



POWER SPEAKS THROUGH ROCK: STONE IDEOLOGY OF THE INKA

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ABSTRACT

In the first decades of the fifteenth century, the Inca began to construct a vast empire which exceeded the size of any present country in South America. From the capital city of Cusco situated in the southern Peruvian Andes, Inca rulers forged and practiced multiple strategies to expand, administer, and control their territories.

In this paper, I argue that rock art played a vital role in one of such strategies which I call "Stone Ideology". I will show that Pachakuti Inca Yupanki, the ninth Inca sovereign, commissioned a geometric style of rock sculpture which referenced Andean origin places, negotiated relations the Inca held with nature, and constructed a particular Inca landscape which was formulated in the Cusco Valley and exported and reproduced throughout the empire. Thus Pachakuti's style of rock art came to express Inca-ness and the presence of the Inca state.

RIASSUNTO

Nei primi decenni del XV secolo, gli Inca iniziarono la costruzione di un vasto impero che superava le dimensioni di qualsiasi Paese attuale del Sud America. Dalla capitale Cuzco, situata nelle Ande meridionali del Perù, i sovrani Inca forgiarono e praticarono varie strategie di espansione, amministrazione e controllo dei loro territori.

In questa comunicazione, sosterrò che l'arte rupestre svolse un ruolo vitale come una di quelle strategie che definisco "Ideologia della pietra". Mostrerò come Pachakuti Inca Yupanki, il nono sovrano Inca, commissionò uno stile geometrico della scultura in pietra che si riferiva alle terre andine d'origine, negoziò relazioni che gli Inca intrattenevano con la natura, e costruì un particolare paesaggio formulato nella valle di Cuzco ed esportato e riprodotto in tutto l'impero. Pertanto, lo stile di arte rupestre di Pachakuti divenne espressione dell'"Incaicità" e della presenza dello Stato Incaico.

RESUME

Dans la première décennie du quinzième siècle, les Incas commencèrent à construire un vaste empire excédant la taille de tout pays actuel en Amérique du sud. Depuis la capitale Cusco située dans les Andes péruviennes du sud, les dirigeants incas forgèrent et pratiquèrent de multiples stratégies afin d'épandre, d'administrer et contrôler leurs territoires.

Dans ce document, je maintiens que l'art rupestre a joué un rôle vital dans l'une des stratégies appelées « idéologie de la pierre ». Je montrerai que Pachakuti Inca Yupanki, le neuvième souverain Inca, commanda un style géométrique de la sculpture rupestre, faisant ainsi référence aux lieux d'origine situés dans les Andes, traita des relations que les Incas tenaient avec la nature, et construisit un paysage incas spécifique qui était conçu dans la vallée Cusco puis exporté et reproduit à travers l'Empire. Ce style créé par Pachakuti en art rupestre vint affirmer le style incas et leur présence.

In the early decades of the fifteenth century, the Inka state was formed in Cusco situated in the south-central highlands of Peru. The Inka quickly expanded their territories and conquered an empire which was larger than any modern country in South America and existed until the arrival of the Spanish in the 1530s (Figure 1). One strategic tool which accompanied state expansion was a specific style of rock art which came to function as a visual marker of Inka identity and relations between the state and the natural environment as well as with subjected peoples.

In this paper, I intend to show that Pachakuti Inca Yupanki, the ninth Inka ruler (governed approximately from 1438 to 1471) who redesigned Cusco as an imperial capital, reorganized shrine (wak'a) worship throughout the growing empire, and supervised numerous campaigns of conquest, also devised a geometric style of rock art which became the material agent of what I call Pachakuti's stone ideology. The rock art to be addressed consists of vertical and horizontal cuts forming planes, platforms, and steps in natural outcrops; it will be referred to as the geometric style below (Figure 2).

I argue that Pachakuti institutionalized this Inka style of rock sculpting. Such reasoning is largely based upon documentation and dates for Machu Picchu which tie this royal estate to the reign of

