CHAPTER 7

TESTING THE HIRTH MODELS: LESSONS LEARNED

As I mentioned in the first chapter, groups of prehistoric households are ideal contexts for studying long-term patterns in a society's domestic economy, including the production, resource ownership and consumption, and distribution sectors of socioeconomic relationships within communities. In focusing my analytical attention on testing for differences in the three sectors of the domestic economy, I follow Hirth in exploring the economic underpinnings of long-term changes in sociopolitical relationships, rather than the political organization of well established hierarchical societies. Jachakala's three periods provided an excellent opportunity to not only reconstruct the long-term history of a highland village from a local perspective, but also to test the expectations of a particular model of how and why changes in the domestic economy might lead to a political economy.

Changes in Jachakala's Domestic Economy

In particular, I set out to test the Hirth models of domestic and political economy. The domestic economy model predicts a low degree of economic differentiation among households in a subsistence-oriented adaptation. This differentiation comes from the observation that, at any given time in a community's history, households will be at different stages of their life cycles, and they will have different numbers of producers and consumers. Consequently, their production and consumption levels of subsistence, craft and utilitarian goods will change over time. Operationalizing this model simply involved

testing for significant differences, in this case between groups of households, in their subsistence, craft production, and exchange activities.

The Niñalupita Period data from Jachakala supported the domestic economy model in that there were few differences in the relative proportions of craft and exchange activities between the central and southern zones. However, there were some wealth differences indicated by inter-zonal differences in access to the most valuable faunal packet, the trunk meat. The lithic:ceramic ratios (Table 4) presented in Chapter 3 also demonstrate that some portion of the residents of the southern area of the community were generally much more involved than the people in the center in the activities associated with basalt bifaces (i.e., agriculture) throughout the community's history. Both of these inter-zonal analyses indicate subsistence differences beyond that predicted by the Hirth model of domestic economy. Unfortunately, these inter-zonal comparisons obscure how wealth was distributed within each area of the site. The center's inhabitants could have been collectively wealthier than those in the south (as two supra-household groups), or there might have been just one or a few wealthy households (individual structures) in either or both zones. Because resolving this issue would provide additional insight into the processes by which socioeconomic differentiation developed at Jachakala and sites like it, excavation of more individual household units would be a productive avenue for future research.

Jachakala's three periods also allowed me to reconstruct diachronic patterns in the domestic economy. Differences in proportions of faunal packets increase slightly in strength over time, from the Niñalupita Period (Cramer’s V=0.13) to the Isahuara (V=0.15) and Jachakala (V=0.19) Period. While these results are still not very strong, increasingly variable distributions of cuts of meat indicates changes in access to subsistence resources between both zones. The significant differences between the trunk faunal packet proportions in the south and center that date to the Niñalupita Period are especially notable in that they are the earliest evidence from Jachakala for wealth differences. Because I found no materials from other regions like obsidian and Tiwanaku pottery in Niñalupita Period levels, I cannot say whether or not participation in trade activities drove these wealth differences to develop.

Secondly, I operationalized and tested the hypothesis that differential participation in exchange and craft production activities provides the impetus for a political economy to develop, the central tenet of the Hirth model of political economy. The Isahuara and Jachakala Period subsistence differences are intriguing in this theoretical context because they co-occur with spatially unequal distribution patterns of other possible sources of wealth. Some of these are imported goods, such as obsidian and other stone materials, as well as most Tiwanaku-style wares. Other goods that could be indicators of wealth may have been manufactured elsewhere and imported into the La Joya region, or they may be local products. Classes of artifacts of ambiguous origins include camelid mandible tools, bone snuff tubes and trays, unslipped incense-burners, and other kinds of Tiwanaku-style materials. The important point is that these artifacts were found in much higher proportions of central and northern zone excavation units than in southern zone units. Goods like these imports might have been markers of social status, instead of or in addition to being sources of wealth. Their foreign origins alone, such as derivation from or association with the ceremonial capital of Tiwanaku, might lend them a cultural significance not visible to the archaeologist.

It seems that the conditions dictated by the Hirth model were present at Jachakala. Some portion of the Isahuara and Jachakala Period households in the central zone of the site participated more in the exchange of semi-precious stones, marine shell, Tiwanaku-style kerus and other ritual ceramics, than those in the southern zone. Some or all of the households in the center also participated to a greater degree in the production of basalt bifacial tools in the Isahuara Period, although this pattern reversed in the Jachakala Period. In this respect, some (group of) households diversified their domestic economy by differentially participating in craft production (of basalt bifacial tools, small projectile points, and a variety of utilitarian goods) and exchange (of semi-precious stone materials, marine shell, camelid mandible tools, and certain classes of imported pottery) activities.

