

# THE PERCEPTION AND STUDY OF RURAL CHANGE IN THE ANDES: THE INKA CASE

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**ABSTRACT:** Archaeologists investigating social complexity often focus on traits that differentiate complex societies from the simpler organizational forms preceding them. Few approaches address the role of households or communities in the development and consolidation of complex polities. Those that do, notably hierarchy models, treat such constituent elements as unchanging and irrelevant to the operation of the system as a whole. An examination of the Inka empire indicates that imperial expansion both modified and was predicated upon the organization of conquered groups. This suggests that archaeologists must address both the structure and history of rural hinterlands in models of social complexity.

## INTRODUCTION

In their investigation of social complexity archaeologists often focus on traits and institutions which differentiate stratified and state societies from the simpler organizational forms preceding them. Such features as centralized authority, full-time craft specialization and urban environments have been used as criteria for establishing the existence of states and are usually viewed as the constituent elements of complexity. As a result of equating this array of traits with complex social forms, simply organized groups embedded within states are usually excluded from the purview of social evolutionary theory. Rural communities, families and kin groups are not seen as integral parts of complex sociopolitical entities, but are viewed, instead, as stable social units which remain unchanged by their new position within the lowest ranks of a larger hierarchy. In the literature on Andean societies, this view of local level stability is especially prevalent. Social forms such as *ayllus*, rural communities and traditional leaders are believed to display a remarkable degree of continuity from pre-Incaic times until the end of the colonial period, despite the radical changes that occurred in the Andes. However, unlike many of the scholars studying complex societies, a number of Andeanists have also noted the similarities between the organization of the Inka empire and that of the societies subsumed by it (Carrasco 1982; Collier 1982; Netherly 1978).

In the following essay the nature of social continuity and change at both the local and imperial levels of the Inka empire will be examined. The theories and evidence on which researchers base their assessments of organizational continuity will be reviewed, and some previously published data will be examined to support a revision of currently held views. Finally, the conceptual difficulties inherent in assessing social change will be briefly discussed.

Throughout, the focus will be on traditional elites from rural communities in the Inka provinces. The reason for this emphasis is twofold. First, very little is known about the internal organization of rural societies. Elites who occupied the lowest rungs of the Inka bureaucracy thus constitute one of the only local level institutions about which information is available. Second, these leaders occupied a critical position within the imperial structure.

They formed the crucial link between the government bureaucracy and conquered groups, and their behavior thus determined to a large extent the overall stability of the empire.

### THE EFFECTS OF POLITICAL INCORPORATION ON RURAL SOCIETIES

One approach to understanding the role of rural communities embedded within state systems is derived from Simon's concept of nearly decomposable hierarchies (Simon 1965; 1973). Simon believes that most, if not all, complex systems are organized hierarchically and seeks to develop a theory that is relevant to all hierarchically ordered phenomena. In his words, a hierarchy is a complex system "analyzable into successive sets of subsystems" (1965: 64), and the linkages between components of social systems are defined in terms of intensity of interaction. Nearly decomposable systems are those in which subsystems are only loosely coupled to other subsystems occupying the same level or to those within the levels above or below. Because of this weak vertical and horizontal coupling, subsystems can be analyzed as if they were independent of each other. Furthermore, the efficacy and stability of higher level structures is relatively unaffected by the internal organization of lower level components. These components display a great deal of homogeneity and usually appear to be near equilibrium; only their inputs and outputs, but not the details of their internal dynamics are of concern to the higher order system (1973:16). As an example of a social system displaying these properties, Simon describes Alexander's empire which was rapidly created by the assembly of pre-existing social units into a larger system that then fragmented into its original components at the time of his death (1965:68).

Although hierarchy theory is one of the few approaches that includes lower level components (in this case conquered groups) in a model of complex society, the concept of near decomposability poses a number of serious problems for the study of rural communities embedded within states. The theory rests on a foundation of assumptions which themselves should be the focus of empirical study and that can be challenged with the data already available.

In the Inka case, the variability of the subsystems incorporated into the empire is perhaps one of the most striking facts to emerge from two decades of archaeological and ethnohistoric research on provincial organization. Although the diversity of pre-Colombian cultures inhabiting the Andes at the time of the Spanish conquest is difficult to detect because of the homogenizing effects of European control, we do know that linguistic, cultural and organizational variability was characteristic of the region (Pease 1982). Furthermore, the Inka's response to conquered groups also varied, and seems to have been related to both the nature of the existing societies and the types of resources available in the area (Schreiber 1983). Neither the lower order components nor the linkages established between them and the imperial superstructure appear to have been entirely redundant; differences among provinces, in fact, have been of great interest to researchers who now question the idealized hierarchy reported by the early chroniclers (e.g., Pease 1982). A more important premise underlying the concept of near decomposability is that the internal dynamics of lower order components are of little importance to the functioning of the higher level structures and, therefore, do not have to be included in an analysis of the system as a whole. The implication of such an assumption is that the organization and behavior of lower order subsystems are irrelevant to either the structure or evolution of complex societies. However, the frequency

with which ancient empires fragmented as a result of their inability to control conquered groups suggests that the functioning of such lower level components was indeed an important concern of those who controlled the state apparatus.

