ABSTRACT

The Inca Empire exhibited labor exploitation and the rational extraction of resources from peripheral polities by a core polity. These characteristics fit the general definition of a world empire, although core/periphery relations were diverse. The nature of core/periphery relations depended on several attributes of the conquered polity including population size, political power, natural resources, and distance from the Inca core at Cuzco. A dynamic picture of core/periphery relations emerges as the outcome of Inca demands for labor and raw materials, and peripheral peoples' desire for control over their autonomy while seeking benefits from the Inca state.

Introduction

The Inca Empire (ca. A.D. 1400 - A.D. 1532) was the largest indigenous empire and state in the New World. It stretched 3000 km from modern Ecuador to central Andean Chile and Argentina (Figure 1). This empire had an army, a large bureaucracy of accountants and other functionaries, a system of taxation, a rigid class system, and massive public works including an extensive network of roads and storehouses (Figure 2). The Inca (1) were predatory and expansionist, conquering many different ethnic groups and appropriating goods from their conquered territories. I will explore the usefulness of world systems, or core/periphery,

approaches for explaining these relations between the Inca and their conquered peoples, and detail some of the complexity in these core/periphery interactions. After summarizing
developments in anthropological world systems theory, I will note how the Inca Empire conforms to our expectations of a hierarchical world system. Then, I will provide some details concerning how the Inca elite managed their empire, and how local populations conformed to or resisted these machinations. Finally, I will conclude with statements about the usefulness of world systems or core-periphery approaches for Andean research.

![Inca Empire Map](image)

**Figure 1.** Extent of the Inca Realm ca. 1525, from Rowe 1946: 205
World Systems Theory

The past decade and a half has seen much work in anthropology and elsewhere designed to clarify, test, and modify Wallerstein's original formulation of world systems theory (Chase-Dunn 1989; Chase-Dunn and Hall 1991; Hall and Chase-Dunn 1993, 1994; Schneider 1991 [1977]; Kardulias 1990; Blanton and Feinman 1984; Dinceuze and Hasenstab 1989; Kelly 1985; Wallerstein 1995; Wilkinson 1987). Chase-Dunn and Hall (1991) label the intellectual offspring of Wallerstein's theory core/periphery studies. This reflects a shift away from rigid economic classifications to a focus on the dynamic processes of economic domination and resistance that take place between core politics and their peripheries. Throughout this paper, I will use the terms world system and core/periphery interchangeably.

A world system is a bounded social system with "a single division of labor and multiple cultures, ... world-systems are intersocietal networks in which the interaction (trade, warfare, intermarriage, etc.) is an important condition of the reproduction of the internal structures of the composite units and importantly affects changes which occur in these local structures." (Chase-Dunn and Hall 1991: 6-7). It is therefore a primarily economic system, and one that has member groups, rules of legitimization, and coherence (Wallerstein 1974: 347). These systems are self-contained in an economic sense, and have a division of labor based on ethnic and class distinctions. Wallerstein notes that members of core states control most wealth and finances and possess advanced military technologies that enable them to dominate their system. There are also peripheral areas that have weak or non-existence states.

(e.g. colonies) (Wallerstein 1974: 349). The essence of a world-system is a net flow of goods, services and wealth from the periphery to the core, and this flow may take the form of raw materials going into the core, and being redistributed as value-added goods back to the periphery (Wallerstein 1974: 16). There is also a class of semi-peripheral states whose members are not central enough in the system to have a controlling influence, but nonetheless are able to act as brokers in this uneven flow of material wealth (Wallerstein 1974: 349; So 1990: 180). Chase-Dunn and Hall (1991: 21) augment this definition in light of more recent world-system investigations. They point out that semi-peripheries may mix both core and peripheral forms of social organization, be geographically located between cores and peripheries, may mediate relations between the core and the periphery, and may contain institutional features that are intermediate between those found in the core and periphery.
The collection of tribute is a central feature of an imperial world system, and theorists debate the nature of this uneven exchange. Wallerstein (1974) concentrates on what he assumes are basic essential goods such as food, as opposed to sumptuous precious (often referred to as valuables in anthropology; see Dalton 1982) that are primarily traded among elites (Wallerstein 1974: 41). Schneider (1991 [1977]) provides a critique of this dichotomy, pointing out that trade in preciousities such as precious metals and spices, can be central to maintaining the hierarchies of core polities, and therefore central to reproducing the economic structures that maintain an empire. Kardulaia (1990) provides an example and analysis of such a system, the development of the fur trade for beaver felt hats on the New World colonial periphery. Schneider (1991 [1977]: 54) also points out the power that gift giving can exert over dominated rulers, as the reception of preciousities then places these subsidiary rulers in debt to rulers in core polities. These modifications of Wallerstein's original formulation expand the scope of world systems theory and provide clearer and more testable concepts for social scientists.

