THESIS

MERCHANTS AND MULETEERS: INFRASTRUCTURE, IDENTITY, AND INEQUALITY IN THE 18^{TH} CENTURY ANDES

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ABSTRACT

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In this thesis, I examine the way that infrastructure helped structure inequality in the 18th century Andes through the production of qualitatively different experiences of movement. Using a combination of historical, geospatial, and archaeological methods, I argue that an individual's experience of movement and lodging along the road system was mediated by their position in a hierarchy of labor. This hierarchy was principally divided between business travelers and muleteers, two positions that emerged from an 18th century economic context in which those who did the labor of physically moving goods were increasingly separated from those who owned those goods. El Lazarillo de Ciegos Caminantes is used as a historical source through which to view an elite understanding of labor identity and its relationship to infrastructure. This historic document is then analyzed using GIS techniques in order to see spatial relationships between infrastructure and class associated patterns of movement. Archaeological data is used to reveal alternative systems of infrastructure that supported the movement of labor. Ultimately, I argue that the disconnect between textual and material sources of information sheds light on both the biases of 18th century authors, as well as the persistence of Andean pastoral traditions even in a context of shifting labor dynamics.

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TABLE OF CONTENTS

ABSTRACT	ii
ACKNOWLEDGEMENTS	iii
Chapter One - Introduction	1
Chapter Two - Context and Representation	8
2.1 El Lazarillo in Broad Historical Context.	
2.2 El Lazarillo and the Roads that Shaped it	
2.3 El Lazarillo – Author and Audience.	
Chapter Three - Retracing the Camino Real	37
3.1 Methods	
3.2 Results.	
3.3 Discussion.	53
Chapter Four - The Archaeological Record and El Lazarillo de Ciegos Caminantes	63
4.1 Origins of the Posta	
4.2 Archaeology of the 18 th Century Posta	70
4.3 Alternative Accommodations	80
Chapter Five - Conclusion	84
References	88
Appendix 1	100

Following the Spanish invasion of South America, the Spanish empire inherited a system of road infrastructure that had been constructed under the Inka empire. Over the course of the 16th and 17th centuries, the Spanish attempted to remake this system of roads, waystations, and corrals into a system that was better suited to an extractive focus on mercury and silver. In the 18th century, the roads of the colonial Andes were again reimagined, as Enlightenment ideals of economic and bureaucratic reform were reflected in efforts by the Spanish Crown to promote trade along the road network. One physical manifestation of this change was the *posta* system, a network of waystations designed to support the movement of both mail and travelers across the landscape.

These changes, including the posta system, coincided with the increasing presence of a new class of person moving along the roads of the 18th century Andes: the business traveler, an entrepreneurial traveling salesman who had access to capital and goods but relied on local foremen, contracted laborers, and the animals they in turn controlled to move their cargo between growing market towns. While traveling merchants had been a fixture of the Andes since the mid-16th century, the 18th century saw an increasing divergence between those who owned goods and those who did the work of transporting them.

The question this thesis seeks to answer is to what degree these changes were linked. Did colonial infrastructure help structure systems of inequality? If so, how? In order to understand these questions, it is necessary to develop a theoretical perspective that links large scale questions of infrastructure to more intimate questions of identity.

Archaeologists have long studied infrastructure. Walls, irrigation systems, road networks, and other "landscape-scale connectivities consisting of elements more extensive than one household can construct, maintain and use by itself" have been discussed particularly in conjunction with the rise of urbanism and the emergence of complex societies (Smith 2016:2; Wilkinson 2019a). Because archaeology still lacks a unified theory of infrastructure, the discipline has historically borrowed theories of infrastructure from other disciplines that focus on modernity and the nation state (Wilkinson 2019a). This borrowing often entails the supposition "that infrastructure is effectively the materialization of the state itself" (Wilkinson 2019a:1220). This is obviously problematic for archaeologists working in non-state contexts that nevertheless exhibit infrastructure. However, it is also a problem for archaeologists of states and empires. There is an implicit tendency for the archaeologist to interpret infrastructure from the top down as a materialized representation of imperial discourse.

Roads, like all other aspects of empire, conformed to some extent to imperial direction. The mark left on the Andean landscape by the Inka empire's program of infrastructure creation, for example, was dramatic. Previous studies of roads and other forms of transport infrastructure in the Andes have typically been focused on the Inka period, stressing the connection between imperial expansion and infrastructure construction (D'Altroy 1992; Hyslop 1984, 1990). However, recent research in both prehistoric and historic Andean archaeology has questioned the conventional top-down model of imperial power. Instead, perspectives that emphasize negotiation and articulation between local and imperial scales are becoming increasingly popular (Garrido 2016; Vanvalkenburgh 2019; Wernke 2007, 2013).

Effectively linking the imperial scale of analysis with individual identity, however, is still difficult. Researchers must balance "the tension between generalization and particularity: while

the Spanish Americas were structured by global-scale policies and institutions, archaeological research has demonstrated considerable variability across time and space in the practices of empire" (Voss 2008:874). One possibility for effectively analyzing multiple scales of analysis lies in a labor centered perspective. At the local scale, "consideration of labor relations provides an entry point into the internal variability of empires, for labor practices differed considerably across regions and over time", while at the same time connecting these local processes with the state's instruments of colonial power, including: "military, religious, mercantile, and bureaucratic institutions" (Voss 2008:874, emphasis added). There is a significant body of research on colonial labor dynamics in the Andes (Bakewell 1984; Smit 2018; Weaver 2008). However, these studies have typically focused on the ways that labor was structured within the urban or peri-urban core of imperial power, rather than on roads or in other "interstitial spaces" of colonial society (Corcoran-Tadd 2019:218).

In order to understand the intersection of labor, identity, and infrastructure, I use a perspective developed by Wilkinson (2019b). When considering the way in which infrastructure can structure inequality, Wilkinson points out that "discussions of material inequality in [modern] infrastructural studies typically focus on either restricted access to facilities or the variable quality of the facilities themselves. In other words, the suffering that infrastructure generates is primarily understood in terms of being excluded from it, or being forced to live with an inferior version of it" (2019b:28). However, Wilkinson recognizes that inequality generated and reinforced by infrastructure "is grounded in qualitatively different life experiences, not just quantitatively inferior ones" (2019b:30). This theoretical value is useful for Wilkinson's case study of the Inka highway, because he is able to differentiate the experiences of elites, who experienced the road as a place of expedient travel, and locals, who experienced it as a constantly

demanding maintenance project. The same perspective is valuable in considering how business travelers and muleteers or caravan drivers moved along the same roads but experienced them differently.

This thesis aims to contribute to an understanding of the connection between infrastructure and identity by combining Voss' labor centered perspective with Wilkinson's idea of qualitatively different experiences of the same infrastructure. Specifically, I argue that inequality was manifest not only in exclusion from some components of infrastructure, but also in different lived experiences of moving along the road itself. By the 18th century, I argue that these experiences were shaped not only by ethnicity or *casta*, an aspect of identity that has so often been the focus of colonial research, but increasingly by one's position in a hierarchical system of labor on the road.

Obviously, lived experience is difficult to reconstruct from archaeological evidence. For this reason, I take as a point of departure one of the most well-known records of a particular journey along the Camino Real from Buenos Aires to Lima. Published in 1773, *El Lazarillo de Ciegos Caminantes*¹ relates the experiences of Alonso Carrió de la Vandera (Concolorcorvo 1965). Carrió traveled from Buenos Aires to Lima as royal inspector of the mail in the early 1770's. *El Lazarillo* is ostensibly a guidebook for inexperienced travelers, and the text is presented in a format that follows the traveler's progress from Buenos Aires to Lima. The work has long been studied as a classic of Spanish-American literature, with analysis focusing on the novel's use of satire to critique government corruption and inefficiency from an Enlightenment-influenced standpoint (Gramuglia 2007; Johnson 1993; Robles 2008). The text has also been

^{1 -..}

¹ Trans: A Blind [Inexperienced] Travelers Guide

critically examined in order to understand 18th century Spanish attitudes toward race, gender, and mestizaje (Meléndez 1996, 2017).

The text has not, however, merited more than a passing mention in historical archaeologies of the colonial Andean road network (Corcoran-Tadd 2017:73). This is likely due to the fact that separating the colonial discourse from more materially grounded portions of Carrió's narrative is difficult. However, several developments in theory and methodology render this project an easier task now than ever before. First, the intersection of labor and infrastructural inequality discussed above provides a solid theoretical framework in which to situate the analysis. Second, advances in GIS methodologies mean that retracing Carrió's route from Buenos Aires to Lima is now a relatively simple proposition. This provides a solid link between Carrió's narrative and the physical space of the South American continent. Third, the literature concerning the historical archaeology of Andean roads is now sufficiently developed as to enable at least an indirect comparison between Carrió's written descriptions and the archaeology of roadside sites across the Andes.

Chapter Two presents the first step in an analysis of *El Lazarillo de Ciegos Caminantes* that focuses on the connections between identity, labor, and infrastructure. This is accomplished using the "labor of representation" approach, a framework developed by Voss (2007) for systematically considering the intersection of discourse and materiality in historical sources. Chapter Two begins with the broad context of infrastructural reform and identity formation in the colonial Andes, before focusing on the more specific context of the author and his intended audience. Chapter Two argues that Carrió, a contemporary observer, recognized a link between an individual's experience of movement and their identity. It notes however, that his perspective

must be understood in the context of Carrió's own identity as an agent of the Crown and a proponent of the Bourbon Reforms.

Chapter Three continues a critical analysis of *El Lazarillo* and the context of its creation, beginning with an attempt to map all the sites named in the guidebook. This map anchors the narrative in space, helping to transform Carrió's journey into a known route. Based on Carrió's written description, GIS techniques that model varying movement speeds are then used to consider how the manner in which one moved along the road, whether astride a horse or mule or walking alongside a loaded baggage train, structured the experience. While the differences in experience between any two known points are not always drastic, the GIS analysis demonstrates that the road system as described by Carrió was organized in such a way as to benefit travelers who shared his class identity. Chapter Three concludes with a return to the text, focusing on ways in which the muleteers and caravan laborers may have continued to exercise agency even in a political economic context that was increasingly demanding of themselves and their animals.

Chapter Four then brings in the archaeological record. It begins with a historical context and critical examination of the form of roadside infrastructure that structures Carrió's narrative, the posta. It then provides an overview of the archaeological literature of roadside site types, both formal and ephemeral. The archaeological evidence presented in Chapter Four suggests that sites located along the road in the 18th century were generally more variable and less formal than Carrió would seem to indicate in the text.

Chapter Five synthesizes the previous three chapters, returning to broader questions of identity and infrastructure. It acknowledges that Carrió's narrative, for historical reasons, reflects a specific experience of travel associated with his own class identity. It also argues that although Carrió's text presents a biased representation of the experiences of those with different class

identities, it can nevertheless shed some light on their experience when combined with geospatial or archaeological data. The chapter concludes with a discussion of future directions, arguing that infrastructure and labor represent an intersection that is promising for future research.

Carrió's narrative ultimately reflects both the roads of the colonial Andes as he experienced them as well as how he believed they should be organized. This does not limit the utility of *El Lazarillo de Ciegos Caminantes* as a historic source. Rather, the disconnect between the world as Carrió saw it and the world as he represented it provide useful insights into the mind of an elite 18th century agent of the state, an advocate of the Bourbon Reforms, and a proponent of the entrepreneurial business traveler. Geospatial data indicates that the posta system proposed by Carrió and his contemporaries was certainly designed to privilege a certain class of traveler. Archaeological evidence, however, indicates that other systems of roadside infrastructure persisted well into the colonial period. Although the roads of the Andes were structured unequally, they were not uniformly dominated by the concerns of the colonial elite. In the 18th century, at least, they were a place where power dynamics between capitalists and laborers were locally situated and continuously negotiated.

CHAPTER TWO: CONTEXT AND REPRESENTATION

The roads which led through the Andes in the 18th century were a palimpsest of new state infrastructure built over Andean precedents. Unlike in the Inka period, Spanish royal highways were designed to stimulate trade and efficient movement and were thus not for official state use only. Movement upon these roadways was a common experience for people of different classes and ethnic backgrounds. Nevertheless, colonial roads still served to structure social inequality, not through restricted access, but through the production of different lived experiences. Method of travel, duration, speed, and comfort were all structured by an individual's identity and their relation to the movement of capital and pack animals along the road. Like many other colonial spaces, roads became spaces in which colonial hierarchies could be produced and reproduced. This is especially true in the 18th century, when Spanish colonial policies designed to promote economic growth simultaneously served to reinforce the differential experience of roads.

Specifically, I focus my analysis on two classes of traveler along the road: the "business traveler" that emerged in the late 18th century, and the muleteers and llama caravanners who emerged from deeper Andean precedent but were similarly transformed by market forces. Other classes of individuals moved along the road as well: couriers, enslaved Africans, indigenous *mita* laborers, livestock herders and others all traveled using the same basic infrastructure. This thesis, however, focuses on two groups created through their relation to each other as well as to the primary means of production - the labor of animals who moved goods and precious metals - in order to better understand the role of qualitatively different experiences of infrastructure in structuring inequality more broadly.



Figure 2.1. Route as described by Carrió with selected colonial centers indicated. Map by the author.

The longest continuous road in colonial South America was the *Camino Real*, or royal highway, connecting Buenos Aires and Lima (Figure 1). The road stretched nearly 4000 km, linking the port of Lima on the Pacific Coast with Buenos Aires on the Atlantic. Along the way, it traversed a huge variety of environments from the coastal desert of Peru, to the Altiplano of the Andean highlands, to the dry grasslands of the Argentinian plains. By the 18th century, it connected the mercury mines of Huancavelica, the Inka capital of Cusco, the shore of Lake Titicaca, the silver mountain of Potosí, and the vast ranches of Cordoba into an increasingly

complex market network. However, the archaeological record associated with the Buenos Aires – Lima route of the 18th century is slim. The majority of the archaeological literature concerning roads and waystations in the Andes deals with Inka infrastructure (D'Altroy 1992; Garrido 2016; Hyslop 1990; Wilkinson 2019b). The limited historical archaeological investigation of roads has been constrained largely to regional routes such as the famed "ruta de la plata" between Potosi and the Pacific (Corcoran-Tadd 2017; Corcoran-Tadd et al. 2021; García-Albarido 2016). To understand the route between Buenos Aires and Lima in the 18th century, the historic record is key.

Perhaps the best record we have of the *Camino Real* from Lima to Buenos Aires comes in the form of an eighteenth-century book, *El Lazarillo de Ciegos Caminantes desde Buenos Aires hasta Lima*. The author, Alonso Carrió de la Vandera, who wrote under the pen name *Concolorcorvo*, was born in Spain but spent most of his life in the Americas. He served in a variety of administrative posts in the colonies, including inspector of the Royal Mail. His book was written following a postal inspection commissioned by the Crown, and while dated 1773, it was likely compiled in Lima between 1775 and 1776. It is a complex document that has been described as a picaresque novel, a work of satire, and a travelogue. Traditionally, historical archaeologists have sought out common sense tangible details in the historic record against which to test or verify archaeological interpretations. Separating discourse from "testable" materiality appears difficult if not impossible for a document that spans multiple genres and audiences, seamlessly blending real world travel descriptions and satirical hyperbole.

Much has been written from a literary standpoint addressing the work as an example of colonial discourse intersecting with a newfound Enlightenment era focus on reform and efficiency, a focus exemplified by the Bourbon Reforms in Spain's colonies (Almanza Gálvez;

Gramuglia 2007; Insuela 1990). However, recent scholarship has stressed a return to the material conditions of history in which the work was created. This is intended to avoid what Hill (2005), referencing Palmer et al. (1990), termed a "descent into discourse" (17). Hill argues that any analysis of *El Lazarillo de Ciegos Caminantes* "compels us to distinguish between rhetorical, or literary, features of Carrió's account and the subject matter of his account which was practical and historiographical/geographical" (Hill 2005: 19).

At the same time, it would be a mistake to extract from even a small part of Carrió's text an unproblematized account of the way things were. Even in the case of a travelogue, a historic document is never a true reflection of the material world. Interactions with the landscape and with other travelers are refracted through the author. The embodied experiences of travel - the heat of the sun, the pain of saddle sores, and the everchanging view - all leave their imprint in the text. All of these embodied experiences are in turn layered and reconfigured by the process of memory, especially (as is the case with *El Lazarillo de Ciegos Caminantes*) when the written work is compiled only at a journey's end (Franklin 2020). In the case of *El Lazarillo de Ciegos Caminantes*, the author moved on a horse or mule for much of the route. Traveling between various inns, postas, and occasional campsites, Carrió was warmly received by the majority of innkeepers, farmers, and officials he encountered. His lived experience of travel was one of comfort, speed, and hospitality. This experience surely made its mark on the way that Carrió remembered and thus recorded his experience of travel.

On top of these issues, travelogues are not politically neutral. They are not only reflections of how the author saw the world, but also how the author imagines the world should be. They are socially produced, and politically charged. In the case of *El Lazarillo de Ciegos Caminantes*, concerns stemming from the Enlightenment-influenced Bourbon Reforms are

apparent in Carrió's work, as are his conflicts with the entrenched viceregal bureaucracy in Lima. While stopping short of advocating unregulated commerce, Carrió's critiques focus on improving the road's infrastructure and administration to promote economically efficient travel. He is strongly aligned with, and advocates for, a mobile Andean merchant class willing to trade in whatever city or port promised the best exchange. On the other hand, Carrió's proposed reforms were to the detriment of deeply rooted trade monopolies in Lima who had built their commercial ventures under the old colonial system (Hill 2005). Continuing with this perspective, Carrió sees porters and the animals they drive as a logistical expense to be managed. Their embodied experience of travel is not a concern addressed in his work. While he does occasionally empathize with the plight of the muleteer, he argues that the most efficient way to improve their standard of living was to design a transport system in which traders provided a fair wage because it was the most efficient way to get their goods moving (Concolorcorvo 1965:35). In terms of how this affects Carrió's representation of different people along the road, it was an individual's relation to this emerging economic system as provider of capital or labor, relaxed business traveler or toiling animal wrangler, that Carrió took as a marker of their identity.

In order to understand how these two intertwined factors, embodied experience and political ideology, influenced Carrió's description of the road and those moving along it, an explicit analytical framework is necessary. Voss (2007) provides a potential framework in the concept of historical documents as "labors of representation". The framework of "labors of representation" is designed to draw "attention to the physical efforts, strategic decisions, and political projects inherent in representational practices, allowing archaeologists to rigorously account for the social production of historical documents without negating their evidentiary

value" (Voss 2007: 147). Voss provides a four-step system for integrating maps, documents, and other works with the material record.