Culbert (n.d.) resolves this discrepancy between theory and historical fact by distinguishing between artificial and natural hierarchies. Artificial hierarchies are most prevalent in modern society where they structure governments, corporations and many other institutions. Hierarchies of this type are usually built from the top down in the sense that the larger system is constructed first, and specialized subsystems are created later. Lower level components are thus dependent on the survival of the larger structure for their continued existence. Two important characteristics of artificial hierarchies are that horizontal linkages between subsystems tend to be negligible, and vertical coupling is usually weak. Culbert therefore maintains that artificial hierarchies most closely resemble the ideal decomposable hierarchies described by Simon. He stresses, however, that the importance of loose vertical coupling is that it allows information from lower levels to be transmitted to higher order components in a simplified form. Decision makers at higher levels can thus create policy and issue directives without becoming unnecessarily involved with the details of lower level organization.

Natural hierarchies are composed of social units that have emerged throughout the course of human development. In complex hierarchies of this sort the most ancient units, such as families, kin groups and villages are organized into evolutionarily recent forms such as states and empires. Horizontal linkages between elementary components are usually dense, despite attempts by decision makers at higher levels to sever them. More importantly, subsystems are able and usually more than willing to survive independently of the larger system. Natural hierarchies, Culbert argues, are therefore usually less decomposable than artificial ones since higher level administrators must constantly interfere in subsystem activities in order to retain them as productive components of the larger system. Direct involvement in local affairs subverts the principle of simplification and often results in an ultimately disastrous expansion of the bureaucracy. Using the Inka empire as an example, Culbert shows how administrators of a natural hierarchy attempted to stabilize such a system by creating artificially organized elements within it.

Culbert's assessment of Simon's concept of decomposability in terms of human hierarchies improves the original formulation in three important ways. First, he injects a dynamic element into an essentially static model by describing the contradictions that exist within natural hierarchies and the ways in which they are modified to produce more stable systems. Second, he shows that multiple horizontal linkages are actually characteristic of natural hierarchies, rather than being entirely absent. Finally, his discussion of upper level participation in lower level affairs demonstrates that the functioning of elementary components *can* have ramifications throughout the entire system.

However, Culbert continues to characterize lower order subsystems of natural hierarchies as stable forms which preserve their integrity and internal structure despite incorporation into a state or empire. By discussing components of hierarchies in terms of the order in which they evolved he implies that elementary forms such as families and villages remain essentially the same throughout the course of human development. Linkages between

these groups and higher levels are characterized as limited since they usually involve simple extractive procedures such as tribute collection or military conscription.

The image of social evolution as an accretionary process that entails the assembly of ancient systems into new frameworks is, perhaps, the result of the language, rather than the intent of systems theorists. However, conceptualizing social groups as bounded, static entities that can be assembled and decomposed makes it difficult to map the internal transformations of social formations or to analyze the multiplicity of interconnections among them. The penetration of the state into agrarian societies and the ramifications of state control within such groups are, therefore, not easily addressed within the framework of hierarchy theory.

In the introduction to the volume *The Inka and Aztec States, 1400-1800* (1982), Collier also emphasizes the continuity of subimperial units from pre-Incaic until late colonial times. He contends that the use of indigenous organizing principles by both the Inka and the Spaniards to structure their empires minimized change at the local level. Conquered communities simply produced a surplus for their imperial overlords rather than for their own *kurakas*. He ignores, however, the effects of changes in the disposition of surplus and the shifting field of extralocal economic relationships on political relations within the community, issues which will be addressed in more detail below.

Collier is not, however, simply arguing from the evidence, which is actually extremely meager; he is continuing a twenty-five year old debate with the early chroniclers. Ever since Murra's (1962) call for the study of provincial records in order to circumvent the biased accounts provided by Inka elites, ethnohistorians and archaeologists alike have been refuting the notion that Incaic control was as thorough as the early chroniclers claimed. This interest in the persistence of rural Andean societies in the face of often brutal outside control seems also to be related to the political changes that Peru experienced in the 1960s and 70s. With the intensification of peasant uprisings and the advent of agrarian reform, both indigenous intellectuals and national leaders have had an interest in demonstrating the connections between present day Andean culture and the pre-Incaic past.