In sum, anthropologists have retained a concern with the designations of core, periphery and semi-periphery, and there is a general expectation that core polities exert a dominance over peripheries that ultimately results in the extraction of goods from the periphery. While the old designations core/periphery remain important, anthropologists do not typically assume that peripheral populations are hapless victims of core progression, and there is considerable attention to the dynamics of periphery resistance and opportunism (Stein 1993; Gragson 1994; Jeske 1996; Shutes 1996; Wells 1996). Anthropologists also are testing the limitations of world systems approaches (Jeske 1996; Stein 1993). Finally, there is increasing attention to the myriad ways core/periphery relations are manifest, including considerations of

the different types of goods involved, as well as logistical problems that may limit core influences. Whether or not the Inca system can be understood from a core/periphery perspective depends upon how well basic core/periphery concepts fit our knowledge of the Inca Empire. An imperial world system should exhibit the following features:

- The empire should encompass a large and bounded area, and be centralized
- The empire should be economically self-contained
- The empire should contain core, periphery and semi-periphery polities
- There should be a net economic flow of raw materials and wealth from periphery to core
Ethnicity should be used in the division of labor

Should the Inca empire fit these expectations, then further study may aid in understanding the dynamics of core/periphery interaction.

The Inca Empire as World System

The Inca Empire at the time of Spanish contact (A.D. 1532) conforms to most expectations for a core/periphery world system. Darrell La Lone (1991, 1994) provided the first explicit world systems analysis of the Inca Empire. He argued that the Inca imposed a hegemony upon conquered peripheral polities and transformed peripheral societies from kin-based to tributary-based economies, and he explained diversity in core/periphery relations from a historical, processual perspective. While La Lone provided an intriguing analysis of the Inca Empire from a world systems perspective, further analysis can elaborate on the diversity of core/periphery relations in the empire, and explain how people in peripheral and semi-peripheral regions adapted to, were oppressed by, and even profited from Inca domination.

The Inca Empire was a large and economically self-contained polity. Despite the difficulty that many researchers have found in drawing boundaries around world systems (see Chase-Dunn and Hall 1991: 8-15; Hall and Chase-Dunn 1993: 126), the Inca case provides clear-cut boundaries. The Empire eventually stretched from the domains of powerful chiefdoms in modern-day Ecuador to the north, was constrained by the Pacific to the west and the Amazonian lowlands to the east, and reached the Maule river of central Chile in the south (Figure 1). Their interactions with Amazonian and south Andean groups were probably not sustained enough to qualify as world-system interaction following Wilkinson (1987). The Inca were economically self-contained because they did not have to import either essential foodstuffs or minerals. The Inca incorporated any polity that possessed raw materials they desired. For example, Netherly (1988) describes how the Inca took control of the middle Chillón Valley near Lima, Peru, and set up Inca colonies to control the production of coca in this region (Figure 2). The empire had a very distinct geographical core that can be contrasted with more peripheral regions, and also had semi-peripheral states.
The Core - Cuzco. Cuzco was clearly the core of the Inca Empire, ideologically, economically, and politically. Even in the region surrounding Cuzco, differences were drawn between the founding lineages of the Inca and more peripheral people (Zuidema 1990; Bauer 1992). Brian Bauer (1992: 125) argues that this core-periphery Inca-conquered duality is embedded in Inca ideology. Cuzco was the center of politics and religion as the residence of the Inca god-king and his holy lineage, or pachacutec. Cuzco was...
considered the navel of the universe. The Inca brought the children of privileged (and controlled) foreign leaders to Cuzco for schooling (Silverblatt 1987: 62), and these children sometimes married into the Inca royal line as a means of solidifying alliances (Silverblatt 1987: 87-88). The Inca extended this benevolent hostage taking even to the gods of conquered peoples as the Inca removed foreign idols from their home territories and placed them in the care of Cuzco residents or in the Inca temple of the sun (Silverblatt 1987: 94; Cobo 1990 [1653]: 48, 49). These idols were simultaneously honored by being brought into the sphere of the one true god of the Inca while being subordinated to the Inca god. Finally, it was in Cuzco that the descendants of dead Inca rulers propitiated their dead kings in a state-sponsored cult that was essential to Inca political and religious life (Conrad and Demarest 1984; Conrad 1992). Cuzco represented a core to which economic, political and even supernatural power flowed from the Inca periphery.