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Pachakuti and to his panaqa [royal lineage]. John Rowe (1990:142) discussed a 16th century document stating that Pachakuti conquered the Urubamba Valley between Ollantaytambo and Chaullay and claimed possession of most of the valley bottom lands. Rowe reasons that the estates constructed above these bottom lands were most likely as well Pachakuti's creations. Construction at Machu Picchu supposedly started in A.D.1450, it was burned in A.D.1562 and abandoned 10 years later (see Wright K. et al 2000:1; Salazar 2004:27). Machu Picchu and its outliers represent a grammar of Inka stonework and its constructed and shifting relations to the surrounding mountain landscape (Figures 3,4). The Spanish chronicles and archaeological survey work (Bauer 2004; Bauer and Covey 2002) further tell us that Pachakuti reorganized Cusco as a multi-faceted imperial capital, that he built up the economic infrastructure of terrace systems in the Cusco Valley, that he newly coordinated wak'a worship throughout the growing empire, and instituted or revised the Cusco zeq'e system and others in different towns (Coben 2006). The zeq'e system interrelated the landscape space surrounding the capital, social organization, and religious ritual in complex ways (Zuidema 1964). It consisted of 41 imaginary lines radiating out from the Temple of the Sun in the city center. These lines were marked and defined by approximately 328 shrines attended to by specified Cusco lineages. Offerings had to be brought to these shrines or wak'as and rituals were held at a prescribed schedule. Many of the wak'as on the zeq'e lines have been identified as sculpted rocks (Bauer 1998). Four or possibly five of the 19 carved rock wak'as on the Cusco zeq'e lines were connected with Pachakuti Inka Yupanki and the fifth zeq'e of Chinchaysuyu [Cusco and the Inka empire were divided into four quarters corresponding to northwest, northeast, southeast, and southwest; Chinchaysuyu was the Inka name for the northwest quarter] was maintained by Pachakuti's panaqa (see also Niles 1999); another six were associated with his son Amaru Thupa Inka who was one of two supervisors of the Cusco wak'as and their required worship. Such findings are significant because they link the majority of the carved rock shrines to two individuals, the ninth ruler and his eldest son. There is no certainty that the two newly commissioned their sculpted rock shrines on the Cusco zeq'e lines; they may well have reused and re-carved older wak'as sanctioned by pre-Inka groups in the Cusco Valley. Based upon the tight links between Pachakuti and the carved stone wak'as at Machu Picchu and on the Cusco zeq'e lines, it appears reasonable to suggest that he commissioned the geometric style of rock art.

Yet such commissions were never shallow orders to his artists/artisans to cut certain outcrops into cube-like volumes. Pachakuti turned formal elements and associated features into a sophisticated aesthetic language which may have co-opted earlier shrines but now was used to advertise Inkaness and state identity in a growing empire. I argue that Inka rock art became the core of a state sponsored stone ideology spread and performed by Pachakuti. The carved rocks stand as the materializations of certain concepts about the supremacy of the Inka state. This reasoning is first of all derived from Andean origin narratives: the pan-Andean story describes how the Sun and the Moon followed by the ancestral Inka couple emerged from a sacred rock outcrop on the Island of the Sun in Lake Titicaca, Bolivia (Bauer and Stanish 2001; Urton 1999) (Figure 5); in the Inka-specific version, these ancestors traveled underground to re-emerge at the rock outcrop Pumaurqu south of Cusco which was carved and sculpted by order of Pachakuti (Urton 1990) (Figure 6). The latter functioned as the paqarina (wak'a of origin) of the Inka dynasty. Thus Inka rulers chose to construct and publicly proclaim their history and origin as closely tied to sacred rock formations. Such claims validated their supernatural descent and associated authority.

On a second level, the differing degrees by which artisans worked stone material reflected the ongoing interaction between the Inka and the Andean environment. The specifically Inka style of rock carving using vertical and horizontal cuts and geometric forms was intended to visualize the reciprocity that existed between the Inka and the natural environment. Geometry is commonly associated with rationality and control while nature has often been seen as free from human interference and sometimes as savage. The range of stone modification reached from untouched natural rocks left in place and worshipped as shrines, to small rocks with a few simple carvings, tall and elaborately sculpted outcrops containing caves, carved boulders associated with walls, and finally to the precisely cut and portable Inka building stones which were put together to create new manmade forms of rock art, i.e. walls (Figures 7,8). I suggest that the degrees to which natural materials were altered allow insights into the discourse the Inka carried on with nature. The nature-culture binary opposition is a Western construct not applicable to Inka ways of thinking. Rather, nature and culture were two principal components of a whole, which interacted in a give-and-take relationship and had to be kept in balance. Rituals did not mediate between dialectic poles but maintained harmony