"Analyzing the labor of representation involved in the production and dissemination of a text or image involves four steps: (1) examining the broad historical and political context in which the representations were produced; (2) researching the intimate context of the representations, including the history of their production and their physical attributes; (3) tracing the citational practices that link the representation in question with other contemporary documents; and (4) evaluating the ways in which archaeological evidence converges with or diverges from the representation." (2007: 147)

The remainder of this chapter will apply the first three steps of Voss' framework to *El Lazarillo de Ciegos Caminantes*. First, I discuss the ways in which the work was situated within the context of the politically and economically dynamic Bourbon period Andes. Second, I examine the specific historical circumstance of 18th century Andean roads and discuss the ways in which the author of *El Lazarillo* experienced them. Third, I investigate the goals and audience of Carrió's work, in order to understand forces that shaped his labor of representation beyond the material. The fourth step, integrating the previous three with the archaeological record, is the most difficult but also provides the greatest area for productive scholarship. It is covered in the following two chapters. Overall, I argue that Carrió's identity and experience as an author, his intended audience, and the broader historical context shape the narrative to such an extent that even the "historiographical/ geographical" portions of *El Lazarillo de los Ciegos Caminantes* are reflections of a uniquely elite understanding of landscape, travel, and identity that emerged in the intersection of entrenched colonial power structures and nascent capitalism in the 18th century Andes.

2.1 El Lazarillo in Broad Historical Context

The late colonial Andes, from the mid to late eighteenth and very early 19th century, was a dynamic place. The "Bourbon Reforms", the Spanish Crown's reorganization of colonial politics and economics, were designed to address a massing fiscal deficit in Spain, as well as to bring Spain's overseas territories into further alignment with the hierarchical directives of the Crown. These economic and political reforms, as a result of the linkages between ethnicity and tribute in the Spanish colonial system, were also engaged at the local scale with questions of ethnic identity and concerns over ethnic fluidity. "[Q]uestions of identity" Ruth Hill argues - "their practices of inclusion and exclusion and our interpretations of those practices in the postcolonial period – cannot be isolated from economic and bureaucratic matters" in the late eighteenth-century Andes (Hill 2005:7). What were the broad changes in politics and economics that we now understand as the Bourbon reforms? How, in turn, did these political and economic changes shape the understanding of labor and identity along colonial roads as documented in *El Lazarillo de Ciegos Caminantes*?

Following the War of Spanish Succession, the Bourbon house took control of the Spanish empire. The empire they inherited was one plagued by inefficiency; fraud and contraband smuggling were commonplace, mining production was down, and colonial militias were in various states of disorganization. In order to correct these inefficiencies and raise revenues, the Crown instituted a sweeping series of reforms based on a suite of Enlightenment ideals. The political administrative system transitioned away from *audiencias* and towards intendancies, mirroring a system implemented by the French and designed to curb corruption in low level officials while increasing the power of the Crown (Paquette 2008:110–111). Sweeping defense modernizations rebuilt militias and fortifications throughout Latin America in the 1760's and

1770's. The Crown's tax on silver, the royal fifth, was slashed to incentivize production and official reporting of that production. Miner's guilds were established in New Spain and Peru in the late eighteenth-century. Free trade (in the sense of Spanish colonial ports being open to foreign merchant ships) was established throughout the colonies piecemeal beginning in the Caribbean in 1765, and was officially codified as the law of the land under Charles III in 1778 (Fisher 1998:459; Paquette 2008:102–103). *El Lazarillo de Ciegos Caminantes* was written in the midst of this reorganization, and the text reflects Carrió's support for a modernized postal infrastructure that would support the entrepreneurial activities of the business traveler. It is at its core a guidebook for merchants, designed to make their travel not only more comfortable but more profitable as well. It was as much a handbook for navigating deep-seated colonial corruption and newly emerging wage labor dynamics as it was for travel.

Adding to the tumult of the late eighteenth-century were changes in demographics and ethnic identity. In the late eighteenth-century, biological phenotype (alongside modern conceptions of gender and class) had not yet crystalized as one of the primary factors through which a person's race or ethnicity was constructed. This is not to say that phenotype was not a significant component of ascribed identity; it clearly was. However, phenotypes had not yet become races. Hierarchical order in the colonial Andes, as in much of colonial Latin America, was instead determined by a complex interaction of ideas which must be understood in their historic context. Social position was a function of three primary factors: *casta*, *estado*, and *limpieza* (Hill 2005).

Casta has previously been interpreted to signify those of mixed race in colonial society.

However, more recent scholarship has shown that Indians, Spaniards, and Africans of unmixed ancestry were referred to as castas in their own right, alongside mestizos and mulattoes (Hill

2005:204–211). Casta is perhaps the closest word to a modern Western conception of ethnicity in that it was rooted in an idea of common descent. The eighteenth-century saw the rise of "pinturas de casta" and quasi mathematical attempts to establish casta taxonomies (Mörner 1967). However, these taxonomies were likely little more than a reflection of an Enlightenment curiosity and desire to classify the world (Cahill 1994; Earle 2016). Mörner, writing in the 1960's, realized these created taxonomies were a reflection of "the almost pathological interest in genealogy that is characteristic of the age... an entertaining genre of art, characteristic rather of eighteenth-century exoticism and rococo then of a serious effort to present the social reality of the Indies" (Mörner 1967:59).

Table 2.1. Taxonomic casta vocabulary of eighteenth-century Peru (Mörner 1967: 58-59).

	Father	Mother	Child
1	Spaniard	Indian	Mestizo
2	Spaniard	Mestizo	Cuarterón de mestizo
		Cuarteróna de	
3	Spaniard	mestizo	Quinterón de mestizo
		Quinteróna de	Spaniard or requinterón de
4	Spaniard	mestizo	mestizo
5	Spaniard	African	Mulatto
6	Spaniard	Mulatto	Cuarterón de mulatto
		Cuarterón de	
7	Spaniard	mulatto	Quinterón de mulatto

		Quinterón de	
8	Spaniard	mulatto	Requinterón
9	Spaniard	Requinterón	Spaniard
10	Mulatto	Indian	Cholo
11	Mulatto	Indian	Chino
12	Spaniard	China	Cuarterón de chino
13	African	Indian	Sambo de Indio
14	African	Mulatto	Zambo

For the purposes of the state, less complicated classifications were more useful. The complex taxonomy noted by Mörner differed "markedly from what colonial administrators deemed appropriate for census purposes, from the five (españoles, indios, mestizos, negros libres, esclavos) of the 1795 viceregal census, to the nine (españoles, indios, mestizos, negros, mulatos, quarterones, quinterones, zambos, chinos) of the 1790 Lima census" (Cahill 1994:339, note 42). Carrió provides several brief censuses in *El Lazarillo*, including the following concerning the exploding settlement of Buenos Aires (Concolorcorvo 1965:58):

- 3639 hombres españoles en que se incluyen 1854 europeos, los 1398 de la peninsula, 456 extranjeros y 1785 criollos.
- 4508 mujeres españolas
- 3985 niños [españoles] de ambos sextos
- 5712 oficiales y soldados de tropa reglada, clérigos, frailes, monjas y dependientes de unos y de otros, presos presidiarios, indios, negros, u mulatos libres, de ambos sexos y todo edades

- 4163 esclavos negros y mulatos de ambos sexos y todos edades
- 3639 Spanish men, including 1854 europeans, 1398 peninsulars, 456 foreigners and 1785 criollos
- 4508 Spanish Women
- 3985 [Spanish] children of both sexes
- 5712 oficials and soldiers of the standing army, clerics, friars, nuns, and subordinates of one or the other, prisoners, Indians, free Africans and mulattoes of both sexes and all ages
- 4163 African and mulatto slaves of both sexes and all ages

Several things are revealed regarding the "social reality" of identity as Carrió understood it.

Firstly, español was a casta that in some cases corresponded more to Europeanness than to specifically Castilian identity, as evidenced by the inclusion of foreigners in the same line. The commonly imagined division between creole and peninsular identity seems to matter less to Carrió than it did to some of his contemporaries. Secondly, casta was only one measure of a person's identity: gender, age, and position of servitude were also intersecting parts of determining one's position in society. As a result, it is worth a brief mention of two other factors that intersected and helped construct casta identity in the Spanish colonies: estado and limpieza.

Estado referred to an estate, and is usefully simplified as the division between elites and non-elites, or between nobles and commoners (Hill 2005:216). Nobility or lack thereof could be ascribed at birth, but it could also be legally granted by the Crown in return for services.

Likewise, those of noble birth could lose their nobility through deeds unbecoming of their estate (Hill 2005:216). Estado was thus itself a complex interaction of birthright, virtue, and public perception. Importantly, nobility was not a solely European possession. Carrió describes a

postmaster in Oruro as an honorable man and "a Spaniard, and a descendant on his mother's side of legitimate caciques, and a governor of Indians" (Hill 2005:224). Even though the postmaster was of mixed European and Indigenous ancestry, his nobility had a significant effect on his perceived casta and he was described as español rather than mestizo (Concolorcorvo 1965:186). It is also likely that his position, as postmaster, contributed to his identification as español.

Limpieza has often been emphasized in colonial scholarship in terms of limpieza de sangre – blood purity. The role of Moorish or Jewish ancestry (or an accusation of the same) in shaping identities in early Modern Spain, and its colonies, cannot be overstated. At the same time, limpieza de oficio (occupational purity) was perhaps more visible and therefore more important in the local-scale negotiations of identity that took place daily in colonial society. Certain occupations were morally hazardous (*vil oficio*), particularly those associated with manual labor or (in the popular imagination) with petty crime. Examples include tailors, actresses, and interestingly – couriers (Hill 2005:221, 32). On the other hand, it appears that by the late 18th century even members of the casta of "Indios" could advance their social standing by engaging in appropriate forms of commerce (Hill 2005:237). Aspects of identity established in the early colonial period were in some ways becoming more fluid. At the same time, the race and class based identities of the 19th century had not yet fully emerged (Guardino and Walker 1992).

Relative to the earlier Colonial or later Republican periods, Bourbon Latin America was a place of complex and fluid identities (Beltrán 2007). This fluidity was not without purpose.

Regardless of how identity was negotiated in a quotidian local context, one's place in the legal hierarchy was associated with significant differences in financial and labor obligations. For many people classified as indigenous or mestizo, "there was a perennial struggle to whiten one's social

status, not least because to be classified officially as indigenous rendered one liable for tribute, the capitation tax paid only by that sector of society" (Cahill 1994:336). The supposed problem of Indians posing as mestizo to avoid tribute payments was commonly noted by colonial census administrators (Pearce 2001). This problem exemplifies the intersection of casta and estado, as legitimate caciques and their descendants were exempt from tribute from the early colonial period on, if not from the Late Horizon (Albiez-Wieck and Gil Montero 2020; Cahill 1994:336). At the same time, even common indigeneity carried its own small suite of legal benefits: "indios were not always the poorest segment of society: communal plots served as a kind of social 'safety net', whereas non-indigenous groups often had no access to land, and eked out a meagre living as best they could" (Cahill 1994:337). Thus, throughout the colonial period, individuals had incentive to portray themselves variously as Spanish, mestizo, or indigenous depending on local economic context. This fluidity was always in some way threatening to colonial order, but it appears to have been of increasing concern to eighteenth century merchants, and officials like Carrió, whose colonial order required stable sources of labor and predictable markets in which to sell their wares (Meléndez 2017).

Those identified as mestizo seem to have been particularly well positioned to manipulating this context of shifting identities, and that is perhaps why Carrió identifies them as "more adept at roguery and malice than people from the coast ... worse than gypsies, although in a different way" (Concolorcorvo 1965:39–40). To colonial agents like Carrió, the fact that individuals moving along 18th century roadways could not always be readily classified on the basis of their appearance was a source of anxiety. As a result, those seeking to classify individuals relied on other signs. As Cahill notes, in "a society (such as colonial Peru) characterized by low levels of literacy, other visual and mnemonic skills tend to be highly

developed, not least at the lower end of the social pecking order. An alternative system of signs evolves..." (1994:340). Cahill sees evidence of a continuity in clothing as a social status marker between the prehistoric and colonial periods in the Andes. As the colonial period dragged on, surely other signs became markers of casta as well. To Carrió, these signs came primarily in the form of an individual's relationship to animal labor.

It is quite clear, for example, that Carrió considered horseback riding to be a marker of non-indigenous identity. In describing the departure of mita laborers for the mines of Potosi, Carrió notes:

"These numerous families, so called because each married Indian takes his wife and children with him, are divided - with their small tents which they transport on llamas or small asses - into troops, it being very rare for them to have a mule or a horse since Indians are not inclined to use these animals on their extended trips." (Concolorcorvo 1965:194)

Mounted travel on a personally owned horse or mule was thus largely the preserve of Spaniards and mestizos. Indigenous men and women interacted with mules and llamas as drivers and herders, marked by their pedestrian relationship to animal labor (Corcoran-Tadd and Pezzarossi 2018).

Alternatively, laborers associated with animal management could theoretically be drawn from any casta. However, Spaniards and mestizos who worked alongside animals and managed Indian labor were naturally untrustworthy by virtue of the contrast between casta expectations and their position. In discussing the logistics of hiring transport from Santa Rosa to Chungará, Carrió relays advice from an unnamed postmaster:

"the Spaniards are always wronged, because the Indians, if they are not paid their advance salary and reimbursed to their satisfaction for their foodstuffs, do not supply provisions or mules, holding them back two or three days under pretext of their having strayed through the hills and ravines. If [the foreman] is a Spaniard or Mestizo, he efficaciously charges the Indians, in the presence of the traveler, to bring the mules before daybreak, and immediately, as if he were discussing another matter, he tells them in their own language to go on with their business and not bring the supplies for two days, or whatever time he whimsically decides, a trick in which the Indians are very clever and cunning" (Concolorcorvo 1965:195).

The direct association of Spaniards or mestizos with animal management, then, was to be understood as a stain on their limpieza de oficio. Just as Carrió believed indigenous Andeans did not ride, he did not see fit for Spaniards and mestizos to be associated with the intimate work of harnessing and driving. Understanding how these expectations came about, and how they were reproduced necessitates a closer look at the 18th century Camino Real as Carrió experienced it.

2.2 El Lazarillo and the roads that shaped it

A historical document cannot be fully understood solely from broad historical patterns. Following Voss (2007), it must also be placed into the specific context within which it was written. For *El Lazarillo de Ciegos Caminantes*, the immediate context is that of an eighteenth-century colonial highway in the Andes. In order to understand why Carrió links identity with mobility patterns in *El Lazarillo de Ciegos Caminantes*, it is helpful to understand how roads and the people who used them came to be in the late eighteenth-century Andes.

Just as the Bourbons sought to reform mining, defense, and census taking, so too did they attempt to modernize and centralize colonial transport infrastructure. The eighteenth-century saw the Crown reverse an earlier course that had allowed roads and lodging infrastructure to be independently planned and financed largely by local communities. While economically significant routes had been termed *Camino Real* from the 16th century, the designation was often in name only (García-Albarido 2016:18). Although the royal mail had a presence in Peru from the early 16th century, the construction of a system of *postas*, postal stations manned by a resident keeper who provided food, shelter, and fresh horses to royal mail couriers, appears to have been an eighteenth-century innovation (Corcoran-Tadd 2017:73). An official Royal decree calling for the construction of a posta system came in 1794, though El Lazarillo attests to the presence of postas on Camino Real from the 1770's on (Concolorcorvo 1965; García-Albarido 2016:18–19). In some cases, postas within the former territory of the Inka empire may have simply been Spanish adaptations of Inka tambos (Corcoran-Tadd 2017). In other areas, they appear to have been a uniquely eighteenth-century form of infrastructure. Carrió claims that no postal establishment of any kind existed in Buenos Aires before 1747 (Concolorcorvo 1965:62). If it is assumed that postas were first established in significant urban centers, then the entirety of the postal infrastructure (between Buenos Aires and Potosi at least) likely reflects a flurry of development temporally bounded between 1747 and the middle 19th century. By the late 19th century, animal based transport had largely been displaced by the introduction of the railroad (García-Albarido 2016:38–39).

As places of lodging, rest, and refreshment, the postas were intimately connected to the road on which they sat. They were surely affected as the principal routes and the density of traffic along them changed over time. The overland route between Lima (and other smaller

Pacific ports) and Potosí was traveled for several hundred years. For the first several centuries of the colonial period, silver flowed down from Potosi, first along the same course as the Camino Real as described by Carrió, and then along regional routes such as the "ruta de la plata" to the Pacific coast. Manufactured goods, imported by traders on the coast, went the other way. Similarly, mita laborers sent to the mines of Potosi likely would have taken small roads from their communities before joining the Camino Real on their way to labor assignments (Bakewell 1984). As they traveled, especially in the Andean highlands, they crossed a network of roads dotted with Inka infrastructure, Toledan reducciones, and Spanish ventas and mesones, forms of private inns with Iberian precedent (Corcoran-Tadd 2017; García-Albarido 2016). Postas built between Potosi and Lima were constructed over this landscape. As time passed, contraband increasingly flowed from Potosi south and east to Buenos Aires on the Atlantic coast. As much as a quarter of the silver produced in Potosi may have evaded taxation in this way (Stein and Stein 2000). Recognizing this loss of revenue, the Spanish Crown created the Viceroyalty of the Río de la Plata, with its capitol at Buenos Aires, in 1776. The ubiquity of the contraband trade may have spurred the development of some road infrastructure between Buenos Aires and Potosi even before state investments began in the late 18th century, but it is likely that many of the postas between Buenos Aires and Potosi consist of newer construction as compared to those between Potosi and Lima.

The people moving along these routes also changed over time. Traditional interpretations of the Inka highway argue that the road was limited to military or other official state use, though this would have been difficult to enforce (Garrido 2016). In the colonial period, roads became places of commerce. *Trajinantes*, or caravan traders, became synonymous with the roads on which they moved. Glave (1989) distinguishes between two eras of commercial traffic in Andean

livestock caravans, the "época de las cargas" or the "porters' epoch" from the early to midsixteenth century, and the "época de tratos y contratos" or the "epoch of deals and contracts" from the late sixteenth through seventeenth centuries. The first period was characterized by the exploitation of indigenous labor, directly controlled by Spanish encomenderos, to move goods. In the second period, a combination of corve mita workers and wage labor maintained the roads and staffed the rest stops. This labor force was managed by *trajinantes*, "the new Andean merchant class ... constituted by Spanish traders, officials of the Crown, corregidores and indigenous leaders" (García-Albarido 2016:25). Some of these trajinantes had access to capital and traded their own goods, while others served as contracted transport for the property of others (Glave Testino 1989:57–63). In the latter case, it was apparently common in turn for trajinantes to sub-contract the physical labor of their profession to "foremen", who worked alongside "aides" and "attendants" to do the physical labor of herd management (Concolorcorvo 1965: 122).

"This trade, or trajin, as it is called, is more stable than any other which has great losses and in which the profits are not in proportion to the work ... There is no merchant in the entire world who has such physical labor because, besides coming and going, these men are forced into continual movement for their sales" (Concolorcorvo 1965:122).