The conclusion that rural communities were relatively unaffected by the Inka conquest has been reached by a number of scholars, but on what empirical evidence does this conclusion rest? Although there has been an explosion of research on imperial control of the provinces very little is actually known about the conquered communities themselves. Only one archaeological project, the Upper Mantaro Archaeological Research Project, has specifically addressed the effects of Inka domination on the domestic economy of a group incorporated within the empire (D'Altroy and Earle 1985; Earle 1985; Earle et al. 1980; Earle et al. 1987; Hastorf 1985b; Hastorf 1990). Ethnohistorians have also neglected agrarian communities in favor of examining specifically Incaic institutions. However, this emphasis began to shift in the last decade (e.g., Pease 1982; Spalding 1984; Salomon 1986; Stern 1982).

In general, archaeologists and ethnohistorians have been primarily concerned with only those provincial transformations which were explicitly directed by Inka policies. This approach is similar to the examination of rural-urban relationships in that it adopts the perspective of elites occupying state or commercial centers rather than the viewpoint of provincial populations themselves. The implicit question has been "How did the Inka restructure the countryside?" rather than "How did the conquered groups respond to Inka

control?" Answers to both questions, it seems, would produce a richer, more complete understanding of the emergence of hinterlands within the Inka empire and the resulting transformation of the societies inhabiting them.

### THE RELATIONSHIP BETWEEN LOCAL AND IMPERIAL ORGANIZATION

In Culbert's model of natural hierarchies the organization of lower level components is conceptualized as being distinct from that of the overarching political structure. Furthermore, direct government involvement in local affairs is seen as a response to disequilibrium which usually leads to a spiral of bureaucratic expansion and continuing pressure on agricultural producers. The organization and functioning of lower level subsystems affects the entire system only when the state is pathologically involved in local matters, and the result is usually disastrous.

In the Inka case, however, imperial organization paralleled that of the groups embedded within the empire, and the government responded to local conceptions of political organization (Morris and Thompson 1985; Murra 1980; Wachtel 1981). This is not to say that the characteristics of individual conquered groups each influenced the structure of the imperial system, but that the interpenetration of the state and the local societies was much greater than hierarchy models suggest.

The interconnectedness of the imperial and local spheres of organization can be seen most clearly in the mechanisms employed by the Inka to maintain the allegiance of the traditional elites. Within highland communities conquered by the Inka the reciprocal exchange of *chicha* symbolized the close relations among kin and marked the economic rights they had in one another. Although the relationship between leaders and their followers was actually redistributive and asymmetrical rather than reciprocal, this was also expressed by the distribution of *chicha*, particularly at labor parties organized for work on the leader's fields. The Inka utilized this type of exchange as a mechanism for maintaining the allegiance of traditional elites as well as provisioning soldiers and *mit'a* laborers. The ritual significance of maize particularly in the creation and maintenance of social ties extended far beyond its economic importance as an easily stored crop (Murra 1960).

The role of maize in the consolidation of social bonds between leaders and their constituents is clearly expressed by Salomon (1986) in his description of contemporary practices near Quito that closely parallel the ethnohistoric evidence from that region. He states that:

"First, the prestation of maize, either dyadically or redistributively, registers bonds that are felt throughout the community, cutting across distinctions of rank, age, etc.. Its meaning is qualitatively the same whether it is offered by a chief or an equal. Second, these demonstrations are made in essentially the same way from the smallest to the largest scale—from small kin-group functions to communitywide festivals. It may be concluded that the chief's claims to mobilize all village members to produce his maize, and to offer them processed maize in return, was a signal of rank only in the sense that his social network was (locally) all-encompassing. The obverse side of the gesture

was an emphasis on solidarity, shared identity, and kin-like fellowship" (Salomon 1986:81).

Godelier (1977 Chapt. 8) points out that the form of a kin-based, reciprocal relationship was extended to an essentially exploitative relationship between the state and its subjects. However, the state's manipulation of kinship ideology to legitimize its rule had far reaching economic and political repercussions. Morris (1982, 1972; Morris and Thompson 1985 Chapt. 5) believes that administrative centers such as Huanuco Pampa and Xauxa were established not only to facilitate the movement of goods and armies, but to feast traditional rulers at the state's expense. Excavations in the large structures adjoining the ceremonial plaza at Huanuco Pampa uncovered tons of jars that were used for brewing chicha, and in nearby buildings numerous weaving implements were found suggesting that textiles were manufactured for redistribution as well (Morris 1974). Although military force was the primary mechanism employed to incorporate groups into the empire, ritual redistribution appears to have played a major role in maintaining their allegiance. The Inka state, in effect, had to continually earn its authority in order to retain adequate control over conquered groups (Morris 1982; Morris and Thompson 1985, Chapt. 5). To do this, as well as provide for the army and other dependents, the state required enormous amounts of maize which were exacted as tribute from preexisting communities or produced by estates and *mitima* colonies (Wachtel 1982). In order to sustain a high level of production, the Inka also invested surpluses in terracing and irrigation projects which were designed to increase the output of corn.

