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## Keywords

Inka, empire, geography, environment, imperialism

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# Andean Geography and the Rise of the Inka

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James G. Longstaffe

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## INTRODUCTION

The Inka empire is one of the most peculiar states in antiquity. The Inka were the ruling elite of an efficient and highly centralized bureaucratic state composed of a mosaic of different ethnic groups. From around 1460 until the Spanish invasion in 1533, the Inka empire occupied much of western South America from northern Peru to northern Chile (Gheerbrant 1961). The Andes mountain range dominates the geography and is the prime factor in the climate and ecology. The Andes have created the most ecologically diverse region on the planet. Isolated river valleys stretch across the empire from the Pacific to the Andean highlands. Within a relatively small area are hundreds of distinct micro-climates ranging from rain forest to desert. Elevation changes drastically and so after traveling only a few hundred one will encounter a different set of ecological variables.

In a relatively short time span, the Inka gained control of this region creating the largest and most populous empire in the New World (Gheerbrant 1961). What is especially remarkable about the Inka is that all of this was accomplished without a market economy (Stanish 1997). This key point differentiates the Inka from almost every other major empire. Even neighbouring Mesoamerican states such as that of the Aztec relied on a market economy for expansion and control. The Inka empire is a truly unique case study in state formation. The Andean geography

forced development away from traditional market based empires towards non-market imperialism (Stanish 1997).

## HIGHLAND AND COASTAL MODELS OF ANDEAN EXPANSION

The traditional model of state expansion involves the assimilation of neighbors in a radially outward direction. The process would start with a single group having some control over border groups which acted as buffers to neighbouring lands. As the state, power grew these buffer regions were incorporated into the state as provinces and new buffer regions were established (Albaracin-Jordan 1996). This dynamic mixture of core, provinces and periphery has proved successful in bringing many diverse groups under the control of a single group elsewhere. However, this does not seem to have been the case for the Inka. Because of geographical extremes of the region, Andean groups developed following two specialized models: the highland model and the coastal model (Métraux 1969). These models are at the root of Andean civilization's, and eventually the Inka's, divergence from more traditional patterns. The model of the Inka empire has been useful in studying other non-conventional states such as that of Hawaii, where geography is similar, though on a much smaller scale, to that of the Andean coast (Earle 1997).

The people living in the highlands of Peru were faced with the challenge of extreme ecological divergence and specialization. Occupying only one micro-climate proved very limiting in terms of the group's growth. As the population of a group grows, the group must shift its agricultural production towards specialization. This allows for the maximum production of goods (Rostworowski 1999). Highly specialized groups become reliant on trade to broaden their diet and technology in order to continue their growth. The highly centralized governments that materialize are usually created as a means to regulate trade between groups that would have previously been enemies (Earle 1997). This scenario states that governments arise as the result of specialization. As it has been shown, what works elsewhere does not seem to have worked in the Andes. Earl (1997) suggests that with the Inka and their predecessors, specialization was a tool used by the government to increase efficiency and control.

In the highlands, the degree of agricultural specialization was such that traveling only a few hundred meters upward in elevation would bring about drastic changes in which crops were dominant and optimal. For example, at 3400m maize cultivation was dominant. Between 3400 and 3900m native tubers were most common. Above 3900m only llama herding was productive (Earle 1997). It would be difficult for a group to develop such power and control as that of the Inka if they were limited to such a small, highly specialized area. Since all of the groups would be forced to trade to some extent, it would be hard for one group to develop such clear dominance over the others because all must meet their neighbors with some level of equality. Of course equality and lack of dominance in such exchanges is never a

likely scenario. By the clear evidence of Inka dominance in the region, we can be fairly confident that trade was not equal.

The highland model of economic control and colonization was that of the vertical archipelago. The vertical archipelago was a network of strategically placed enclaves situated vertically along the Andes encompassing many different micro-climates. (Rostworowski 1999) The highland elite controlled these various zones as a way to increase their productive assortment. They were usually days apart from each other and far apart from other ethnic communities. It is not clear if the colonies were conquered or if they represent colonization of previously uninhabited or integrated land. They were most likely new land, at least initially.

An example of a vertical archipelago comes from the Carta group of southern Peru (Métraux 1969). The group occupied a steep terrain encompassing many micro-climates. The enclaves were within one or two days from each other. A rotational system of seasonal work was developed with the workers moving from enclave to enclave. Since different crops grew in different enclaves, the rotation was always in sequence of crop harvest and planting. However, other work needed to be done and such things as tool production and mining would be included in the cycle. A typical cycle would consist of planting maize, mining gold, harvesting coca, and working on non-subsistence trades. Since there would be movement between each activity, a series of seasonal and communal villages developed (Métraux 1969). By using this model, the highland groups were able to meet all their needs without much direct contact with neighbors through trade and advance their state.

The people living along the coast, however, were not faced with the same climatic variation. The Andean coast, though a desert, is rich in marine and metallic resources. These groups spread out along the coast without much differentiation among the coastal enclaves. Because they did not utilize a maximum of ecological zones, these groups were less independent and more reliant on trade. The coastal villages were easily dominated by the highland groups through intersecting multiethnic centers. The laterally spread coastal groups and the vertically expanded highland groups would merge at coastal centers where exchange between the groups would occur. Such centers have turned up a wealth of artifacts describing economic and colonial ties between the two types of groups (Covey 2000).

However, while evidence of coastal exchange is prevalent, movement of products between the groups linking the archipelago from the highlands to the coast is not always present in the archaeological record. Excavations of highland groups at the Montara Valley site in southern Peru have shown that almost all of the diet was derived from local species (Earle 1997). Sites in Tiwanaku, an earlier highland state, show that crafts were also produced almost entirely for local use (Janusek 1999). In Tiwanaku valued goods were accumulated through production in controlled work shops rather than through trade. Only the leaders were allowed access to these goods so there was no pressure for the people to acquire such items through trade (Janusek 1999). This lack of true trade among the highland groups often results in the misinterpretation that there was very little movement of goods outside of their native zones. Local subsistence was in local hands, but the localities were

stretched across many eco zones and much could be derived from them (Morris 1993).

