus 2008; Wernke 2007a, 2013). Therefore, hybrid

mortuary practices materialized almost immediately as local Andeans negotiated and resisted as they attempted to re-member their social knowledge of the ancestors and the landscape – a narrative often forgotten in the history of the Spanish Conquest (Klaus 2008, 2013; Klaus and Tam 2009; Wernke 2007b, 2013).

Within the early years of colonial contact and rule, there was a shift in how and where the dead were interred. No longer were they permitted to bury their dead in caves and worship their ancestors, instead, as good Catholics, their dead had to be buried in sanctified ground, mostly underneath the church (Gose 2008; Ramos 2010; Stojanowski and Larsen 2013). Bodies were expected to be buried in the extended position, oriented toward the altar and without grave goods (Gose 2008; Klaus 2013; Stojanowski and Larsen 2013). As noted earlier, where one was buried within the church typically corresponded to their position in life, with the most prestigious buried near the altar (Klaus 2013; Stojanowski et al. 2007; Stojanowski and Larsen 2013). This type of mortuary practice manipulated and changed the Andean concept of origin, legitimization, *ayllu* lineage and resource control. Everyone, so long as they were a baptized Catholic, were buried beneath the Church, with no boundaries and no visual marker, or sepulcher, to re-mind the local Andeans of their orientation in the world and toward death (see Gose 2008 and Ramos 2010).

Unlike many of the other social transformations in the Andes, the colonial moment and its effect on mortuary traditions is one of the most drastic transformations of social memory as Andean claims to the landscape, their origins, their memory was being erased and rewritten by the Spanish who tried to enforce Catholic mortuary practices and destroy the physical sepulchers of Andean identity (Klaus 2008, 2013; Klaus and Tam 2009; Stojanowski and Larsen 2013; Wernke 2013). To many Andeans, this destruction and attempted erasure was intolerable. Resistance stemmed from the attempts at erasure and sought to revitalize "traditional" Andean ways. Andeans tried to re-member their past, but the Spanish chroniclers rarely recorded these resistances and/or negotiations and have mostly recorded outright revolts and their punishments. However, we know that Andeans were not passive in the wake of Spanish contact and examples of resistance and negotiations are beginning to be recognized (Klaus 2008, 2013; Klaus and Tam 2009; Wernke 2013).

Colonial Period Archaeology in the Andes: Hybridity/Negotiation

Most of the archaeological research conducted in the Americas during the Colonial period focuses on household archaeology, initially highlighted by the work of Kathleen Deagan. Deagan, among others in archaeology and social theory, argued that most meaningful actions are played out and enforced in the everyday from what we eat and drink to the types of ceramics or cooking ware we use (Bourdieu 1977; Deagan 1996, 2003; Voss 2005, 2008; Van Buren 1999). While Deagan's (1996, 2003) work in household archaeology was ground-breaking, especially in her emphasis on women's roles in negotiating conquest and because it introduced the idea of creolization or hybridity in material culture due to colonial interaction, her model was Caribbean specific and did not take into account all living experiences (Van Buren 2010; Voss 2005, 2008). Consequently, historical archaeology, and the archaeology of colonialism, shifted

focus, looking at how individuals, in their everyday life, began producing hybrid identities as people negotiated through their own circumstances (Deagan 1996, 2003; deFrance 2003; deFrance et al. 2016; Groover 2000; Kennedy and VanValkenburgh 2016; Rice 2013; Smith 1997; Spielmann et al. 2009; Van Buren 1999, 2010; Voss 2003, 2008; Wernke 2007a, 2007b, 2013).

In the Andes, studies looking into the life between indigenous populations and the Spanish during the colonial period discovered that most everyday experiences involved negotiated spaces and materials. For example, most zooarchaeological studies find an intermixing of animal remains both New World and Old World, and find that most of the cookware is indigenous whereas the serve-ware may or may not be Spanish, depending on the context and wealth (deFrance 2003; deFrance et al. 2016; Kennedy and VanValkenburgh 2016; Smith 1997; Van Buren 1999). Additionally, through his work in the Colca Valley of Peru, Wernke (2007a, 2007b, 2013) has argued that initial contact and even the *reducciones* had elements of negotiation between indigenous people and Spanish authorities. Missionaries, upon arrival, were faced with spaces that were not fully controlled by one group and improvised with Catholic doctrine, ultimately leading to a hybridization of religion, and burial practice (Wernke 2007a:179). These studies show that people, as active agents, created spaces and traditions, hybridized from a negotiated world-view that utilized material and ideological culture from several different groups, meaning there was not simply a top-down imposition of Spanish policy (Wernke 2007b, 2013).

There have been a few bioarchaeological investigations into the colonial period in the America's with the focus on social memory and social identity (Klaus 2008, 2013; Klaus and Tam 2009; Stojanowski 2005a, 2005b; Stojanowski et al. 2007; Stojanowski and Larsen 2013) while the majority of studies focused on the health effects of colonialization (Larsen and Milner 1994; Ubelaker 1992; Ubelaker and Newson 2002; Ubelaker and Ripley 1999). In particular, Stojanowski and Klaus approach the colonial interaction in Florida and in the Moche Valley, respectively, as multi-faceted, with hybridization of materials and people leading to a change in mortuary patterns and in genetic structure — emphasizing the biocultural nature of negotiation and hybridity (Klaus 2008, 2013; Stojanowski and Larsen 2013; Stojanowski 2005a, 2007). In both cases, Stoajnowski and Klaus argue that the negotiation that takes place, especially within the mortuary rituals, emphasized a change in social identity, social memory and population structure. Specifically, Klaus' research into the Mochica population in the Moche Valley during the colonial period shows a change in mortuary ritual, with range of burial type, burial position, burial orientation and associated grave goods throughout several periods of the colonial moment. These findings emphasized how individuals navigated between Catholicism and the local cosmology (Klaus 2008:460). These differing and changing mortuary patterns point to the importance of burial ritual within the social memory of people and their negotiation between their own social memory in death and the Catholic ideology.

Conclusion

Overall, understanding the mortuary practices through time in the Andes combined with archaeological studies of negotiation and hybridity in the Andes during the colonial period demonstrate that local indigenous populations actively negotiated between the poles of Andean traditions and Catholicism through everyday activity and mortuary ritual. In this study, diet, skeletal, and mortuary analyses were conducted because earlier and on-going historical archaeological work have demonstrated that everyday activity and mortuary ritual are important intersections of social memory and social identity in the wake of negotiation. Through focusing on mortuary rituals, especially for sites with limited skeletal preservation, I can begin an investigation into how individuals at *Iglesiachayoq* negotiated this initial contact, as they navigated between two axes of control: that of their indigenous traditions and that of Catholicism.

IV. Archaeological Background of the Chicha-Soras Valley

The Chicha-Soras Valley

Table 1: Generalized Chronological Periods in Peru with the approximate dates.

Generalized Chronological Period	Approximate Dates
Pre-Ceramic	***4000-2000 BCE***
Initial Period / Formative	***2000 – 800 BCE***
Early Horizon	800 – 200 BCE
Early Intermediate Period (EIP)	200 BCE – 650 CE
Middle Horizon	***650 – 1000 CE***
Late Intermediate Period (LIP)	***1000 – 1438 CE***
Late Horizon	***1438 – 1532 CE***
Colonial Period	***1533 – 1826 CE***

Bolded and italicized chronological period/approximate dates are time periods where there is archaeological evidence of human occupation within the Chicha-Soras Valley.

The Chicha-Soras Valley is located in the South-Central Andes of Peru, between the departments of Ayacucho and Apurimac (see Figure 1). The valley ranges in altitude from 2600 to 4000 MASL and is heavily terraced, with a modern, local economy based off of livestock and farming (Meddens 1984). The Chicha-Soras Valley is in between both the Wari and the Inka Heartland along the Inka road (Meddens 1984). This implies that the Chicha-Soras Valley, in general, was a very important area for both the Wari and the Inka empires. Despite its location between these heartlands, there has been little research done in this area (but see Barnes 2003; Branch et al. 2007; Kemp et al. 2006; Meddens 1984; Meddens 1991; Meddens 2006; Meddens and Schreiber 2010; Norman 2016) since it is fairly isolated and was a hot-spot for *Sendero Luminoso* during the 1980s and 1990s, preventing archaeological investigation.

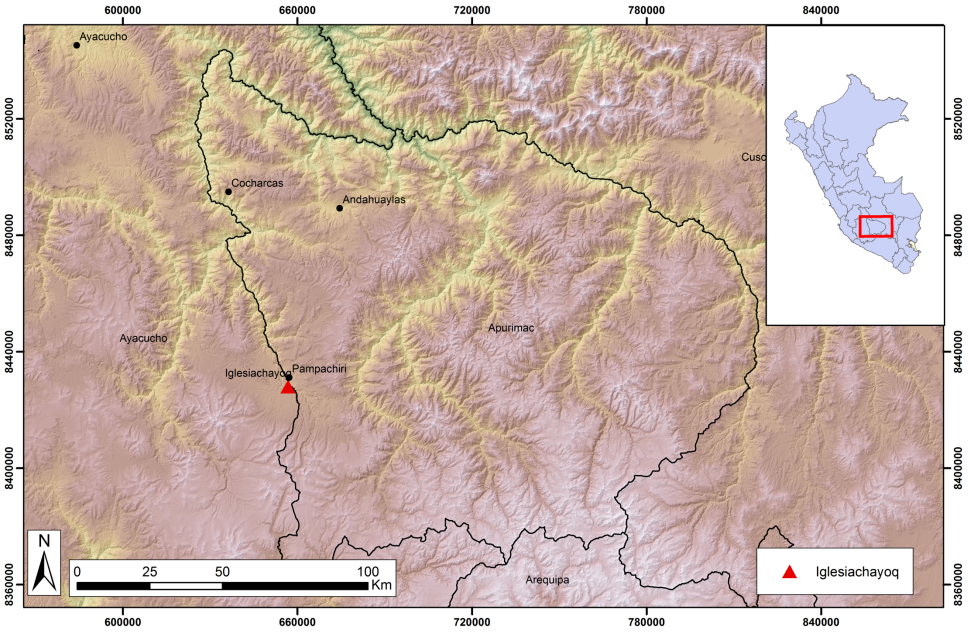

Figure 1: Map of study area. Map by Scotti Norman.

The archaeological work that has been conducted occurred in the late 1980s and the early 1990s, mostly by Frank Meddens and Monica Barnes. From these archaeological investigations and supplementary research from Spanish Chronicles, it is unclear when the Chicha-Soras Valley was first occupied (see Table 1). From survey conducted in the 1980s, Frank Meddens found at least two sites dating before the Middle Horizon – one Pre-ceramic and one Initial Period site – however, the majority of the sites surveyed date between the Middle Horizon and the Late Horizon (Meddens 1984). Heavy terracing is evident within the entire valley, indicating an intensification of agriculture that can mostly be dated to the Middle Horizon (Meddens 1984:148; Meddens 1991; Branch et al. 2007). Settlements occupy areas of intensive terracing around the altitudes of 3400-3600 MASL during the Middle Horizon, indicating that the human population within the Chicha-Soras Valley most likely increased while under the influence of Wari (Meddens 1984; Branch et al. 2007).

While the population most likely grew, evidenced through the proliferation of Middle Horizon sites, pollen data and archaeological material, it is clear that there was a strong and resilient Chicha-Soras-centric identity in the valley, which grew and had a heavier influence on the population living in the area than did any external influence on identity such as the Wari or later, the Inka (Meddens 1984; Meddens 1991; Branch et al. 2007). Local styles of ceramics and architecture flourished, with just hints of Middle Horizon and Late Horizon influence.

During his survey in the 1980s, Meddens also recorded and dated tombs based on associated grave goods. Overall, Meddens identified two types of *machay* tombs and two types of *chullpas* in the Chicha-Soras Valley. All the tomb sites found were disturbed and documentation of the skeletal remains were limited to the disturbed and often comingled positions of interments within the tombs. The two types of *machays* varied in size and

location within the mountain landscape, from small to large, but most contained more than one individual, per generalized Andean tradition (Meddens 1984:139; Meddens and Branch 2010; Isbell 2004, 2007; Kurin 2016). The *machays* had built entrances and some had architecture inside the cave or natural rock shelter such as white painted mud plaster and large trapezoid windows[3] (Meddens 1984:139; Meddens and Branch 2010). Additionally, both round and square *chullpas* were recorded. Associated ceramics were used to date the use of the *machays* and *chullpas,* with most *machays* dating to the Middle Horizon and the Late Intermediate Period and most *chullpas* dating to the Late Horizon (Meddens 1984:139). Finally, most of the remains found, if found relatively undisturbed, were recorded to be in a flexed position, a common position for the individuals interred (Kurin 2016; Meddens 1984:139). These recorded tombs establish a compelling case of mortuary ritual expected in the Chicha-Soras Valley population: namely, individuals interred in a flexed position in either *machays* or *chullpas* probably representing *ayllu*-like familial tombs with associated grave goods like ceramics.

Iglesiachayoq

Iglesiachayoq is an Inka-era site that was identified by Cristóbal de Albornoz, a priest who visited several towns in the Soras region to extirpate the growing idolatry, as one of the centers of the *Taki Onqoy* (Quechua for dancing sickness) resistance (Albornoz 1584[1990]; Mumford 1998; Norman 2016; Scotti Norman, personal communication 2015). *Iglesiachayoq* is thought to have been continuously occupied for around 100 years, from the Late Horizon the Early Colonial Period (Mumford 1998; Norman 2016; Scotti Norman, personal communication 2015). When the Spanish arrived at *Iglesiachayoq* around 1540, there were only 30 to 40 more years of occupation (around one or two generations) before the population was forced to move into a *reducción* per the Toledo Reform.