As Carrió makes clear, a cycle of low wages and debt forced both trajinantes and their contracted laborers into a constant cycle of movement. "The muleteer can thank God for the fact that after four years he collects the money for his herd, which, with another year spent in a round trip to Salta, makes five years, during which he is supposed to eat and buy clothes and shoes from his earnings" (Concolorcorvo 1965:123).

By the late 18th century, trajinantes were increasingly contracted in turn by a new class of traveler – the 18th century "business traveler" (Hill 2005:15–17). Though these new travelers moved along the same roads as trajinantes and pursued similar goals, they were separated by two characteristics: a higher level of access to capital and a larger degree of distance between themselves and the intimate labor of harnessing, driving, and tending to animals. On their travels, business travelers utilized the same transport infrastructure that had originally been intended to support rapid mail couriers. "Just as many drivers today use rest areas to refuel and get a bite to eat, business travelers in eighteenth-century Spanish America visited the offices of the posts in sparsely populated areas to exchange mules or horses and to purchase supplies for the rest of the trip, and they often followed the postmen's routes" (Hill 2005:15).

Carrió traveled in a manner similar to those business travelers, and his account clearly reflects their embodied experience of travel and road infrastructure. He spent most of the trip riding, even during the flatter portions of the trip between Buenos Aires and Jujuy in which he could have ridden in an ox-drawn cart. "The lazy passengers stay in the carts with the windows and doors open, reading or observing the condition of the road and other aspects presented to their view. The more energetic and curious persons ride horseback, going ahead or falling behind at their will" (Concolorcorvo 1965:95). Carrió describes a day's travel in the flat country like so:

"Since oxen are affected only by the heat of the sun, the caravans regularly stop at ten o'clock in the morning and after a roundup has been made, depending on the number of carts, each driver unhitches his four animals and the oxen keeper puts them with the replacements so they may eat, drink, and rest until at least four o clock in the afternoon. In these six hours, more or less, food is prepared for the people [by attendants] ... some

of the passengers sit in the shade of the high trees, others in the shadow cast by the cart ... a diligent person will person will take the trouble to pack [a small stool] inside the cart, along with a folding table which is useful for eating, reading and writing" (Concolorcorvo 1965:93–94)."

In a short passage, this makes clear that Carrió understood the labor of animal driving and wrangling to be beneath the business traveler. Business travelers had the choice of riding on horseback or sitting in carts, but respectable travelers chose to ride. Even though they rode, they expected to be free from the burden of harnessing and tending draft animals in order to focus on the landscape or their books. They were also able to roam the countryside, traveling ahead or falling behind at their leisure. When traveling with mule trains instead of oxcarts, the same pattern seems to have held true only with different timing (Concolorcorvo 1965:33).

As a result, the business traveler moved across the landscape more quickly, and was surely capable of spending as much or as little time as they liked in postas and the other small communities which dotted the countryside. Carriós text reveals multiple social encounters with the postmasters, military officers, and other "Dons" who managed the state's postal infrastructure along the route.

Throughout the text, Carrió narrates the various estates and postas that he passes by (for a particularly lengthy example, see Concolorcorvo 1965: 69-74). Carrió generally seems to expect that those staffing the postas will be honorable gentlemen from the casta of Spaniards. When this is not the case, such as in the case of the postmaster of Santiago de Chile, a "common muleteer" or the postmaster of Potosi, who had been a "puppeteer" in Spain before his emigration to America, Carrió deems it worthy of attention that men of low estado and limpieza ranking, even

within the casta of Spaniards, had attained such a position (Concolorcorvo 1965:156–167; for discussion of puppetry as a low-prestige Spanish folk art see Keller 1959).

Carrió thus saw the posta system, and the Camino Real more broadly, as being built for people like himself. Business travelers and postmasters, invariably honorable, proto-capitalist, Spanish, and male were the cornerstones of the road. Foremen, aides, and attendants moved across it out of sight and out of mind for the most part, with the exception of their attempts to defraud the naïve business traveler. In order to understand why Carrió's labor of representation is constructed in this way, it is necessary to understand the specific motivations of both the author and his audience.

2.3 El Lazarillo – Author and Audience

Alonso Carrió de la Vandera was born in Gijón, Spain in 1715. The son of a local alderman and hildalgo, Carrió declined to follow his older brothers into the priesthood and instead took up work as a merchant. Carrió left Iberia for New Spain in 1735, working as a merchant and travelling widely throughout New Spain in the 1740's, a period in which the Bourbon reforms began to reshape local bureaucracies in that region (Hill 2005:6). Carrió left Mexico City for Lima in 1746, and in 1750 married a prominent Lima socialite (Johnson 1993:108). Between 1746 and 1768 he served in a variety of government positions, including supervisor of mines and as a member of a military regiment devoted to combating coastal piracy. In 1768, he accompanied the Jesuits out of South America, returning briefly to Cadiz, Spain. Carrió returned to Peru in 1771 after having been appointed second commissioner of the Royal Mail in the territory and charged with inspecting the roads and postas, subordinate only to Jose Antonio de Pando, appointed administrator in 1769 (Johnson 1993:108).

Carrió arrived in Buenos Aires in the July of 1771. On November 5th of that year he began his official inspection of the postal system, a duty which would involve a nineteen-month trek over the Andes. In the city of Cordoba, he was joined by an indigenous guide, Calixto Bustamente Carlos Inca, who accompanied Carrió all the way to Potosí. Carrió navigated the Andes from there through La Paz, Cusco, and Huancavelica, arriving in Lima June 6, 1773 (Johnson 1993:108). However, it would be several years before Carrió published his "guide for inexperienced travelers between Buenos Aires and Lima" (Concolorcorvo 1965).

Carrió's reception in Lima was perhaps less spectacular than the one he had imagined over the course of almost two years. While Carrió was en route, the Spanish Crown had officially begun to implement the suggested reforms of his superior, Jose Antonio de Pando. The inspection report, which Carrió had spent nineteen months researching, suddenly had no purpose. Pando published his own recommendations in the form of a book titled *Reglamento general*, *y metodico de los dias*, *y horas fixas*, *que se establecen*, *en que los conductores de à caballo*, *destinados á servir el correo ordinario* in 1772.





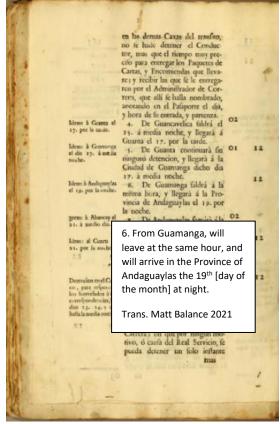


Figure 2.3. Example times and distances given in the Reglamento General, page 10.

Pando's work provides a more rigid and bureaucratic view of the South American posta system in the eighteenth-century. As the title perhaps implies, it reads like a government document. It provides not only the order of stops, but also a timetable of sorts showing on what days and at what times correspondence will leave and arrive at certain postas. Pando's work is focused much more on the use of the posta system by couriers than by business travelers or trajinantes. As a result, it contrasts strongly with the guidebook-like language with which Carrió describes landscapes and the travelers moving through them. However, it nevertheless has significant value for the archaeologist or historian of the posta system. Pando distinguishes between towns with and without a *casa de correos*, an official state building explicitly designed for the collection,

organization, and distribution of mail. Interestingly, Carrió frequently describes stops as postas, even when Pando does not indicate the presence of a "casa de correos". It is worth noting then that what a "posta" was, to a traveler reading Carrió's work, and to a government official reading Pando's, were likely different. That seemingly innocuous difference appears to reflect a wider conflict between old colonial power structures in Lima and a new merchant class in Buenos Aires. Pando seems to have understood the posta system primarily as a form of communication infrastructure. To Carrió and his contemporaries, the postas were primarily designed to serve as lodging for the new class of traveling merchants.

The establishment of an independent Viceroyalty of the Rio de la Plata, and thus the official designation of Buenos Aires as destination for Potosi silver, occurred in 1776. In practice, however, merchants in Buenos Aires had been illicitly trading with foreign vessels and receiving Potosi silver for more than a century (Hill 2005:120–124; Moutoukias 1988). The 1776 decision was a source of deep resentment for many prominent Peruvian merchant families, who lost out on a trade monopoly (at least on paper) with the stroke of a pen. As a member of the Peruvian Viceroyal administration, a former merchant, and the husband of a powerful *limeña*, Carrió surely experienced the pull of this conflict. Carrió's friendship with Don Manuel de Basilvibaso, the postmaster of Buenos Aires, and his charitable description of the city and its inhabitants, seems to position Carrió firmly on the side of Buenos Aires and the Bourbon state's push for economic efficiency (Concolorcorvo 1965:Chapter 2). This is perhaps one reason why Carrió was upset with the state's decision to implement Pando's recommendations before his own could be heard. Pando chose Lima as the starting point for the postal route, page one. Carrió's narrative begins in Buenos Aires.

In 1775 or 1776, El Lazarillo de Ciegos Caminantes went to press to be circulated both in Lima and Madrid. In order to give "the impression that El Lazarillo was a report routinely filed at the conclusion of his mission and not the result of growing frustration and bitterness, the publication date is given as 1773" (Johnson 1993:109). The press was listed as the La Rovada (trans: "the stolen") press in Gijon, Carrió's birthplace. There was no La Rovada press in Gijon, though the invented name may be an insinuation that Pando had stolen Carrió's opportunity. While the work acknowledges a basis in Carriós diaries and notes, authorship is ascribed to an invented illegitimate Inka descendant in the form of Concolorcorvo, perhaps in an effort to shield Carrió from libel charges stemming from his frequent criticism of certain postmasters and administrators and his assertions of widespread fraud. This effort carried through into the very organization of the novel, which has two principal characters. The first is the supposed author, Concolorcorvo. He is of mixed, part indigenous heritage, with a dubious claim to Inka nobility (Robles 2008). The second is a generalized Spanish official, who traveled alongside Concolorcorvo but is referred to only as "the inspector". The fact that Carrió both hid behind a false author and falsified the publication date of his work seems to indicate that he was aware of its politically charged nature.

Carrió was appointed to head the Lima mail in 1777, showing that he had distanced himself sufficiently from his critiques to maintain a government position in the Viceroyalty of Peru. Shortly thereafter, he acknowledged and defended his authorship of *El Lazarillo* in a letter to Pedro Rodríguez de Campomanes, an influential Spanish economic scholar and former minister of the Treasury (Navarro 2004). In the same letter, in which Carrió expounds on his own qualifications, is a hint at what he felt his opponents lacked. At the root of Carrió's critique was the assertion that Pando had not spent the same amount of time out in the field.

"me apliqué al Comercio en calidad de viagero, pues aunque fuí cinco años

Corregidor, siempre fue caminando de Pueblo, en Pueblo estudiando en el caracter de los
hombres, calidad de los Payses, y sus fondos, y por esta razon soy uno de los mas

Practicos de la Nueva España, y el Perú"

"I applied myself to trading as a traveler, because although I was a Corregidor for five years, I was always traveling from town to town, studying the character of the men, quality of the countries, and their funds, and for this reason I am one of the most practical [men] in New Spain, and Peru" (trans the Author 2020, Extract from 1777 Letter from Alonso Carrió de la Vandera to Pedro Rogriguez de Campomanes, transcribed in Navarro 2004: 502:504)

Pando, in Carrió's opinion, did not have the requisite experience as a merchant necessary to make recommendations for the postal system. Pando was not the sort of "curious man" interested in seeing the material conditions of the countryside and understanding the way that new market dynamics were transforming travel along the Camino Real. Rather, Pando had asserted the power of the state from his comfortable seat in Lima. Carrió spent the last few years of his life continually agitating for reform before dying in Lima in 1783 (Johnson 1993:109).

Carrió and his works were certainly controversial in their own time. That is perhaps why his work continues to fuel scholarly debate more than two centuries after it was created. One of the largest aspects of this debate concerns the intended audience of *El Lazarillo de Ciegos*Caminantes. Who was Carrió primarily writing for? What did he want to tell them?

There are, of course, no simple answers to those seemingly simple questions. Reflecting her concern with separating the discursive from the geographic, Hill notes a distinction between

practical business travelers, interested in the work as a guidebook, and "armchair travelers" – "the supposedly enlightened literati and ministers in Europe who had never been to the Americas (Hill 2005:16). Innuendo and humor, as well as his practical knowledge of trade practices ingratiated Carrió with the business traveler looking for candid travel advice. References to classical mythology, Ovid, and Virgil meanwhile signaled Carrió's own place as a social equal to the elite of European society and the upper echelons of the colonial political establishment. As a result, much of *El Lazarillo* is Carrió's attempt at walking a fine line, what Hill terms "semantic variegation" that "allowed Carrió to speak to multiple audiences at the same time, delivering a different message to each, which was absolutely essential to his negotiation of the Bourbon cultural paradigm imposed by the men who hired him" (Hill 2005:17).

But what is the historical archaeologist to make of all this semantic variegation? On the one hand, it is quite clear that both Carrió's embodied experience, as an elite mounted traveler, and his Bourbon influenced economic and political beliefs affected what he saw and what he chose to record about his experience traveling along the road. His desire for order and stability in an increasingly fluid ethno-economic system led him to focus on an individual's relationship to animal labor as a foundational component of their identity. How then, can we possibly draw from Carrió's distorted textual construction information we can use to understand the lived experience of those who traveled the road alongside mules and llamas?

Following Voss' framework, the next step would ideally be to identify postas as archaeological sites and compare the material and historical records. However, little archaeological research has been carried out on the Camino Real. That is not to say, however, that there are no possibilities for exploring alternative perspectives on Carrió's narrative. Where site-based archaeological comparison is impossible or impractical, I argue that the most

productive path is firstly to broaden the scale of analysis, to understand the route, rather than individual stops along it, as an artifact of infrastructure capable of being approached archaeologically. Secondly, through using sources beyond excavation data in inventive ways, new opportunities emerge for exploratory uses of tools such as GIS software.

The following chapter is an attempt to move beyond the constraints of Voss' original fourth step, through the creative use of geospatial data. It therefore begins with a set of simple questions: At what speed could the mounted business traveler move each day? How does this compare to how contracted laborers moved with their mule caravans? After revisiting the patterns of movement associated with identity in Carrió's text, the following chapter brings these patterns of movement back into conversation with the differential experience of infrastructure. By analyzing the patterns of movement alongside the spatial distribution of postas along the Camino Real, we can gain a new perspective on how the spatial arrangement of postas along the route structured qualitatively different experiences of the same infrastructure. After doing so, we can return to the question of the archaeological record, of postas and the objects deposited near them, with a fresh perspective.

ELLAZARILLO CIEGOS CAMINANTES DE. desde Buenos-Ayres, hasta Lima con sus Itinerarios segun la mas punqual observacion, con algunas noticias utiles á los Nuevos Comercian. tes que tratan en Mulas; y otras Historicas. SACADO DE LAS MEMORIAS QUE hizo Don Alonío Carriò de la Vandera en este dilatado Viage, y Comission que tubo por la Corre para el arreglo de Correos, y Estafetas, Situacion, y ajuste de Postas, desde Montevideo. POR DON CALIXTO BUSTAMANTE CARLOS Inca, allas CONCOLORCORVO Natural del Cuzco, que acompaño al referido Comifionado en dicho Viage , y eferibio fus Extractos. CON LICENCIA. En Gijon, en la Imprenta de la Royada, Año de 1773.

"Guide for Blind Travelers from Buenos Aires to Lima with Itineraries/Routes Based on the Most Precise Observation and some useful Information for New Merchants dealing in Mules and other Historiographic information.

Excerpted from the memoirs prepared by Don Alonso Carrió de la Vandera during the lengthy journey and commission that he had been given by the court in Lima for the improvement of delivery of letters and parcels, Location and Relocation of the Posts from Montevideo [to Lima]."

Translated by Ruth Hill, 2005

"By Don Calixto Bustamente Carlos Inca, aka Concolorcorvo [?] of Cusco, that accompanied the above-named Commissioner on said voyage, and wrote his excerpts."

Translated by the Autor, 2021.

Digitized, John Carter Brown Library

https://archive.org/details/ellazarillodecie00conc/page/n3/mode/2up

Figure 2.4. The title page of an early edition of "El Lazarillo de Ciegos Caminantes".

CHAPTER THREE: RETRACING THE CAMINO REAL

The Camino Real, from Lima to Buenos Aires, was a road that moved across more than 4,000 km of rugged terrain. Dotted along it were growing urban settlements, farms and ranches, small indigenous communities, official rest stops known as postas, and informal campsites known as pascanas. For the couriers of the royal mail – the road was a blurred backdrop traversed at speed. For the "business traveler" the road was a place to travel in the pursuit of profit, but not at the expense of comfort. For muleteers, the road was a space of slow, routine, and physically demanding movement. While all three groups shared the route, business travelers and muleteers were more closely linked to each other than either group was to the Spanish state's postal couriers. This chapter presents a GIS analysis comparing the movement of business travelers and muleteers, in order to gain an additional perspective on how their patterns of movement and rest are or are not presented in Carrió's labor of representation.

Business travelers moved in small groups on horse or mule back, perhaps accompanied by an Indian guide and the most valuable of their trade goods. Muleteers, under contract with these business travelers, followed behind at a slower pace. Business travelers, as portrayed by Carrió, expected to be accommodated in comfort most nights: to have their beds made and their meals prepared for them at the next inn or posta. Muleteers were prepared to spend nights out, often in informal campsites known as pascanas. This practice has deep roots in Andean pastoral tradition. However, by the eighteenth century, business travelers increasingly expected their goods to be moved at the pace of the market, not at the traditional pace of Andean pastoral practice. In order to encourage this, business travelers used the postal system to structure not only their day's travel, but also the distribution of wages to the muleteers in their employ. As a result, the postas

and the roads between them were spaces in which two different classes of traveler were drawn into interactions mediated by the emerging power dynamics of wage labor and colonial capitalism. These spaces were to some degree shared, but the experience of moving through and between them was not.

When attempting to model, recreate, or quantify the experience of travel, there are a number of factors to consider. GIS viewshed analyses, for example, have often been used to understand something of the perceived experience of humans situated on or moving through a landscape (Franklin 2020; Lake et al. 1998; Wernke et al. 2017). The innately human perception of the passage of time provides another opportunity to model some aspect of the embodied experience of travel. Quantifying travel time further provides a potential window through which to compare how different groups of people moved along the road and between sites, and in so doing, had qualitatively different experiences of infrastructure.

I thus first discuss the methods by which I identified the route of the Camino Real as described by Carrió using GIS software. I next model travel time between each posta at three different speeds, in an effort to understand how the experience of traveling differed for different groups of people. After doing so, I examine patterns in travel time between distinct segments of the route specifically focusing on the experiences of caravan drivers and business travelers. I then return to a discussion of *El Lazarillo de Ciegos Caminantes*, in order to explore how the calculated figures might shed new light on the experience of travel as depicted in Carrio's representation. As Franklin (2020) states, GIS has often been used in archaeology to provide a means by which spatial data can be quantified and compared, and thus hypotheses can be tested. The capacity of GIS tools and methods to be used "playfully" – to raise questions rather than provide answers, is only in the last few years being explored as an outgrowth of wider interest in

the digital humanities and social sciences. I thus frame my GIS process here as one of raising new questions and new perspectives. How can GIS provide new perspectives through which to analyze both the documentary and material records? How can it provide a lens on the qualitatively different experiences of infrastructural inequality? As an exploration of that question, I thus aim to understand how the Camino Real and the postas alongside it were "perceived, encountered, remembered and made meaningful through the situated, embodied experience of humans in motion" (Franklin 2020:852).