The typical pre Inka movement of goods was centered on the highland elite. Llama trains would be sent down the slope with highland products including wool and dried meat. These goods would be exchanged at the coast for crucial commodities such as cocoa and metals. Also, they would pick up goods to exchange with the lower groups in the vertical archipelago. Guano is an excellent fertilizer and it would be difficult to grow maize in the valleys without it. The llama trains would exchange guano with these lower groups for maize (Covey 2000). The pattern was very cyclical and the exchanges were beneficial for each participant. The access to llamas, however, allowed the highland groups to control this exchange system. It is important to note that there was no market system in the Andes. A person's wealth was gauged by their level of access to valuables (Stanish 1997). Without money, the economy is in the hands of the elite rather than the merchants.

### **INKA TECHNIQUES OF INTEGRATION**

The Inka's masterpiece is in how they controlled a whole group of these exchange cycles. The ruling elite of the empire, the Inka, arose from the Cuzco group in modern day southern Peru (Gheerbrant 1961). The Cuzco elite were one of the many highland groups who dominated the region. Inka legend says that the empire rose when another group, the Chanca, split into three groups with aspirations of world domination. One of these groups headed towards Cuzco. The people fled Cuzco leaving only a handful of the strongest leaders to defend the city. Neighbours, having no embedded

alliances with other groups, watched the activity but would not help Cuzco. Miraculously the few leaders who remained in Cuzco fought off the Chanca. The observing groups, seeing the battle turn from Chanca's favour, joined Cuzco and together they went to the Chancan city and conquered it under the Cuzco leadership. With the spoils from this victory the Cuzco group went on their own trip of world conquest. The reputation that came from the victory over Chanca allowed Cuzco almost unimpeded success (Rostworowski 1999). Because of the youth of the empire when the Spanish arrived there is probably still considerable fact in the legend, though there are no official records this legend is probably very similar to the true story.

Rather than completely incorporating these new groups under the central Cuzco government they left the previously existing administration systems in place. As previously stated the Andes are a complicated region to control efficiently and the Inka adopted no uniform administrative policy. Usually the best system is the one already in place. Today the region is considerably less agriculturally productive than it was in ancient times due significantly to the imposition of non-local agricultural and administrative practices (Morris 1993).

To legitimize Inka absolute dominance, myths were incorporated into the regional religions. Rather than using one story for the whole empire, the Inka personalized the creation myths for the group they delivered it to. The story circulating around the northern end of the empire was that the Inka came out of a cave in Cuzco and were given divine authority to rule the land. The southern portion of the empire believed that the Inka rose from Lake Titicaca and were sent to Cuzco to form the empire. In the

central part of the empire the people were told that the world was almost destroyed but the Inka, with divine intervention, saved the world (Stanish 1997). This story is most similar with the Chancan war legend probably because Cuzco is located in this region.

The economy of the Inka Empire was based around the concept of reciprocal contribution. Rather money, tax and tribute. The Andean groups had no concept of money or ownership; instead there was a labour tax. All of the land was property of the Empire and the subjects were responsible for the labour whether it be agriculture, mining, weaving, or tool making (Morris, 1993). Parts of the food, and much of the metal and cloth, were stored in administrative centers along the ingenious road network constructed by the Inka (Gheerbrant 1961).

One example of how the Inka utilized the previously existing economic structure returns to the cyclical relationship between the highland and coastal groups. The group producing the maize would have had a production quota to meet. Rather than importing the Cuzco technique for maize production they would leave the system intact. The exchange cycle, though unofficial in the eyes of the Inka, was ignored because they were interested solely in the maize. The highland elite previously dominating the system were given exemptions by the Inka and sometimes even raised to the level of lower lords within the Inka court (Covey 2000). Because of the Inka treatment of previously existing systems, Inka records only tell of the maize exchange and not of the rest. Inka records are difficult to decipher because there was no written language (Menzel 1959). Instead, information was recorded by *quipus*, a series of knotted cords (Métraux 1969).

The other side to the reciprocity is on the Inka's part. The stores of food and wealth, though used partially for the Inka's enjoyment and to support religious leaders and the army, were distributed to the subjects through banquets. Occasionally the stores were used in times when crops failed. It is a misconception, however, that the Inka had a welfare state. On the contrary, food was distributed during periods of crop failure only rarely. The Empire was concerned about its subjects only as far as considering them a problem for the local chiefs. The Inka participated in the reciprocity directly with the local chiefs only. They gave the chiefs the quota to fill and it was up to them to distribute the labour amongst their people. The interaction between the Inka and the people was not very much different than the previous systems with other elite in charge. Much of the time, though, things were better with the Inka than before. The Inka administration oversaw many monumental feats in a short period of time. Though the intentions of the Cuzco elite may have been to dominate the region, their means of control brought stability and continuous prosperity to the region.

### CONCLUSION

Many of the techniques used by the Inka to control its subjects were very simple. The Andes created a complicated patchwork of ethnic groups, each of which had found a way to maximize the efficiency of their land. The best way to monopolize such systems was to leave them intact, gain control of their leaders, and extract from these groups' area of expertise. The Inka were different from other great empires that assimilated their conquests. Geography forced the Andean groups to develop in a different manner from other groups. The Inka Empire was a step in the evolution of Andean states.

Unfortunately, the arrival of the Spanish ended this great experiment prematurely. How might the world be different if the Inka had been allowed to continue?

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