Iglesiachayoq has around 80 structures, which are divided amongst three basic architectural forms: rectangular with squared corners, rectangular with rounded corners and ovoid. The obvious site center is made up of a large rectangular structure (35m x 9m) that has been identified as an Early Colonial Period Spanish church (see Figure 2). This structure opens (to the North) onto a large open plaza, which is surrounded by a wall. Adjacent to the church, with its access facing South, is a large rectangular structure with rounded corners, which likely housed the *kuraka*[4] of *Iglesiachayoq*. This structure is one of the largest at the site (14m x 11m), has 18 rectangular niches aligned on all interior walls, and its access is lined with beautifully-cut polygonal ashlar masonry typical of Inka elite residences. The focus of fieldwork at *Iglesiachayoq* was to explore this supposed center of the Andean 1560s revitalization movement, *Taki Onqoy*. Scotti Norman led excavations at Iglesiachayoq in 2015. A total of 19 units were excavated, including sections of the large rectangular structure composed of three units (see Figure 3), the large circular Inka-masonry structures, the smaller round and rectangular

[3] *Charrangochayoq* is the most well-known *machay* that dates to the Middle Horizon and used throughout the Late Intermediate Period in the Chicha-Soras Valley. Rectangular rooms to inter the dead were constructed in a rock shelter with white plaster walls and windows (Meddens and Branch 2010).
[4] The principal governor of an Inka province.

structures and plazas. The results of the excavation reveal that most of the households contained Andean artifacts, mostly ceramics, with a limited number of households containing European artifacts. This suggests that individuals negotiated the terms of contact with the Spanish, sticking to their identity while also engaging in a spectrum of negotiations (Norman 2016; Scotti Norman, personal communication 2015).

Figure 2: The church at *Iglesiachayoq*. This is a major focal point of the entire site, centering it as an important architectural feature. Photograph taken by author.

Taki Onqoy is understood to be a covert resistance against the Spanish Catholic tradition through the belief that the indigenous *huacas* would defeat the Spanish God, and re-establish the indigenous population as the true lords of the landscape (Gose 2008; Mumford 1998; Salomon 1995; Stern 1992). The location and the nature of *Igesiachayoq,* represents an ideal site to investigate such questions of resistance and negotiated identity, assuming, 1) the movement itself left behind material clues and 2) there were varying levels of acceptance, negotiation and resistance to Spanish Catholicism and administration.

Conclusion

The Chicha-Soras Valley has not been extensively studied even though serves as a connection between Cusco, Andahuaylas and Nasca on the Inka Road (Meddens 1984). From the limited archaeological investigations to date, the most extensive period of occupation begins during the Middle Horizon, but while the population most likely increased, along with a significant change in landscape due to agriculture intensification (terracing), distinct local identity(s) erupted, dominating the ceramics and housing types although they showed Wari, and during the Late Horizon, Inka, influence. People established and occupied *Iglesiachayoq*, a large settlement with around 80 structures and Inka *kuraka* house(s) from the beginning of the Late Horizon (Norman 2016). When the Spanish arrived, people continued to occupy the site, they were eventually moved into *reducciones* before 1584 (as the town is not listed on the 1584 *visita*), meaning that *Iglesiachayoq* represents a total occupation time period of around 100 years, and only 30-

40 years after Spanish contact. During the time of Spanish and Andean co-occupation, people negotiated their status within the Catholic tradition and the new cultural revitalization movement: *Taki Onqoy*. A large, central rectangular building was central to the site, which was hypothesized to be the church and the center of Catholic power and a site of negotiation between people who embraced Catholicism and those who advocated *Taki Onqoy*. If this structure was a church and since Albornoz identified *Iglesiachayoq* as one of the centers of this revitalization movement, *Iglesiachayoq* becomes an ideal site to investigate how mortuary ritual is a locus for social memory and a locus for negotiating identities.

V. Materials and Methods

Materials: Church Units Excavation and Skeletal Remains

The Proyecto Arqueologico de Taki Onqoy (PATO) excavated three two-by-five meter units inside the church: Unit 17 abutting the westernmost axis of the church (furthest from the altar), unit 18 in the middle of the church, and unit 19 at the easternmost altar area (see Figure 3). These particular locations within the church were prioritized to 1) see if this structure was a church or a *kallanka*, and 2) if it was a church, to obtain a representative sample of the population buried beneath it.

The soil beneath the church was extremely acidic, making the human remains excavated very fragmentary and fragile; therefore, the levels of preservation varied considerably across the different loci (Branch et al. 2007; Kemp et al. 2006). In total, an MNI of 21 individuals were recovered, with each described locus being the remains of one individual unless otherwise noted. Most of the remains recovered were comprised of dentition and long bone fragments.

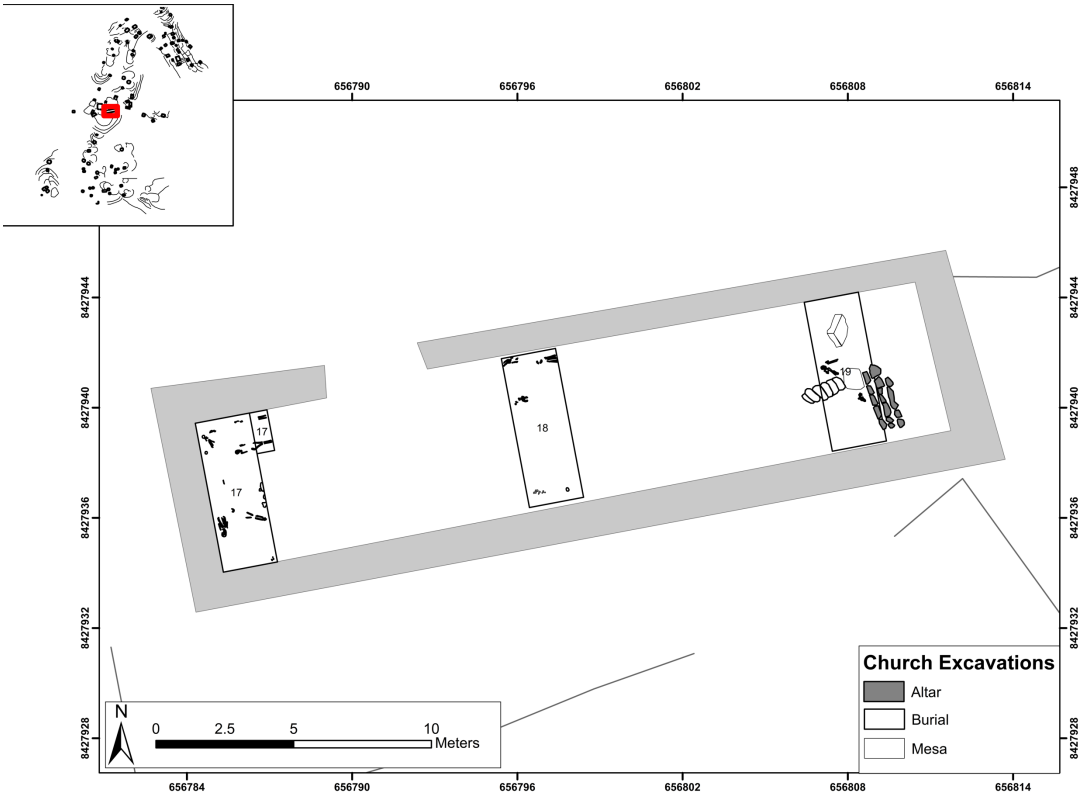

Figure 3: Map of excavated burials unit 17, 18 and 19. Map by Scotti Norman.

Methods: Skeletal and Mortuary Analysis

Age determination for each individual/locus (n=20) was based on dental eruption for juveniles and dental wear for adults (Lovejoy 1985; Miles 1962; Miles 2001; Watson et al. 2013). No additional means of age determination could be employed because of the fragmentary nature of the skeletal remains, especially for juvenile individuals. Burials at *Iglesiachayoq* were initially classified as 1) primary, 2) secondary, 3) disturbed, or 4) removed. Burials were typed primary if the majority of the skeletal elements were present in the space and they had no evidence of disturbance, paying particular attention to whether or not the tarsals and/or carpals were present as well as the completeness of dentition (Sorg and Haglund 2001). Burials were said to be secondary if tarsals/carpals were missing, there was an unexpected lack of dentition completeness and/or bundling was evident (Sorg and Haglund 2001:9-10). Most of the burials typed as secondary were also deemed "bundles" due to the bundled appearance of the bones and the mixture of different individual skeletal elements (see Figure 4). Burials were typed as disturbed if the individual is missing an element of their skeleton such as their cranium, or the cranium was placed in an unnatural position with other portions of the skeleton articulated. Burials were typed as removed if the soil was not uniformly compact, but was instead soft and revealed a hole with a large rock and/or small fragments of bones without any major skeletal elements. Finally, it was not possible to identify some of the burial positions, so these burial types were defined as unknown; most of these were also determined to be juveniles.

Figure 4: Example of an individual being typed as a bundle.

Burials were also classified as in either a flexed or extended position. Individuals/loci were classed as flexed if the remains were uncovered with their knees to their chest and the grave space relatively small given the age of the individual. Individuals were classed as extended if the individual/locus was uncovered with their

appendages laid out flat or their hands touching the shoulder area, lying either on their back or on their side. All burial positions described above were evident within the church with differing burial patterns emerging in the different excavated units.

Materials: Stable Isotope Analyses

Due to the complexity of food webs at each archaeological site, it is always best to have a site-relevant baseline to interpret any human skeletal data, especially when the soil itself is complex and agricultural terraces were abandoned and reconstructed (Branch et al. 2007). Therefore, I collected plant and water from *Iglesiachayoq* and the surrounding area: modern day Pampachiri and Andahuaylas. A total of 20 (n=20) modern plant samples were taken to represent foods that possibly would have been eaten. For the modern plant samples, 1.5‰ was added to the $\delta^{13}C$ value to make the data comparable to archaeological samples[5] (Kellner and Schoeninger 2007). I attempted to obtain samples for animals in the area, however under the time constraints and encountering unknown variables, such as animals being fed with alfalfa grown in different, unidentified regions, I was not successful. For a general baseline, published data from Finucane et al. 2006 was used in lieu of site-based data as I expect similar values[6].

Additionally, a total of 19 human bone and teeth samples (n=19) recovered from the church units were taken for stable isotopic analyses. Samples were taken from each unit (unit 17, unit 18 and unit 19) in an attempt to get a representative sample of the church population based on the location within the church. For each locus, depending on the preservation of each individual or locus, I tried to sample one segment of human long bone and one tooth with a focus on 3rd molars. In total, five individuals and the locus 1009, were sample twice with bone and enamel data (n=5) and six individuals were sampled once with either a human bone segment or enamel (n=6), depending on preservation status. From these samples, I prepped them based off of their preservation and weight, for collagen (n=8) and carbonate (n=11) stable isotope analyses (n=19).

Methods: Stable Isotope Analyses

Stable isotope analysis works on the premise of you-are-what-you-eat (DeNiro and Epstein 1978, 1981). In this analysis, I examined the following stable isotope ratios in both bone collagen and enamel and bone carbonate: $\delta^{13}C$, $\delta^{15}N$ and $\delta^{18}O$. These isotopes were chosen because they reveal the main sources of diet and possibly the most accessible water sources of the individual, sometimes in both adulthood and childhood if enamel and long bone were both sampled. This is important information when asking

[5] The addition of 1.5‰ to each $\delta^{13}C$ accounts for the modern enrichment of carbon (Kellner and Schoeninger 2007).

[6] Finucane et al. 2006 faunal data was used in lieu of samples from *Iglesiachayoq* because the site, Conchopata, Ayacucho, Peru is about 260 km from *Iglesiachayoq.* Conchopata was an urban site within the Wari Heartland. They used the $\delta^{13}C$ and $\delta^{15}N$ in order to determine if this urban site was reliant on intensive maize agriculture or whether it was used as a ceremonial food. Data revealed maize was a staple and that there were two distinct camelid herd management systems, one based on C_4 or maize and one based on C_3 plants.

questions about social identity and social memory in mortuary rituals because cuisine is a central part of social identity, whether Spaniard or indigenous, as it is an everyday activity. Additionally, movement throughout the landscape is important to understand who these individuals were buried beneath the church and who their survivors thought or wanted them to be. Overall, diet and residential mobility fills out the question of who the individuals were beneath the church and how that contributed or did not contribute to their burial and their memory.

Methods: Dietary Reconstruction

When reconstructing diet, bone collagen allows us to obtain stable isotope ratios for carbon ($^{13}C/^{12}C$) and nitrogen ($^{15}N/^{14}N$), which are represented as δ values ($\delta^{13}C_{collagen}$[7] and $\delta^{15}N_{collagen}$[8]) and presented in a per mil notation (‰)[9]. Typically, $\delta^{13}C_{collagen}$ data reveals the type of plants humans and the animals humans consume, while $\delta^{15}N_{collagen}$ reveals the main source of protein in the diet. In contrast, bone and enamel carbonate (CO_3), which often substitutes within the apatite crystal, reveals carbon ratios ($^{13}C/^{12}C$), which is also represented as δ values ($\delta^{13}C_{carbonate}$[5]) and presented in a per mil notation (‰)[3], that are enriched in ^{13}C (Ambrose and Norr 1993; Lee-Thorp et al. 1989; Tieszen and Fagre 1993). In general, bone and enamel carbonate reflects the overall dietary contributions, or the energy source of the diet as opposed to the collagen, which reflects the dietary protein source, or the growth aspect (Ambrose et al. 1997; Ambrose and Norr 1993; Klepinger and Mintel 1986; Lee-Thorp et al. 1989; Tieszen and Fagre 1993). Therefore, the carbonate and collagen values will be different because they reflect different aspects of the diet.

Human bone is a living tissue, constantly remodeling at different rates depending on many different variables including individual health, diet, genetics and mechanical stress. Additionally, the type of bone (cancellous vs. lamellar) as well as the location (bone shaft vs. metaphysis) all affect how quickly the bone remodels (Ambrose and Krigbaum 2003; Knudson et al. 2004; Sealy et al. 1995). On average, long bones, particularly the femora, remodel every 10-20 years while ribs remodel every 2-5 years. Through sampling the shafts of long bones for stable isotope analysis I expect to receive diet data from the past 10-20 years of the individual's life before death from both the bone collagen and the bone apatite (Knudson et al. 2004).