3.1 Methods

In order to understand the Camino Real, it is first necessary to relocate the course of the route on modern maps. Using distance tables prepared by Walter Kline (1965), who not only translated the work into English, but also consolidated the distance tables with which Carrió began many of his chapters into a continuous appendix of place names and distances, I derived a sequentially ordered list of place names along the route. I added to this list place names identified through their inclusion in the narrative, without known distances (Carrió occasionally omits distances when he thinks they are of little interest to the reader) to form my own ordered list of toponyms associated with the route.

Beginning with these place names, I sought out matching toponyms using Google Earth, OpenStreetMaps, and mindat.org (an open database used mainly by geologists, but which contained a number of small population centers located in neither of the other sources). The pictured map of the post road from Buenos Aires to Potosi, drawn in 1816 by an unknown English- speaking author and currently held by the US Library of Congress, provided another source of place names between Buenos Aires and Potosi.

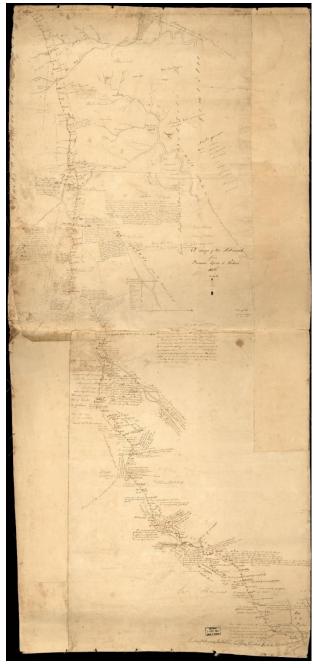


Figure 3.1. Anonymous. "A map of the post-road from Buenos Ayres sic to Potosi." 1816. Map. Library of Congress 2012592246 https://www.loc.gov/item/2012592246/

Using the assumedly durable place names of large modern settlements, I georeferenced this map in order to locate several of the smaller postas between Buenos Aires and Potosí. Of the 113

named locations in Kline's appendix, I was able to securely identify 91 using either modern toponyms, the 1816 map, or both. In some cases, places were identified in cases where the position agreed and the phonetic differences were minor, on the assumption either that Carrio mis-transcribed the sound or that sound change occurred between the late 18th century and the official inscription of the toponym (for example, Sica-Sica and Sicafica or "Tiay Guanaco" and Tiwanaku). Of the locations I could not identify positively, several are present in period maps, but at scales that make exact identification an exercise in speculation. From this information, I

was able to understand the general path of the route.

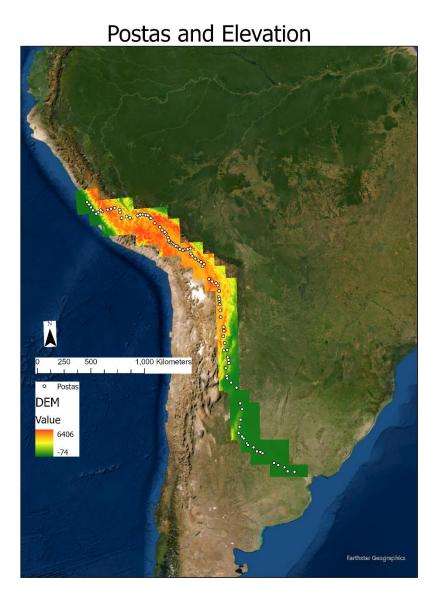


Figure 3.1. Posta locations and elevation data as identified from Kline's translation of El Lazarillo de Ciegos Caminantes (1965). Values in Meters Above Sea Level.

Using the same information, I was able to generate a simple linear model of the Camino Real. However, pedestrian movement across topographically variable landscapes is never linear. Route choice on the Camino Real was surely affected by numerous factors, including the availability of water and forage and the need to link market towns. Slope was

likely another major factor, especially given its effects on load bearing animals (Tripcevich 2008). In order to understand the effect of slope on movement along the route, I next created a raster mosaic constructed from 1 arcsecond (approximately 30m) resolution SRTM Digital Elevation Model scenes downloaded from USGS EarthExplorer. This raster mosaic covers the entirety of Carrio's route. Small data gaps or errors were filled using the "Fill" tool in ArcGIS pro, though large data gaps in the high central Andes were left unfilled in order to avoid introducing significant error to the DEM. Thankfully, these large data gaps do not appear to significantly impact the route as described in El Lazarillo, being located outside the likely course of the route. Using the identified points from Kline's translation in conjunction with a rasterized model of elevation, I then ran a Distance Accumulation analysis using ArcGIS Pro. The distance accumulation tool allows for complex movement modeling away from or toward a source feature that takes into account user-definable cost factors for vertical and horizontal movement (Figure 2). It is an updated tool that retains much of the core functionality of the Path Distance tool frequently used in prehistoric archaeology for constructing least cost paths (White 2015). Like the earlier path distance tool, the cost of vertical movement can be input as a customized table file. For the purposes of this project, three trials were run from each named location using three different tables: one that models pedestrian movement, and two which model mounted horseback movement (Figure 3). All three tables were based initially on Tobler's (1993) "hiking function", derived from empirical study of modern recreational hikers on varying surfaces. The "horseback functions", which were also used to approximate mule riding in rough terrain, were modified by multiplying speeds by 1.25 (for relaxed pace over distance) and 1.75 (for sustained pace over short distances) respectively. The value of 1.25 is drawn from Tobler's recommendation for horse

movement modeling, while the value of 1.75 was reached in an attempt to set the maximum speed at a fast trot (~13km/hr) (Goosewing Ranch; Tobler 1993). These three values are taken to represent, at a very simplified level: caravanners traveling alongside their animals, business travelers moving on horses or mules at a relaxed pace, and couriers moving rapidly and changing animals frequently in order to maintain maximum speed (Figure 4).

Although these are relatively basic modifications of the original function, it is best to be

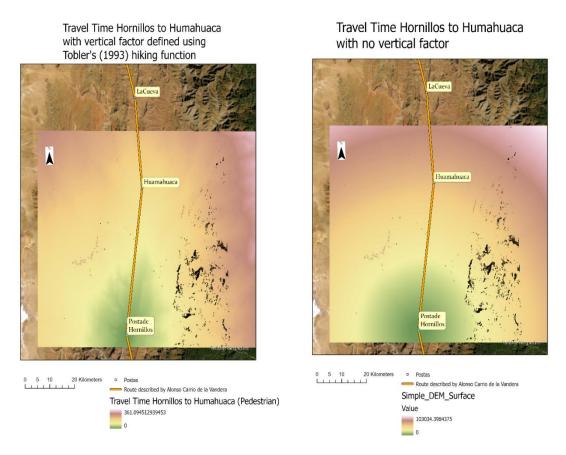


Figure 3.2. Travel cost from Posta de Hornillos with (left) and without (right) a defined vertical factor. Units in hours (left) and meters (right). Note that travel time appears uniform across varying topography without a defined vertical factor (right).

conservative when analyzing endurance travel over rough terrain and long distances on horses and mules. Although several other functions are available for modeling horse movement, they are based either on laboratory treadmill exercises or on thoroughbred racehorses (Eaton et al. 1995; Lugo and Alatriste-Contreras 2020; Self et al. 2012). In these

cases, an experimental design rooted in racehorse training would appear to significantly overestimate maximum speed in an endurance context. The modified Tobler's function is

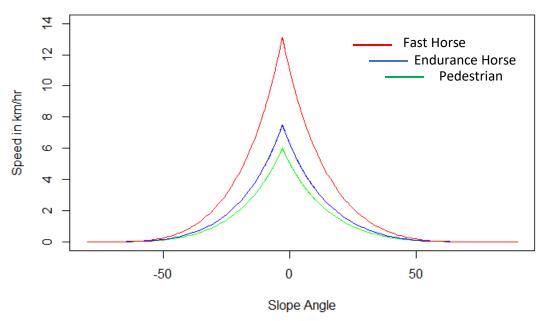


Figure 3.3. Movement speed in km/hr plotted against slope angle for 3 different methods of travel. Originally from Tobler 1993, modified by the author.

likely flawed as well, in that it overstates the speed of descending quadrupeds (Tripcevich, personal communication, 2020). Until more empirically derived models of horseback movement over distance are published, however, a modification of Tobler's function likely represents the most plausible model of horseback riding currently possible (Sunseri 2015).

From each positively identified location derived from Kline's distance tables, all three functions were used to arrive at a travel time to the next positively identified location moving from east to west in accordance with Carrió's narrative structure. This process was first performed on a selection of major cities that seem to have been viewed by Carrió as self-evident breaks in the route (as evidenced by his use of spatialized chapter titles). However, it became clear that this form of larger scale modeling is most effective for flat sections of the route (such as on both coasts), and that it underestimates travel time for sections of the route

that are more topographically variable. As a result, the same process was performed iteratively from each positively identified location to the next, beginning in Buenos Aires. This workflow is more computationally complex but produces a more realistic estimate of travel time. With the exception of obviously impassable bodies of water (such as Lake Titicaca and the Pacific Ocean), the rasters were left unmasked in order to avoid imposing a "known" path where one has not been identified archaeologically. Travel time to the known postas was calculated using the "Sample" tool in ArcGIS pro to find where each known location intersected with each of the calculated rasters. Travel times to unknown postas were then interpolated based on relative distances, given in leagues by Carrio, to known locations.

It is important to note that the unknown placement of some of the posta stops, as well as the simplistic manner in which Tobler's function models equestrian movement limit the quantitative utility of this geospatial analysis. These values should not be taken as absolute travel times, and in fact it is very possible that at multiple sections of the route the difference between pedestrian and foot travel may have been greater (across flat ground, in good weather, with well-maintained roads) or non-existent (in poor weather with muddy potholed roads). Carrió himself acknowledges that a certain section of road between Oruro and Caracolla could vary by as much as three hours of travel time depending on the weather (Concolorcorvo 1965:190).

For that reason, the absolute values provided here are not given as verified truths. However, they still contribute to a discussion of mobility, infrastructure, and inequality in a relative sense. Additionally, the fact that the absolute values reached are a measure of time, rather than more abstract distances, affords an opportunity to empathize with the daily rhythms of travel as experienced by various classes of traveler along the Camino Real.

3.2 Results

The full results of travel time analysis are presented in Appendix I. However, a few basic patterns are worth discussing. On average across the entire route, slow horse riders reached the next posta an average of 1.4 hours faster than pedestrians, and fast horse riders reached the next posta an average of 3 hours before pedestrians. The distinction is less extreme though still noticeable when using the median values. In reality, the disparity was likely often greater when considering that large llama or mule caravans are often slowed down by choke points in the steep topography of Andean road networks. In a traditional pastoral context, animal caravans were likely further slowed by frequent stops to water and graze the herd. This is certainly the case for contemporary llama caravans documented ethnographically and ethnoarchaeologically (Nielsen 2000; Tripcevich 2008; Tripcevich et al. 2016).

In precontact Andean pastoral communities, llamas were used for the transport of both personal goods and those bound for exchange with other communities. However, mules were increasingly used in place of llamas for trade purposes by the 18th century, likely due to their higher load bearing capacity. This occurred even in areas where llamas were better suited to the terrain, as evidenced by the staggering mortality rate for mules in the high mountains (Corcoran-Tadd and Pezzarossi 2018:92–93). Carrió remarks that guides and drivers were wont to stop at shrines "which are usually at junctions of roads or the crests of hills", but that they could be made to "double their pace" with sufficient payment (Concolorcorvo 1965:34–35). Osteological evidence of mules from the colonial and Republican periods likewise indicates that herders had begun to push their animals to the physical limit and often to the point of death (Corcoran-Tadd and Pezzarossi 2018). Business travelers were therefore performing a constant calculus: how hard could they push the drivers and their mules before

the strain proved more financially damaging than the loss of time would otherwise be.

Muleteers were likewise forced to balance the demands of their employer with the health of the herd. For much of the following discussion, I therefore exclude discussion of couriers to instead focus on the interwoven, constantly negotiated experiences of business travelers and muleteers.

Table 3.1. Average travel time in hours between postas for the entire route, split by method of travel.

Hours Between	Pedestrian	Slow Horse	Fast Horse
Postas			
Average	6.9	5.5	3.9
Median	6.2	5.0	3.5

Table 3.2. The average travel time in hours between postas from the first to the second of the listed two cities, split by method of travel.

	Pedestrian	Slow	Fast
		Horse	Horse
Buenos Aires-	7.7	6.1	4.4
Cordoba			
Cordoba-Jujuy	8.3	6.6	4.7
Jujuy-Potosi	8	6.4	4.6
Potosi- La Paz	6.3	5.1	3.6
La Paz - Cusco	4.9	3.9	2.8
Cusco-Huancavelica	6.6	5.3	3.8
Hauncavelica-Lima	6.8	5.4	3.9

Even more interestingly, there are noticeable patterns regarding average travel time between postas depending on the relative age of the road segment on which one was traveling. Segments located east of Potosi have an average posta spacing further apart than those located to the west. Carrio chose to divide *El Lazarillo de Ciegos Caminantes* into two parts, one describing the road between Buenos Aires and Potosi, and the other describing the road between Potosi and Lima. As discussed in the previous chapter, one could very easily see this division as a rhetorical device that mirrored the political tensions between Buenos Aires and Lima, a "descent into discourse" if ever there was one (Hill 2005). However, it does appear that this decision reflects a tangible difference in the experience of traveling along those roads.

To gauge how the traveling experience between Buenos Aires and Potosi, and between Potosi and Lima was different, travel times were grouped into two columns: East of Potosi and West of Potosi. While both sections of the route contain a few extremely long segments between postas, these can be understood as outliers. As a whole, travel times for travelers on the road west of Potosi appear both shorter and more consistent than could be expected to the east (Figure 5). Further, the disparity does not appear to be as great when any other major settlement is selected as the dividing point of the route (Table 3).

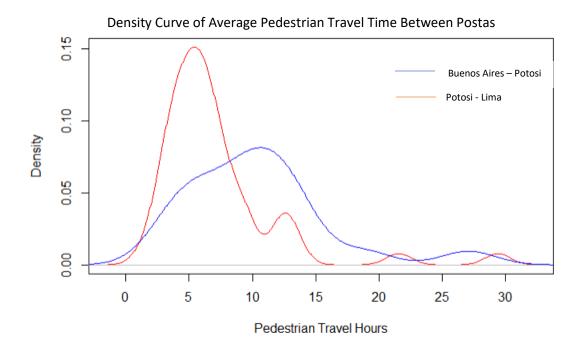


Figure 3.4. Density curves for travel time between postas west (red) and east (blue) of Potosi.

Table 3. 3. Pedestrian travel times in hours averaged for all postas East (Column 2) and West (Column 3) of the named location.

City	East	West	Difference
Cordoba	7.7	6.8	0.8
Jujuy	8	6.4	1.6
Potosi	8	6	2
La Paz	7.6	5.9	1.7
Cusco	7	6.7	0.4
Huancavelica	7	6.7	0.3

It is suggestive that a disparity between both the absolute value and the relative consistency of travel times corresponds with the divide between a relatively old route, that between Lima and Potosi built on top of previous Inka road infrastructure, and one built largely in the 18th century between Buenos Aires and Potosi. While there are likely environmental and demographic factors at play as well, it is nevertheless possible that infrastructure built in the context of nascent capitalism in the late 18th century Andes (on the east side of Potosi) prioritized different qualities

than a system built earlier in the colonial period, largely by consolidating an earlier Inka system (west of Potosi). To further address this discrepancy, absolute travel time values are worth interrogating further.

Nielsen's ethnoarchaeological study of modern Andean llama caravanners provides a comparative value for evaluating a day's travel. In modern camelid caravans, an average day's travel begins at 7am and proceeds until between 2 and 4 pm for a total of 9 hours of travel if no breaks are taken (Nielsen 2000:425). If the same basic schedule could be said to hold true for 18th century muleteers, then the average day's travel between Buenos Aires and Potosi would have permitted almost no break time. This pattern of a day's travel for muleteers is further evidenced by the route between Caiza and Potosi. Although it is a manageable distance (12 leagues), Carrió remarks that the steep gradients and rough road surfaces make it so that muleteers do not often make the trip in a single day (Concolorcorvo 1965:161). This is in agreement with the travel time table created through GIS, which approximates the pedestrian travel time from Caiza to Potosi at 11.4 hours (Table 4). Of the two other route segments that Carrió identifies as taking longer than one day for muleteers (Las Peñas to Oruro, and Guanta to Parcos) one is longer than 9 hours and one is described as impossible "with a double load" (Concolorcorvo 1965:269).

Table 3.4. Postas identified by Carrió as being noteworthy in taking longer than one day for mule caravans.

Origin	Destination	Hours	Leagues	Note by Carrió (page in Kline
				translation)
Caiza	Potosi	11.4	12	"rarely do muleteers make the
				trip in a single day" (160)
Las	Oruro	10.2	10	"the weakened mules of the
Peñas				Indians could not make it
				without rest" (184)
Guanta	Parcos	7.8	10	"cannot be done in one day
				with a double load without
				a change of mules" (269)

If 9 hours is interpreted as the reasonable limit to a single day's travel time, then 14 of 120 postas would have been multiple days apart for the business traveler, while 26 of 120 would have been multiple days apart for the muleteer. Of those long segments, 11 of 14 and 20 of 26, respectively, are located between Buenos Aires and Potosi. In terms of differential experiences of infrastructure, the muleteer would have spent approximately double the nights without formal accommodation as compared the business traveler. This may not necessarily have been a hardship. Carrió's narrative conveys an abhorrence for camping. Archaeological and ethnoarchaeological evidence, meanwhile, seems to indicate that overnighting at improved campsites known as pascanas was not an uncommon or perhaps even unpleasant experience for the muleteer. Nevertheless, muleteers were often obliged to conform to the same route traveled by their employer, who either distributed wages periodically at meeting points or left funds in the hands of the postmaster to be distributed to muleteers trailing behind (Concolorcorvo 1965:35). It is clear from an investigation of travel times that the posta system of the Camino Real, as

envisioned and experienced by Carrió, was not designed to facilitate the movement patterns of the common muleteer or his animals.

This quantitative evidence, produced by the playful use of GIS, provides more than ammunition for a discussion of statistical significance (Franklin 2020). It serves as a new starting point from which to reengage with the text of *El Lazarillo de Ciegos Caminantes*. Does Carrió record, even tangentially, the effects of differential travel timing on business travelers and muleteers? Even more broadly, can we use Carrió's work to gain insight into how muleteers and herders operated within a system designed without concern for their welfare?'