The Periphery. Peripheral polities would be regions where Inca rulers were able to appropriate raw materials, labor and wealth, and where the local people or their elites would have little power to alter the form of this extraction. The province of Chupachos is one example of such a peripheral polity (Grosboll 1993; Julien 1993). This province is largely a lowland area in central Peru at the headwaters of the Huallanga river system (Figure 2). A Spanish survey of the province in 1549 noted that the Inca had substantially resettled the Chupacho province for the purposes of political control and economic extraction. There were 4108 households recorded for the Chupachos province (Julien 1993: 210), of which the Inca removed 1110 (27%) to Cuzco. Another 1498 households (36.5%) resided outside of the province either part or full-time. The Inca assigned 500 of these to military service. Of the remaining 1500 households, the Inca assigned 500 to agricultural service, and relocated 1000 to specialized production communities (Julien 1993: 210). In sum, the Inca forcibly resettled 89% of the households of Chupachos for political, military, and economic purposes. The specialized communities set up by the Inca within Chupachos concentrated on the production of raw materials indigenous to that lowland region. These production communities specialized in pottery, woodworking, herding (probably llamas), gold panning, featherworking, bird and honey collecting, and coca and maize production (Julien 1993: 206). Many other peripheries existed and current research not only details their peripheral status, but also underscores the diversity in Inca core/periphery relations (Malpass 1993; Morris and Thompson 1985; Earle et al. 1987; D’Altroy 1994).

The Semi-Periphery. La Lone (1994: 34) notes that kingdoms such as the Chimú and Lupaqa would be good candidates as semi-peripheral polities. The Aymara kingdoms
(such as the Lupaqa) to the south of Cuzco, by virtue of their large size, strong political hierarchy, and nearness to the Cuzco core arguably had semi-peripheral status. The Inca used pre-existing political structures in the administration of these regions and since many of the former elites were responsible for this administration (Rowe 1946: 272), a limited degree of autonomy and control could be exercised by these administrators, matching both Wallerstein's and Chase-Dunn and Hall's definitions.

Julien (1993) provides evidence that the Aymara kingdoms retained much of their indigenous political structure, although the Inca managed to extract resources from them. For instance, the Lupaqa (Figure 2) were organized into two *huno*, with each *huno caraca* lord responsible for 10,000 households (Julien 1993: 188). Each *huno caraca* kept a census for the whole province that could be checked against the census of the other *huno caraca*. "In the nearby Colla provinces, administrators of productive enclaves in one province resided in another" (Julien 1993: 188). She suggests that the Inca instituted this dual organization as a means of providing checks and balances among the conquered rulers.

The Inca also appear to have sponsored specialized craft production in the Aymara kingdoms (Julien 1993: 189; Murra 1965). The Inca promoted a state ideology that laid claim to all lands and beasts as ultimate property of the Inca state. This fiction was then used to set up state herds in the productive pastures of the Aymara kingdoms of Lupaqa and Qolla. The Inca established a Pax Incaica: the local boundaries between the pastures of ethnic groups were to be set up and enforced (Polo [1561], 1940: 194; Falcón [1580?], 1918: 149; Garcilaso de la Vega [1604], bk. 2, ch. 13; 1960: 61); many of the llamas were confiscated to form the nucleus of Inca state herds (Polo [1571], 1916b: 62); others were granted as spoils to the Cuzco soldiers, individually (Murra 1965: 204).

However, these examples of extraction were not accomplished without the cooperation of local elites and a certain amount of reciprocity between Inca and Aymara lords that gave the Aymara kingdoms a degree of control over production (Julien 1988; 1993).

Another form of semi-periphery comes from the vicinity of the Inca capital, Cuzco. The Inca based their administrative organization in the Cuzco valley on a distinction between an Inca-by-Blood core and a non-Inca, or Inca-by-Privilege periphery (Zuidema 1990: 12). This periphery was subservient to the Inca core; "the inside was considered superior and the
outside inferior" (Zuidema 1990: 54) in Inca society. Investigations of the Province of Paruro, near Cuzco, indicates that these residents, known in Spanish as Inca de Privilegio, were "subservient to Cuzco, yet allied with it, the Inca de Privilegio represented a large, tribute-paying social stratum that supported the ruling elite in Cuzco through direct produce, and by occupying low-level bureaucratic positions in state institutions" (Bauer 1992: 141). These administrators, while not true core members, nonetheless benefitted from their administrative connections to the core, and so were not peripheral. Once again, this is evidence of an intermediate form of social organization between the core and periphery.