In contrast, enamel is developed throughout childhood and never remodels. Each permanent adult tooth develops at different times, reflecting different stages of childhood development and reflecting those shifts in diet (Ambrose and Krigbaum 2003; Knudson et al. 2004; Parfitt 1983; Wright and Schwarcz 1998). Most permanent dentition begins developing before the first year, meaning they have enriched carbon stable isotopic

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[7] $\delta^{13}C = \left[\frac{\frac{13C}{12C}\ Sample}{\frac{13C}{12C}\ Standard} - 1\right] \times 1000$

[8] $\delta^{15}N = \left[\frac{\frac{15N}{14N}\ Sample}{\frac{15N}{14N}\ Standard} - 1\right] \times 1000$

[9] The stable isotope carbon ratio standards that the samples are compared to are in relation to the PeeDee Belemnite (PBD). The stable isotope nitrogen ratio standards that the samples are compared to are in relation to atmospheric nitrogen (AIR).

values, reflecting weaning and not actual dietary sources. Therefore, third molars are mostly used as they begin developing (laying down enamel) around 7 years old and accurately reflect overall childhood diet (Hillson 1996).

Methods: Dietary Sources

Plants can be categorized based on the type of photosynthetic pathway they use as each pathway fixes carbon differently, producing distinctive $\delta^{13}C_{collagen}$ values. There are three photosynthetic pathways: the Calvin Cycle (C_3), Hatch-Slack pathway (C_4), and Crassulacean Acid Metabolism (CAM) (Ambrose and Krigbaum 2003). All variety of plants are found in the Andes and each display different values for $\delta^{13}C$. Plants that use the C_3 photosynthetic pathway are the most common plants, consisting mostly of trees, shrubs and temperate grasses/grains (rice, wheat, barley, etc.). These plants have more negative $\delta^{13}C$ values, usually ranging from -26.5‰ to -18‰. In the Andes, the most common edible C_3 plants that individuals are expected to eat are quinoa, legumes and tubers (including potatoes, olluca and sweet potatoes or *camote*) (O'Leary 1981). In contrast, plants that use the C_4 photosynthetic pathway consist mostly of tropical grasses, the most prominent being maize (O'Leary 1981). These plants have a less negative $\delta^{13}C$ values, usually in the range from -12.5‰ to -7.5‰ (O'Leary 1981). There is no overlap between C_3 and C_4 plant $\delta^{13}C$ values. Finally, plants that use the CAM photosynthetic pathway consists of mostly succulents and typically have $\delta^{13}C$ values in-between C_3 and C_4 plant $\delta^{13}C$ values, ranging from -27‰ to -12‰. While there are many different varieties of succulents in the Andes (and not all succulents are CAM plants), they were most likely not ingested at a significant rate and most of the calories are expected to come from C_3 and C_4 plants (Kurin 2016:165; Finucane et al. 2006; Williams 2005:110).

When reconstructing dietary patterns, it is also important to look at nitrogen stable isotope ratios in plants (DeNiro and Epstein 1981; Schoeninger and DeNiro 1984). Plant $\delta^{15}N$ values differ based on their sources of nitrogen and their metabolism (Shearer and Kohl 1986; Kellner and Schoeninger 2008). Most plants obtain their nitrogen from the soil, with the exception of plants such as legumes, which typically have a symbiotic relationship with nitrogen-fixing bacteria (Shearer and Kohl 1986; Schoeninger et at. 1997). In general, terrestrial plants have $\delta^{15}N$ values between 2‰ and 7‰.

Stable isotope ratios for carbon in the bone collagen of animals typically reflect the plant protein source of their diet. This means that herbivores reflect the main plant protein source (C_3, C_4 and CAM). However, the $\delta^{13}C$ values displayed in the bone collagen are relative to trophic level, meaning that the values are around 5‰ higher than the plants they are eating (Kellner and Schoeninger 2007, 2008). Additionally, carnivores will reflect the $\delta^{13}C$ value of the animals they consume and omnivores will reflect the contributions of both animal and plant isotopic rations, each with about a 5‰ increase. Complimentary, the stable isotope ratios for nitrogen in the bone collagen reflect the trophic level of the individual. This means that for every step up in the food chain, there is around a 3-4‰ increase in $\delta^{15}N$ value (DeNiro and Epstein 1981; Schoeninger and DeNiro 1984; Schoeninger 1985).

Marine resources slightly complicate the analysis of stable isotope ratio values when reconstructing diet due to its variation. In general, marine plants and animals have

higher $\delta^{13}C$ and $\delta^{15}N$ values. Marine sources have much higher $\delta^{15}N_{collagen}$ values because they have a high protein content and their dietary carbon contributes to the $\delta^{13}C_{collagen}$ values more than plant sources (Schoeninger and DeNiro 1984; Tykot 2004). Often, $\delta^{13}C$ values of marine animals overlap with C_4 plants, making it difficult to distinguish between (for the Andes) a maize based diet that is also reliant on marine resources with just $\delta^{13}C_{collagen}$ values (Kellner and Schoeninger 2008). Therefore, $\delta^{13}C_{carbonate}$ values should help with the distinction if there is one. However, due to the location of *Iglesiachayoq*, a limited caloric contribution of marine or freshwater protein is expected, making the signature negligible[10].

Methods: Andean vs. Spanish Dietary Reconstruction

Before Spanish contact, stable isotopic studies from the Central Highlands of Peru indicate that maize was a dietary staple. In particular, during the Middle Horizon-LIP, research has generally shown a diet reliant on maize. In the nearby city of Andahuaylas, studies have revealed a heavy reliance on maize during the Middle Horizon, but a slight differentiation between genders during the Late Intermediate Period (Kurin 2016). Additionally, stable isotopic analysis from Finucane and colleagues (2006) revealed high collagen and carbonate $\delta^{13}C$ values, indicating that maize was the dietary staple, with some contribution from C_3 plants and eating mostly lower trophic level animals. They also looked at the differences between camelids, which revealed two distinct groups, one with a more C_4 or maize-based diet ($\delta^{13}C$ mean = -10.0‰) and one with a more C_3-based diet ($\delta^{13}C$ mean = -18.6‰), establishing different herd management techniques (Finucane et al. 2006:1771). During the Late Horizon little stable isotope analysis has been conducted, but some studies from the human remains at Machu Picchu and Puruchuco-Huaquerones also indicate a maize based diet, further lending support that an expected diet for the Central Highlands is more C_4 or maize-based, but were also consuming some C_3 resources and animals at lower trophic levels (Burger et al. 2003; Williams 2005; Williams and Katzenburg 2012).

When the Spanish arrive, they brought their foodstuffs with them, so it is important to understand what dietary trends could change. In general, the Andean foodstuffs (maize, potatoes, quinoa, etc.) should still be utilized, especially in the early contact years, but there may also be a change in C_4 versus C_3 reliance. This is due to the fact that Spanish diet consisted of mostly C_3 plants, animals that eat those plants (wheat and barley) and marine protein (Salazar-Garcia et al. 2016). It has been documented that the Spanish authorities brought their foodstuffs over and implemented wheat growing and New World animal herd management in the Chicha-Soras Valley (Hyland 2016). While there have been a few zooarchaeological studies investigating dietary changes (see deFrance 2003; deFrance et al. 2016; Kennedy and VanValkenburgh 2016; Smith 1997; Van Buren 1999), there have been few stable isotopic studies, especially at the time of contact. However, work by Brooks (2016) from the Lambayeque Valley (North Coast of

[10] *Iglesiachayoq* is close to the Chicha River, which contains trout in modern times. Additionally, three ceramic pieces, modeled after fish heads were found during excavations at *Iglesiachayoq*, meaning the trout could have been an important resource, however, their caloric contribution may still not have been significant compared to other protein sources.

Peru) shows that there was no significant change in diet from the Early Colonial to the Mid-Colonial period with individuals continuing to consume a diet based on C_4 plants. However, values are slightly more negative than expected, indicating that more C_3 plants were incorporated (Brooks 2016). Additionally, Hyland's research from Pampachiri (a *reducción* of *Iglesiachayoq*) indicates that Spanish foodstuffs were reserved, but more readily eaten than Andean foodstuffs, by Spanish authorities in the Chicha-Soras Valley (Hyland 2016). Therefore, if it could be afforded, Spanish authorities would have preferred Spanish plant goods, such that for those individuals I would expect a more C_3 signature than others, although it is still possible for maize to be prevalent within the diet. Lastly, *Taki Onqoy* sources indicate that Spanish foodstuffs were actively avoided and ceremonially important foods, such as maize, were emphasized in the diet (Molina 2011 [1574]). Overall, I expect an Andean diet in this sample to be represented by C_4 based consumption whereas a Spanish authority or those of higher class should have a more mixed or C_3 based diet.

Methods: Residential Mobility

In this study, I also looked at oxygen stable isotopes for a general idea of movement throughout the Andes. Bone and enamel apatite allows us to obtain a ratio of oxygen stable isotopes ($^{18}O/^{16}O$), represented as a δ value ($\delta\,^{18}O_{carbonate}$[11]) and presented in a per mil notation (‰)[12]. Oxygen stable isotopes are difficult to interpret in the Andes without the help of other isotopic data such as strontium and carbon (see Gagnon et al. 2015; Knudson 2009; Knudson and Torres-Rouff 2009; Knudson et al. 2012; Torres-Rouff et al. 2015; Turner et al. 2009). In general, oxygen isotope ratios differ across climates and elevations, making it theoretically useful in the Andes due to the varied ecotones within the various valleys. This is due to the fact that ^{16}O is lighter than ^{18}O, so lower altitudes are expected to be more enriched in ^{18}O than higher altitudes, i.e. higher $\delta^{18}O$ values are expected the lower in elevation one goes and lower $\delta^{18}O$ values are expected the higher up in elevation one goes (Knudson 2009; Price and Burton 2011; White et al. 1998). Oxygen isotopes are incorporated into bone and enamel apatite crystals mostly through drinking water ($\delta^{18}O_{mw}$) and food sources[13] (Knudson 2009; Longinelli 1984; White et al. 1998). In the past, it is assumed that individuals obtain most of their water, and water for their food sources, from local sources (Gagnon et al. 2015; White et al. 2000). Therefore, $\delta^{18}O_{carbonate}$ values should reflect the ecotone individuals lived in or obtained their drinking and food sources from, allowing us to trace residential mobility if there is movement between elevations, i.e. from the coast to the mountains or from the valley floor to higher up the mountain (but see Knudson 2009).

There are numerous complications with stable isotope analysis of oxygen due to the complexity of its incorporation in the body and human manipulation. Human

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[11] $\delta^{18}O = \left[\frac{\frac{18O}{16O}\ Sample}{\frac{18O}{16O}\ Standard} - 1\right] \times 1000$

[12] $\delta^{18}O_{apatite}$ values are reported relative to the Vienna PeeDee belemnite (VPDB) carbonate standard and are presented in a per mil notation (‰).

[13] For this study, I analyzed $\delta^{18}O_{carbonate}$. It is possible to analyze $\delta^{18}O_{phosphate}$ as well, however, it was not in the scope of this study.

manipulation becomes most problematic when analyzing these results, since storage and water preparation alters the oxygen isotopic signatures. Most water and food preparation in the Andes involved boiling, particularly when talking about *chicha*, a corn-based alcoholic beverage often imbibed (Gagnon et al. 2015; Knudson 2009; Turner et al. 2009). Consequently, $\delta^{18}O$ values are disrupted because when drinks and food are boiled, ^{16}O is most likely to evaporate, altering the ratio and therefore, the $\delta^{18}O$ value of the drink/food source (Gagnon et al. 2015; Knudson 2009). Overall, this means that $\delta^{18}O$ values cannot solely be relied on to reflect residential mobility even though most foodstuff and drinks are boiled in the Andes because the amount of alteration is unknown. I then, cautiously, use $\delta^{18}O_{carbonate}$ values together with $\delta^{13}C_{carbonate}$ values in this study to indicate whether individuals are moving across ecotones and plan to further this study through aDNA and strontium isotope analysis in the future.

Diagenesis

Diagenesis is a process where there are post-mortem alterations to the bone chemistry after burial. During this process, the chemical makeup of the bone and the subsequent isotopic composition are altered due to geological concepts (DeNiro 1985; Nelson et al. 1986; Schoeninger and DeNiro 1982). Therefore, diagenesis must be accounted for within bone samples to verify the isotopic composition used for paleodiet reconstruction in order for the results to be accurate and meaningful (Nelson et al. 1986). In the past, bioapatite was considered by some scholars to be unstable and unreliable for paleodiet research because it more easily altered due to burial (Schoeninger and DeNiro 1982, 1984). However, other scholars disagreed and demonstrated that with the proper preparation, the contaminants from diagenesis could be removed and bioapatite is now considered acceptable for paleodietary research[14] (Sullivan and Krueger 1981; Lee-Thorp and van der Merwe 1991; Lee-Thorp et al. 1989).

Diagenesis is difficult to predict because there is no correlation with the preservation, age, or the appearance of the sample and the diagenetic effect: some bones that appear well-preserved can be significantly affected by diagenesis (van der Merwe et al. 1993). Therefore, diagenesis should be tested for in bone for both collagen and bioapatite. Researchers have developed several methods to detect diagenesis in bone collagen and bioapatite. For collagen, the carbon-to-nitrogen ration (C/N), carbon and nitrogen content (wt% C and wt% N) and collagen yield[15] are the most common methods for detecting diagenesis (Ambrose 1990; Schoeninger et al. 1989). For bioapatite, the CO_2 gas yield and the Crystallinity Index are the most common methods for detecting diagenesis (Lee-Throp and van der Merwe 1991; Person et al. 1995; Schoeninger et al 1989; Wright and Schwarcz 1996).

For this thesis, diagenesis was tested in bone collagen using the C/N ratio, carbon and nitrogen content and collagen yield. The C/N ratio measures whether or not the

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[14] Dental bioapatite is considered more stable and less likely to be altered due to diagenesis than bone apatite, especially if the first millimeter of enamel is buffed away (Hillson 1996; Lee-Thorp and van der Merwe 1987).