3.3 Discussion

Carrio's experiences with travel and the posta, by virtue of his identity, likely mirror those of the business traveler. He spent much of every day riding: on horseback between Buenos Aires and Jujuy, and on a mule between Jujuy and Lima. However, it appears that he spent most nights in a comfortable bed, with a warm meal, under a solid roof. This, to Carrió, was a natural and expected way to travel for any and all occasions. Postas served not only as room and board, but also as spaces for travelers of the appropriate class to converse and be entertained. "Of course the dust-covered, thirsty, and tired gentleman undoubtedly knows that couriers and inns or posts are as old as the world, because, to my way of thinking, they are a natural institution, as anyone who chooses to reflect at all will agree... The posts, I repeat, serve not only for serious matters but also for the convenience and diversion of curious travelers" (Concolorcorvo 1965:28–29). In Carrió's mind, postas were well worth the expense to the traveler and the effort of the state to maintain them. He states that "The posts are of much service... and although they are costly in themselves, they save much money by the brevity with which the trips are made"

(Concolorcorvo 1965:30). The trips, for business travelers at least, do appear to be marked by their speed and low level of physical effort:

"On the extended trip from Buenos Aires to Lima, [the inspector] took such supplies and precautions that I scarcely recall having eaten cold meats three times... by ten o clock in the morning, we had already traveled 5 or 6 leagues; one servant would busy himself only with preparing the meal, and all the rest of us, including the inspector, would secure our animals and go in search of grass and water; with these precautions and four hours of rest, the mules would arrive at the inn with spirit ... In this manner, extended trips become more tolerable" (Concolorcorvo 1965:33–34).

The business traveler accompanied by a small group of mules, servants, and a guide therefore had either the option of arriving at a posta earlier or, as this passage demonstrates, stopping for a hot meal and waiting for the cargo trains they had left behind in the morning to catch up. This contrasts strongly with Carriós warning to business travelers considering traveling alongside the conventional long distance mule train:

"In the first place, the latter do not go more than 3 leagues in any day between Lima and Cuzco because of the necessary, as well as the many voluntary, stops to strengthen the herd. The passenger must take all his own provisions except water. These supplies are the most exposed to the attacks of the attendants, especially stocks of wine and other liquors... I would like to ask these travelers, inexperienced on the sierra roads, what course of action they will pursue when they find themselves on a bleak tableland or in some cordillera where the mules, fleeing from the cold, go in search of other pastures, or so the driver pretends... They will find themselves obliged to endure the day with the sun

beating down on the tent, which is like an oven, and the night with little protection" (Concolorcorvo 1965:32).

This catastrophic level of discomfort and slow progress, could of course "be set in order with the help of the wallet" (Concolorcorvo 1965:33–34).

"Everything is put in order with 3 or 4 additional reales at each post, so that the master there may prepare the mules and provide the necessary supplies. These pack animals, although poor, travel with celerity from post to post, because the Indian guides or the postilion put them into motion like machinery" (Concolorcorvo 1965:34).

Three or four reales (half a silver peso) was likely not a huge amount of money to the business traveler. It was roughly the price of two chickens, or the hiring wages of a guide for two leagues (less than a day of travel) (Concolorcorvo 1965:36). Interestingly, however, the wages were not dispersed directly to the laborers who put the pack animals into efficient motion. Rather they were provided as an additional tip (or bribe) on top of the normal fees paid directly to the local postmaster who assumedly distributed them fairly. This appears to have been a near daily ritual, perhaps intended to prevent laborers from absconding with their wages before the work was complete (Concolorcorvo 1965:35). When possible, Carrió recommended that the business traveler directly supervise the distribution of wages, but the very fact that he highlights the importance of this practice to his reader indicates that many business travelers did not concern themselves with the day to day payment of guides, drivers, and porters (Concolorcorvo 1965:36). By paying to speed up their travel, the business traveler would have ensured that he rested in the comfort of a posta nearly every night. Additionally, business travelers moving large amounts of currency or other precious cargo could directly supervise their property, and ensure that it was placed under lock and key each night (Concolorcorvo 1965:36).

In addition to serving as a place to rest safely and store cargo securely, the postas and inns scattered along the route were also small oases of comfort in the often-hostile environments of the Camino Real. These comforts do not appear to have been equally distributed. Even when muleteers reached a posta in time for a warm meal and a comfortable bed, they may have found admission blocked. The inn or posta kept by Señora Doña Josefa Yribarre, in the town of Mojo, was open wide to "any **respectable** person" (Concolorcorvo 1965:158, emphasis added). The reasons for excluding a certain class of traveler were sometimes more explicitly articulated.

"In the Honda ravine [northwest of Potosi] is an inn which is usually the best stocked on this entire road. It has a good main room, with two sleeping alcoves and four good beds, but this room is available only to people of Royal or apparent distinction, because ordinary and common men usually exhibit such crudeness in speech that it offends the ears and sight of a noble subject accustomed to a dissolute life, wherefore the owner forbids this room to men of low class or those who show the same by their manners.

Besides the indecencies which they write on the walls with charcoal, there is not a table or bench in which these fools have not carved their first and last names with blows of iron instruments. This practice is very old... it has become so common in America that there is not an inn or cave which is not adorned with names and obscene words" (Concolorcorvo 1965:171).

While the profanity is perhaps expected, the complaint regarding graffiti raises an interesting point. Little scholarship has examined literacy rates in the eighteenth-century Andes (see Burns 2010 for a discussion of writing and power in earlier contexts). However, if literacy rates by casta and estado in the Andes approximated those of 18th century Mexico, it would seem to indicate that the majority of offenders were those categorized as Spanish or mestizo (Althouse

2009). The judgements that separated ordinary or common men from distinguished guests were therefore not rooted in exclusively casta, but also in signs. The odds that an innkeeper did not note the manner of travel by which one arrived as part of an overall character assessment are slim.

As a result, muleteers were both less likely to reach a posta at the end of a day's travel and less likely to be received as guests when they did. When compared to business travelers through the lens of *El Lazarillo de Ciegos Caminantes*, their experience of the road as infrastructure seems more arduous, less comfortable, and more exploitative. This is not to say, however, that muleteers and others associated with the caravan trade as laborers did not engage in negotiation regarding the course of the route and the spacing of stops. They had several tools at their disposal to do so, all predicated upon their fundamental role in maintaining the extractive economy of the viceroyalty.

At the most basic level, muleteers could simply refuse to service a route when the labor demands on themselves or their animals reached an unacceptable level. This appears to have been the case for the town of Yocalla, located approximately seven hours walk from Potosi, which in the past had supplied charcoal to Potosi's industries.

"Those drivers who come with products from distant provinces arrive with their mules so maimed that they can scarcely support the harness. The animals of the Indians who supply coal daily are in worse condition. The Indians from the town of Yocalla, who used to return their mules in the time of the Count of Castillejo, have withdrawn because the stop made in Potosi is so short that they do not have time to go to their town, which is 10 leagues distant over a bad road, to bring back four times the number of mules to carry out the commissions of gold and silver" (Concolorcorvo 1965:168).

The pressure exerted on the silver trade by a decline in the number of willing muleteers seems to have been of great concern to Carrió, who calls for additional state support when he reiterates that "no town on the highway has as great a need of a post as Potosí" (Concolorcorvo 1965:168).

In addition to boycotting certain segments of the route, muleteers also had the option to avoid interacting with certain postmasters. The postmaster of Oruro was particularly notorious for his fraudulent and cruel exploitation of muleteers. The fact that even Carrió, who defended the practice of forced indigenous labor in *obrajes* (workshops) was struck by his cruelty is startling.

"[The Postmaster] had four mitayos, who were for no advantage or utility other than that of acquiring mules, that is, stealing them from the poor drivers for the dispatch of mail and passengers and locking them in a large corral guarded by the servants of the *corregidor* and *alcaldes* [other local officials] ... the owners found themselves obliged to redeem the animals with silver... The drivers were often forced to undersell some mules in order to feed those locked in a corral which had only manure for the journey of 8 or 9 leagues at a fast trot with double load that awaits them" (Concolorcorvo 1965:185).

The community of muleteers passing through Oruro took exception to this treatment. They made their stops in Oruro less frequent and less consistent, until supply shortages put pressure on local officials to strip the postmaster of his authority.

"The news of this cruelty spread to the drivers who profited from the business of supplying this town, and if they judged that the couriers were about to enter or leave, they stopped at a few leagues' distance so as not to exhaust their tired and thin mules, wherefore the town was frequently lacking in some provisions. A general and well-

grounded complaint from the residents and from outsiders obliged the inspector to solicit an honest resident to accept the postmastership, to provide horses for riding and pack in that town, to the couriers of His Majesty and to travelers." (Concolorcorvo 1965:186).

As was the case in Yocalla, the muleteers acting as a unified community were able to exert pressure on large, urban centers. This was possible only because those centers, although wealthier and more politically influential, were nevertheless dependent on supply trains moving goods overland.

Muleteers, often representing entire indigenous communities, also had the power to negotiate prices and rest stops. While the community of Yocalla could refuse to hire their mules out as caravans, they could not refuse to support official couriers along the route with refreshed mules, forage, and water. Nevertheless, their critical role in maintaining the extractive economy did not go unnoticed. Carrió recommended that couriers stopping in Yocalla from or on their way to Potosí be ordered to pay for ten league's use of the community's mules, although the actual distance was scarcely more than nine (Concolorcorvo 1965:184).

In some cases, communities providing caravan labor, both human and animal, may have banded together to conduct these negotiations under the representation of an indigenous noble. Relationships between the state and local communities in the colonial Andes continued to be mediated by local headmen, known variably as caciques or kurakas, well into the colonial period. These local leaders could be instrumental in making the state's infrastructure plan a reality on the ground. In some cases, local leaders were assigned certain sections of the road to take charge over by viceregal officials, such as in the following quote describing the planned construction of additional infrastructure along a section of the route from Yruma to Oruro.

"The trip from Las Peñas to Oruro was 9 leagues in length, which the weakened mules of the poor Indians could not make without rest, wherefore the inspector divided the one from Yruma in two at the Intermediate Venta, putting the latter in charge of a governor, an Indian chief², who is perhaps one of the most privileged in the kingdom" (Concolorcorvo 1965:184).

Local officials were also vulnerable, however, when their authority made them the focal point of conflict with regional or local Spanish officials such as corregidores.

"The [chief] immediately ordered that sufficient materials be brought to construct a comfortable dwelling, independent of his house which he regularly opens to any honorable man; but the present Corregidor, whom I do not choose to name to save him ridicule, and much less to expose him to punishment, opposed a benefit which had been done at the petition of the Indians of his province... under pretexts so frivolous and ridiculous it causes one shame to relate them... thus the trip remained at 9 leagues to Oruro" (Concolorcorvo 1965:185).

This may well have been the same Corregidor engaged in a conspiracy with the postmaster of Oruro. If so, it would explain why he chose to oppose any improvement that would provide relief for the muleteers and their mules on the way into town. Nevertheless, the attempt, as noted by Carrió, does demonstrate that muleteer communities, if represented by someone of the appropriate estado, had the capacity to petition the state for redress of grievances associated with road infrastructure. Unlike in the case of the postmaster of Oruro, however, it appears that the

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² Given as "cacique" in Spanish. (Concolorcorvo 2005:108)

muleteers were not able to get other local residents on their side. As a result, the corregidor's decision to halt construction of an additional rest stop was upheld.

In all of these cases, muleteer communities demonstrated that through solidarity and collective bargaining they could make their voices heard. In doing so, they expressed a collective form of agency in an attempt to adapt an infrastructure system that had not been designed for their needs. Although these attempts were not always successful, they sometimes were. This success was not typically driven by petitioning and elite representation, forms of protest Carrió argued were appropriate. Rather, muleteers exerted the most pressure on an unfair system when they collectively embraced their role in the extractive economy and reminded colonial elites that all the silver pulled from the mountains, and all the trade goods shipped into the ports, were worthless without a way to transport them to market.

Muleteers, and their animals, were faced with working and moving within an infrastructural system that privileged neither their comfort nor their safety. The system was instead designed to support the movement patterns of business travelers and other colonial elites. Even though the roads themselves were shared, the support infrastructure located along the road was designed to advantage capitalists at the expense of their contracted laborers. Nevertheless, muleteers and others who labored alongside animal caravans were able to utilize their shared economic and social position in order to exert pressure on the system, and on the elites who designed and regulated it. The next chapter takes asks to what degree their unique experience of infrastructure can be differentiated on the basis of archaeological data. In particular, it investigates the way that muleteers may have strategically used pascanas and other site types drawn from Andean pastoral tradition to avoid unnecessary interactions with the posta system entirely. Due to a lack of comprehensive archaeological investigation of the Camino Real, the

next chapter turns toward the material investigation of Andean colonial infrastructure more broadly before narrowing in on sites occupied during the late 18th century.

CHAPTER FOUR: THE ARCHAEOLOGICAL RECORD

AND EL LAZARILLO DE CIEGOS CAMINANTES

The analysis presented in Chapter Three focuses on the geospatial patterning of posta sites across the landscape, to understand how the manner in which a traveler moved and stopped along the road and between postas was shaped by their identity. However, it is also worth shifting the scale of analysis and introducing a new source of data in order to examine what was happening within postas, and how a traveler's experience at these stopping places was similarly dependent on their position in a hierarchy of labor. As a result, it is important to first understand the convergence of Andean and Iberian infrastructural traditions that occurred in the colonial Andes. Only then can Carrió's description of postas be understood in historical context. Next, the archaeological evidence of historic period Andean transport infrastructure is examined to see both how it aligns with and diverges from Carrió's narrative. While archaeological research from the Camino Real itself is limited, a broader analysis of 18th century roadside sites in the Andes suggests that postas were only significant forms of roadside infrastructure in certain places, for certain people.

As Chapter Three demonstrated, Carrió's work focuses on a movement pattern across the landscape structured by a unique form of 18th century colonial infrastructure – the posta. While the Bourbon reforms and other political and economic changes of the 18th century surely shaped the trajectory of the posta in unique ways, it is nevertheless imperative to understand the historic context in which the system emerged. The posta can best be understood as a Bourbon update on a deeply historical system of transport infrastructure in the Andes, a system influenced as much by its pre-contact foundations as by Spanish attempts to reshape it.

4.1 Origins of the Posta

Long distance roads, and stops along them, existed in the Andes prior to the emergence of the Inka empire. Many of these interregional routes were initially established as the result of increasingly complex patterns of reciprocal agro-pastoral exchange. Nielsen et al. (2018) conducted a survey of "internodal areas", or spaces between settlements in the Southern Andes to locate sites associated with these patterns of mobility. One particular type of site, the expedient campsite often referred to as a pascana, was widespread in the Late Intermediate Period (1000-1450 CE). These expedient pastoral campsites have certain commonalities even with the campsites used by contemporary caravans in the Andes, including windbreaks, informal shelters, corrals, and u shaped fences designed to facilitate the management of pack animals (Nielsen 2000, 2016; Tripcevich et al. 2016). Scholars of the Andes have long argued, based on ethnohistoric documentation in contact period sources, that roads within the Inka empire were closed to public use (D'Altroy 2014:243; Hyslop 1984). More recent archaeological research has shown that subject communities in the Atacama desert may have continued to use roads in their traditional patterns of reciprocal exchange, even when those roads were incorporated into the Inka state (Garrido 2016). This form of campsite thus likely continued to persist through the Late Horizon and beyond, at least in remote regions of the Inka Empire.

The Inka state's contribution to Andean infrastructure was to link many of these interregional routes into a cohesive imperial highway. The Inka road network stretched across the Andes for more than 40,000 km (Morris and Von Hagen 2011:44). Dotted alongside the road were way stations known as *tambos*, designed to support the movement of Inka military forces, message runners known as *chaskis*, and other state sponsored travelers. Although tambos varied dramatically in size and architectural design, they commonly included storehouses stocked with

food, textiles, and other goods for state use (Hyslop 1984). These storehouses allowed Inka forces to resupply even in seemingly inhospitable landscapes. Along with storehouses tambos are characterized by the presence of *kanchas*, or rectangular buildings arranged around a patio, *kallankas*, long, one room, rectilinear, gable roofed structures with multiple entrances, and corrals. These kallankas and corrals have traditionally been interpreted as having accommodated state travelers and their camelids respectively (Corcoran-Tadd 2017:49–52).

Despite understandings to the contrary by some early Spanish chroniclers, tambos appear to have been spaced not at an exact linear distance, but at the limits of a day's travel for llama trains based on the local topography (Cieza de León 1959; D'Altroy 1992). It was this predictable spacing, and the resulting reliability of resupply for Inka forces, that was a major factor in the rapid territorial expansion of the Inka empire. It also appears that in certain contexts, Inka infrastructure may have been intentionally designed to further subjugate the conquered by creating continual work for a class of involuntarily resettled laborers known as *mitmaqkuna* (Wilkinson 2019b). As a result, the tambo has long been discussed in the archaeological literature as an example of the top-down power of the Inka, a material remnant of the ways in which Cuzco exercised political authority and used architecture to reinforce dominance over their imperial territory (D'Altroy 1992; Hyslop 1984). Even when roads continued to be used for non-state purposes, it is clear that the placement of tambos and the maintenance of roads served to remind local communities of the power of the Inka state (Wilkinson 2019b).

Iberian *ventas*, or inns, were not so directly linked with state authority. Rather, they were typically the product of enterprising individuals. Placed at strategic road intersections, they took advantage of passing traffic by establishing a monopoly on resupply and lodging in the rural areas of Spain (Corcoran-Tadd 2017:57). These sites emerged in the late medieval period,

following the Reconquista. By the mid 16th century, ventas were a key part of transport infrastructure in Iberia. In some cases, this allowed rural innkeepers to establish a monopoly and charge extortionate prices (Corcoran-Tadd 2017:42). They were therefore targets of reform by the Crown beginning with Phillip II in the mid-16th century (Butzer 1997). However, their private ownership often limited the power of the state to enact sweeping structural changes to the venta system. The venta as a form of infrastructure was therefore distinct from the Andean tambo in that it was established in response to market demands, rather than state directive.

How then, did these two distinct infrastructural traditions interact when the Spanish arrived in the New World? Initially, the Spanish were shocked at the scale of Inka infrastructure. Spanish chroniclers drew heavily on their own understandings of the Roman empire's road network as a parallel (Cobo 1990). Even though they saw value in the road and tambo system, the first decade after contact saw the widespread degradation of the road network (Corcoran-Tadd 2017:56). In order to halt the destruction, Antonio Vaca de Castro's *Ordenanzas de tambos, distancias de unos a otros, modos de cargar los indios y obligaciones de las justicias respectivas* was issued in 1543. Castro proposed a number of reforms, but his ultimate goal was to shift labor demands away from pedestrian load carrying by indigenous porters and towards animal caravans (Corcoran-Tadd 2017:57). Further changes came following the appointment of Francisco de Toledo as viceroy in 1569. Toledo sought to reorganize the tambo system in the model of ventas or mesones. As a result tambo rights were leased as a commercial venture, either to individuals or communities, as part of an increasingly mercantile economy (Glave Testino 1989:130).