In the process of constructing an empire, then, the Inka relied to an extent on organizational principles that structured conquered groups and which were probably important in pre-imperial Incaic society as well. Basing his argument on Carrasco's analysis of Aztec state formation, Collier (1982:17) maintains that the Inka transition from 'kingdom' to 'empire' was simply a matter of applying previously evolved principles of organization to a wider geographic and social sphere. Because the mode of production remained essentially the same he suggests that the emergence of the Inka empire did not entail the evolution of innovative social forms. To both Carrasco (1982) and Collier (1982) the congruence of imperial and local modes of production and stratification also implies that conquered groups were essentially unaffected by their incorporation into the empire.

Although we know rather little about pre-imperial Inka society, the suggestion that the emergence of the empire was accomplished by extending previously developed principles of organization is quite plausible. This is particularly true of the manner in which the allegiance of traditional elites was maintained, as discussed in the example above. Redistributive activities with connotations of reciprocity were used to link conquered groups with the Inka bureaucracy. In essence, a social mechanism that emerged in the context of kin based relations was used to integrate the empire. However, the application of old principles to new realities does not simply result in the perpetuation of the *status quo* as Carrasco and Collier imply. Many institutions and structural relations remained the same, but just the vast increase in scale alone spurred the development of new social groups as well. For instance, the storage of food was important to redistributive leaders at the local level, but the immense quantity of goods that flowed into the imperial coffers required not just a network of goods and storage facilities, but a system of record keeping and a class of 'literate' specialists who controlled it. Decimal organization was applied to populations of tribute payers in the

southern highlands, creating a new category of officials with access to labor (Julien 1982). In a sense, new social groups and relations were associated not with the emergence of the empire, but with its consolidation. Even institutions such as *yanakuna* and *mitimaes* that seem to have had pre-Incaic precedents were developed and elaborated in response to imperial growth and the realization, perhaps, that traditional forms of social control were no longer adequate.

Collier's and Carrasco's contention that sub-imperial continuity was characteristic of the Inka empire because the empire as a whole and groups incorporated within it were organized along similar socioeconomic lines is also suspect. Collier himself points out that the impact of Inka control on local groups depended partly on the way in which these societies were organized prior to conquest. States such as the Lupaqa appear to have remained internally intact, while the uncentralized Chachapoyas of the western slopes were organized into a single administrative unit under the direction of a *yanakuna*, or retainer provided by the state. The amount of resistance put up by the conquered groups also affected the degree to which they retained indigenous forms of organization. The kingdom of Chimor was militarily conquered by the Inka and much of its political apparatus was dismantled as a result (Pease 1982).

More important to this discussion is the fact that with the imposition of Inka control, the social, political and economic environment in which these societies operated before the conquest was radically altered. The modification of relationships among groups that occupied the same conquered region had important effects on the relationship between local leaders and their constituents. In an attempt to understand the ways in which local leadership was transformed and the hinterlands were restructured, a description of two conquered groups is presented below.

#### THE CONQUERED COMMUNITIES OF QUITO AND THE MANTARO VALLEY

The region around Quito, Ecuador, was one of the last areas conquered by the Inka, and at the time of the Spanish conquest was thus on the periphery of the empire. The indigenous population was organized into a series of *llajtakuna*, or communities, whose members held hereditary rights to land and who recognized the political authority of a community member with elite status (Salomon 1986:45). Although *llajtakuna* were internally stratified, the differences between elites and commoners were not as pronounced as they were in some of the larger political entities to the south. This type of organization seems to have been characteristic of many of the groups conquered by the Inka, with the kingdoms of the north coast and southern highlands as well as the more simply organized groups of the eastern montana being the best known exceptions.

The elites, or *kurakas*, of the *llajtakuna* derived their authority from a number of sources. Although they were the heads of extended kin groups, in the larger *llajtakuna* *kurakas* maintained authority over people who were not closely related to them. They received tribute and also benefitted from the labor of their subjects, *yanakuna*, and multiple wives. Their houses, which were often part of large compounds, were the foci of political and ceremonial activities and were important symbols of the cosmic order. Both harshness and generosity were felt to be characteristic of powerful lords, whose abilities to distribute gifts

and host splendid drinking parties were key components in the maintenance of loyal followers. This type of reciprocity was symbolized most clearly in the distribution of *aswa*, beer made from maize grown on lands controlled by the *kuraka* and cultivated with community labor (Salomon 1986:73-81).