An uneven flow of goods from periphery to core is a fundamental element of world systems formulations (Wallerstein 1974; Schneider 1991 [1977]; Chase-Dunn and Hall 1991). The chronicles all are clear about the flow of goods from conquered regions to the core Inca state, and recent archaeological research corroborates this asymmetrical exchange. Much of this produce, extracted by appropriating the labor of conquered people to produce goods, wound up in great Inca storehouses where the goods could then be redistributed according to the state's needs (Morris and Thompson 1985). Archaeological research in the upper Mantaro Valley of Huánuco, Peru (Figure 2) shows how the Inca substituted inferior metals (bronze) in peripheral regions and extracted more valuable metals such as silver (Earle et al. 1987: 103), while archaeological data from Calchaqui, Argentina demonstrate how the Inca set up mines in that region (D'Altroy 1994). Inca exploitation of precious metals conforms to Schneider's (1991 [1977]) argument that core politics dominate through their ability to control preciousities.

The Inca dominated many diverse ethnic groups, and this ethnicity affected economic flow in two ways. First, there was the all-important distinction between ethnic Inca by Blood and non-Inca (Zuidema 1990; Bauer 1992), with the attendant privileges of political and cultural dominance conferred upon the Inca by Blood. This distinction formed the basis for the Cuzco Core vs. non-Inca periphery distinctions in economic flow. In their analysis of Inca manipulation of ethnicity in Huánuco, Morris and Thompson (1985: 165) state, "The Inca policy in Huánuco appears to have emphasized the maintenance and manipulation of diversity rather than an attempt to integrate through the creation of cultural uniformity." Ethnicity was also an important factor in the Inca use of colonies (Rowe 1946; 1982; Murra 1980), described below. The uneven flows of wealth, the political domination of weaker polities, and the use of ethnicity to define privilege were part of a system whose parts functioned to perpetuate these exploitive relationships.
Chase-Dunn and Hall (1991: 7) stress that in world systems, the forms of interaction of the system are important in reproducing the social structures of the component polities. Conrad (1981, 1992) and Conrad and Demarest (1984) provide an intriguing and controversial reconstruction of how Inca expansion became an essential ingredient in the maintenance of Inca social structure. Chroniclers (Poma 1990 [1615]; Cobo 1990 [1653]: 39-43; Cieza de León 1959 [1553]: 189) detailed the Inca worship of dead, mummified kings, and the cults that grew out of this worship. Ancestor worship cults were related to a system of split inheritance in which the heir to the Inca throne inherited the status of king, but the wealth acquired by his predecessor went to the other descendants. Those descendants who inherited the previous Inca's wealth used this wealth to sustain themselves and his cult. The new Inca, by necessity, had to find sources of revenue with which to build his own wealth. According to Conrad (1981, 1992), this ideological system of split inheritance was the motivating factor in Inca expansion. Other Andean researchers (Paulsen 1976; W. Isbell 1978; Carriero 1992) suggest that material factors such as mitigating environmental stress, or plundering for personal aggrandizement, motivated the expansion of the Inca empire. Whether or not lofty ideology or crass materialism were the motivators for Inca expansion, all researchers agree that the Inca core elite maintained their position through expansion and the extraction of resources throughout the realm. Furthermore, the descriptions of peripheral and semi-peripheral politics offered above demonstrate how Inca domination structured the economies of production throughout the empire. In some cases, this structure was essential to the maintenance of local elites.

The Inca state generally corresponds to a world-empire as defined by world systems theorists. As Wallerstein notes of all empires/economies, their basic purpose is to appropriate the wealth and resources of the periphery and to concentrate these in the core, and they accomplish this through the control of peripheral populations. However, the empire was not monolithic in its control, and used a combination of coercion and enticement to achieve this control. I propose the following hypothesis: the degree to which the Inca could coerce resources was related to the proximity of a polity to the Inca core, and to the size of the population and its pre-Inca political integration. Those polities that were small and nearby were easily coerced, those polities that already possessed strong hereditary leaders with a large population and/or that were distant from Cuzco required a softer touch.