By the time of Guaman Poma de Ayala's *Nueva Coronica y buen gobierno* (1615), control of the tambo and its resulting revenue appears to have been appropriated by enterprising

Spaniards. In his lengthy plea to King Phillip III, Guaman Poma made clear that of the "six ungodly animals feared by the poor Indians of this kingdom" the "español del tabo [tambo]" or Spanish innkeeper, was one of the fiercest (1615: 694 [708]).

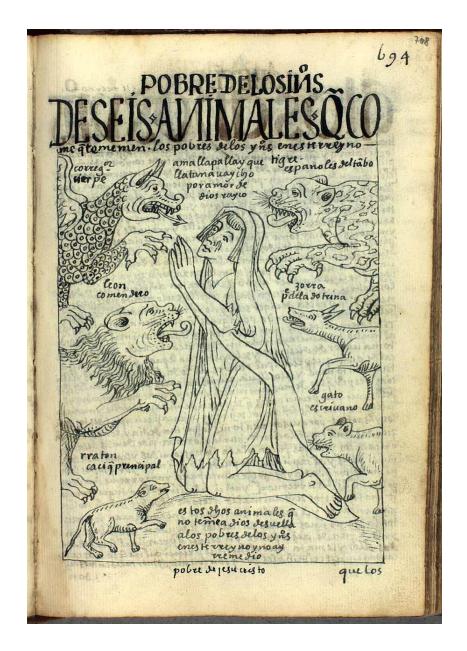


Figure 4.5. Guaman Poma de Ayala's artistic depiction of the "animals" that exploited the indigenous population of early 17th century Peru. From page 694 [708] of his manuscript. Digitzed by Rare Books and Manuscripts, Royal Library of Denmark. Retrieved from http://www5.kb.dk/permalink/2006/poma/708/es/image/

By the mid-17th century, the commercialization of the tambo had become an accepted part of Andean life (Glave Testino 1989). That is not to say however, that control of tambo resources was uncontested. While in many cases tambos were controlled by Spaniards, indigenous communities continued to negotiate and contest the rights to wealth generated at these sites. Even when tambos were controlled by indigenous individuals, often by the local kuraka or cacique, they would have been used as a way to generate revenue (Corcoran-Tadd 2017:62). In some cases, it appears that these funds were used broadly to fund community trusts (Charney 2001). In other cases, the revenue may have been disbursed much less equitably.

The tambo continued to exist in this radically reimagined form through the eighteenth century. Where to draw the line(s) between the deeply rooted Andean tambo, the early colonial venta, and the eighteenth-century posta is not a simple question. Nevertheless, it is worth understanding how the specific historical context in which the posta supposedly emerged as a new form of roadside infrastructure shaped it in ways different from earlier tambos and ventas.

The posta as an institution is clearly linked with the Bourbon reign of the eighteenth century. As discussed in Chapter Two, the Crown's vision of a complete and unified posta system, as reflected in Pando's *Reglamento* and Carrió's *El Lazarillo* was the culmination of a sequence of infrastructure reforms that took place over the course of the 18th century. The postas were named as such because of their role in the distribution of the royal mail. However, they were also intended to function as "an officially planned sequence of inns operated by private individuals" staffed by "a resident employee who was responsible for attending to and providing food for the travelers" (García-Albarido 2016:18). The posta, in this form, was a blueprint to be spread across the colonial Andes. This system reflected the desire of economic reformers like Carrió to move away from an antiquated, locally variable system of roadside infrastructure

towards a homogenized model that would support the growing class of colonial entrepreneurs. The posta system, Carrió argued, would promote commerce by making the overland transport of goods cheaper, faster, and more secure (Concolorcorvo 1965:36–37). For Carrió and his contemporaries, the posta system was a form of infrastructure that could encourage economic growth by promoting conditions favorable to the business traveler.

4.2 Archaeology of the 18th Century Posta

Archaeological Sites Discussed in Chapter Four



Figure 4.6. Archaeological sites discussed in this chapter.

The extent to which postas as described by Carrió were really established in 18th century South America, however, is up for debate. It is worth noting, before going farther, that the development of archaeological projects devoted to historic period Andean roadside infrastructure is still in its infancy, at least as compared to the archaeological investigation of prehispanic

infrastructure. Posta sites in northern Cordoba, Argentina for example have been identified for the purposes of heritage tourism, but archaeological work related to these sites has not been widely published (Cordoba Turismo 2021). Two rural Argentinian sites do show possible evidence of being 18th century postas – the sites of Achiras and Posta Gallegos (Biscaldi 2012; Rocchietti and Ribero 2017). In the case of Achiras, the documentary record conclusively links the location with that of an eighteenth century posta and chapel. However, the eighteenth-century component of the site so far excavated appears to be primarily represented by the chapel and graveyard, and little artifactual or architectural detail relating to the posta itself has been identified (Rocchietti and Ribero 2017). Additionally, the site has been disturbed in some areas by modern agricultural activities. At Posta Gallegos, the historical record and the site's location appear to align with a known 18th century posta. However, research at the site was constrained to portions accessible from a public road, due to the site's location on private land. Of the limited area investigated so far, the majority of the artifactual evidence indicates a mid-19th century occupation, with whiteware being by far the most common artifact class recovered (Biscaldi 2012). The 18th century is (possibly) represented only by a small number edgeware sherds decorated with a blue stripe on the rim. An 18th century map testifies to the presence of an inn at Tarapaya, near Potosi (deFrance 2003; Van Buren 1999). However, archaeological publications

on the site initially focused on domestic contexts and the site was subsequently destroyed before more extensive excavations could be undertaken (Van Buren, personal communication, 2021).



Figure 4.7. Detail view of Tarapaya inn (meson o tambo) from Arzán de Orsúa y Vela's (1787) Historia de la Villa Imperial de Potosí.

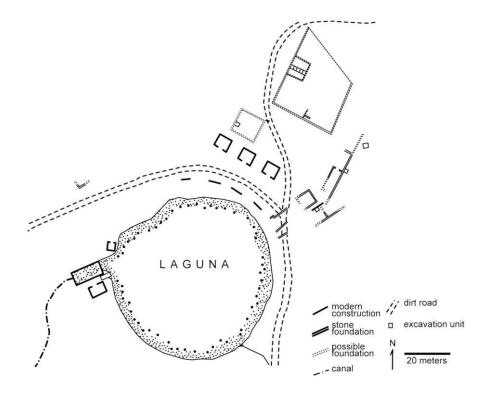


Figure 4.8. Plan of archaeological excavations at Tarapaya, from Van Buren (1999: 112).

In order to examine the material culture and architectural form of a more securely dated posta, it is necessary to move off the Camino Real and look further afield to the north coast of Peru.

The site of Pajatambo is located between the Moche and Viru valleys, in the dry coastal desert that separates the agriculturally productive river valleys from the Pacific Ocean on the north coast (Beck et al. 1983). Situated 20 km south of Trujillo and 24km north of Uripe, it would have represented an ideal stopping place for overland travelers between the two river valleys. It is also located between the remnants of two "roads" – unpaved linear depressions in the sand on the east and west flanks of the site. While it certainly may have had traffic on either side, it appears much more strongly associated with the west road, a road that can be traced from the site to the modern limits of irrigation agriculture in the Moche Valley.

The site was originally identified as part of the Chan-Chan Moche Valley project directed by Michael Mosely when pedestrian survey revealed some cane "quincha" wall foundations and a surface scatter of colonial period artifacts located both within the site and at a smaller isolated scatter 200m north of the main site (Beck et al. 1983:56). Excavated in 1974, the site was the first colonial roadside structure to be the subject of archaeological investigation in the Andes. It was also, more broadly, one of the first historic sites excavated in the Andes, part of a larger trend of colonial sites discovered by chance within the survey boundaries of large prehistoric archaeology projects (Jamieson 2005:354). Following the site's discovery, its surface architecture was mapped, and artifacts were collected from the surface.

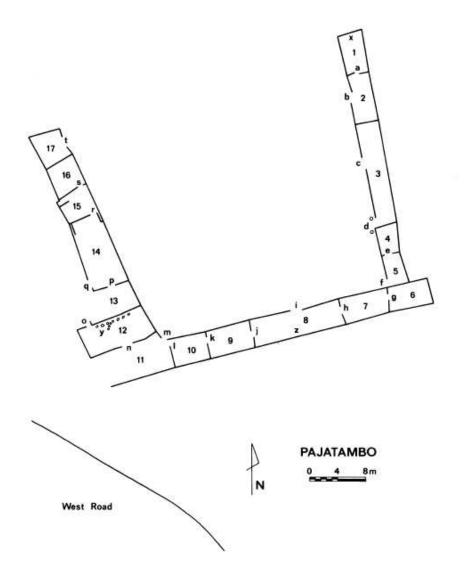


Figure 4.9. Site plan of Pajatambo. From Beck et al. (1983: 60).

The plan of the site is a "U", with three wings surrounding a central plaza. The open end of the U faces slightly west of north. The southwestern entrance to the U permits entry into the site from the western road, passing directly into the inner patio. There are three wings of the U, with the western wing opening towards the western road, and the central and eastern blocks opening onto the inner plaza. There are 17 rooms in total, five in the eastern block, six in the southern, and five on the western. Each wing contains a large, central rectangular room flanked by two or three smaller rectangular rooms on each side. The regularity of the architectural

pattern, however, does not extend to entryways. Some rooms open directly onto the plaza or the western road, while others are accessible only by passing through other rooms first. It is this pattern of varying levels of privacy and security, along with artifactual associations, that provide the best evidence for an interpretation of the site.

All of the artifacts recorded at Pajatambo were recovered from the surface; none were recovered from excavations. Both ceramic and metallic artifacts appear to date to the colonial period, with the most secure dating coming from four coins recovered at the site (Beck et al. 1983:64). Two of these coins can be securely dated to the reign of Phillip V (1702-1727), while one coin possibly dates to between 1744 and 1760 on the basis of a "P" assayer's mark. In either case, it is important to remember that colonial coinage remained in circulation for some time. Another line of evidence linking the site with the colonial period, and with at least some horsemounted traffic, is the recovery of several metal artifacts interpreted as part of a set of spurs and a "trunk stud". Two buttons were also recovered at the site. These buttons appear to date to the 18th century, but the authors' use of a comparative collection based in English-controlled North Carolina makes that date range rather broad. The colonial date of the site, and the status of at least some of its occupants, is further corroborated by the ceramic assemblage, which largely consists of non-diagnostic red earthenwares but includes a small number of green-glazed earthenware sherds and one base sherd of a porcelain bowl.

While no distinct hearths were identified during the excavation, significant charcoal concentrations were identified in rooms 12, 14, 6, and 8. Room 8 was also the location of a small collection of fragmented large mammal bones. While no exact provenience information is provided for most of the metal and ceramic artifacts, the authors state that "the majority of these materials were concentrated in and around rooms 11 and 12... Most of the sherds and metallic

artifacts were recovered from rooms along the base of the flat "U" south of the structure and within several meters of it" (Beck et al. 1983:62). The coins were evidently recovered not in this area, but in corners of the plaza outside rooms 10, 2, and 7.

On the basis of this architectural and artifactual patterning, Beck et al. proposed three possible interpretations of the site (1983:67). Firstly, they proposed that the site may have served "the intent of colonial officials to use the site as a checkpoint for travel and trade between the Moche and Viru valleys". Their second interpretation "would see the establishment of the site by an entrepreneur who felt that there was enough slow-moving traffic along the road to support a hostel." Finally, they acknowledged the possibility that the site may have been built "specifically for a traveling viceroy or other important personage". The authors leaned towards the first theory, noting that the use of the interconnected rooms at the base of the site as offices would fit such an explanation. However, on the basis of charcoal and faunal remains, room 8 seems like the most likely room to have housed a kitchen. This activity would certainly not have commingled with a colonial "office".

Beck et al.'s (1983) third explanation is certainly possible. At the town of Yocalla, for example, Carrió documents an indigenous community who did just that.

"The Indians have quarters which seem like caves or ovens, in which one may, with difficulty, put a small bed sack to make a narrow bed, with all the baggage remaining piled up in the narrow and small patio, and in spite of this misery, to which the Indians adjust themselves better than any other race - they built a large house with numerous rooms, patios, inner patios, and corrals to lodge, just six days out of a year, their priest and lieutenant who come to celebrate their festival days and to collect the taxes; therefore the inspector advises couriers and travelers to take possession of one or

two of the many rooms in this house, to secure their loads and to rest, utilizing the corrals and the kitchen (Concolorcorvo 1965:184)."

At the same time, the archaeological evidence seems to indicate a repeated if not continual occupation. The presence of both Early Green Glazed ware (dated to the early 17th century at the latest) alongside 18th century coins testifies to at least a century of repeated use (Beck et al. 1983:64; VanValkenburgh 2021:26). As a result, I favor the second interpretation. I would propose that the site's location, orientation, plan, pattern of differentiated access and artifacts support an interpretation as an 18th century venta or posta. Further, I would argue that Carrió's *El Lazarillo de Ciegos Caminantes* provides a fresh perspective from which to analyze the site and the artifacts recovered therein.

In the Prologue to *El Lazarillo de Ciegos Caminantes*, Carrió makes a case for the generalized benefits of travel using the posta system. As opposed to much of the rest of his work, wherein Carrió describes aspects of specific locations, the prologue features his expectations of what activities should be supported by a posta. Two general functions of a posta described by Carrió are visible at Pajatambo, even given the relatively meager archaeological assemblage. Firstly, the restricted access of certain rooms at Pajatambo would have served business travelers' need for secure storage. Outside a solid structure, especially overnight, a business traveler's goods were vulnerable.

"It is fantasy to think that one's goods are more secure because of his presence, because in the event, that is very rare, that a bad attendant wishes to steal by opening a bundle or a chest, he does so on a dark and stormy night, when the owners are retired in their tents, and even the owner of the herd (foreman?) takes shelter, trusting that the owner of the cargo is present, and that since he has put

his trust in him, he has no other responsibility than that of handing over the tied bundles" (Concolorcorvo 1965:32).

This vulnerability could be rectified at an inn, where they could be stored overnight under lock and key (Concolorcorvo 1965:36). The trunk stud recovered from the surface of the site provides artifactual evidence for the movement of goods in trunks past the site. Several rooms at Pajatambo would have served well for securely storing goods in trunks or bundles, including 16, 6, 4 and 1.

Another specific function of the posta was as a location for funds to be distributed. Carrió explains that by distributing funds regularly at each posta, the business traveler could ensure that their trip was without delay.

"The Inspector informed me several times that he had never been wanting for supplied in the more than 36 years that he had been traveling... he seated the postmasters at his table... and the first care of the day was to count the amount earned in carriage and to pay, before his eyes, the mitayos who were to lead the pack animals and any other Indians who served to bring water or wood. Their work was quickly rewarded, thus everyone was pleased. The news spread from post to post, and he never lacked anything in the time he traveled as a private individual" (Concolorcorvo 1965:35).

The central patio would have served well for a gathering of this kind, and the coins recovered during the Beck et al.'s (1983) fieldwork were all recovered from the plaza. The one and two real coins represent small amounts, between one and two leagues of contracted work for a guide. It is easy to imagine that such small amounts would not have been noticed by a business traveler

distributing larger amounts to several individuals. Pajatambo thus seems to have accommodated many of the concerns of business travelers in the 18th century.

Finally, the most obvious function of a posta was as lodging. As Carrió pointed out, one of the many benefits of the posta system was to travel between market towns while being able to sleep "under a roof" every night (Concolorcorvo 1965:36). With an interior space of approximately 460 square meters, and with three distinct wings, Pajatambo could have provided enough space to lodge a business traveler, the laborers who accompanied him, and a resident innkeeper. Buckles, cufflinks, and porcelain certainly testify to the patronage of Pajatambo by business travelers and other elites. This would align with the historical evidence of shipborne passengers, bound for Lima, moving overland from Paita south. This was due to the fact that current and wind made seaborne travel from north to south exceptionally slow in the age of sail (Beck et al. 1983:54). As a result, both documentary and material evidence testify to the use of the site as a stopping point for passing elites.

It is less clear, however, whether the site also regularly housed common muleteers. Per Carrió, on the Camino Real, inns typically allowed only those of a certain class to stay in certain rooms (Concolorcorvo 1965:170). The multi-wing plan of Pajatambo could have accommodated some separation, with the eastern half of the site being further separated from the noise, dust, and commotion of the road and animal wrangling. As such, that sector of the site may have been reserved for those of the distinguished class. It's unclear that laborers would have been permitted lodging, but if they were, they would have been obliged to lodge nearer to the road in the south and west wings. If this was the case, then laborers would have experienced little divide between their toils on the road and their lodging situation at Pajatambo.

After arriving perhaps hours later than their employer, the aides and attendants traveling with the caravan would have been expected to unload and secure the cargo and tend to the animals. Thereafter, they likely would have been faced with surveillance and judgement even in their choice of leisure or entertainment activities. Even though travelers were advised to pay laborers regularly, as seen in the quote from page 35, Carrió looked down severely on laborers who chose to spend their money on "illicit diversions injurious to their family" (Concolorcorvo 1965:120). The consumption of alcohol for example, was closely monitored. Carrió cautioned business travelers to ration alcohol in order to control muleteers and guides (Concolorcorvo 1965:35). Further, it appears that Carrió, and the business travelers to whom he wrote, understood drunkenness as a vice inextricably linked with indigenous identity (Concolorcorvo 1965:35). The pressure on laborers to perform in their down time, to conform to the expectations of their employer even at times of rest, must have been substantial.

Muleteers may have responded by falling back on Andean tradition and organizing their own accommodation at pascanas. This is a possibility even at Pajatambo, where the original survey also uncovered an "isolated scatter of colonial redware pottery" some 200m north of the main site, at the intersection of the east and west roads (Beck et al. 1983:56). At this distance, the muleteers would have been outside the surveillance of overseers, foremen, and business travelers staying at the posta. If the ceramic scatter north of Pajatambo does represent a campsite, then it provides archaeological evidence that an individual's experience of lodging along the roads of the 18th century Andes was shaped by identity as capitalist or laborer.

4.3 Alternative Accommodations

While evidence of two separate systems appears at Pajatambo, there is also evidence that on some routes pascanas were the primary form of roadside infrastructure. In the few targeted

surveys of historic period Andean transport infrastructure currently available, 18th century material has been found primarily at campsites. García-Albarido surveyed the colonial and Republican transport corridor between Potosi and Cobija on the Pacific Coast. He registered seven sites as "postas" but dated all of them to the early Republican period (García-Albarido 2016:63). This may have been the result of a lack of excavation data. García-Albarido did, however, recover colonial material from a number of informal, semi-improved pastoral campsites known as pascanas (García-Albarido 2016:68–74). Additionally, García-Albarido found evidence for use of small estancias, or pastoral settlements, and hamlets as stopping places along the route. Unlike the situation at Pajatambo, it appears that lodging for many travelers along the Potosi-Cobija in the 18th century did not occur at ventas or postas and was instead provided in the form of expedient campsites except when the hospitality of local communities was available.