However, as Salomon (1986 Chapt. 3) makes clear in his analysis of these ethnohistorically known groups, the power of the *kurakas* derived not only from their social and religious roles, which gave them access to internally generated surpluses, but from their economic ties to groups external to the *llajtakuna*. Unlike the groups described by Murra (1972), which he feels were characterized by an ideal of self-sufficiency that manifested itself in the creation of vertical archipelagos, the communities near Quito maintained a network of economic relationships with both nearby and distant groups. Households relied on the Yumbos population in the western mountains for peppers, salt and cotton which were deemed necessary for the maintenance of a culturally acceptable standard of living (Salomon 1986: 83-89). The exchange of these items seems to have been in the hands of domestic units who conducted this trade directly with the Yumbos people. Other forms of exchange also existed and were controlled by the *kurakas*. Under their sponsorship, itinerant merchants, called *mindalaes*, obtained a wide array of prestige items such as silver, jewelry, coca, finely woven *mantas*, metal hatchets and bone beads. Because of their control of the *mindalaes*, the elite had preferential access to these goods, which they often distributed to faithful constituents. A market, or *tianguéz*, also existed in Quito where both luxuries and necessities could be obtained. Goods available in the *tianguéz* were provided in part by the *mindalaes*. These included products obtained from the Yumbos and via long distance exchange networks, as well as medicinal herbs, pigments and beetle carapaces from the tropical lowlands. Locally produced food was also available (Salomon 1986 Chapt. 4).

The economic configuration of the Quito *llajtakuna* is strikingly different from the picture of community self-sufficiency through direct exploitation of multiple resource zones that is usually depicted in the Andean literature. These communities were enmeshed in a network of economic relationships that allowed them to procure items from various ecological zones.

Salomon argues that this economic network existed at the time of Spanish conquest not because it was a uniquely northern configuration, but because the Quito area had not yet been fully incorporated into the Inka empire. To test this possibility he compares the communities near Quito with the Puruha area to the south (Salomon 1986 Chapt 7). Ecologically and culturally, Puruha and Quito were quite similar, but the Puruhaes were conquered earlier and appear to have undergone a greater degree of reorganization under the Inka. One result of incorporation was the severance of exchange relations with the nearby Yumbos. Neither *mindalaes* nor individual households obtained pepper, salt or cotton from the western population. Instead, a series of specialized enclaves were established to produce these goods as part of a classic archipelago system. Interestingly, different enclaves were controlled by the Inka and by local *kurakas*. Even maize, a locally grown crop, was treated in this manner. *Kurakas* were given irrigated lands at a distance from the community for their own use. Although they benefitted economically, their dependence on the state increased. Salomon believes that this parallelism between indigenous and imperial institutions existed not because the Inka imitated local organization, but because they accorded *kurakas*



privileges comparable to those of the state in order to co-opt them (1986:216). By gradually introducing institutions in which elites could participate, the Inka managed to strengthen their control over both economic resources and local leaders while avoiding the alienation of the latter.

If Salomon's equation of the organizational differences exhibited by Quito and Puruha with the temporal transformation of local groups under the Inka is correct, then the current characterization of economically self-sufficient Andean communities as fundamental and enduring is open to serious doubt. Prior to Inka control, the northern population, at least, seems to have consisted of a number of competitive, warring groups embedded in a dense matrix of exchange relationships. Local elites occupied a critical place within this system, extracting surplus from their own communities and exchanging it for goods obtained by itinerant traders under their control. Their power derived not just from their senior rank within kin groups, but from their ability to obtain valued items which were redistributed to loyal followers. Military prowess and the ability to forge marital alliances with elites in other *llajtakuna* no doubt increased their power within the community.

With the imposition of Inka rule these complex interrelations among groups and, thus, the nature of local leadership, changed radically. Internal warfare ceased and economic relationships among communities were severed, depriving *kurakas* of two important sources of prestige and economic control. The Inka allowed the *mindalaes* near Quito to operate, but used them as a mechanism for gaining access to goods produced beyond the empire's reach, as well as to spread Inka ideas and practices beyond the frontier (Salomon 1986:217). The creation of marital alliances between groups was also restricted by the requirement that all marriages be approved by representatives of the state (Rowe 1946:285). Internally, *kurakas* lost the right to freely dispose of surplus generated by their followers. In some cases, such as in the Puruha region, *kurakas* were allowed to retain certain amounts of land and labor for their own use. The land, however, was no longer located in the community and was essentially under Inka control. With the imposition of Inka rule, *kurakas* no longer derived their authority from within the community or through interactions with neighboring groups. Instead, they relied on the imperial bureaucracy for material and ideological support.

To summarize, Inka domination in the northern region of the empire had rather dramatic effects on the organization of what had suddenly become a hinterland. The web of interacting communities that inhabited the area was dismantled, and the nature of local leadership was transformed. Internally, communities experienced selective acculturation and, perhaps, new forms of exploitation that abrogated the norms of kinship. The Inka did not simply provide a peaceful environment in which ethnic colonies were free to expand. They restructured the region in a manner that allowed them to gain the greatest possible control over resources while minimizing the potential for rebellion. Some aspects of this transformation resulted from the purposeful implementation of Inka policy, such as the regulation requiring the use of ethnic headgear, which promoted social discontinuities and enabled the state to quickly identify its subjects (Rowe 1946:272). The interspersal of *mitima* communities and private estates among indigenous groups had the effect of further disrupting local social and economic networks. As Rowe notes (1982:110), *mitima* colonies settled by the state probably evoked hostility from their neighbors, and perhaps provoked the defensive use of ethnic markers. The result of all these factors was the formation of the closed, self-sufficient ethnic communities described by Murra (1972) as typical of the Andean region.