[15] Collagen yield = [$\frac{Weight\ of\ Collagen}{Weight\ of\ Bone\ Processed}$] x 100

collagen is contaminated with organic materials (DeNiro 1985). According to DeNiro (1985), the ratio should be between 2.9-3.6, however, Schoeninger and colleagues (1989) report acceptable values between 2.6-3.4, but acknowledge that using C/N ratios and collagen yield alone are very poor indicators of bone collagen integrity (Ambrose 1990). The carbon and nitrogen content (wt% C and wt% N) indicate the integrity of the original composition of the collagen, anything lower than nitrogen concentrations of 4.8% and 13% for carbon, indicates the addition of inorganic substances (Ambrose 1990; Van Klinken 1999). Collagen yield indicates how much of the collagen was retained with lower weights indicating more difficulty obtaining a dietary signature (Ambrose 1990). However, as stated earlier, collagen yield can be deceiving and should not be relied on solely, although it is recommended to reflect bone samples with collagen yield of less than 1% (Van Klinken 1999). In all, samples were evaluated using the C/N ratio between 2.6-3.4 (Schoeninger et al. 1989), carbon and nitrogen content of 13% (C) and 4.8% (N) (Ambrose 1990) and collagen yield of more than 1% (Van Klinken 1999).

For this thesis, diagenesis evaluation was not conducted on the apatite data. Therefore, the bone apatite data reported has not been verified and may not be accurate whereas enamel apatite is more resilient and is usually not expected to be affected by diagenesis, especially if the first millimeter of enamel is buffed away (Hillson 1996; Lee-Thorp and van der Merwe 1987). CO_2 gas yield and the crystallinity index[16] would ideally have been calculated to detect the integrity of the bioapatite structure. The CO_2 gas yields would reveal whether or not secondary carbonates have contaminated the sample (Ambrose 1993) while the crystallinity index (CI) looks at recrystallization of the apatite (Shemesh 1990; Wright and Schwarcz 1996).

Methods: Stable Isotope Sample Preparation

Plant samples (n=20) were dried naturally in the field by laying them out in the sun and were further dried in an oven and eventually crushed for stable isotopic analysis in a laboratory. The samples prepared for collagen extraction (n=8) were prepped with minor modifications as described in Ambrose (1990). All prep work for plants and human bone collagen extraction was done at the Bioarchaeology and Stable Isotope Research Laboratory at Vanderbilt University under the direction of Tiffiny Tung. Plant samples were analyzed at the Yale Analytic Stable Isotope Center on a Thermo Delta Plus Advantage with a Costech ECS 4010 Elemental Analyzer with Conflo III interface[17]. Human samples were analyzed at the Keck Carbon Cycle AMS Facility at University of California, Irvine on a Fisons NA1500NC elemental analyzer/Finnigan Delta Plus isotope ration mas spectrometer. Human bone values were measured with a precision of 0.1‰ for $\delta^{13}C$ and 0.2‰ for $\delta^{15}N$ on aliquots of ultrafiltered collagen.

The human bone and enamel samples (n=11) were prepped for carbonate analysis at the Anthropology Paleodiet Laboratory at Northern Arizona University under the direction of Corina Kellner. Samples were prepped using a protocol adapted from Schoeninger (2007). Human samples were analyzed at the Northern Arizona University

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[16] $CI = \frac{A_{605}+A_{565}}{A_{595}}$ (Shemesh 1990; Wright and Schwarcz 1996)

[17] Standards and precision were not provided, but have been requested.

Colorado Plateau Stable Isotope Laboratory on a Delta Plus Advantage with a Costech ECS4010 Elemental Analyzer with Conflo III interface. The mean $\delta^{18}O$ of NBS-19 analytical standard is -2.19‰ with a standard deviation of 0.09‰ and the mean $\delta^{13}C$ of NBS-19 analytical standard is 1.94‰ with a standard deviation of 0.05‰.

VI. Results: Skeletal and Mortuary Analyses

Three units were excavated within the church: unit 17 which is the westernmost portion, unit 18, which is the center, and unit 19, which is the easternmost portion that also contained the altar. Each unit excavated was distinct with a different number of individuals, different arrangement of burial types and even different levels of preservation. A total of 8 samples (n=8) were taken for radiocarbon dating, however, only 7 samples (n=7) contained enough collagen for analysis (see Table 2). Samples taken attempted to represent individuals from each unit and each burial type. All samples date to the colonial period with the earliest dating to 1556 in unit 17 and the latest to 1629 in Unit 19. All excavated unit results are described below.

Table 2: Calibrated radiocarbon dates[a] from remains excavated under the church (n=7). See Appendix A.

Site	Sample ID[b]	Lab #	Radiocarbon Age	$\delta^{13}C$	Collagen Yield	Calibrated Radiocarbon Age[c]
Iglesiachayoq	IC.001.H	191876	340 ± 20	-13.3	1.9	1503-1645
Iglesiachayoq	IC.007.H	191877	340 ± 20	-13.7	2.0	1503-1645
Iglesiachayoq	IC.011.H	191878	350 ± 20	-13.4	12.2	1500-1641
Iglesiachayoq	IC.014.H	191879	330 ± 20	-11.6	2.0	1505-1650
Iglesiachayoq	IC.015.H	191880	315 ± 20	-13.6	1.1	1508-1655
Iglesiachayoq	IC.018.H	191881	310 ± 20	-13.7	1.7	1509-1659
Iglesiachayoq	IC.020.H	191882	360 ± 20	-12.4	4.6	1496-1636

[a]All radiocarbon ages were calibrated with the ShCal13 curve using OxCal 4.3
[b]Site, sample number and material
[c]cal A.D.; 95.4% probability

Unit 17 – Westernmost Portion of the Church

Unit 17 is located at the westernmost portion of the church, and contained interment locations haphazardly arranged and body orientation varying throughout the unit (see Figure 5 and Table 3). A total of 11 loci were excavated with two primary flexed burials, one primary extended burial, one possible primary extended burial, one secondary flexed burial, four removed burials, one disturbed burial and one locus identified as a combination of primary extended and disturbed. Six out of eleven individuals present in this unit retained a portion of their dentition. Overall, an age range from around 5 +/- 1.5 years of age to adult was documented. Additionally, of the eleven individuals excavated, 6 were found with grave goods consisting of ceramic, *tupus*, turquoise *Nueva Cadiz* beads and a metal pendant. Two of the three individuals found with *tupus* were juveniles while the other individual with a *tupu* was an adult and also found with the *Nueva Cadiz* beads. Overall, I argue that the varied orientations and grave goods that included *tupus*, suggest that most of these individuals were indigenous burials of varied status and demonstrated a negotiation of Andean and Catholic traditions.

Table 3: Excavated unit 17 burials summary.

Locus	Unit	Type	Orientation	Age	Sex	Grave Goods	Notes
906	17	Flexed	S-W	35+	--	--	Mandible closed, perhaps elderly; primary burial
907	17	Flexed	NW-SE	15±36 months	F?	Ceramic, 2 Tupus	Probably primary burial
907-2	17	Removed	--	--	--	--	Jumble of arm bones
908	17	Unknown	N-S	~5±36 months	--	--	--
909	17	Removed	--	~4+	--	2 Tupus	--
910	17	Removed	--	--	--	--	Locus refilled with large stones
911	17	Extended	E-W	--	F?	Tupu, 4 Nueva Cadiz Beads	Likely extended
912	17	Extended	E-W	~25	--	Metal Pendant	--
913	17	Removed	--	--	--	--	--
914	17	Removed	--	--	--	--	--
915	17	Disturbed/ Extended	NW-SE	~35	--	--	Lower limbs primary, head secondary
916	17	Unknown	--	--	--	--	--

Figure 5: Unit 17 excavated loci. Picture taken by Scotti Norman.

Unit 18 – The Middle of the Church

Unit 18 was located in the middle of the church and the burial locations are again haphazard, with bodily orientation varying throughout the unit, much like unit 17 (see Table 4). A total of five individuals were excavated, with two secondary flexed burials, two unknown burials and one disturbed burial. Out of the five individuals, two were young juveniles, one of which was identified as around 5 +/- 1.5 years old, and both were found on the southern wall of the church side by side. One of these juveniles and one adult were found with *tupus*. The secondary, flexed positioning of two individuals, the one disturbed individual, the lack of organization within burial locations in the church and some individuals containing grave goods, indicate these individuals were indigenous, but negotiated a place within the Catholic church, much like those burials excavated in unit 17, although it is also possible that Spanish authorities demanded they were interred within the Church, although without being baptized, that is unlikely (Gose 2008).

Table 4: Excavated unit 18 burial summary.

Locus	Unit	Type	Orientation	Age	Sex	Grave Goods	Notes
955	18	Unknown	--	~10	--	--	Very disturbed, no teeth
956	18	Unknown	--	~5±36 months	F?	1 Tupu	--
958	18	Flexed	E-W	Adult	--	--	--
960	18	Flexed	E-W	Adult	F?	4 Tupu pieces	--
962	18	Disturbed	--	Adult	--	--	--

Unit 19 - Easternmost Altar Unit

Unit 19 is located where the altar once stood (see Figure 6). Within this unit, five burials were excavated, one of which was a secondary extended, one secondary flexed with two individuals within the locus, two disturbed burials and one individual buried extended within a stone tomb (see Table 5). Out of these there are the remains of two possible juveniles. Both of the possible juvenile remains were found beneath the stairs of the altar, although one of the loci with possible juvenile remains also had adult remains. Two adults were found, one of which was a secondary extended burial and the other one an extended burial in a stone coffin/tomb. The other locus found was disturbed and no demographic or orientation data could be collected. The only grave goods found were a *tupu* and a needle, found associated with the locus containing some juvenile and some adult remains beneath the altar stairs. I argue that the mostly extended burials, the inclusion of coffins, and the juveniles found beneath the altar, in contrast to the varied use of space in the remainder of the church, demonstrate three individuals encompassed by the Catholic tradition while those found beneath the altar stairs could represent an Andean compromise within a very prominent space.

Table 5: Excavated unit 19 burials summary.

Locus	Unit	Type	Orientation	Age	Sex	Grave Goods	Notes
1005	19	Disturbed/ Extended	N-S	Juvenile	--	--	Interred partially extended on left side facing the altar
1008	19	Extended	E-W	~25	--	--	Head propped up facing altar; Secondary burial
1009	19	Flexed/ Disturbed	--	Juvenile and Adult	F?	Tupu and needle	Juvenile cranium, adult legs
1010	19	Extended	E-W	~25	--	--	Cannot confirm primary or secondary status, but probably primary.

Figure 6: Unit 19 excavated loci. Photograph taken by Scotti Norman.

Summary of Results

Excavation of the church yielded twenty-one individuals (see Table 6), with eleven coming from unit 17. Out of the unit 17 burials, there was the most variation in burial type, representing all of the burial positions identified: primary, secondary, disturbed and removed. Unit 17 also had the only removed burials in the church. Unit 18 included five individuals with most of the burials in a flexed or unknown position, the latter individuals all being identified as juveniles. Lastly, unit 19, which is located closest to the altar, had mostly extended burials, except for the bundle found at the base of the altar stairs.

Table 6**:** Type of burials found per unit.

Burial Types	Unit 17	Unit 18	Unit 19
Flexed	2	2	1
Extended	2	0	3
Disturbed	1	1	0
Removed	5	0	0
Unknown	1	2	0

Grave goods were also found in all three units, primarily consisting of *tupus*, ceramics, *Nueva Cadiz* beads, metal pendants and needles (see Figure 7). Again, Unit 17 demonstrated the greatest number and most varied grave goods of all the units excavated, with the majority being *tupus*. Only *tupus* were found in unit 18. Finally, only two grave goods were found in unit 19, both of which were in the same burial, conforming, in effect, to the more traditional good-less burials of Catholic tradition. Many of the burial types combined with their grave goods produce an interesting story for each individual. In order to address these nuances, types of burials are highlighted in the discussion to investigate the discrepancies in burial types and grave goods found.

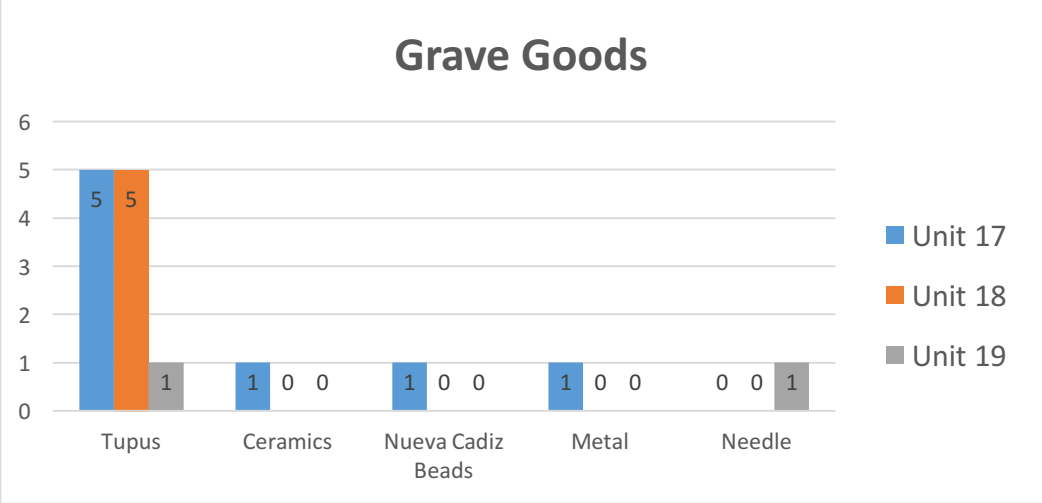

Figure 7: Bar graph representing types of grave goods per unit.