Corcoran-Tadd surveyed several likely routes in the Tacna region, registering two Inka tambos and six possible historic tambos (Corcoran-Tadd 2017). After pedestrian survey and test excavations, he concluded that the colonial presence in Tacna was limited to expedient use of the pre-existing Inka tambos and the simultaneous establishment of new pascanas (Corcoran-Tadd 2017:222). The establishment and occupation of historic tambo, venta, or posta sites was confined to the 19th and 20th centuries. Even though this pattern is distinct from that found by García-Albarido, it is likewise apparent that the colonial landscape of Tacna did not reflect Carrió's vision of a posta system.



Figure 4.10. A small, semicircular windbreak at a campsite along a historic road in Tacna, Peru. From Corcoran Tadd (2017: 190).

One possible explanation for this seeming disagreement is that both surveys took place in rural landscapes off the main Camino Real, where the posta system envisioned by the Spanish Crown had not yet been established by the time that independence movements swept through Spain's South American colonies. Douglas Smit (2018:144), in his survey of the landscape surrounding the mercury mining hub of Huancavelica, found one site potentially associated with transport infrastructure. The site was identified by a local informant generally as a "tambo". Excavation results suggest that the structure was then abandoned during the 17th century, with occupation reestablished in the 19th century when a new stone floor was built over the previous floor surface. As a result, the sort of 18th century posta described by Carrió (and indeed, by Pando) is again highlighted by virtue of its absence in the archaeological record.

While all three studies are limited in spatial coverage, taken together, the archaeological evidence nevertheless suggests that in the 18th century Andes transport infrastructure was much

more variable than the system described by Carrió. Even in an economy in which muleteers were obliged to follow the same routes as business travelers in order to receive their wages, caravan laborers found ways to improve their situation through the use of campsites or pascanas. Further, it appears that along some routes, pascanas were the dominant form of lodging in the 18th century. It is therefore apparent that at least some sections of Carrió's work are representative of the Camino Real not as he experienced it, but as he believed it should be. In order to understand why, the following chapter brings the archaeological data presented here back into the broader context of Carrió's purpose and audience.

CHAPTER FIVE: CONCLUSION

While the course of the Camino Real that Carrió traveled has not been systematically surveyed, the overall variability of transport infrastructure displayed in the material record on neighboring routes suggests that Carrió's "labor of representation" left out any description of infrastructure commonly used by indigenous caravan laborers. This would seem to render his account of the Camino Real an unreliable source of information for understanding the intersection of identity and infrastructure. This is, fortunately, an oversimplified view.

Carrió's account likely reflects one real experience of traveling through the Andes – that of the elite colonial administrator and the business traveler. The archaeological evidence at Pajatambo and the historical account at Yocalla indicate that in at least some areas, specialized ventas or postas were established to cater to the needs of this class of traveler. Furthermore, the text reflects Carrió's vision of what moving through the Andes should be like for the class of person he views as being responsible for the creation of wealth – the business traveler. It is rather unsurprising that Carrió's text does not reflect the travel experiences of the common muleteer. After all, his text was not written for them. For the business traveler for whom Carrió wrote a guide, muleteers, cart drivers, camp attendants and others below their class were either incompetent or intentionally deceitful. Indeed, certain stereotypes appear time and time again in Carrió's work: the drunk and thieving Indian and the tricky, conniving mestizo (Hill 2005; Meléndez 2017). All had to be guarded against, preferably by utilizing the secure and expedient travel afforded by Carrió's vision of the posta system.

Chapter Two argued that *El Lazarillo* reflects not only a Bourbon-period concern over economic crisis in the Spanish empire, but also a broader 18th century desire to organize the

world into rationally based hierarchies. To Carrió and his peers, their ability to control and regiment the movement of those beneath them in the social hierarchy was both reasonable and natural. In an era of mestizaje, and increasing fluidity surrounding an individual's status, one's labor became another sign by which they could be placed in their appropriate hierarchy. Additionally, it was up to the colonial elite to implement systems that would counteract the natural vices present in the lower classes. Carrió's representation diverges from the material conditions of the road in order to argue this very point. The roads of the colonial Andes appear in the archaeological record as places shaped most of all by local politics and a constant negotiation between labor and capital. However, representing this reality would be anathema to an 18th century understanding of the ordered, rational hierarchy necessary for a successful colonial venture (Hill 2005; Meléndez 1996, 2017). For his second audience, his peers in colonial government, Carrió had to carefully color his description of an idealized posta system that needed reform but was at its core a functional idea.

Muleteers traversed the same roadways as these business travelers, but they did not engage in the same way with transport infrastructure. For the muleteer, the postas that did exist were not spaces of refreshment and resupply to be reached at the end of a long day. Instead, they were sites of exploitation and surveillance. As shown in Chapter Three, even Carrió acknowledged that muleteers could exercise agency in certain situations, choosing to avoid certain towns or postas that did not afford acceptable working conditions. What the archaeological evidence presented in Chapter Four appears to show is that muleteers were open to a wide range of alternatives. Faced with calls by the colonial elite, as represented by Carrió, to conform to a system of infrastructure that increasingly disregarded the welfare of themselves and their animals in order to cater to the needs of business travelers, muleteers appear to have forged

their own path. In some cases, they drew on pastoralist camping traditions and in other cases integrated their stops with local communities, but in all cases diverged from Carrió's vision of a homogenized roadside network of waystations.

Thus, infrastructure certainly served to structure inequality not only through exclusion at some formal postas or inns, but also through the broader creation of different experiences of movement, but it did not do so uniformly across space and time. A combined assessment of historical, geospatial, and archaeological lines of evidence points to a contrast between movement along different sections of the Camino Real, as well as between the Camino Real and other routes such as the Potosi-Cobija road or the Potosi-Arica route through Tacna (Corcoran-Tadd 2017; García-Albarido 2017). While the system of organized exploitation described by Carrió does appear to some extent in the archaeological record, it clearly existed contemporaneously with systems of infrastructure designed by and for muleteers and caravan laborers.

While this variability appears to be supported by the current literature on historic transport infrastructure in the Andes, more work will be needed to establish what portions of the route were supported by postas, pascanas, or both. Particularly, more of the high traffic portions of the Camino Real itself need to be surveyed, in order to understand how processes of infrastructure on the road connecting the imperial core may have differed from those on the periphery. Additionally, it is worth investing in more extensive examination of the route between Potosi and the Atlantic, to understand how a system of infrastructure established largely in the 18th century may differ from regions in which the Spanish built upon Inka precedent. While some promising research has been conducted in the last decade, much work remains to be done on this front.

As this thesis has shown, historical archaeology provides an opportunity not only to verify or dispute the historical record, but also to find meaning in the contrast between the material and historical records. While 18th century elites had a vision for a posta-based system of transport infrastructure in the Andes, their vision was never a "natural institution". Rather, it was one component of a broader system that emerged from a process of negotiation between people of different class and ethnic identities.

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APPENDIX I

Table A1.5. Complete travel time data between postas in hours of movement as both absolute and difference values at different paces (see Figure 3.5). Positively identified posta locations in black. Interpolated calculations in Red.

Location	Pedestria	Difference_p	Horse_h	Difference_ho	Trot_h	Difference_t
	n_h	ed_h		rse_h		rot_h
Buenos aires	0	0	0		0	
Lujan	13.02	13.02	10.416	10.416	7.44	7.44
Areco	22.32	9.3	17.856	7.44	12.75428	5.314285714
					571	
Arrecife	34.27	11.95	27.416	9.56	19.58285	6.828571429
					714	
Pergamino	43.45	9.18	34.76	7.344	24.82857	5.245714286
					143	
India Muerta	54.322	10.872	43.4576	8.6976	31.04114	6.212571429
					286	
Esquina de la Guardia	70.63	16.308	56.504	13.0464	40.36	9.318857143
Cabeza de Tigre	75.48	4.85	60.384	3.88	43.13142 857	2.771428571
Saladillo de Ruy	81.89	6.41	65.512	5.128	46.79428	3.662857143
Diaz	02.03	0.11	03.312	3.120	571	0.0020371.0
Esquina de	89.4094	7.5194	71.52752	6.01552	51.09108	4.2968
Castillo					571	
Fraile Muerto	91.06	1.6506	72.848	1.32048	52.03428	0.9432
					571	
Esquina de	99.0088	7.9488	79.20704	6.35904	56.57645	4.542171429
Colman					714	
Paso de Ferreira	102.1	3.0912	81.68	2.47296	58.34285	1.7664
					714	
Tio Pujio	105.74	3.64	84.592	2.912	60.42285	2.08
					714	
Puestos de	108.3344	2.5944	86.66752	2.07552	61.90537	1.482514286
Ferreira					143	
Ampira	117.02	8.6856	93.616	6.94848	66.86857	4.9632
					143	
Rio Segundo	121.25	4.23	97	3.384	69.28571	2.417142857
Caralala	422.21	0.00	404 400	7.400	429	E 4274 42055
Cordoba	130.24	8.99	104.192	7.192	74.42285	5.137142857
Cincagata	141.02	10.70	112.016	0.634	714	C 1C
Sinsacate	141.02	10.78	112.816	8.624	80.58285	6.16
					714	

La Dormida	153.99	12.97	123.192	10.376	87.99428 571	7.411428571
Urahuerta	164.7026	10.7126	131.7620 8	8.57008	94.11577 143	6.121485714
Cachi	172.46	7.7574	137.968	6.20592	98.54857 143	4.4328
Portezuelo	179.048	6.588	143.2384	5.2704	102.3131 429	3.764571429
Ambargasta	183.44	4.392	146.752	3.5136	104.8228 571	2.509714286
Ayuncha	199.4741	16.0341	159.5792 8	12.82728	113.9852	9.162342857
Chanar Pugio	205.1001	5.626	164.0800 8	4.5008	117.2000 571	3.214857143
Santiago del Estero	211.57	6.4699	169.256	5.17592	120.8971 429	3.697085714
Vinara	225.01	13.44	180.008	10.752	128.5771 429	7.68
Mancopa	235.16	10.15	188.128	8.12	134.3771 429	5.8
San Miguel de Tucuman	240.2	5.04	192.16	4.032	137.2571 429	2.88
Rio de Tapia	244.8733 333	4.673333333	195.8986 667	3.738666667	139.9276 19	2.67047619
Pozo del Pescado	254.22	9.346666667	203.376	7.477333333	145.2685 714	5.340952381
Rosario	264.83	10.61	211.864	8.488	151.3314 286	6.062857143
Concha Estate	270.3	5.47	216.24	4.376	154.4571 429	3.125714286
Rio Paisaje	276.46	6.16	221.168	4.928	157.9771 429	3.52
Cobos	291.19	14.73	232.952	11.784	166.3942 857	8.417142857
Salta	297.84	6.65	238.272	5.32	170.1942 857	3.8
Tres Cruces	305.455	7.615	244.364	6.092	174.5457 143	4.351428571
La Cabana	310.024	4.569	248.0192	3.6552	177.1565 714	2.610857143
Jujuy	313.07	3.046	250.456	2.4368	178.8971 429	1.740571429
Guajara	321.0972	8.0272	256.8777 6	6.42176	183.4841 143	4.586971429
Posta de Hornillos	326.91	5.8128	261.528	4.65024	186.8057 143	3.3216

Humahuaca	337.59	10.68	270.072	8.544	192.9085 714	6.102857143
La cueva	344.42	6.83	275.536	5.464	196.8114	3.902857143
Cangrejos Grandes	355.672	11.252	284.5376	9.0016	203.2411 429	6.429714286
La Quiaca	363.82	8.148	291.056	6.5184	207.8971 429	4.656
Mojos	369.34	5.52	295.472	4.416	211.0514 286	3.154285714
Suipacha	375.82	6.48	300.656	5.184	214.7542 857	3.702857143
Ramada	387.4	11.58	309.92	9.264	221.3714 286	6.617142857
Santiago de Cotagaita	393.61	6.21	314.888	4.968	224.92	3.548571429
Escara	397.43	3.82	317.944	3.056	227.1028 571	2.182857143
Quirve	401.6	4.17	321.28	3.336	229.4857 143	2.382857143
Caiza	414.29	12.69	331.432	10.152	236.7371 429	7.251428571
Potosi	425.72	11.43	340.576	9.144	243.2685 714	6.531428571
Yocalla	432.7	6.98	346.16	5.584	247.2571 429	3.988571429
La Lena	437.63	4.93	350.104	3.944	250.0742 857	2.817142857
Lagunillas	442.56	4.93	354.048	3.944	252.8914 286	2.817142857
Vilcapugio	449.74	7.18	359.792	5.744	256.9942 857	4.102857143
Ancato	461.1172	11.3772	368.8937 6	9.10176	263.4955 429	6.501257143
Las Penas	473.9255 32	12.808332	379.1404 256	10.2466656	270.8145 897	7.319046857
Yruma	479.68	5.754468	383.744	4.6035744	274.1028 571	3.288267429
Intermediate Venta	480.837	1.157	384.6696	0.9256	274.764	0.661142857
Oruro	484.13	3.293	387.304	2.6344	276.6457 143	1.881714286
Caracolla	491.99	7.86	393.592	6.288	281.1371 429	4.491428571
Panduro	497.67	5.68	398.136	4.544	284.3828 571	3.245714286

Sicafica	504.6	6.93	403.68	5.544	288.3428 571	3.96
Ayoayo	512.38	7.78	409.904	6.224	292.7885 714	4.445714286
Caxamarca	517.12	4.74	413.696	3.792	295.4971 429	2.708571429
La Ventinilla	523.018	5.898	418.4144	4.7184	298.8674 286	3.370285714
La Paz	526.95	3.932	421.56	3.1456	301.1142 857	2.246857143
Laja	532.34	5.39	425.872	4.312	304.1942 857	3.08
Tiay Guanaco	538.64	6.3	430.912	5.04	307.7942 857	3.6
Guaqui	542.05	3.41	433.64	2.728	309.7428 571	1.948571429
Cepita	548.35	6.3	438.68	5.04	313.3428 571	3.6
Pomata	554.76	6.41	443.808	5.128	317.0057 143	3.662857143
Juli	558.74	3.98	446.992	3.184	319.28	2.274285714
Ylave	563.62	4.88	450.896	3.904	322.0685 714	2.788571429
Acora	567.66	4.04	454.128	3.232	324.3771 429	2.308571429
Chucuyto	570.3	2.64	456.24	2.112	325.8857 143	1.508571429
Puno	573.59	3.29	458.872	2.632	327.7657 143	1.88
Paucarcolla	576.02	2.43	460.816	1.944	329.1542 857	1.388571429
Juliaca	581.67	5.65	465.336	4.52	332.3828 571	3.228571429
Nicasio	589.75	8.08	471.8	6.464	337	4.617142857
Pucara	593.12	3.37	474.496	2.696	338.9257 143	1.925714286
Ayaviri	599.01	5.89	479.208	4.712	342.2914 286	3.365714286
Chungara	606.73	7.72	485.384	6.176	346.7028 571	4.411428571
Lurucachi	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
Sicuani	619.14	NO DATA	495.312	NO DATA	353.7942 857	No DATA
Cacha	NO DATA	NO DATA	NO Data	NO DATA	NO DATA	NO DATA
Quiquijaca	632.08	NO DATA	505.664	NO DATA	361.1885 714	NO DATA