If populations in the north underwent such changes, what evidence exists for similar processes having occurred in the provinces south of present day Ecuador? The only relevant information available to date comes from the Upper Mantaro Archaeological Research Project in the Central Highlands of Peru. UMARP was designed specifically to investigate the economic organization of the Mantaro Valley during the late prehistoric periods (Earle 1985:371). Recently, the primary focus of research has been the transformation of the subsistence economy during the transition from the Late Intermediate to the Late Horizon (D'Altroy 1985).

During the Late Intermediate period the Mantaro Valley was inhabited by the Wanka, an ethnic group composed of competing communities of various sizes. These communities were internally differentiated and seem to have been politically ranked as well. Warfare was a frequent activity in which local leaders played an important role (Earle 1985:369).

A dramatic change in the settlement pattern occurred after the Inka conquest. Fortified hilltop settlements were abandoned, and smaller sites were constructed at lower elevations. Hatun Xauxa, a large administrative center, was constructed on the valley floor adjacent to the Inka highway, and numerous storage facilities were erected throughout the valley (Earle and D'Altroy 1982). The relocation of sites at lower elevations was probably due to the Inka's demand for maize (Earle 1985:371). This inference is supported by the results of excavations carried out in elite and commoner residential patios in sites throughout the valley. Hastorf's analysis of botanical remains from these contexts indicates that the production of maize increased during Late Horizon times (Hastorf 1985a).

The importance of maize in the redistributive relations within the communities is also underscored by the archaeological data. Large storage vessels and containers for brewing beer were frequently found in both Late Intermediate and Late Horizon elite patios. However, in Late Horizon contexts, traditional vessel forms are often replaced by state manufactured aryballoids, suggesting that the surplus which was being redistributed was no longer provided directly by the community, but was supplied by the Inka instead (D'Altroy 1985:6). The location of state constructed storage facilities at a distance from Wanka settlements (Earle and D'Altroy 1982:282) also indicates the degree to which elites had lost control over local surpluses, and their deliberate exclusion from the administration of materials used for state projects.

Hastorf and DeNiro conducted isotopic analyses of skeletal material in order to measure more directly the consumption of crops such as legumes and maize (Hastorf 1985b). An interesting point to emerge from this study was that no difference existed between the amounts of maize consumed by elites and commoners during the Late Horizon. However, both elite and commoner women ate much less maize than men did. Hastorf believes these results may be indicative of the systematic exclusion of women from redistributive activities such as ritual events and corvee labor drafts (Hastorf 1985b). This suggests that the imposition of state control resulted in either an increase in the division of labor by gender, an exclusion of women from religious activities and thus potential sources of prestige, or both.

Hastorf's investigations also raise a number of issues about which one can only speculate since no relevant data have been published and do not, perhaps, exist. The

appropriation of male labor for the *mit'a* would have created periodic imbalances in the local sex ratio. This may, in turn, have instigated changes in patterns of gender related labor within the community or promoted the extension of households to include more adults. More importantly, the need to provide labor to work state and religious lands within the community would have created labor bottlenecks during critical agricultural seasons. Because the Inka exacted enough tribute to cover the redistributive needs of the *kuraka* as well as to provide a surplus for use by the state, it is reasonable to assume that the amount of time commoners were required to work in elite lands increased after the Inka conquest.

According to colonial sources the state also demanded that its lands be cultivated before community members began work on their own fields (Rowe 1946:266). However, based on his research in the modern village of Quinoa, Mitchell believes that these sources are in error (1980:141). In Quinoa, the order in which fields are now cultivated is determined primarily by crop type, altitude and the season in which the crop is sown. The combination of these variables and the tendency for landholdings to be dispersed in different ecological zones generates a complicated agricultural system in which timing plays a critical role in crop productivity. For this reason, Mitchell feels that it is unlikely that the Inka interfered in the cultivation sequence.

Although Mitchell's data make it clear that the sequences reported by the chroniclers are oversimplified and idealized, they do not justify his dismissal of the chroniclers' statements as entirely erroneous. States often make demands that lead to inefficiency, lowered productivity or conditions which are detrimental to local populations. Ecological constraints may condition the efficacy of different economic strategies, but they do not determine which are implemented, particularly when the needs of the native populace and those of governing elites are not entirely consistent. Thus priority given to state lands may well have been an unpleasant fact of provincial life, and one that impinged upon a household's ability to schedule agricultural activities in the best possible manner. Again, one plausible response would have been to increase household size in order to provide additional labor, since tax obligations were imposed on a household basis without regard for family size.