VII. Results: Stable Isotope Analyses

Establishing a local food web for more accurate interpretation of dietary patterns is essential. Therefore, the isotopic values for local plants and animals that would have been eaten during the early colonial period are presented in Table 7 and Figure 8. In general, the dietary sources mapped out as expected with the C_3 plants having more negative $\delta^{13}C$ values between -30‰ and -24‰, while the C_4 (maize) had more positive $\delta^{13}C$ values between -11‰ and -9‰. Additionally, I integrated my local data with published data from Finucane et al. 2006, allowing animal isotopic signatures to be averaged and recorded. Finucane and colleagues (2006) data derives from the site of Conchopata in Ayacucho, Peru. Camelids had both a more C_3 ($\delta^{13}C$ values = -20‰ to -15‰; $\delta^{15}N$ values = 5.1‰ to 8.1‰) and a more C_4 ($\delta^{13}C$ values -11.5‰ to -9.3‰; $\delta^{15}N$ values = 5.1‰ to 8.1‰) diet recorded and guinea pigs had a diet range closest to the human range ($\delta^{13}C$ values = -9.2‰ to -7.4‰; $\delta^{15}N$ values = 7.4‰ to 14.6‰), which is not surprising considering they were most likely fed table scraps.

Table 7**:** Plant $\delta^{13}C$ and $\delta^{15}N$ data.

Plant	Location Sampled	Modern/ Archaeological	$\delta^{13}C$	$\delta^{15}N$	C:N
Zea Mays L. (Purple Corn)	Andahuaylas	Modern	-11.1	1.8	43.4
Zea Mays L. (Purple Corn)	Andahuaylas	Modern	-10.5	0.5	36.7
Zea Mays L. (Purple Corn)	Andahuaylas	Modern	-10.6	0.9	33.3
*Zea Mays** (Indigenous Maize)	Pampachiri	Modern	-10.3	2.5	32.8
*Zea Mays** (Indigenous Maize)	Pampachiri	Modern	-9.9	-0.6	41.4
*Zea Mays** (Indigenous Maize)	Pampachiri	Modern	-10.3	3.3	34.7
*Zea Mays** (Indigenous Maize)	Pampachiri	Modern	-10.0	0.5	41.9
*Zea Mays** (Indigenous Maize)	Pampachiri	Modern	-10.1	0.6	65.1
*Zea Mays** (Indigenous Maize)	Pampachiri	Modern	-10.4	0.8	40.3
Chenopodium quinoa (Quinoa)	Pampachiri	Modern	-24.0	4.5	17.5
Chenopodium quinoa (Quinoa)	Pampachiri	Modern	-24.2	4.6	16.5
Chenopodium quinoa (Quinoa)	Pampachiri	Modern	-24.1	4.4	17.2
Chenopodium quinoa (Quinoa)	Pampachiri	Modern	-24.2	4.1	16.5
Cactus[†]	*Iglesiachayoq*	Modern	-12.3	1.8	37.0
Ullucus tuberosus (Olluca)	Pampachiri	Modern	-23.8	7.4	20.8
Ullucus tuberosus (Olluca)	Pampachiri	Modern	-22.8	7.6	24.6
*Solanum tuberosum**[‡] (Natural Potato)	Pampachiri	Modern	-26.1	0.3	49.1
*Solanum tuberosum**[‡] (Natural Potato)	Pampachiri	Modern	-26.9	1.7	40.3
*Solanum tuberosum**[‡] (Regular Potato)	Andahuaylas	Modern	-22.7	3.0	22.5
*Ipomoea batatas**[‡] (Camote or Sweet Potato)	Andahuaylas	Modern	-26.1	6.3	27.5

**Exact variation unknown.*

[†]Genus and species unknown.

[‡]Variation is distinguished through the terms "natural" and "regular". The common name for the sweet potato in the Pampachiri/Andahuaylas area is "Camote".

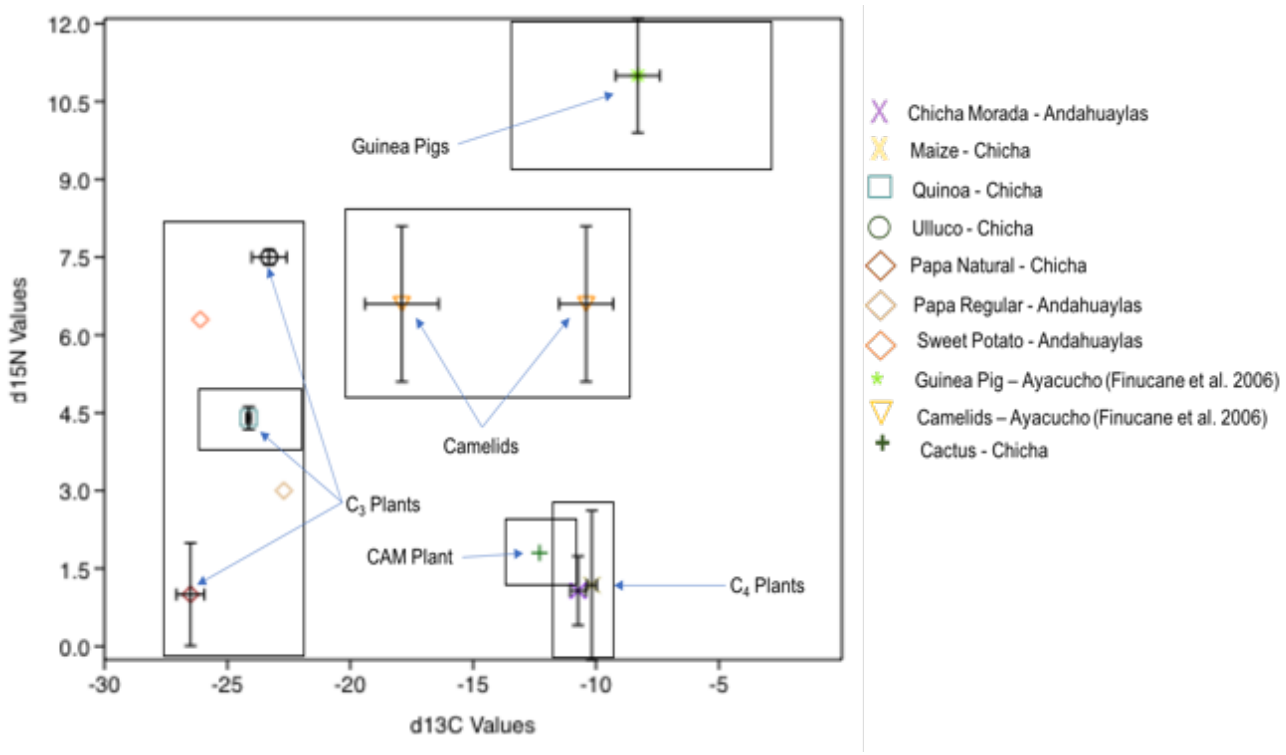

Figure 8: Archaeological and modern plant and animal stable isotope values of the foods individuals at *Iglesiachayoq* most likely would have eaten. For the modern plant samples, 1.5‰ were added to their $\delta^{13}C$ values to account for ^{12}C – enrichment of today's atmosphere so that they were comparable to the archaeological samples (Kellner and Schoeninger 2008). The archaeological animal (guinea pig and camelid) $\delta^{13}C$ and $\delta^{15}N$ data is from Finucane et al. 2006.

Results: Collagen Stable Isotope Analysis

The isotopic values for the 8 individuals excavated and sampled are listed in Table 8. The range of $\delta^{13}C_{collagen}$ is -13.4‰ to -11.1‰ (average=-12.5‰; sd=0.8‰). The range of $\delta^{15}N_{collagen}$ is 10.1‰ to 11.8‰ (average=11.3‰, sd=0.7‰). This falls into the range of individuals eating C_4 plants (maize) and eating animals that fed on C_4 plants (see Figure 9). The range for individuals eating the same diet for $\delta^{13}C_{collagen}$ is more than 1‰ and for $\delta^{15}N_{collagen}$ is 3‰ (Schoeninger and DeNiro 1984). All eight individuals cluster together for $\delta^{13}C_{collagen}$ values, indicating that these individuals, who relatively represent each unit, ate similar diets. However, the range is larger than 1‰ (range=2.3‰), which indicates there was a slight differentiation between dietary resources, specifically between loci 958, 916, 912 and 1009 who may have incorporated more C_3 plants and/or more terrestrial protein eating C_3 plants into their diets. When looking at the $\delta^{15}N_{collagen}$, there is a similar tight cluster indicating similar access to protein sources. Even the individual from locus 1010, who is hypothesized to be a Spanish priest because of the prominent location and elaborate burial treatment within the church was eating a similar diet to the rest of the individuals sampled. There was no clustering of data based on unit buried. Overall, most individuals had a more C_4-based diet, which is typical of what is expected for the Andean population at *Iglesiachayoq* and minimum Spanish foodstuff influence.

Samples were evaluated for diagenesis and the C/N, content of nitrogen and carbon and the collagen yield were all recorded and presented in Table 8. The C/N ratio were all 2.7, which is in the acceptable range (Schoeninger et al. 1989). Additionally, most nitrogen and carbon content was between the acceptable range of 4.8‰ for nitrogen and 13‰ for carbon except for loci 915 (N=3.1 wt %, C=8.4 wt %), 958 (N=2.8 wt %, C=7.6 wt %) and 1009 (N=7.0 wt %, C=11.0 wt %). Collagen yield varies, but none (with the exception of locus 915) falls below 1%. However, those loci with nitrogen and carbon content below the accepted values, low collagen yields and the low C/N ratio, indicating that these samples may be affected by diagenetic alterations and their values analyzed with caution.

Table 8: Results of the for $\delta^{13}C_{collagen}$ and the $\delta^{15}N_{collagen}$.

Locus	Unit	Sex	Age	Material	$\delta^{13}C$ (‰)	$\delta^{15}N$ (‰)	C/N	Wt % N	Wt % C	Collagen yield (%)
906	**17**	**U**	**35+**	**Long Bone**	**-12.9**	**11.8**	**2.7**	**12.1**	**32.8**	**1.9**
912	**17**	**U**	**20-30**	**Long Bone**	**-13.4**	**10.3**	**2.7**	**7.7**	**20.6**	**2.0**
915	**17**	**U**	**20-30**	**Long Bone**	**-11.6**	**11.8**	**2.7**	**3.1**	**8.4**	**U**
916	17	U	U	Long Bone	-13.0	11.1	2.7	12.1	32.8	12.2
958	18	U	Adult	Long Bone	-11.1	11.6	2.7	2.8	7.6	2.0
960	18	F?	Adult	Long Bone	-12.8	11.6	2.7	13.7	37.2	1.1
1009	**19**	**U**	**Adult**	**Long Bone**	**-13.0**	**10.1**	**2.7**	**4.0**	**11.0**	**1.7**
1010	19	U	20-30	Long Bone	-12.2	11.8	2.7	7.0	19.0	4.6

U = Unknown
Bolded items indicates values for carbonate as well.

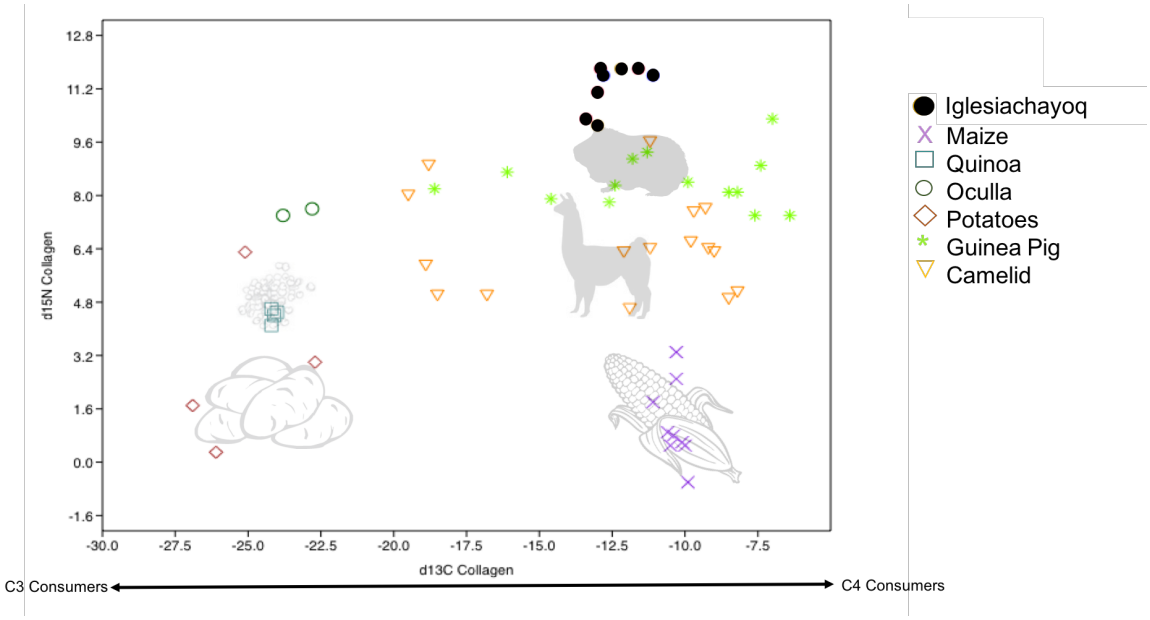

Figure 9: Results of the stable isotopic analysis of the plant material collected from the area of Iglesiachayoq. Plant samples included maize, oculla, quinoa and potatoes. Data of the camelids and guinea pigs comes from published data (Finucane et al. 2006).

Results: Carbonate Stable Isotope Analysis

The isotopic values for the 9 individuals excavated and sampled are listed in Table 9. For loci 907 and 1008, bone and enamel carbonate samples were taken. The range of $\delta^{13}C_{carbonate}$ for the enamel is -6.56‰ to -3.23‰ (n=8; average= -5.3‰, sd=1.2‰). The range of $\delta^{18}O_{carbonate}$ for the enamel is -11.4‰ to -7.7‰ (n=8; average= -9.8‰; sd=1.6‰). However, the premolar and the first molars sampled have not been corrected for[18] and will be reported on separately. Therefore, when taken out of the sample, the range of $\delta^{13}C_{carbonate}$ is -6.2‰ to -3.3‰ (n=5; average= -4.9‰, sd=1.5‰). The range for $\delta^{18}O_{carbonate}$ when the premolar and first molars are removed is the same -11.4‰ to -7.7‰ (n=5; average= -10.0‰, sd=1.4‰). The premolar, sampled from locus 906 (n=1) has a of $\delta^{13}C_{carbonate}$ value of -6.4‰ and a $\delta^{18}O_{carbonate}$ value of -9.9‰. The two first molars from loci 908 and 956 (n=2) have similar $\delta^{13}C_{carbonate}$ values of -5.7‰ and -5.8‰ and $\delta^{18}O_{carbonate}$ values of -8.8‰ and -9.4‰.