**Sticks: Maintaining Control By Coercion**

[Page 9]

*Journal of World-Systems Research*
The Inca Empire was a large bureaucratic organization with a standing army. The maintenance of a costly war-machine indicates that coercion was part of imperial policy, and ethnohistorical data overwhelmingly attest to this. Chroniclers (Poma 1990 [1615]; Cobo 1979 [1653]; Cieza de León 1959 [1553]) largely focus on the historical ascendancy of the Inca over their Andean neighbors in battle after battle, and archaeological and iconographic evidence is replete with star-headed maces, defensive fortifications, violent injuries, and decapitated heads (Rowe 1946; Poma 1990 [1615]). Not only was the Inca state an empire of conquest, but after a victory, the Inca also employed many means of coercion in order to maintain control. I have already detailed the conquest of new lands for the control of coca production, the forced schooling of conquered nobles' children, forced resettlement, extraction of precious metals, the eminent domain of the Inca state, and the general Pax Incaica. Further evidence exists in the form of uneven flows of goods, an Orwellian means of population administration, taxation, colonization, census taking, and the outright use of force.

The simple flow of goods from periphery to core does not necessarily imply imperial economic hegemony as Stein (1993) notes for Mesopotamia, Sinopoli (1994) notes for Medieval India, and Gragson (1994) notes for contemporary cattlemen and foragers in Venezuela. Evidence of the actual Inca control and appropriation of goods is required. This evidence comes from documentation and archaeological remains of the Inca administration of Chupachos in the central Andes (Figure 2). This province lies in an intermediate location in the empire, only about 500 km from the Cuzco core, and therefore would have been more easily coerced than more peripheral regions. Julien (1993: 209) notes the presence of several Inca tambos (storehouses) and fortresses. More importantly, the Inca established ethnic colonies of people from other parts of the empire to garrison the province and to extract resources (Julien 1993: 208-209), indicating that the residents of Chupachos had little control over their territory. The radical resettlement of Chupachos within and without their province further suggests a lack of control over their own destiny. In fact, Julien (1993: 210) concludes that Chupachos was an estate that eventually served the state cult of the dead honoring the Inca Huayna Capac.

The Inca used a decimal system (Cobo 1979 [1693]: 198; Vega 1966 [1609]: 94-95; Rowe 1946: 263; Julien 1982) to monitor the activities of the empire's subjects and to organize peasant labor. This system consisted of a hierarchy of foremen and state officials. It is best to consider the decimal system as an idealized scheme, since there is debate among Andeanists over whether or not the exact figures presented reflected Inca administrative
realities (Murra 1980: 117 n. 48). I will use the spellings provided in Julien (1982: 123) for these varied decimal officials. Ideally, the system began with a chunka, or foreman, who was responsible for 10 tax payers. Above this official was another local foreman, a piska chunka, who had 5 chunka, or 50 tax payers below him. Above this level were hereditary positions, subject to state approval. The pachaka was responsible for two piska chunka, or 100 tax payers. The piska pachaka had 5 pachaka below him, or 100 tax payers. This system went up the line including a waranqa (chief of 1,000), a piska waranqa (chief of 5,000), and then a humi (chief of 10,000). Above the humi was a provincial governor, or t'ogriqok, who in turn reported to an apo, or prefect of one of the four geographical divisions of the empire (Rowe 1946: 263). Above the apo was the Inca himself. Theoretically, officials could report disidence at the lowest level to the Inca himself in just a few administrative steps (Vega 1966 [1609]: 94).

Taxation existed in a variety of forms, including labor tax, state appropriation of fields and herds, and the importation of women from peripheral communities. The Inca levied a labor tax, known as mit'a, upon all households, and officials employed the decimal system to do this (Murra 1980: 31, 1982; Julien 1982: 135-141; Rowe 1946: 268). Each male family head owed a yearly period of service to the state (Murra 1980: 91; Rowe 1946: 267; Cobo 1979 [1653]: 231; Vega 1966 [1609]: 262).

Another form of taxation involved the distribution of land. The Inca divided land into three sections, allotting a portion for the local community, a portion for the state, and a portion for the state-sponsored religion (Murra 1980: 31; Cobo 1979 [1653]: 211; Vega 1966 [1609]: 242). These are not necessarily equal divisions, but nonetheless represent substantial inroads upon a local community's resources. Every local community also owed a labor tax to be spent working these state fields (Rowe 1946: 265). Murra (1965) notes that a similar situation prevailed for state vs. local llama herds.

The Inca levied another de facto tax through the institution of nunneries. State officials chose girls from communities throughout the empire to populate its nunneries; these women were called aclla (Rowe 1946: 269; Silverblatt 1981). La Lone (1994:26-27) and Silverblatt (1987: 80) note the profound implication of the Inca's ability to dispose of a polity's women as they saw fit, and they point out that the conscription of the aclla drained communities of much labor, and directed that labor toward the state. Rowe (1946: 269) states, "The Inca government controlled its women subjects as arbitrarily as its men" through this institution. These women, along with being instructed in the official state religion, also

brewed chicha beer and wove textiles, the two primary manufactured goods of the empire (Poma 1990 [1615]: 51; Vega 1966 [1609]: 195-203). Archaeological evidence of such
production is evident at large centers like Huánuco Pampa (Morris and Thompson 1985: 90).