However, the crucial point of the Hirth model is that it predicts that trade and craft specialization provide the stimulus or opportunities for a political economy to develop. In this regard, the causal relationships between these variables are not supported by the data. At Jachakala, there was some inequality in access to camelid meat before other differences in the domestic economy developed, and these subsistence inequalities were

unrelated to exchange or craft activities. Trade and craft goods played important roles in shaping and defining socioeconomic stratification at Jachakala, but not that predicted by the Hirth model of political economy.

Social Differences and Social Power

Differential access to subsistence resources and some classes of non-utilitarian goods minimally constitute wealth differences at Jachakala. Clearer evidence for social hierarchy at Jachakala (other than distributions of exchange items that may or may not have functioned as such) could be reflected in house sizes, although the continuum of house floor areas of sampled structures at the site would suggest otherwise. It is also possible that status distinctions could have been expressed via categories of material culture that failed to preserve. For the same reason, the archaeological remains of Jachakala's residents provide few clues of why there were walls separating areas of the site at all. *Ayllu* (kin group or clan), status, or ethnic divisions could have existed between the groups in the two zones (i.e., horizontal differences like those described in Hoshower's [1995] work on Tiwanaku colonists in the Moquegua Valley), but the range of mortuary, architectural, and material styles do not help to answer this question.

One might make the argument that differences in social power (the ability to use differences of status or prestige to get things) could have justified increasingly restricted access to possible prestige goods and esoteric knowledge (i.e., symbolic capital). Although Jachakala household ritual traditions continue throughout the sequence, there are spatially unequal distributions of ceremonial artifacts like figurines and *kerus*. However, it is equally likely in this hypothetical case that Isahuara and Jachakala Period differences in wealth are justified by or based on access to knowledge, alliances with elites or polities elsewhere, imported luxury goods, or something else. If access to or participation in the ritual realm was the basis for those economic differences, we might have expected more highly restricted distributions of luxury goods (e.g., obsidian) and ceremonial offerings (found throughout the site). Since household ritual traditions continued, residents of the center and south could have participated in northern zone activities to different degrees (not the same as social power); in other words, they might

have just done somewhat different things without using those differences to justify any sort of social hierarchy whatsoever.

These speculations about the nature of social distinctions or divisions at Jachakala bring a flaw of this essentially materialist approach to light. Inequalities can develop even when there are no material advantages involved. The ethnographic literature offers many accounts of complex sociopolitical formations in which strong differences in social power and prestige are based in some individuals' ability to give resources away (e.g., Kwakiutl and Polynesian potlatches) or because of their place in the society's religious life (e.g., Hindu Brahmans and Navajo shamans). In the Hirth model, on the other hand, hierarchy develops when there are craft and trade goods that allow some households to be wealthier than others. If the ethos of inequality existed in the Niñalupita Period, then the trade goods would have been distributed in accordance with those social differences once they did appear. The introduction and differential distribution of trade goods in the Isahuara Period is very visible in the archaeological record, but that does not make the activities through which they appear "causal." My inability to weigh non-materialist possibilities highlights a limitation of the Hirth models of domestic and political economies, and perhaps, of a range of similar materialist approaches.

THEORETICAL IMPORT OF RESEARCH

Lessons learned (and additional questions) about agency in the periphery of states, heterogeneity in the range of activities practiced by agro-pastoral households in a politically autonomous village, and wealth differentiation without political economy, are applicable to communities on a similar scale and/or in a similar socioenvironmental setting. I offer a few comments below on each of these issues in an attempt to place the Jachakala project into a broader theoretical context, and to make its conclusions relevant to scholars working elsewhere.