Table 9: Results of the for $\delta^{13}C_{carbonate}$ and the $\delta^{18}O_{carbonate}$ analysis for the individuals buried beneath the church at *Iglesiachayoq*.

Locus	Unit	Sex	Age (Years)	Material	$\delta^{13}C$ (‰)	$\delta^{18}O$ (‰)
906	**17**	**U**	**35+**	**Premolar**	**-6.4**	**-9.9**
907*	17	F?	12 – 18	Long Bone	-7.6	-12.8
907	*	*	*	3rd Molar	-6.2	-11.4
907-2	17	U	U	Long Bone	-7.9	-12.6
908	17	U	3 – 7	1st Molar	-5.7	-8.8
912	**17**	**U**	**20 - 30**	**3rd Molar**	**-3.8**	**-7.7**
915	**17**	**U**	**20 - 30**	**3rd Molar**	**-4.6**	**-10.4**
956	18	F?	3 – 7	1st Molar	-5.8	-9.4
1008*	19	U	20 – 30	Long Bone	-8.7	-11.3
1008	*	*	*	3rd Molar	-6.6	-10.4
1009	**19**	**U**	**Adult**	**3rd Molar**	**-3.2**	**-10.3**

** Sample taken from the same locus as above.*
U = Unknown
Bolded items indicate values for collagen as well.

The data suggests that there may have been some migration or differentiation happening within *Iglesiachayoq's* church population (see Figure 10). This may be due to the fact that *Iglesiachayoq* was on the Inka road, making it a settlement that had relative ease in traveling due to their location. From plotting out the $\delta^{13}C_{carbonate}$ and $\delta^{18}O_{carbonate}$ values for the five individuals with 3rd molars, the samples from unit 17 are within a $\delta^{13}C_{carbonate}$ range of 2.3‰, which indicates there is little diet differentiation in current

[18] The premolar (locus 906) and the two first molars (loci 908 and 956) were taken out of the cumulative sample due to the weaning effect. Due to the time of development of premolars and first molars, their $\delta^{18}O$ values reflect enrichment of ^{18}O (similar to trophic level enrichment of nitrogen isotopes) because of the equilibrium between the breastfeeding individual and the breastfeeding mother (Turner et al. 2005; Wright and Schwarcz 1999). Additionally, $\delta^{13}C_{carbonate}$ data from different teeth has been used to track weaning patterns as there is usually a change from the introduction of solid foods (Turner et al. 2005; Turner et al. 2009; Wright and Schwartz 1999)

literature (Turner 2010). The range of $\delta^{18}O_{carbonate}$ values is 3.8‰, which is usually indicates some difference in water consumption/access within the current literature, however the small sample size (n=5) complicates the discussion of these values (Wright and Schwartz 1999; Kurin 2016). Considering the values plotted together, though, there is a trend (n=3) that shows these individuals were most likely eating similar diets as children, but had differential access to different ecotones, which indicates relative "freedom" to move around and/or trading, although in the Andes, $\delta^{18}O_{carbonate}$ values are difficult to interpret, especially without strontium values to compare (Knudson 2009; Knudson and Torres-Rouff 2009; Knudson et al. 2012). If they are eating similar diets, but obtain their water from different altitudes, meaning they most likely lived for a significant amount of time at those altitudes, then perhaps there was adequate or dependable trading of crops, such as maize, although this is beyond the scope of this thesis (see Kurin 2016:166).

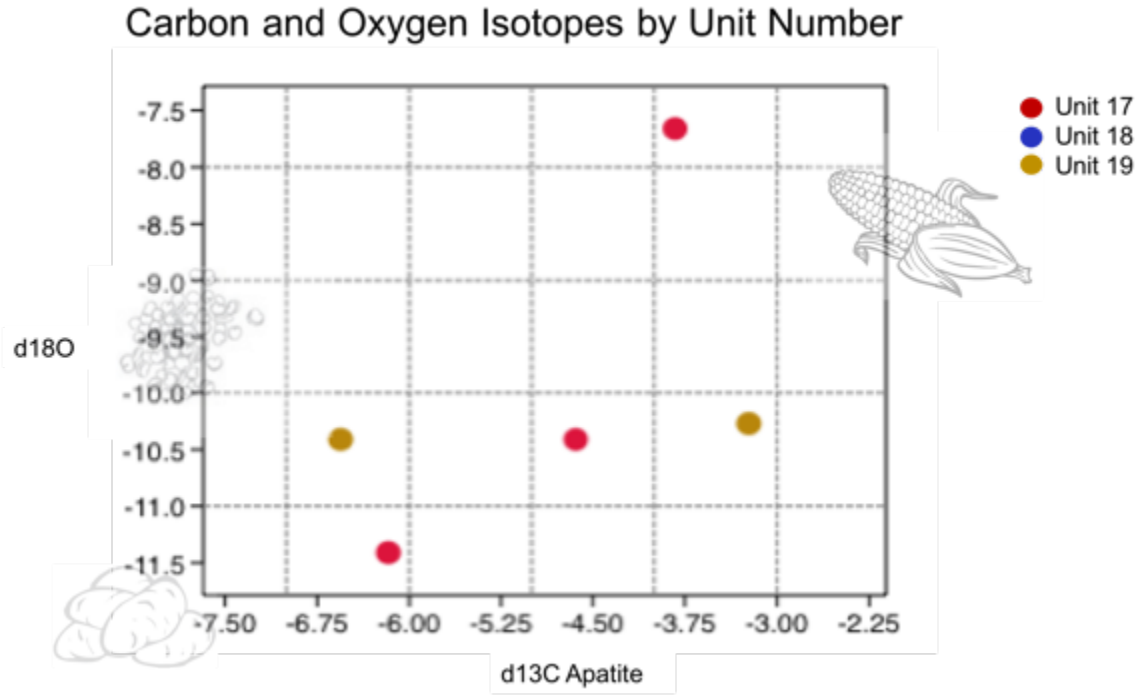

Figure 10: Results of the stable isotopic analysis of the skeletal remains from *Iglesiachayoq*.

When looking at unit 19, individual 1008 and locus 1009 show the largest range of $\delta^{13}C_{carbonate}$ values, with a difference of just over 3‰, which is usually considered indicative of different water sources. This suggests that these individuals grew up with a different diet, with locus 1009 eating a diet contained of mostly C_4 plants and individual 1008 eating more of a mixed diet of C_3 and C_4 plants. However, these individuals have similar $\delta^{18}O_{carbonate}$ values, possibly suggesting access to a similar ecotone and not much movement. Overall, the data suggests that individuals mostly had a C_4 based diet in childhood, but some individuals incorporated more C_3 into their diets. When compared with the collagen data, it echoes that there were some differences in diet, but it is not a wide range.

Collagen and Carbonate Results

Four loci (n=4) were sampled for both collagen and carbonate values, loci: 906, 912, 915 and 1009. Values indicate there may have been a slight change in diet from childhood (carbonate) to the last few years of an individual's life (collagen). With the exception of locus 1009, which had a mixture of remains, the comparison reveals that while the diet was still C_4 based, C_3 was also incorporated. However, there are a few shifts that are visible. Specifically, locus 912 (unit 17) had a fairly solid C_4-based diet ($\delta^{13}C_{carbonate}$ = -3.8‰) during childhood, but appears to have begun to incorporate more C_3 foods ($\delta^{13}C_{carbonate}$ = -13.4‰) into their diet around 10 years before their death. Loci 906 and 915 have similar mixed diets throughout their lives, hardly shifting between more C_4 base and more C_3 base.

Table 10: Results for four loci (n=4) where samples were taken for both $\delta^{13}C_{carbonate}$ and $\delta^{13}C_{collagen}$

Locus	Unit	Sex	Age (Years)	Material	$\delta^{13}C_{carbonate}$ (‰)	$\delta^{13}C_{collagen}$ (‰)	Wt % N	Wt % C	Collagen yield (%)
906	17	U	35+	Premolar/ Long Bone	-6.4	-9.9	12.1	32.8	1.9
912	17	U	20 - 30	3rd Molar/ Long Bone	-3.8	-13.4	7.7	20.6	2.0
915	17	U	20 - 30	3rd Molar/ Long Bone	-4.6	-11.6	3.1	8.4	U
1009†	19	U	Adult	3rd Molar/ Long Bone	-3.2	-13.0	4.0	11.0	1.7

†*Samples of long bone and adult may not be from the same individual. This individual was interred with a juvenile cranium, adult long bones bundled and a few loose teeth.*

Summary of Results

Overall the stable isotope results suggest this population is primarily consuming a C_4 based diet, i.e. a diet with maize as the main staple, which is expected for an Andean population especially in this area at this time with some C_3 incorporated into the diet. Some individuals appear to have shifted diet emphasis slightly from childhood to adulthood, but the range is not large, indicating a general Andean diet expected in the Central Highlands with limited Spanish foodstuffs such as wheat or barley. Bearing in mind the problems with oxygen in the Andes (e.g. Knudson 2009), there does appear to be some evidence of residential mobility, most notably individual 912. Lastly, there also appears to be slight differences in childhood versus adult diet for individual 1008. Both individuals 912 and 1008 had some interesting mortuary patterns that will be further discussed. In sum, the dietary data does not reveal any structure that can be tied to status or cultural tradition as indicated by the mortuary patterns at the church.

VIII. Discussion

In burying the dead, the living choose how they will be remembered. When the Spanish made contact with the population at *Iglesiachayoq*, people negotiated their spaces, resulting in individuals not only being buried beneath the church, a unique negotiation in its own right, but also having variance in how they were buried or removed from the space. The different mortuary rituals employed beneath the church at *Iglesiachayoq* show that there was a convergence of beliefs and an ever-changing spectrum of negotiation with and rejection of Catholic and indigenous practices. I argue that in the church, the arrangement of burial and the dead themselves, revealed the process of negotiation and how the dead showed their influence upon the living during this time of initial contact (Klaus 2008; Wernke 2013). In the different arrangement of the dead beneath a space that was both negotiated and forced, one can begin piecing together negotiated identities, and evidence of reaction/resistance, all of which can alter the narrative of forced complacency that is frequently associated with burial in the colonial Andes. The following discussion addresses the spectrum of reaction to Catholicism through clustering the burials found in all three units into more Catholic influenced, resistance and negotiated burials.

Catholic Identity Burials

Every burial examined from *Iglesiachayoq* was found beneath the church floor, establishing that, at least for the community, Catholic mandates were established in the early colonial period, almost immediately after contact. Therefore, each of these individuals already had components of Catholic burial ritual incorporated into their death and lasting memory, whether agreed to or forced. This is important to establish because from this standard, responses to burial ritual ranged a wide spectrum with a few individuals on each extreme end.

One burial beneath the church in particular demonstrated and established strict Catholic burial treatment for the community: Individual 1010 in unit 19 (see Figure 11). This burial was excavated beneath the altar in an extended position, was buried without grave goods and was interred in a stone tomb. Collagen $\delta^{13}C$ and $\delta^{15}N$ results show that this individual was eating a similar diet to most of the individuals buried beneath the Church, which indicates that this individual was most likely eating a fairly Andean diet of C_4 plants and terrestrial protein during the last 10 years of their life. Although there is evidence of Old World animals at *Iglesiachayoq* (see Norman 2016), the assemblage is not significant and might not have had a noticeable impact on the diet during the initial contact period[19].

[19] There is evidence of differential diet later on in the Chicha-Soras valley, as cuisine is part of identity formation and re-membrance. Additionally, *Taki Onqoy* sources indicate that *Taki Onqoy* practitioners avoided Spanish goods and foodstuffs, theoretically making dietary reconstruction useful in determining *Taki Onqoy* participation and identifying Spanish authorities – especially if they were wealthy enough to bring food from major cities (Molina 2011 [2574]; Hyland 2016).

Figure 11. A Catholic burial, locus 1010, unit 19. This individual was interred in a stone coffin. Photographs by Scotti Norman

This burial is the most elaborate excavated beneath the church, leading to the hypothesis that this individual may have been the founding Spanish priest, however, aDNA analysis has yet to be completed to confirm this hypothesis. The presence of this burial, and the earlier calibrated date of approximately 1550 CE (see Table 2) demonstrate that Catholic tradition, if anything, was present and displayed at *Iglesiachayoq*, making it a viable and real burial ritual toward which the community could have oriented themselves. The presence of this burial beneath the altar in a stone tomb, with no grave goods and in an extended position demonstrates that Catholic doctrine was present and established at the site around the 1560s and was a part of *Iglesiachayoq* community life. Overall, the presence of this prominent burial not only established the structure as a church, but presented a compelling argument for this individual being a founding priest and instituting a baseline for "correct" Catholic burial ritual (see Ramos 2010).

Two other burials in unit 19 present compelling evidence that a Catholic burial ritual was acknowledged and encouraged at one point, although how heavily it was encouraged or enforced is difficult to say. Locus 1008 and locus 1005 were both found at the foot of the altar in the extended position without grave goods. However, these individuals present confounding information about the choices made by the living for and

their burial. Specifically, locus 1008 (see Figure 12) was removed from the original resting place and reconfigured into an extended position along the East-West axis without any grave goods. This individual was important enough to be re-interred in an attempted fully extended body position in the established correct Catholic tradition. This demonstrated the importance of not only being reinterred in the church, but so close to the altar in correct Catholic burial with seemingly no Andean influence besides being re-interred indicate that this individual may have been a *kuraka* or some other important individual who ascribed to Catholic doctrine. Overall, this individual demonstrates that some among the community may have fully embraced (at one point) Catholic doctrine and again, shows that individuals were aware of, witnessed and may have participated in Catholic doctrine for burial rituals, establishing that this was an active point of negotiation among the local community and the incoming Spanish administration.

Figure 12: A Catholic burial, locus 1008, unit 19. Found with no grave goods and faced the altar per Catholic doctrine. Photograph by Scotti Norman.