These varied levies required impressive accounting in an empire that numbered in the millions, and this was accomplished by quipu-camayocs (Rowe 1946: 272; Murra 1980: 109-110; Vega 1966 [1609]: 124, 267, 329-330; Cobo 1979 [1653]: 253; Cieza de León 1959 [1553]: 174). The quipu were complexes of knotted strings that quipu-camayocs used as mnemonic devices to remember accounts and historic events.

Inca institutions of land tenure, labor allocation, population organization, and accounting are impressive mechanisms for resource extraction, that required coercion to institute and maintain. The Inca coerced through the punishment of individuals, punishment of communities, military attack, and forced resettlement. Chroniclers noted that Inca punishment was swift and severe. Individuals found guilty of an offense received reprimand, exile to plantations, loss of office, torture, or death (Rowe 1946: 271, Cobo 1979 [1653]: 203-207; Vega 1966 [1609]: 96; Cieza de León 1959 [1553]: 171). More importantly, dissident communities could receive harsh retribution from the state, being attacked, destroyed and/or uprooted (Vega 1966 [1609]). Uprooting could be especially effective. For instance, those communities that did not observe the ritual calendar mandated by the Inca,

serán castigados y serán muertos y condenados a muerte y se acabarán todo su generación y consumarrá sus pueblos; y se sembrará sal en ellos... (Poma 1990 [1615]: 33)

They will be punished and they will be dead and condemned to death and all of their generation will be wiped out and their towns will be destroyed; and salt will be sown in their lands...

Jornal of World-Systems Research

Uprooting is related to colonization. Colonization is an ancient feature of Andean politics that predates the Inca (Murra 1968; 1972, 1980; Salomon and Urioste 1991: Spaulding 1984: 37), and archaeologists have located evidence of these ethnic archipelagos (Stanish 1989). These colonies existed in several forms, but most involved the placement of ethnic groups in varied ecological zones to exploit indigenous resources. The Inca manipulated and expanded this system for state economic and political needs. Rowe (1982) details three types of resettlement, yanaconas, camayos, and mitimas (mitmaq, mitimaes), and Murra (1980: 163) provides a similar classification. Mitmaq refer to colonies linked to specific provinces, the colonists retaining their kin and economic obligations to their own ethnic group (Rowe 1982: 105; Netherly 1988: 267). Yanaconas were personal retainers
to Andean rulers, and the Inca maintained such retainers, sometimes recruiting them from war captives (Rowe 1982: 100). Finally, the camayos were communities of craftsmen who were uprooted from their own groups, the effect being "to weaken the local loyalties of some camayos and create bonds to the Inca state" (Rowe 1982: 105). In the empire, mitmaq were colonies of ethnic Inca (or other Inca-dominated groups) that the state set up in varied regions to control production and limit political dissent (Rowe 1946: 269; Cieza de León 1959 [1553]: 166; Julien 1993). Even powerful, semi-peripheral states had some of their productive lands and resources appropriated by the Inca through the use of mitmaq.

As soon as one of these large provinces [of barbarians] were conquered, ten or twelve thousand of the men and their wives, or six thousand, or the number decided upon, were ordered to leave and move themselves from it. These were transferred to another town or province of the same climate and nature as that which they left... these were called mitimaes (Cieza de León 1959 [1553]: 57).

Indians were also transferred for another reason. Whenever some warlike province had been conquered which was distant from Cuzco and peopled with fierce and restless inhabitants and might therefore prove disloyal or unwilling to serve the Inca peacefully, part of the population was moved away from the area - and often the whole of it - and sent to some more docile region, where the newcomers would find themselves surrounded by loyal and peaceable vassals and thus learn to be loyal themselves... (Vega 1966 [1609]: 402-403).

Cieza de León (1959 [1553]: 57-62) further notes that mitmaq were used to indoctrinate the surrounding populace, to garrison newly conquered territories, and to populate empty lands.