Agency in Interregional Relationships

The iconographically-charged associations of Tiwanaku-style goods in particular with processes of state formation and a changing ideological landscape in the greater

south-central Andes should be questioned, not assumed, when they are recovered from communities like Jachakala. Imported goods are sometimes recovered from contexts in which they may have functioned as status markers (the burials in San Pedro de Atacama, Chile and Sipan, Peru are good examples). In other cases, the consumption or display of some items may be restricted to an elite class (such as at Tiwanaku itself, as well as Shang burials, Egyptian officials' households and tombs, etc.). Because exchange goods are found in both domestic contexts (house floors, domestic middens and storage pits, household ritual offerings) and non-domestic contexts (temples, northern zone refuse pits and features unassociated with any structures) at Jachakala, their function is less than clear. Did they mark differences in social status? Did they function as wealth differences (luxury goods)? Were they, or the activities in which they were used, somehow justification for the faunal packet differences? I have shown that some kinds of Tiwanaku-style goods were variably adopted at Jachakala. But because they appear relatively late in the historical sequence of events there, I argued that they played a minimal role in the local development of inter-zonal wealth differences.

It is only possible to objectively evaluate the role of interregional contacts in processes of social change by first reconstructing the local context in which trade goods (and imported ideas) moved. Not only does this local perspective enlighten us about the processes through which changes in the domestic economy lead to wealth differences, but it is also crucial to truly understanding larger regional entities like the Tiwanaku cultural horizon. It is surprising how little work is done in sites like Jachakala and regions like La Joya that tests the effects of larger sociopolitical entities on local populations. More often, our preconceptions about the effects that cities, states and even empires *must have had* on small agropastoral communities "in the periphery" result in blanket characterizations of interregional relations.

My work at Jachakala demonstrates that in fact the most important processes that happened there were internal ones. Jachakala certainly had contact with and adopted materials from other altiplano populations, but they did so on their own terms. Tiwanaku-style ritual wares include undecorated vessel forms and local forms with Tiwanaku IV or V slip; these wares were recovered from household ritual offerings as well as the public architecture in the northern zone. Some painted elements, including a very few crude

Figure 59. Map of the Tiwanaku State illustrating one of the more extreme views of this polity's area of political control (Swartley 2002: 176, taken from Fundación Winaymarka 1993: 5).

representations of birds and the sun but mostly geographic designs, look more like the Mojocoya (Cochabamba) versions of Tiwanaku pottery than the Tiwanaku pots themselves. Other pieces do look like direct imports. But household ritual traditions continue, as do material styles other than these few classes of goods. This strongly suggests that Jachakala's population decided for themselves how, when, where, and even whether to use imported pots in their daily lives.

Therefore, we should be careful when we talk about places like Tiwanaku as monolithic ceremonial capitals of very big regions. Without a doubt, Tiwanaku was big

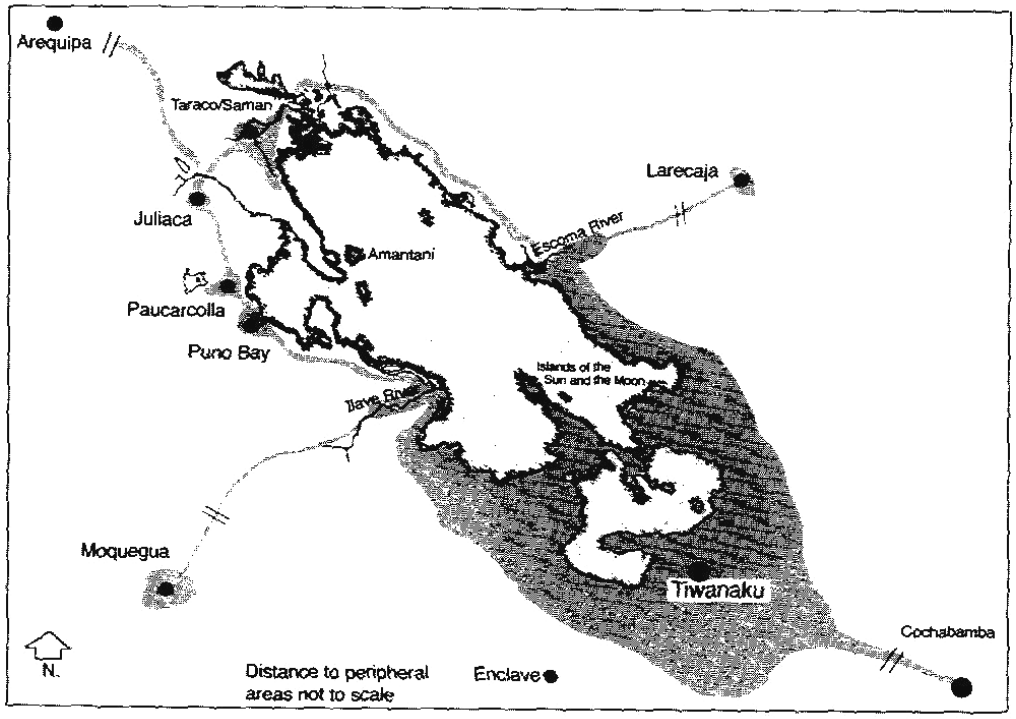

Figure 60. Map showing “hypothesized areas under direct Tiwanaku control at its height circa AD 800-900” (Bauer and Stanish 2001:39, Map 2.2).