Related to these issues is the question of land tenure within indigenous communities. The chroniclers state that lands were divided in a tripartite fashion, with the community, Inka and state religious cult each receiving a share (Rowe 1946:265). The degree to which this ideal scheme was implemented and the proportion of community land held by the state is still unknown (Murra 1982). The frequency with which the state appropriated agricultural lands that were already in use or developed previously uncultivated lands is open to debate. The relevance of these problems for evaluating the impact of Inka control on conquered communities is twofold. First, the economic pressures exerted by the state on local populations, both in terms of increasing labor extractions and the appropriation of prime land, need to be assessed. Second, internal changes in land tenure, particularly those which promoted intensification or privatization would probably result in the realignment of social groups as well. These questions are almost impossible to address with archaeological data alone, but a careful examination of early colonial court cases involving land disputes may help provide the answers.

The information collected by the UMARP on long distance and regional exchange presents a less dramatic picture of imperially induced change than do the settlement or

dietary data. For the most part the trade items found in patio contexts indicate that exchange networks remained relatively intact, with a few notable exceptions.

Phyllite grinding stones, obtained from a source on the eastern edge of the valley, were frequently found in Late Intermediate contexts and were particularly abundant in elite households (Earle 1985:381). However, the occurrence of phyllite dropped from 21.2% to 14% of the lithic assemblage after the Inka conquest (Earle 1985:379). On the other hand, marine shell, which had to be imported long distances, increased slightly from Late Intermediate to Late Horizon times (Earle 1985:387).

Not surprisingly, the occurrence of prestige items was most strongly affected by the Inka conquest. State manufactured ceramics, for instance, comprise 13% of the Late Horizon ceramic assemblage (Earle 1985:383). These were probably produced within the valley, but distributed by the state (D'Altroy and Bishop 1990; Earle 1985:385), perhaps at the kind of redistributive events described by Morris and Thompson (1985 chapter 5). State involvement in the local economy is also apparent in the metallurgical industry. During the Late Intermediate period local copper ores that naturally contain arsenic were used to produce bronze items that were distributed regionally. A shift to local copper alloyed with tin occurred in the Late Horizon. This probably reflects imperial intervention, since the closest sources of tin are located in Bolivia and southern Peru (Earle 1985:10). State control of the distribution, and, perhaps, production of metals is also suggested by the occurrence of silver objects. Ethnohistoric sources indicate that silver was manufactured at Hatun Xauxa for the Inka, and archaeological evidence suggests an increase in the amount of metal processing by elites in the Late Horizon. However, the actual occurrence of silver in patio deposits decreases at this time (D'Altroy and Earle 1985:194), indicating that elite participation in silver manufacture was directed towards production for the state, rather than for their own use.

Although the Mantaro Valley data do not indicate a radical shift in the Wanka economy, they are not inconsistent with the Ecuadorian situation described by Salomon. The local subsistence and exchange system appears to have remained stable, although Hastorf's research suggests that local patterns of production and consumption were affected by the conquest (Hastorf 1990). In addition, there are indications that regional exchange was disrupted. As in Ecuador, state involvement in the economy was focused on the control of prestige goods, or what D'Altroy and Earle (1985) would term wealth. As they note (1985:196), the increased use of wealth finance by the Inka promoted vertical linkages between provincial elites and the state. Furthermore, wealth items constitute the class of goods most actively traded in Ecuador, and it is not unreasonable to assume that they played a similar, though less important role in the Wanka region as well. Thus the increased use of wealth finance by the Inka, and particularly their monopolization of such goods, would have curtailed the interaction of local groups in the Mantaro Valley. Inka interference in a relatively narrow aspect of the regional economy would have promoted the isolation of conquered polities which, in turn, may have altered social relations within them. Given this perspective, it is not surprising that exchange networks did not expand in response to Inka imposed peace (cf. Earle 1985:389).

Although the general pattern of change in Ecuador and the Mantaro Valley seems similar, the economic configurations of these areas prior to Inka domination appear to have

been very different. However, the apparent magnitude of this disparity may be the result, in part, of the different sources of information available to us. Ethnohistoric documents provide a great deal of insight into the organization of trade. Data about consumers and producers, as well as the mechanisms of exchange are available. The archaeological data, in contrast, primarily reflect consumption, although the physical sources of exchange items can sometimes be specified as well. However, the distribution of goods in the archaeological record says little about the means by which they were procured. Long distance exchange goods in elite patios could have been obtained via traditional modes of exchange or through the process of state redistribution; distinguishing between these two cases is difficult when only distributional data are available. On the other hand, the total volume of trade goods uncovered by the UMARP excavations is fairly low (Earle 1985:387). The Wankas did not, perhaps, engage in exchange as actively as did the groups near Quito. If this were the case, the effects of the Inka conquest on the local economic and political organization would have been less dramatic. In order to resolve this issue, more information about changes in the organization of exchange in the Peruvian highlands is needed. Archaeological work that is designed to identify the social groups who participated in trade and ethnohistorical research that attempts to penetrate the palimpsest created by imperial conquests will be required.