**Carrots: Maintaining Control by Enticement**

The Inca maintained control with carrots as well as with sticks. These enticements included supporting local elites, constructing public works, and the provisioning of conquered peoples from state storehouses. Local leaders who consented to Inca overlordship could benefit from the backing of the powerful Inca administration, as
documented for the large Aymara kingdoms of the Titicaca basin (Murra 1965; Julien 1988; 1993). The Aymara politics were populous states with strong hereditary rulers and so the Inca could not easily dominate them. The Inca supplied local lords with gifts and grants of llamas from state herds; the local lords used these grants to provision Inca facilities along its highway to feed Inca armies (Murra 1965). Julien (1988: 142) notes how local Lupaca rulers had their social position maintained by the Inca as heads of decimal systems for mit'a labor recruitment, enabling the Inca to limit the power of these local puppets. In short, the Aymara lords retained their noble status by association with the Inca state, provided they acquiesced to Inca domination and provided goods from their territory along with safe passage for Inca armies and goods that passed to and from more peripheral parts of the empire (Figure 2). The political organization of the Inca-dominated Aymara kingdoms was a mixture of Aymara and Inca organizational features, and in some cases, the Aymara lords' positions may have been strengthened with Inca support. The adoption of more intermediate forms of social organization between the strong centralized Inca core state, and smaller, more kin-based Aymara kingdoms, along with their geographic proximity to Cuzco, matches Chase-Dunn and Hall's (1991) expectations for a semi-peripheral polity.

Chase-Dunn and Hall (1991: 8) point out that the "existence of exploitation, domination or unequal exchange should not be a matter of assumption, but rather investigation." The Inca provided benefits to their conquered vassals by expanding and creating many public works including canals and terraces (essential for much of Andean agriculture), roads, and storehouses (Rowe 1946: 229-233; Morris 1988; Netherly 1988; Lynch 1993; Poma 1990 [1615]: 103-105; Cieza de León 1559 [1553]: 158; Vega 1666 [1609]: 241, 255; Cobo 1979 [1653]: 215-230; Cobo 1990 [1653]: 231). These infrastructural improvements had an influence on peripheral peoples' health. Paleodemographic research in the Jauja region of central Peru clearly shows an improvement in nutrition that accompanied Inca domination, although the basic economic relationship was one of unequal extraction (Earle et al. 1987: 101). As Rowe (1946: 273-274) notes, "The government insured the individual against every sort of want, and, in return, demanded heavy tribute in labor, a very small part of which directly benefitted the people who paid it." The Inca manifested this control over their subjects through their extensive systems of food and goods stored in high-altitude colcas and tambos (Rowe 1946: 231; Morris and Thompson 1985: 108). The Inca could use these stores to aid subjects in times of need, or to punish subjects by withholding them. In either way, the Inca harnessed the labor of conquered peoples to keep these stores full.
Y así el Inca, en este mes de marzo, tenía mandado puesto un juez en cada pueblo de las semeneras, para que no los gastasen los indios ni los acabasen pronto las comidas; y que guardasen para todo el año ... (Poma 1990 [1615]: 112).

And so the Inca, in March, had placed a judge in each town of the agricultural lands, in order that no one waste nor eat up the food too fast; and to guard the food all year...

Throughout the whole kingdom there were three sorts of storehouses to hold the harvest and tribute. Every village, whether large or small, had two storehouses: one was used to hold the supplies kept for the use of the people in lean years, and the other was used for the crops of the Sun and Inca. There were other storehouses at intervals of three leagues on the royal highway, and these came to serve the Spaniards as inns or taverns (Vega 1966 [1609]: 255).

These examples indicate that Inca administrators used enticements as well as punishments in maintaining control of its conquered subjects. Inca core/conquered periphery relations were varied; benefits as well as punishments could flow from core to periphery. Relations between the Inca and their subjects were hardly monolithic, and conquered people were able to exert their own powers to differing degrees in dealing with the state.

Conclusion: The Inca Empire as a World System

Did the Inca Empire conform to a world system? Considering ethnohistorical accounts and emerging archaeological analyses, the answer is a qualified yes. The empire was a bounded, self-contained system with recognizable core, semi-periphery and periphery characterized by an uneven flow of goods and services from periphery to core that in turn structured economic and social organization of all polities involved. Recognition of the Inca’s use of indigenous social organization actually strengthens the case for a world system since we can see the systematic formation of a semi-periphery. La Londe’s appreciation for historical process underscores as well that the Inca Empire was not a fait accompli, but rather an imperial world system in the making. This, too helps us to understand why the Inca were not an unqualified world system. La Londe (1994) suggests that the diversity we see in Inca core/conquered periphery relations is due to the fact that Inca domination was in process and incomplete when the Spanish arrived in 1532 and
disrupted this indigenous development. La Lone (1994: 21) states, "The incompleteness of the transformation reflects also the still inchoate development of core/periphery hierarchy. Cuzco's status as core was indisputable ... while the status of other regions as relative periphery was still in contention."