and quite impressive, and it affected people's lives within and outside of the Titicaca heartland. However, its ideological influence on populations outside of the southern Basin (or within the Titicaca Basin, for that matter) might not have been as homogeneous and all-encompassing as we tend to think. At Tell el-Amarna (Kemp 1989), for instance, there is evidence that forbidden deities were secretly worshipped by officials in the Pharaoh Akhenaten's administration, inside his royal capital. Why should populations in distant regions not under the direct political control of a ceremonial capital like Tiwanaku or Chavin be any different? In other words, why should we assume that big, impressive ceremonial capitals necessarily changed the ideological landscape around them, or that they did so for all exposed populations in a similar manner?

Because of this, it might be inappropriate to even talk about places like Jachakala as "peripheral." If Jachakala is typical of small sites outside of the heartland of big polities, then we should certainly be cautious about equating a state's "periphery" with the

spread of pottery styles or other material goods. To me, the term "periphery" implies a source of exploitable resources, including raw materials and potential human labor, which elites in capitals and provincial centers strategically exploit to whatever extent and in whatever ways they can. How many communities in the "periphery" of Uruk, Monte Alban, Vijayanagara, Harappa, and similar polities underwent trajectories of change that were not shaped or directed by outside influences? In short, were they "peripheral" to the bigger sites on the sociopolitical landscape at all?

Perspectives on the State from Jachakala

The distribution of ceramics, bronze vessels, or other goods from a powerful or important place like Tiwanaku is not necessarily the same as the spatial extent of its "influence," "power," or "control." To some extent, this means that we really do not know what cultural horizons represent, nor can we adequately explain the heterogeneous relationships between capitals and the rest of the communities in some broader region, unless we take a local perspective from within those communities. Indeed, we tend to characterize states as blanket entities subsumed under such general labels as "ceremonial center" or "expansionistic polity," when we know that such vocabulary obscures the variability found in the "periphery" of even history's most powerful political forces (modern and ancient alike). The problem is certainly widely recognized, and the heterogeneity such generalizations mask are well documented in studies such as those collected in Schwartz and Falconer's (1994) edited volume. Though small and fairly isolated from processes in the Titicaca Basin, Jachakala provides a cautionary tale against *assuming* that villages and towns will be the passive recipients of artifacts and ideas from a state's capital, rather than actively changing and incorporating those goods and ideas as they see fit.

Although the Jachakala project addresses but one site in the large area where Tiwanaku-style goods are recovered, it should provide reason to carefully examine one's assumptions about core processes as well as core/periphery relations. In the Tiwanaku case, colonies like Omo 12 are distinguished from traditional administrative nodes precisely because their purpose is not political control over local populations. Whether or not verticality was practiced outside of the Moquegua Valley (Goldstein 1989, 1993), it is

highly unlikely that the spatial extent of Tiwanaku's political and economic *control* was equal to that illustrated in Figure 59, or that it was an "expansionistic state" (Bauer and Stanish 2001:38) as some have argued. The map in Figure 59 represents one of the more generous views of Tiwanaku's area of control; it was produced and distributed as part of Oswaldo Rivera's Fundación Winaymarka, a non-governmental organization that constructed raised fields (agricultural features associated with Tiwanaku) in an effort to bring this technological adaptation back to the *altiplano*. The hypothesis that Tiwanaku directly controlled even the much more limited area depicted in Figure 60 must be rigorously tested via local histories in peripheral or marginal areas. Such examples of a capital-focused or urbanocentric perspective on south-central Andean prehistory hinder a more anthropological understanding of issues of long-term social change by using assumptions about causality to "explain" those trajectories of change. This is not to say that work in or views on regional change from state capitals are somehow all erroneous; they certainly provide important contributions to our knowledge of human history. However, the understanding of state formation processes we gain by studying their central places cannot be extended beyond the borders of those capitals if we want to understand the forms those interactions with other regions took. At the very least, the La Joya region should be exempted from such sweeping territorial maps of "state control."