## DISCUSSION

The cases discussed above make it clear that communities conquered by the Inka did not remain unchanged by their absorption into a large political entity. One aspect of the transformation they underwent entailed the severance of ties with other communities and the channeling of surpluses through local intermediaries into the imperial bureaucracy. The closed, self-sufficient vertical archipelago systems described by Murra (1972) may not have been traditional pre-Incaic forms, but more likely, a response to these new conditions.

The nature of Late Intermediate communities is, however, still poorly understood, and our ability to identify the sources of organizational variability apparent in the archaeological and ethnographic records is limited. This problem is particularly vexing when the nature of exchange in the north of the empire is addressed. The system of trade that existed on the northern frontier of the state at the time of the Spanish conquest could be the result of a number of different factors: cultural differences between the *paramo* and *puna* Andean regions, incomplete incorporation into the empire, or the promotion of trade by the Inka in order to gain access to goods produced by groups free from their control. Salomon's (1986) analysis of the Quito communities, as well as the ethnohistoric references to markets cited by La Lone (1982) indicate that systems resembling markets were more developed in the north than in the core of the empire, and it is quite probable that they existed prior to Inka conquest as well. As LaLone notes, though, the search for markets in the Andes has diverted attention from other forms of exchange. Vertical archipelago systems have been viewed as risk-free alternatives to markets, rather than contrasted with the wide variety of means by which people gain access to non-local resources. A closer examination of Late Intermediate communities to the south of Ecuador may reveal the existence of non-market modes of exchange that nonetheless entailed reliance on resources controlled by groups outside the community.

The inability of many Andeanists to see beyond the market-vertical archipelago dichotomy is reinforced by the orientation of recent ethnographic investigations. Murra's (1972) work generated a flurry of research devoted to identifying vestiges of pre-Incaic vertical economies in modern indigenous communities. Although much of this work has been highly productive, the tendency to classify all methods of procuring resources from different altitudinal zones as examples of vertical economies has obscured the great diversity within this category. Inter-marriage between groups with access to fields at different altitudes (Bastien 1978), exchange between geographically distant moieties (Harris 1978), and even the maintenance of ties to kin residing in coastal cities (Skar 1982:112), have been cited as instances of vertical economies. They all, however, involve different kinds of social relations and represent the variety of ways in which groups are able to acquire a similar set of resources.

The lesson for prehistorians is that although the Andean environment imposes severe constraints on the ability of agriculturalists to subsist only on the products of single altitudinal zones, the means by which adequate resources can be procured is impressively diverse. Collier's suggestion (1982:11) that the enduring nature of subimperial societies results from their adaptation to a particular set of ecological constraints can be rejected on these grounds. Although agrarian communities must certainly operate within the limits set by technology and the environment, the range of possible adaptations, and thus their responsiveness to historical forces, is much greater than he suggests.

Another difficulty that arises in the assessment of rural change is the frequency with which states attempt to construct a facade of stability. The apparent continuity of local societies under state control stems, in part, from the practice of building new social structures from old materials, but states also manipulate traditional forms in order to obscure the implementation of changes that may be detrimental to the rural populace. Both Wari (Isbell 1986) and the Inka phrased tribute in terms of traditional conceptions of reciprocity and redistribution in order to mitigate the hostility of conquered groups towards the empire. Viceroy Toledo, who did more to dismantle indigenous social organization than any other Spanish administrator, used Inka practices as a blueprint for constructing the extractive machinery of the early Spanish empire. For instance, *mit'a* quotas were imposed on communities in order to provide labor for the silver mines. The name and outward form of the *mit'a* thus survived into the colonial period, despite radical changes in its purpose and in the effects it had on the native population. More recently, the state-controlled collectivization of *haciendas* and indigenous communities has been justified in terms of the corporate nature of native land tenure and indigenous patterns of communal labor (Skar 1982:86), institutions which have already been greatly modified by the *hacienda* system and the penetration of capital. In each of these cases the semblance of continuity has been actively fostered by states at the same time that they are restructuring their relations with agrarian producers. As in the case of "vertical economies," then, one must be careful to look beyond labels and assumptions in order to perceive change and variability at the local level.

In conclusion, our capacity to understand rural change depends, at the very least, on our ability to perceive it. Theories and models of social complexity that ignore the agrarian sector or characterize it as enduring and immutable must be replaced by those which recognize the historicity and evolutionary significance of rural society. One productive approach is derived from the work of Eric Wolf (1982). He proposes that we conceive of

stateless societies not as static, bounded entities, but as highly interactive groups connected by web-like networks of social exchange. The permeability of social boundaries and the interactive nature of such groups also makes them susceptible to the same historical processes that affect more complex societies. If we approach the issues of subimperial continuity and community closure from this perspective, then we can, perhaps, see the configuration of rural society during the Late Horizon as the evolutionary product of the expansion of the Inka state, rather than the persistence of elementary social forms.

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