Finally, locus 1005 (see Figure 13) was found directly at the base and parallel to the altar steps in a North-South body orientation, without a cranium (or the remnants of a cranium). While he/she was interred on their left side, this type of extended burial is not

uncommon among Spanish missions (Klaus 2008; Stojanowski and Larsen 2013), but the orientation on the North-South axis is inconsistent with known Catholic doctrine and the missing cranium presents a scenario that suggests looting or a negotiation. However, various bodily orientations are common at Spanish colonial sites, especially during the early colonial period (Klaus 2008). Additionally, the removal of the cranium could have happened in a variety of ways, including as a part of a resistance movement, by being taken back to a *machay* or *chullpa* or, finally, it could have been destroyed much later from looting of the site. Either way, the intentional burial of this individual follows more closely to Catholic doctrine, demonstrating that the original intent was Catholic with little Andean influence, although the removal of the cranium calls into question ulterior motives about T*aki Onqoy* removal of body parts or entire bodies from the church floor, which are discussed in the next section.

Figure 13**:** A possible Catholic burial, locus 1005, unit 19. Photograph taken by Scotti Norman.

Resistance Burials

While some individuals demonstrated strict Catholic practice, excavations also uncovered individuals who were initially buried beneath the church floor, then later moved; presumably to be reinterred in traditional *machays* or *chullpas*. Out of the 20 burials excavated, five were typed as removed, all found in unit 17 in the back of the church. Each removed burial was found refilled with either a loose soil matrix indicative of burial loci, rocks to occupy the void left by the removed body, and/or very few distal bone fragments that were, presumably, left behind accidentally (see Figures 14 and 15). While there were some documented instances where individuals were removed from their resting place beneath the Church floor to make way for the newly (and seemingly more important) dead, the fact that each space was refilled and that some skeletal elements

were left behind indicate that these removals were not performed under the direction of a priest (Gose 2008:127). Refilling each grave with rocks instead of new bodies and leaving behind fragments of the dead points to clandestine removal, an attempt to quickly and without notice, take the body of the deceased back to an *ayllu*-based *machay* or *chullpa*. Therefore, here, the removal of individuals buried beneath the church floor is interpreted as an active and calculated move by the living, who removed them as a form of resistance to Catholicism, most likely under *Taki Onqoy*.

Figure 14: A removed burial, locus 909, unit 17. Photograph by Scotti Norman.

Figure 15: A removed burial filled with loose sand and large rocks, locus 910, unit 17. Photograph by Scotti Norman.

The clandestine removal of the dead from beneath the church floor was not unique to *Iglesiachayoq*. This activity was well documented among chroniclers and was mainly interpreted as active resistance to Catholicism by many clergy, ultimately becoming a punishable offense around 1541 (Gose 2008:139-155; Stern 1992). Many of these cases of removed bodies circulated around *Taki Onqoy*, which by nature was an underground resistance movement due to the harsh punishments associated with idolatry. Many *Taki Onqoy* practitioners were not open about their participation and many of the practices were performed in private households or out of view from the Church and the local priest (Molina 1574 [2011]; Norman 2016). *Taki Onqoy* included practices such as fasting, drinking, avoiding Christian foods, *huaca* possession and worship, dancing, trembling, ancestor worship, and preaching for the resurrection of *huacas*, none of which were necessarily visible or open resistance to Catholicism with physical evidence for active participation[20] in the movement hard to find (Molina 1574 [2011], Norman 2016). Within the context of *Iglesiachayoq,* Scotti Norman has argued that through documents and excavations, there is physical evidence of *Taki Onqoy* participation at *Iglesiachayoq*, most namely the removed burials and avoidance of Spanish goods and foodstuffs (Albornoz 1584 [1990]; Molina 1574 [2011]; Norman 2016; Scotti Norman, personal communication 2015). However, the stable isotope results reveal that the individuals excavated were mostly eating a similar diet, close to typical Andean diets, and therefore, do not reveal compelling evidence of *Taki Onqoy* or differentiation in burial space, although there might have been some residential mobility.

The stealthily removed burials are the most compelling evidence of *Taki Onqoy* practice within the Church and represent the opposite extreme of the Catholic burial, that of rejection and resistance of Catholicism. In actively removing the dead and re-interring them elsewhere, most likely in an *ayllu*-based *machay* or *chullpa, Taki Onqoy* practitioners have made two sepulchers, one beneath the church with potentially deceitful refilling as a means of escaping Spanish retaliation, and one as a physical locus of the body as a re-membered ancestor. In removing the body from the church, a resistant identity is claimed and re-membered by the living and the dead, which established yet another extreme on the spectrum of negotiated identities.

Negotiated Identity Burials

From the established Catholic burial to the *Taki Onqoy* or resistant burials identified, the majority of the burials beneath the Church were buried within a spectrum between the two extremes, suggesting most individuals and their families negotiated an identity between Catholic and Andean, perhaps demonstrating ambivalence to fully conform to a religious tradition at the expense of the other. While Spanish documents are read and analyzed under intense scrutiny, a few priests recorded that in some indigenous communities, members wanted their dead to be buried beneath the church even if those members were not converted, although grave goods were often incorporated in the original burial ritual and/or graves were later opened to add them to the deceased's grave (Gose 2008). In addition, throughout the Andes, burials were not typically uniform, often

[20] But see Scotti Norman's discussion on *Taki Onqoy* at *Iglesiachayoq* (Norman 2016).

incorporating burial rituals that were not Catholic. This indicates that negotiating an identity and place within the Catholic church was not a unique experience, but was more common than strict adherence to Catholic doctrine and death.

Within *Iglesiachayoq*, most of the burials encountered displayed elements of Catholic and Andean burial practice. In total, there were two flexed burials, three bundles, two extended burials with colonial grave goods and one disturbed and burned individual whose cranium was then re-interred. These individuals represent a spectrum of responses to Catholicism during the initial years of contact, each ranging in location throughout the Church. The following sections will explore the flexed burials, including the bundles, the extended burials and the disturbed individual in order to discuss the nuances of responses to navigating between the two extreme poles of Catholicism and *Taki Onqoy* resistance.

Flexed Burials and the Bundles

The two flexed burials that were not identified as bundles were excavated from the back of the Church in unit 17 directly in front of the back wall (see Figure 4): locus 906 and locus 907 (see Figures 16 and 17). Locus 906 was one of the earliest buried according to the radiocarbon dates and was found without grave goods (see Table 2). The other flexed burial (locus 907) was also excavated along the back wall and was identified as a juvenile, around the age of 15 and was found with *tupus*, possibly indicating that this individual was female. While both of these individuals were buried on the back wall of the church in a flexed position, their burial orientations and presence of grave goods was not consistent. These flexed burials provide evidence that during the initial years of contact, individuals varied on their position with Catholic doctrine, still adhering to the comfort of traditionally flexed burial positions, but varying on their positions with or without grave goods even though they were buried beneath the church.

Figure 16: A flexed burial, locus 906, unit 17. Photograph by Scotti Norman.

Figure 17: A flexed burial, locus 907, unit 17. Photograph by Scotti Norman.

While the flexed burials beneath the church floor indicate a more direct move toward Catholic doctrine on the spectrum of responses, the three excavated bundles represent a different side to the response spectrum (see Figures 18, 19 and 20). Each bundle (loci 958, 960, and 1009) was classified as such due to the "bundling" of long bones. The individuals were re-interred after decomposition so that their long bones could be grouped together, indicated by the upper extremities being placed with the lower extremities and little to no distal elements found (see Figure 20). While it was initially thought that each bundle was a re-interred ancestor, a part of a baptism of the dead from an earlier period (see Gose 2008), radiocarbon dates revealed that they all date to the colonial period. Loci 960 and 1009 had the latest dates out of the samples analyzed, with loci 1009 dating to the early 1600s (see Table 2). While each mummy bundle was dated to the Colonial Period, the fact that they were represented as bundles and reinterred in the church, suggest these individuals, or locus in the case of 1009, and their kin felt it was important to inter them in this traditional manner. In re-interring the bundles beneath the church, the lineage locus was moved to a new space and may have even denied familial members access if they rejected Catholicism, rupturing portions of local memory and identity. These bundles represent an attempt to negotiate a place within the church while maintaining Andean traditions to individuals who may have been important to their lineage. It is clear that as time continued, Andean ties to the burial ritual continued to vary throughout the Church, with a negotiation more focused on placement within the consecrated grounds of the Church as opposed to strict Catholic adherence.

Figure 18: A bundle burial, locus 1009, unit 19. Photograph taken by Scotti Norman.

Figure 19: A bundled burial, locus 960, unit 18. Photograph taken by Scotti Norman.

Figure 20: A bundled burial, locus 958, unit 18. Photograph taken by Scotti Norman.

The bundle, locus 1009, found in unit 19 beneath the altar steps (see Figures 18, 21, 22 and 23), is highlighted below as a special case. Not only was this bundle found beneath the altar steps – a very prestigious space – it was buried with a juvenile skull directly on top of a bundle of adult long bones (see Figure 23). Additionally, a *tupu* and a needle were found nearby. While it is impossible to ascertain the intention of an adult bundle with a juvenile skull, it is important to address the fact that this was an Andean bundle directly below the altar buried with grave goods. Bodily ritual position and grave goods were used to prove their Andean identity, but their direct placement beneath the altar steps suggests that they were important or prestigious enough within the Church, especially considering that this bundle dates to the early 1600s. Additionally, this locus was sampled for stable isotope analysis and their results, while not considered significant, represent the most C_4 signature out of all the individuals sampled, pairing closely with another locus considered prestigious, in the back of the church, locus 912. While, it was common at other Spanish mission sites to have children, particularly young children, buried closer to the altar, this locus had an associated adult long bone bundle, complicating any hypothesis involving the importance of children to the enforcement of Catholic doctrine (Gose 2008; Stojanowski 2013). Here, this locus represents a very strong Andean identity statement in terms of bodily position and ritual, grave goods and isotopic data combined with a very strong Catholic statement from its placement directly beneath the altar in the later years of colonial contact. Overall, this single bundle represents strong ties to both extremes, representing a strong adherence to both doctrines and a strong desire by the living to preserve and navigate both of these doctrinal poles of control in the form of a negotiation with death.

Figure 21: Cranium above the bundle of adult bones locus 1009, unit 19. Photograph taken by Scotti Norman.

Figure 22: Juvenile frontal, nasal bones and mandible, locus 1009, unit 19. Left: Juvenile frontal and nasal bones from unit 19, locus 1009. Right: Juvenile mandible from unit 19, locus 1009. Photographs taken by author.

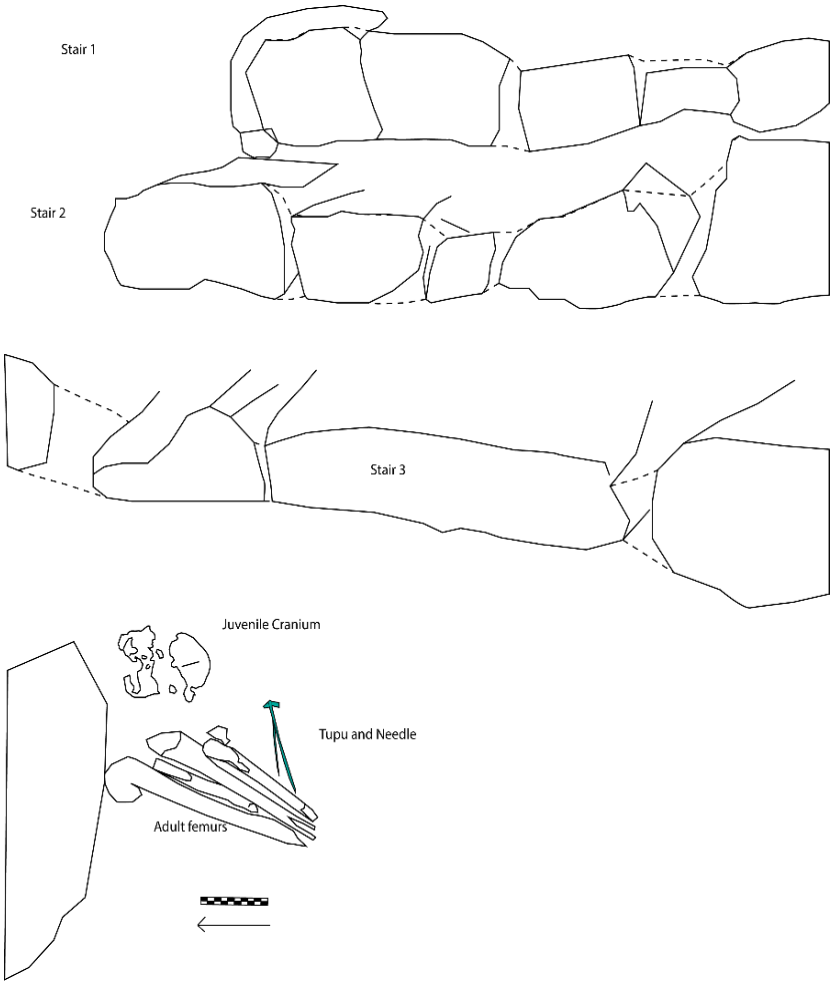

Figure 23: Illustration of the location of locus 1009 elements, unit 19. Drawing by Scotti Norman.

Extended Burials

Two extended burials on an East-West axis were found in unit 17 with grave goods, representing a negotiated burial that begins with a Catholic base of burial rituals. Particularly, locus 911 was a possible primary extended burial facing the altar, following Catholic tradition, found in unit 17 with a *tupu* and colonial era turquoise beads as grave goods (see Figure 26). Additionally, locus 912, buried next to locus 911, was buried with a metal pendant and had most of their dentition present, which was used to estimate an age in the mid 20s (see Figures 24 and 25). With all of this information, loci 911 and 912 present an interesting narrative of individuals who were most likely indigenous, buried in the Catholic tradition with markers of colonial contact and connection. Overall, these people appear to have been buried as a form of negotiation with Catholic doctrine, as an example of both Catholic and Andean identities at a time when it was being negotiated how these identities would be remembered after death

Figure 24: An extended burial, locus 912, unit 17. Found with grave goods. Photograph by Scotti Norman.