The Environmental Factor

On the other hand, the ecological setting of sites such as Jachakala, Lukurmata, and the Early Uruk period villages on the Deh Luran plain such as Farukhabad (Wright 1981) probably strongly prohibited surplus accumulation. In areas where agricultural intensification and surplus accumulation is easier to accomplish, such as floodplains and other warmer, wetter settings, opportunities existed to dominate aspects of staple agricultural production or the distribution of cultigens. Given Jachakala's setting, it is not surprising that higher status households were more involved with camelids than with building terraces and canals or controlling the production of agricultural hoes. Perhaps important factors in the emergence of inequalities elsewhere were similarly tied to mobile sources of meat and socioeconomic connections to less marginal environments. If yaks played a similarly important role in early inequalities in the Himalayan mountains of

Tibet and Nepal, for example, then this would make for a very interesting comparison of paths to inequality in marginal environments. I do not mean to imply that environmental conditions predetermine social adaptations, but the social and environmental settings of communities do provide limitations on the range of possibilities open to ambitious households and individuals.

Prestige Good Models of Social Complexity

In a broader sense, my work also tests a version of the prestige goods models of the origins of complexity that have been popular in various forms over the years. I tested (and rejected) the hypothesis that as some households grew to dominate long-distance trade, social inequalities developed as a result. Other archaeologists have also argued that interaction and/or competition between elites could provide the impetus for social change (e.g., Renfrew's (1986) peer-polity interaction model, Brumfiel's (1994) factional competition, and Burger's (1995) Chavin model are a few). Whether elites strengthen their position in sociopolitical hierarchies through differential access to prestige goods imported from a distant capital, or through control over craft specialization to export manufactured products to wider trade networks, exchange has played a very prominent role in research on complex human social organization. In a society as small and non-hierarchical as Jachakala, there are no elites to speak of; but exchange still played an important part in the Hirth model of how wealth differences might emerge. The data here suggest that wealth differences predate differential participation in exchange networks, and so the Jachakala case does not support models positing the causal or central role of prestige goods in initially developing social inequalities.

Jachakala and the Origins of Complexity

The inter-zonal differences I reconstructed, even those dating to the Isahuara and Jachakala Periods, are quite moderate. Though some might object to the appropriateness of discussing models of political economy in the first place -- Jachakala's small population size and relative isolation in the larger La Joya region mean its development was inherently limited by these things -- there were wealth and perhaps status differences that emerged within the community. This differentiation never developed further at

Jachakala, and McAndrews's survey (1998) suggests that sites that post-date its abandonment are smaller and scattered across the landscape. However, its relative isolation and small size make the processes by which Jachakala's socioeconomic differences that much more intriguing. Regions without political hierarchy, densely concentrated populations, or intensive agriculture, are also stages on which trajectories to stratified society could have played out. Processes and causal factors by which the first stages of stratification can and did emerge are the basis for models of complexity; these models should be tested in cases where the beginning stages are archaeologically visible, as well as cases where differentiation is well established. How can we understand the processes by which complexity emerged in human prehistory by limiting ourselves to looking at the end products of those processes?

Avenues for Further Investigation

In addition to advocating the local perspective on historical trajectories of change in households, communities, and regions, there are a number of productive ways to extend the results from this work beyond the Bolivian altiplano. Research on the origins of a political economy related to changes in the domestic economy of some portion of a population might look beyond craft specialization and exchange as springboards for socioeconomic differentiation. I believe that conceptualizing these changes as diversification of the domestic economy is a very appealing way to approach early forms of social inequalities. All households in communities without well established, non-food producing elites were concerned, first and foremost, with meeting their subsistence needs. Because the eventual emergence of non-food producing elite households means that, at some point, they had to start concentrating on other activities, the domestic economy is where such differentiation will first begin to develop. Other models of how and why these changes could occur in the archaeological record of a community or set of communities within some bounded region should somehow incorporate non-materialist opportunities for social differentiation. The Hirth model in particular does not do this. However, craft production and exchange are still two sectors of a household's range of economic activities which provide important opportunities to expand and change its function within its larger community. Just because the causal relationships posited by the

Hirth model of political economy were not supported by the Jachakala data does not in any way detract from its theoretical appeal. Some version of it has been and will continue to bet tested in a wide variety of case studies from human prehistory. Indeed, Jachakala provides a case study of the processes by which social differences gradually emerged. In this general sense, its potential theoretical import as a comparative case study is greater than the sum of its household refuse.