I offer the following hypothetical explanations for the variability in Inca core/periphery relations. One is the use of indigenous political organization in the empire's administration of conquered polities, leading to different modes of extraction as well as to the creation of a semi-periphery among conquered, yet powerful kingdoms such as the Lupaqqa, Colla and Chimu (La Lone 1994). Another reason is that Inca imperialists, despite their army, roads, and administrative organization, were still constrained by distance (see Stein 1993 for a

Mesopotamian example). The only beasts of burden were llamas, which can carry only about 25 kg each, and people, who need to transport their own food (see Hassig 1992 on the Aztec). As the Inca ventured farther from their Cuzco core, they were harder pressed to force their hegemony upon other polities. Finally, the Inca empire was still in a process of consolidation when it collapsed.

While studies of the Inca can aid our investigations of imperial world systems, Andean researchers can use world systems theory to reinforce our understanding of the empire's most salient characteristics. One beneficial influence of a world systems approach for Inca research would be a reorientation of both archaeological and ethnohistorical research to the empire's periphery, since knowledge of the core is de facto incomplete without knowledge of the periphery. This reorientation is already underway (Malpass 1993; Earle et al. 1987; Morris and Thompson 1985) and it offers us both a richer understanding of the operation of the Inca Empire as well as information on previously little known or unknown regions and peoples. The comparative framework of world systems theory will also benefit Andean research as it relates the Inca to similar empires around the world and through time. Such comparison may enhance efforts at understanding the growth of the empire and its eventual downfall. The approach also focusses Andean researchers on the most salient characteristic of the Inca Empire as well as other Andean states - the control over the production of the varied goods necessary for existence.

As an example, many scholars (Murra 1972; Bastien 1978; Brush 1977; B. J. Isbell 1978; Mujica et al. 1983; Stanish 1989) have underscored the importance of verticality in Andean economies. The discussion above provides evidence that the Inca maintained such vertical control either through tribute payments or through direct colonization. World systems theory and its comparative framework may also shed light on the cause of empires, and thereby help to resolve the current debate over the ideological vs. material foundations of Andean empires (see Conrad 1981, 1992; Carniero 1992). Chase-Dunn
and Hall (1991) call for empirical cross-cultural comparisons to enable a broader applicability of world systems theory concepts, and this description of the Inca Empire along with La Lone's (1994) help to provide just such an empirical basis for comparison.

Note
1. The term Inca refers to several different things. It can refer to the Inca king himself, the core of Inca noble lineages, the ethnic Inca of the Cuzco region, or integrated members of the Inca society. I will use it in all of these ways, indicating which definition prevails in each particular context.

References Cited

Bastien, J.


Bauer, B.


Blanton, R., and G. Feinman


Brush, S.

Carniero, R. L.


Chase-Dunn, C.


Chase-Dunn, C., and T. D. Hall


Cieza de León, P.


Cobo, Father B.


1990 [1653] *Inca Religion and Customs*. translated by Roland Hamilton, University of
Conrad, G. W.


Conrad, G. W., and A. Demarest


D'Altroy, T.


Dalton, G.


Dincauze, D. F., and R. J. Hasenstab


Gragson, T. L.


Grosboll, S.


Hall, T. D., and C. Chase-Dunn


[Page 21]
*Journal of World-Systems Research*
Hassig, R.

Isbell, B. J.

Isbell, W.

Jeske, R.

Julien, C. J.


Kardulias, P. N.

[Page 22]
*Journal of World-Systems Research*

Kelly, R. C.


LaLone, D.


Lynch, T.


Malpass, M. A. ed.


Morris, C., and D. Thompson


Mujica, E., M. Rivera, and T. Lynch


Murra, J. V.


1980 *Economic Organization of the Inka State*. JAI Press, Greenwich, CT.

Netherly, P.


*Journal of World-Systems Research*


Paulsen, A.

Poma, H.


Rowe, J. H.


Salomon, F., and G. Urioste trans.


Schneider, J.

[Page 25]

*Journal of World-Systems Research*


Shutes, M.

Silverblatt, I.


Sinopoli, C. M.


Spaulding, K.


Stanish, C.


Stein, G.

de la Vega, G.


Wallerstein, I.


Wells, P.


Wilkinson, D.

[Page 27]
Journal of World-Systems Research


Zuidema, R. T.

Journal of World-Systems Research