Figure 25: Metal pendent found with locus 912, unit 17. Photograph taken by Scotti Norman.

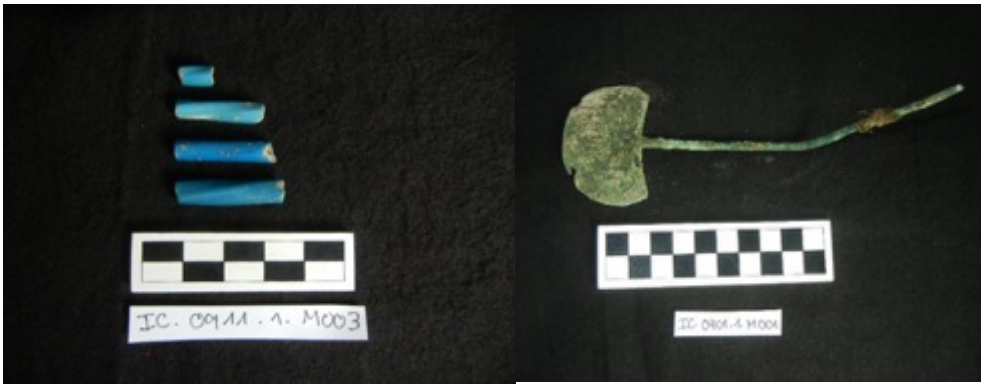

Figure 26: *Nueva Cadiz* beads and *tupu* found with locus 911, unit 17. Photograph taken by Scotti Norman.

Extended and Disturbed Burial

Finally, locus 915 was found in the back of the church, with the cranium inferiorly oriented (see Figure 27). No upper body fragments were found, so originally it was thought that this locus just contained a cranium. However, excavators kept digging due to the softness of the soil and soon revealed lower limbs, with the tibiae and the feet anatomically intact (see Figure 28). Due to the lower limb find, this individual was typed as extended, however, interred at an angle, from northwest-southeast. When analysis was conducted on the cranium, there was a black residue caked onto the remaining dentition and in some cases exposed, creamy cracked dentin – indications that this individual's cranium was exposed to fire (see Figure 29).

Figure 27: Inverted crania, locus 915, unit 17. Photograph taken by Scotti Norman.

Figure 28: Intact lower limbs in locus 915, unit 17. Photograph taken by Scotti Norman.

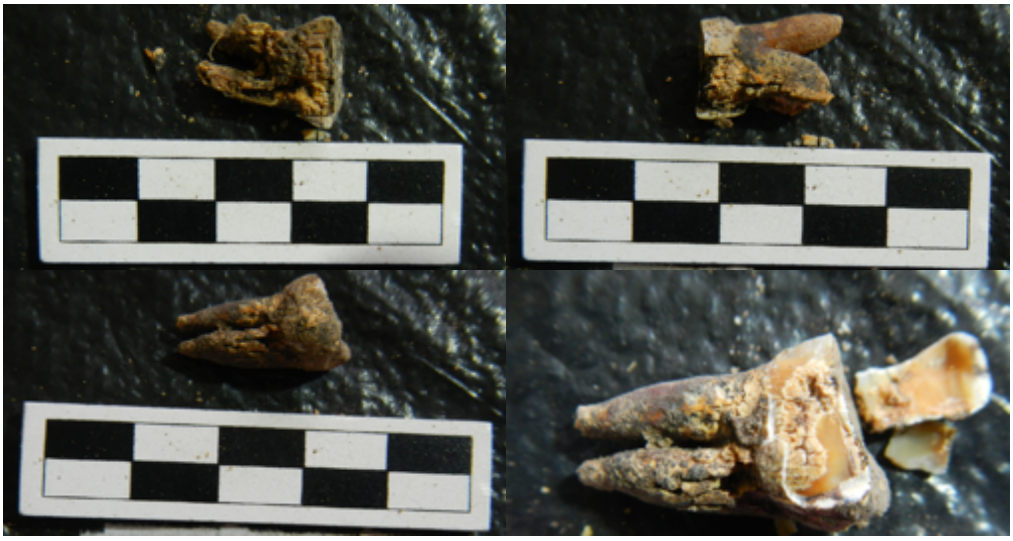

Figure 29: Burnt molars, locus 915, unit 17. Black residue caked onto the remaining enamel and, in some cases exposing, creamy cracked dentin, of some of the dentition of locus 915 in Unit 17. Photographs taken by author.

Due to the primary positioning of the lower limbs, as the cranium and the limbs are most likely associated with each other, it is hypothesized that the cranium was removed at one point, exposed to fire, then placed back in its original position. This might be an attempt by *Taki Onqoy* practitioners to regain some of their kin unsuccessfully, however, body parts were usually not returned to the Church (Gose 2008). More likely, it could be a negotiated ancestor veneration within the new space of the church as a physical marker of mourning, done without the participation of the Spanish priest. Regardless, it is a well-documented practice in the Andes to remove and replace ancestral bodies, or parts of bodies, for ritual purposes; linking Andean identity and the process of negotiation within this new religion and the new Spanish administration trying to convert indigenous Andeans (Gose 2008; Stern 1992).

Conclusion

The position of the burials beneath the church floor revealed the most compelling evidence that the dead were an important process of negotiation, observed through a spectrum of responses heavily influencing the living during this time of initial contact. The isotopes results revealed that, at this time, those who were sampled were most likely eating a "typical" Andean diet although there may have been some differential access to different ecotones (Knudson 2009; Kurin 2016). This established that there was no large disparity between individuals, their burial placement within the church or their burial position (also see discussion of loci 1008 and 912). While food is central to identity and was a large part of negotiation and *Taki Onqoy* practice (see deFrance et al. 2016; Hyland 2016; Kennedy and VanValkenburgh 2016; Molina 1574 [2011]), here, the stable isotopes revealed a rather homogenous diet. However, for loci 1008 and 912, it is clear that these individuals may have eaten a slightly different diet, from childhood to adulthood, although no results were significant, they all had church burial locations and/or grave goods that indicated prestige and European connections.

Overall, when examining the stable isotopic and burial data, the burial position and orientation reveal most clearly, how individuals at *Iglesiachayoq* responded to this contact. The burial rituals that emerged under the confines of the Catholic Church, indicate that there was a wide range of negotiated identities, often shifting with time and circumstance. All of the radiocarbon dates indicate that burials beneath the church floor began around the 1560s with both of the extremes, Catholic and the resistance *Taki Onqoy* removal, present. This established that both poles were drawn upon and manipulated presumably as navigation between both poles of control and as a re-orientation of the living in the world through their relationship with the dead.

IX. Conclusion

This research collected data on burial patterns and supplemented these with data on paleodiet, and mobility at *Iglesiachayoq* during the Early Colonial Period (c. 1560). *Iglesiachayoq* was initially documented by the Spanish chronicler, Albornoz, as a site of *Taki Onqoy* resistance (Albornoz 1584 [1990]; Norman 2016; Scotti Norman, personal communication 2015). As a resistance movement, *Taki Onqoy* has not been documented archaeologically, and the *Iglesiachayoq* excavation was the first to focus specifically on the material remains of this important, yet mostly forgotten, revitalization movement (see Norman 2016). While analysis of the 19 excavated units provides compelling evidence of *Taki Onqoy* activity, the analysis of the burials beneath the church provide some of the strongest evidence for the range of reactions and the continuous spectrum of negotiation between indigenous and Spanish religious practices (see Norman 2016).

The church itself is the center of *Iglesiachayoq*, meaning it was most likely the center of control for Spanish authorities when contact was established. The range of burial position, orientation and dietary data indicate that this population actively engaged in navigating Spanish and Andean religious traditions, ranging from full incorporation to active resistance through *Taki Onqoy* activities. *Taki Onqoy* practitioners advocated for the rejection of Spanish Catholicism and a return to *huaca* worship in belief that their *huacas* would defeat the Spanish God. However, this evidence suggests that most individuals were never on the extreme ends of the range, but instead, took a variety of stances, often incorporating both traditions in their burial rituals. In this way, the individuals who were buried and left in the church were spatially and physically within the Catholic center whilst the burial style and practice conformed to Andean traditions. There are also representatives of the two extremes with individuals who were initially interred in the church and later removed and individuals who were buried in full Catholic tradition beneath the altar, including a potentially Spanish individual. The dietary data introduced confirm that the population was, at least initially, following traditional dietary patterns for the local community and engaging in residential mobility as would be expected of a site on the Inka Road.

The Catholic burials, one of which has one of the earliest radiocarbon dates, established the Catholic burial tradition, demonstrating how a Catholic burial was to be performed whilst also interring the individual within a sepulcher, the only physical reminder to the living community of the individual, who was Catholic and clearly important, that this was a revered world orientation – that this was supposed to be the new and accepted status quo. The other two clearly Catholic burials emphasized the importance of the Catholic death in location and the process of either building the tomb or re-interring the individual and reassembling them in extended position. While these burials established a Catholic tradition as important and visible to the community, there were also burials that demonstrated a clandestine resistance to Catholic doctrine. These burials represented an attempt by practitioners to resist Catholicism and reestablish their Andean worldview and traditions. From Spanish documents, the *Taki Onqoy* resistance movement was identified as the most likely movement involved at *Iglesiachayoq*. Five burials were identified as representing *Taki Onqoy* resistance because these individuals were removed and their graves were refilled with large rocks and/or distal bone

fragments were left behind as the only evidence of interment. As removing bodies and body parts from graves beneath the church was a common practice that was viewed as idolatrous by the clergy, the fact that the graves were refilled with large rocks and distal remains were left behind indicate that individuals were moved quickly and there was an attempt to make the grave appear still occupied (Gose 2008; Stern 1992).

Having these two extremes of worldviews clearly present beneath the church indicated that there was an attempt to navigate between these two different poles of control: Catholic doctrine and power or Andean traditions and strong social identity. The majority of the burials were between these poles, demonstrating elements of both Catholic doctrine and Andean burial traditions. From these burials, it was clear that responses to Catholicism varied in regards to burying the dead and most likely shifted throughout time and circumstance. Some individuals followed Catholic doctrine more closely such as loci 911 and 912, but their inclusion of grave goods indicated a strong linkage to their material body, an Andean traditional view. On the other end, some individuals were buried in the flexed position, a typical body position for the dead in Andean tradition with grave goods, but they were buried beneath the Church floor, which is a privileged place, designated for those considered Catholic. This wide spectrum demonstrates that Catholicism was not a sweeping conquest, but relied more heavily on negotiating and navigating the world of death and re-memory in the Andes. While Catholic doctrine had an obvious effect on burial rituals, diet and overall cosmology, its relationship with death and the physical remains of the dead displays heightened nuances and is evidence of how Andeans, as active agents, negotiated their own positions and worldview when confronted.

Overall, the mortuary and bone chemistry data not only confirm *Iglesiachayoq* as an early colonial contact site, but also provide a glimpse into the *Taki Onqoy* revitalization movement and the spectrum of stances between resistance and Catholicism. While scholars continue forward with works on colonialism and negotiation, emphasizing a narrative beyond conquest, research on social memory, mortuary analysis and bone chemistry move us towards a more complete and nuanced narrative beyond the standard lens of European contact.

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Appendix A: Multiple plot calibrated date (calAD)

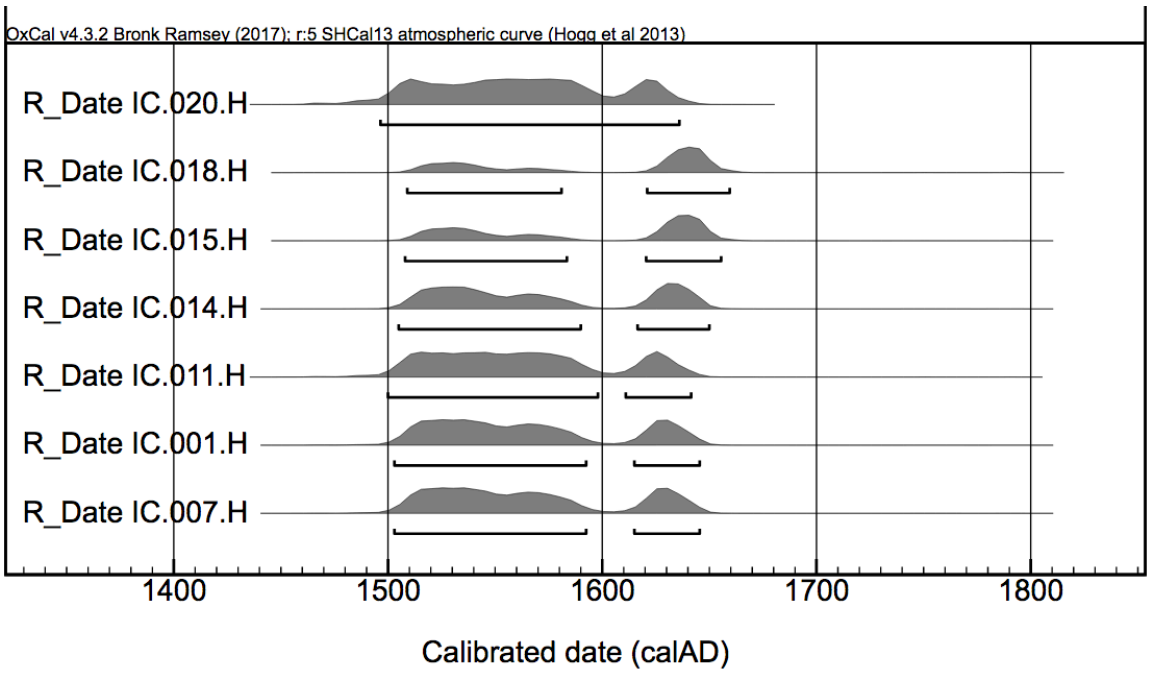

Figure 30: Multiple plot graph of calibrated radiocarbon age for human bone samples taken. All radiocarbon age calibration was done on the ShCal13 curve through OxCal 4.3.