Oropesa 639.96 3.93 511.968 3.144 365.6914 2.245714286 2.245714286 Cusco 644.6 4.64 515.68 3.712 368.3428 2.651428571 Zurite 650.95 6.35 520.76 5.08 371.9714 3.628571429 Limatambo 656.37 5.42 525.096 4.336 375.0685 3.097142857 Marcaguasi 659.43 3.06 527.544 2.448 376.8171 1.748571429 Curahuasi 664.02 4.59 531.216 3.672 379.44 2.622857143 Tambo Urco 669.47 5.45 535.576 4.36 382.542 3.114285714 Pincos 680.37 5.45 539.936 4.36 385.6685 3.114285714 Uripa 694.83 9.01 555.864 7.208 397.0457 5.148571429 Uripa 694.83 9.01 555.864 7.208 397.0457 5.148571429 Hiwias 702.662 7.832 562.1296	Urcos	636.03	3.95	508.824	3.16	363.4457	2.257142857
Cusco 644.6 4.64 515.68 3.712 368.3428 2.651428571 Zurite 650.95 6.35 520.76 5.08 371.9714 3.628571429 Limatambo 656.37 5.42 525.096 4.336 375.0685 3.097142857 Marcaguasi 659.43 3.06 527.544 2.448 376.8171 1.748571429 Curahuasi 664.02 4.59 531.216 3.672 379.44 2.622857143 Tambo Urco 669.47 5.45 535.576 4.36 385.5685 3.114285714 Pincos 680.37 5.45 539.936 4.36 385.6685 3.114285714 Pincos 680.37 5.45 544.296 4.36 388.7828 3.114285714 Pincos 685.82 5.45 548.656 4.36 381.8971 3.114285714 Uripa 694.83 9.01 555.864 7.208 397.0457 5.148571429 Cangollo tambo 702.662 7.832 562.1296	Oropesa	639.96	3.93	511.968	3.144	143 365.6914	2.245714286
2urite	Cusco	644.6	1.61	515 60	3 712		2 651/128571
Limatambo 656.37 5.42 525.096 4.336 375.0685 3.097142857 Marcaguasi 659.43 3.06 527.544 2.448 376.8171 1.748571429 Curahuasi 664.02 4.59 531.216 3.672 379.44 2.622857143 Tambo Urco 669.47 5.45 535.576 4.36 382.5542 3.114285714 Pincos 680.37 5.45 539.936 4.36 385.6685 3.114285714 Pincos 680.37 5.45 544.296 4.36 388.7828 3.114285714 Pincos 680.82 5.45 548.656 4.36 381.8971 3.114285714 Hivias 702.662 7.832 562.1296 6.2656 401.5211 4.475428571 Guamollo tambo 709.07 6.408 567.256 5.1264 405.828 3.661714286 Guanta 727.88 6.18 582.304 4.944 415.9314 3.531428571 Paucara 741.05 5.3997 592.84 <td>Cusco</td> <td>044.0</td> <td>4.04</td> <td></td> <td></td> <td>571</td> <td>2.031428371</td>	Cusco	044.0	4.04			571	2.031428371
Limatambo 656.37 5.42 525.096 4.336 375.0685 3.097142857 Marcaguasi 659.43 3.06 527.544 2.448 376.8171 1.748571429 Curahuasi 664.02 4.59 531.216 3.672 379.44 2.622857143 Tambo Urco 669.47 5.45 535.576 4.36 382.5542 3.114285714 Pincos 680.37 5.45 539.936 4.36 385.6685 3.114285714 Pincos 680.37 5.45 544.296 4.36 388.7828 3.114285714 Andahuaylas 685.82 5.45 548.656 4.36 391.8971 3.114285714 Uripa 694.83 9.01 555.864 7.208 397.0457 5.148571429 Hivias 702.662 7.832 562.1296 6.2656 401.5211 4.475428571 Guamanga 721.7 12.63 577.36 10.104 412.4 7.217142857 Guanta 727.88 6.18 582.304	Zurite	650.95	6.35	520.76	5.08		3.628571429
Marcaguasi 659.43 3.06 527.544 2.448 376.8171 1.748571429 Curahuasi 664.02 4.59 531.216 3.672 379.44 2.622857143 Tambo Urco 669.47 5.45 535.576 4.36 382.5542 2.622857143 Cochacajas 674.92 5.45 539.936 4.36 385.6685 3.114285714 Pincos 680.37 5.45 544.296 4.36 385.7828 3.114285714 Andahuaylas 685.82 5.45 548.656 4.36 391.8971 3.114285714 Uripa 694.83 9.01 555.864 7.208 397.0457 5.148571429 Hivias 702.662 7.832 562.1296 6.2656 401.5211 4.475428571 Guamanga 721.7 12.63 577.36 10.104 412.4 7.217142857 Guanta 727.88 6.18 582.304 4.944 415.9314 3.531428571 Parcos 735.6503 7.7703 588.5202	Limatambo	656.37	5.42	525.096	4.336	375.0685	3.097142857
Curahuasi 664.02 4.59 531.216 3.672 379.44 2.622857143 Tambo Urco 669.47 5.45 535.576 4.36 382.5542 3.114285714 Cochacajas 674.92 5.45 539.936 4.36 385.6685 3.114285714 Pincos 680.37 5.45 544.296 4.36 388.7828 3.114285714 Andahuaylas 685.82 5.45 548.656 4.36 391.8971 3.114285714 Uripa 694.83 9.01 555.864 7.208 397.0457 5.148571429 Uripa 694.83 9.01 555.864 7.208 397.0457 5.148571429 Hivias 702.662 7.832 562.1296 6.2656 401.5211 4.475428571 Cangollo tambo 709.07 6.408 567.256 5.1264 405.1828 3.661714286 Guanta 727.88 6.18 582.304 4.944 415.9314 3.531428571 Paucara 741.05 5.3997 592.84 </td <td>Marcaguasi</td> <td>659.43</td> <td>3.06</td> <td>527.544</td> <td>2.448</td> <td></td> <td>1.748571429</td>	Marcaguasi	659.43	3.06	527.544	2.448		1.748571429
Tambo Urco 669.47 5.45 535.576 4.36 382.5542 3.114285714 Cochacajas 674.92 5.45 539.936 4.36 385.6685 3.114285714 Pincos 680.37 5.45 544.296 4.36 388.7828 3.114285714 Andahuaylas 685.82 5.45 548.656 4.36 391.8971 3.114285714 Uripa 694.83 9.01 555.864 7.208 397.0457 5.148571429 Hivias 702.662 7.832 562.1296 6.2656 401.5211 4.475428571 Guamanga 721.7 12.63 577.36 10.104 412.4 7.217142857 Guanta 727.88 6.18 582.304 4.944 415.9314 3.531428571 Parcos 735.6503 7.7703 588.5202 6.21624 420.3716 4.440171429 Guancavelica 749.87 8.82 599.896 7.056 428.4971 5.04 Cotay 758.64 8.77 606.912		664.00	4.50	504.046	2.672		2 622057442
Cochacajas 674.92 5.45 539.936 4.36 385.6685 3.114285714 714 7.83 617.712 6.264 441.228 4.474285714 7.83 617.712 6.264 441.228 4.474285714 7.83 617.712 6.264 441.228 4.474285714 1.05 5.91 622.44 4.728 444.6 3.377142857 1.0771 1.05 5.91 622.44 4.728 448.628 3.46285714 1.05 772.14 7.83 617.712 6.264 441.228 4.474285714 1.05 772.14 7.83 617.712 6.264 441.228 4.466 3.377142857 1.0104 772.14 7.83 617.712 6.264 441.228 4.466 3.377142857 1.0104 772.14 7.83 617.712 6.264 441.228 4.474285714 1.0104 7.21048571 1.01048571 1.01048		+					
Cochacajas 674.92 5.45 539.936 4.36 385.6685 3.114285714 Pincos 680.37 5.45 544.296 4.36 388.7828 3.114285714 Andahuaylas 685.82 5.45 548.656 4.36 391.8971 3.114285714 Uripa 694.83 9.01 555.864 7.208 397.0457 5.148571429 Hivias 702.662 7.832 562.1296 6.2656 401.5211 4.475428571 Gangollo tambo 709.07 6.408 567.256 5.1264 405.1828 3.661714286 571 500 577.36 10.104 412.4 7.217142857 42.9 Guanta 727.88 6.18 582.304 4.944 415.9314 3.531428571 Parcos 735.6503 7.7703 588.5202 6.21624 420.3716 4.440171429 Guancavelica 749.87 8.82 599.896 7.056 428.4971 5.04 Cotay 758.64 8.77 606.912	Tambo Urco	669.47	5.45	535.576	4.36		3.114285714
Pincos 680.37 5.45 544.296 4.36 388.7828 3.114285714 Andahuaylas 685.82 5.45 548.656 4.36 391.8971 3.114285714 Uripa 694.83 9.01 555.864 7.208 397.0457 5.148571429 Hivias 702.662 7.832 562.1296 6.2656 401.5211 4.475428571 Cangollo tambo 709.07 6.408 567.256 5.1264 405.1828 3.661714286 Guamanga 721.7 12.63 577.36 10.104 412.4 7.217142857 Guanta 727.88 6.18 582.304 4.944 415.9314 3.531428571 Parcos 735.6503 7.7703 588.5202 6.21624 420.3716 4.440171429 Paucara 741.05 5.3997 592.84 4.31976 423.4571 3.085542857 Guancavelica 749.87 8.82 599.896 7.056 428.4971 5.04 Turpu 764.31 5.67 611.448 </td <td>Cochacajas</td> <td>674.92</td> <td>5.45</td> <td>539.936</td> <td>4.36</td> <td></td> <td>3.114285714</td>	Cochacajas	674.92	5.45	539.936	4.36		3.114285714
Andahuaylas 685.82 5.45 548.656 4.36 391.8971 3.114285714 Uripa 694.83 9.01 555.864 7.208 397.0457 5.148571429 Hivias 702.662 7.832 562.1296 6.2656 401.5211 4.475428571 Cangollo tambo 709.07 6.408 567.256 5.1264 405.1828 3.661714286 Guamanga 721.7 12.63 577.36 10.104 412.4 7.217142857 Guanta 727.88 6.18 582.304 4.944 415.9314 3.531428571 Parcos 735.6503 7.7703 588.5202 6.21624 420.3716 4.440171429 Paucara 741.05 5.3997 592.84 4.31976 423.4571 3.085542857 Guancavelica 749.87 8.82 599.896 7.056 428.4971 5.04 Cotay 758.64 8.77 606.912 7.016 433.5085 5.011428571 Turpu 764.31 5.67 611.448 </td <td>Pincos</td> <td>680.37</td> <td>5.45</td> <td>544.296</td> <td>4.36</td> <td></td> <td>3.114285714</td>	Pincos	680.37	5.45	544.296	4.36		3.114285714
Uripa 694.83 9.01 555.864 7.208 397.0457 5.148571429 Hivias 702.662 7.832 562.1296 6.2656 401.5211 4.475428571 Cangollo tambo 709.07 6.408 567.256 5.1264 405.1828 3.661714286 Guamanga 721.7 12.63 577.36 10.104 412.4 7.217142857 Guanta 727.88 6.18 582.304 4.944 415.9314 3.531428571 Parcos 735.6503 7.7703 588.5202 6.21624 420.3716 4.440171429 Paucara 741.05 5.3997 592.84 4.31976 423.4571 3.085542857 Guancavelica 749.87 8.82 599.896 7.056 428.4971 5.04 Cotay 758.64 8.77 606.912 7.016 433.5085 5.011428571 Turpu 764.31 5.67 611.448 4.536 436.7485 3.24 Vinac 772.14 7.83 617.712 6.264 441.2228 4.474285714 Llangas 778.05						571	
Uripa 694.83 9.01 555.864 7.208 397.0457 5.148571429 Hivias 702.662 7.832 562.1296 6.2656 401.5211 4.475428571 Cangollo tambo 709.07 6.408 567.256 5.1264 405.1828 3.661714286 Guamanga 721.7 12.63 577.36 10.104 412.4 7.217142857 Guanta 727.88 6.18 582.304 4.944 415.9314 3.531428571 Parcos 735.6503 7.7703 588.5202 6.21624 420.3716 4.440171429 Paucara 741.05 5.3997 592.84 4.31976 423.4571 3.085542857 Guancavelica 749.87 8.82 599.896 7.056 428.4971 5.04 Cotay 758.64 8.77 606.912 7.016 433.5085 5.011428571 Turpu 764.31 5.67 611.448 4.536 436.7485 3.24 Vinac 772.14 7.83 617.712	Andahuaylas	685.82	5.45	548.656	4.36		3.114285714
Hivias 702.662 7.832 562.1296 6.2656 401.5211 4.475428571 429 Cangollo tambo 709.07 6.408 567.256 5.1264 405.1828 3.661714286 571 Guamanga 721.7 12.63 577.36 10.104 412.4 7.217142857 286 Parcos 735.6503 7.7703 588.5202 6.21624 420.3716 4.440171429 420.3716 429.474 429 Paucara 741.05 5.3997 592.84 4.31976 423.4571 3.085542857 429 Guancavelica 749.87 8.82 599.896 7.056 428.4971 5.04 429 Cotay 758.64 8.77 606.912 7.016 433.5085 5.011428571 714 Turpu 764.31 5.67 611.448 4.536 436.7485 3.24 Vinac 772.14 7.83 617.712 6.264 441.2228 4.474285714 571 Llangas 778.05 5.91 622.44 4.728 444.6 3.377142857 241 242 242 244.6 3.377142857 242 244 243.4571 5.04 243.4571 5.71 Llangas 778.05 5.91 622.44 4.728 444.6 3.377142857 242 243.4571 5.04 243.4571 5.04 243.4571 5.71 Llangas 778.05 5.91 622.44 4.728 444.6 3.377142857 242 243.4571 5.04 243.4571 5.04 243.4571 5.71	Uripa	694.83	9.01	555.864	7.208	397.0457	5.148571429
Cangollo tambo 709.07 6.408 567.256 5.1264 405.1828 3.661714286 Guamanga 721.7 12.63 577.36 10.104 412.4 7.217142857 Guanta 727.88 6.18 582.304 4.944 415.9314 3.531428571 Parcos 735.6503 7.7703 588.5202 6.21624 420.3716 4.440171429 Paucara 741.05 5.3997 592.84 4.31976 423.4571 3.085542857 Guancavelica 749.87 8.82 599.896 7.056 428.4971 5.04 Cotay 758.64 8.77 606.912 7.016 433.5085 5.011428571 Turpu 764.31 5.67 611.448 4.536 436.7485 3.24 Vinac 772.14 7.83 617.712 6.264 441.2228 4.474285714 Llangas 778.05 5.91 622.44 4.728 444.6 3.377142857 Lunaguana 784.11 6.06 627.288 <td< td=""><td>Hivias</td><td>702.662</td><td>7.832</td><td>562.1296</td><td>6.2656</td><td></td><td>4.475428571</td></td<>	Hivias	702.662	7.832	562.1296	6.2656		4.475428571
Guamanga 721.7 12.63 577.36 10.104 412.4 7.217142857 Guanta 727.88 6.18 582.304 4.944 415.9314 3.531428571 Parcos 735.6503 7.7703 588.5202 6.21624 420.3716 4.440171429 Paucara 741.05 5.3997 592.84 4.31976 423.4571 3.085542857 Guancavelica 749.87 8.82 599.896 7.056 428.4971 5.04 Cotay 758.64 8.77 606.912 7.016 433.5085 5.011428571 Turpu 764.31 5.67 611.448 4.536 436.7485 3.24 Vinac 772.14 7.83 617.712 6.264 441.2228 4.474285714 Llangas 778.05 5.91 622.44 4.728 444.6 3.377142857 Lunaguana 784.11 6.06 627.288 4.848 448.0628 3.462857143						429	
Guamanga 721.7 12.63 577.36 10.104 412.4 7.217142857 Guanta 727.88 6.18 582.304 4.944 415.9314 3.531428571 Parcos 735.6503 7.7703 588.5202 6.21624 420.3716 4.440171429 Paucara 741.05 5.3997 592.84 4.31976 423.4571 3.085542857 Guancavelica 749.87 8.82 599.896 7.056 428.4971 5.04 Cotay 758.64 8.77 606.912 7.016 433.5085 5.011428571 Turpu 764.31 5.67 611.448 4.536 436.7485 3.24 Vinac 772.14 7.83 617.712 6.264 441.2228 4.474285714 Llangas 778.05 5.91 622.44 4.728 444.6 3.377142857 Lunaguana 784.11 6.06 627.288 4.848 448.0628 3.462857143	Cangollo tambo	709.07	6.408	567.256	5.1264		3.661714286
Parcos 735.6503 7.7703 588.5202 4 6.21624 420.3716 4.440171429 Paucara 741.05 5.3997 592.84 4.31976 423.4571 429 3.085542857 429 Guancavelica 749.87 8.82 599.896 7.056 428.4971 429 5.04 429 Cotay 758.64 8.77 606.912 7.016 433.5085 436.7485 714 5.011428571 714 Turpu 764.31 5.67 611.448 4.536 436.7485 714 3.24 714 Vinac 772.14 7.83 617.712 6.264 441.2228 4.474285714 4.474285714 Llangas 778.05 5.91 622.44 4.728 444.6 3.377142857 Lunaguana 784.11 6.06 627.288 4.848 448.0628 3.462857143	Guamanga	721.7	12.63	577.36	10.104		7.217142857
Parcos 735.6503 7.7703 588.5202 4 6.21624 420.3716 4.440171429 Paucara 741.05 5.3997 592.84 4.31976 423.4571 429 3.085542857 Guancavelica 749.87 8.82 599.896 7.056 428.4971 429 5.04 429 Cotay 758.64 8.77 606.912 7.016 433.5085 5.011428571 714 Turpu 764.31 5.67 611.448 4.536 436.7485 3.24 714 Vinac 772.14 7.83 617.712 6.264 441.2228 4.474285714 571 Llangas 778.05 5.91 622.44 4.728 444.6 3.377142857 Lunaguana 784.11 6.06 627.288 4.848 448.0628 3.462857143	Guanta	727.88	6.18	582.304	4.944		3.531428571
Paucara 741.05 5.3997 592.84 4.31976 423.4571 3.085542857 Guancavelica 749.87 8.82 599.896 7.056 428.4971 5.04 Cotay 758.64 8.77 606.912 7.016 433.5085 5.011428571 Turpu 764.31 5.67 611.448 4.536 436.7485 3.24 Vinac 772.14 7.83 617.712 6.264 441.2228 4.474285714 Llangas 778.05 5.91 622.44 4.728 444.6 3.377142857 Lunaguana 784.11 6.06 627.288 4.848 448.0628 3.462857143	Parcos	735.6503	7.7703	588.5202	6.21624		4.440171429
Guancavelica 749.87 8.82 599.896 7.056 428.4971 5.04 Cotay 758.64 8.77 606.912 7.016 433.5085 5.011428571 Turpu 764.31 5.67 611.448 4.536 436.7485 3.24 Vinac 772.14 7.83 617.712 6.264 441.2228 4.474285714 Llangas 778.05 5.91 622.44 4.728 444.6 3.377142857 Lunaguana 784.11 6.06 627.288 4.848 448.0628 3.462857143				4			
Guancavelica 749.87 8.82 599.896 7.056 428.4971 5.04 Cotay 758.64 8.77 606.912 7.016 433.5085 5.011428571 Turpu 764.31 5.67 611.448 4.536 436.7485 3.24 Vinac 772.14 7.83 617.712 6.264 441.2228 4.474285714 Llangas 778.05 5.91 622.44 4.728 444.6 3.377142857 Lunaguana 784.11 6.06 627.288 4.848 448.0628 3.462857143	Paucara	741.05	5.3997	592.84	4.31976		3.085542857
Cotay 758.64 8.77 606.912 7.016 433.5085 714 5.011428571 Turpu 764.31 5.67 611.448 4.536 436.7485 714 3.24 Vinac 772.14 7.83 617.712 6.264 441.2228 4.474285714 4.474285714 Llangas 778.05 5.91 622.44 4.728 444.6 3.377142857 Lunaguana 784.11 6.06 627.288 4.848 448.0628 3.462857143	Guancavelica	749.87	8.82	599.896	7.056	428.4971	5.04
Turpu 764.31 5.67 611.448 4.536 436.7485 3.24 Vinac 772.14 7.83 617.712 6.264 441.2228 4.474285714 Llangas 778.05 5.91 622.44 4.728 444.6 3.377142857 Lunaguana 784.11 6.06 627.288 4.848 448.0628 3.462857143							
Turpu 764.31 5.67 611.448 4.536 436.7485 3.24 Vinac 772.14 7.83 617.712 6.264 441.2228 4.474285714 Llangas 778.05 5.91 622.44 4.728 444.6 3.377142857 Lunaguana 784.11 6.06 627.288 4.848 448.0628 3.462857143	Cotay	758.64	8.77	606.912	7.016		5.011428571
Vinac 772.14 7.83 617.712 6.264 441.2228 4.474285714 Llangas 778.05 5.91 622.44 4.728 444.6 3.377142857 Lunaguana 784.11 6.06 627.288 4.848 448.0628 3.462857143	Turpu	764.31	5.67	611.448	4.536	436.7485	3.24
Llangas 778.05 5.91 622.44 4.728 444.6 3.377142857 Lunaguana 784.11 6.06 627.288 4.848 448.0628 3.462857143	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	770.46		647.746			4 47400
Lunaguana 784.11 6.06 627.288 4.848 448.0628 3.462857143	Vinac	//2.14	7.83	61/.712	6.264		4.4/4285714
Lunaguana 784.11 6.06 627.288 4.848 448.0628 3.462857143	Llangas	778.05	5.91	622.44	4.728	444.6	3.377142857
		+					3.462857143
Gualcara 789.99 5.88 631.992 4.704 451.4228 571	Gualcara	789.99	5.88	631.992	4.704		3.36

Asia	799.09	9.1	639.272	7.28	456.6228	5.2
					571	
Chilca	805.26	6.17	644.208	4.936	460.1485	3.525714286
					714	
Lurin	811.93	6.67	649.544	5.336	463.96	3.811428571
Lima	817.7	5.77	654.16	4.616	467.2571	3.297142857
					429	