and order within a whole defined by everyday experience. Nature and culture nourished and built each other and became thus inextricably cross-linked. This Inka view is very much consistent with the theory of phenomenology, which advocates that the world and our own existence are materially and conceptually intertwined through lived experience. Carving stony outcrops and thus altering the natural setting is clearly an act of exerting control. Yet the Inka never set out to conquer or overpower nature: their relationship with nature was based upon the fundamental Andean principle of reciprocity or *ayni*. In terms of landscape iconography, sculpted rocks mediate between object and image (see Van de Guchte 1996). Their place is always somewhere in between the dialectic poles just like Andean people live in different ecological zones and trade and barter their products grown in differing altitudes. This system of symbolic and economic reciprocity/*ayni* has been fundamental to Andean culture in pre- and post-contact times. From the same perspective, stones and rocks become vital nodes on trails/roads and conceptual lines/*zeq'es* since the latter outline a horizontal direction and stones/rocks access the vertical cosmic divisions. They mark a center, an encounter or *tinkuy* of opposing axes and opposite forces, and offerings have to be placed and rituals conducted to maintain equilibrium in the animated world of man and nature. Further, *ayni* guided many of their interactions with conquered tribes and subdued subjects¹ and I see a conceptual parallel in the way carved rocks and administrative strategies reflect reciprocity. Varying landscape settings called for particular modifications of stone and different sites and situations demanded differing degrees of give-and-take relations which in the political arena played out how local lords were installed into *kuraka* (local ethnic authority) positions (D'Altroy 2002:232-234, 327). This may explain why Pachakuti commissioned sculpted rocks in strategic outlying areas to claim Inka presence and to export Inka mythology to Inka-conquered tribes. In other words, he co-opted the ancient Andean custom of venerating rocks and mountains and turned stone *wak'as* into new geometric forms, which he advertised as an Inka visual language to mark Inkaness and the presence of the state. Simply speaking, Pachakuti transformed traditional Andean stone worship into a political power tool of his empire. I refer to all these practices as stone ideology.

In a sense, all rocks share this inherent animistic potential, but not all rocks were or are *wak'as*. The Inka preferred in particular boulders and outcrops which exhibited cave-like overhangs, were associated with water sources, and/or displayed some unusual visual characteristic and they selected others situated close to their roads. Van de Guchte (1999:151) argues for an Inka aesthetic of alterity or difference in the way they selected *wak'as*, which was an integral aspect in the Inka cognition of landscape embedded in a state-controlled practice blending mythology, geophysical reality, and political ambitions. Anthropologists have frequently talked about culture as a system of shared meaning. Recent discussions, however, have emphasized that the production of meaning is always the result of power relations (see Sharman 2006:843-844). In our context, I argue that Andean people experienced stone in a shared egalitarian manner and that the Inka imposed their authority of meaning upon that material. As van de Guchte (1999:155) emphasizes, the Inka selected stones, rocks, and boulders to become *wak'as* but could also change them back into non-*wak'as* (*wak'a atisqa*). These selections clearly reflect the processes of power involved in bestowing meaning or non-meaning upon rocks which I will contextualize further.

Exactly how the Inka forged and maintained reciprocal relations with nature through carved rock *wak'as* is a fascinating but still elusive inquiry. We have gained certain insights from contemporary Quechua and Aymara practices (Allen 1998, 2002). From a linguistic perspective, stone was seen in the context of hard and precious things; it was linked with mountains and it had *camac* or a vitalizing force (from the word *camay* "to charge with being") in its most durable and permanent state (Salomon 1998; Salomon and Urioste 1991). Early Colonial Quechua words for stone, for example, *rumi* and its derivatives (Gonzalez Holguin 1989:319-320 [1608]) carry connotations of hard and precious substances. The word *uma* and its derivatives link the concepts of head and mountain top with precious stones (Gonzalez Holguin 1989:354 [1608]). Fundamental are the multiple and complex layers of mediating qualities – between high and low, sky and river valleys, dry and wet, cold and warm – stones/rocks seem to be imbued with as mountain derivatives. Nevertheless, such a permanent state of order was always in danger of being undermined. A scenario of this kind

1 Certainly, reciprocity did not determine all relations between the Inka and conquered peoples. The well known policy of forcefully relocating thousands of *mita* workers into newly acquired territories was an authoritarian measure to solely provide administrative and economic benefits to the state. In military matters, reciprocal relations were offered to subject tribes and if they were rejected, a brutal and all-out war was conducted.



may be alluded to in certain carvings which step in as opposed to the common stepping out forms which create the steps and platforms. One such stepping in sculpture can be found at Saqsawaman near the reservoir area where it graces a rock overhang (Figure 9). Allen (1998:20-22; unpubl. manuscript) has carefully documented relations between people in Sonqo and domesticated animals and utensils both of which are treated as living creatures. These interactions continue beyond death with the important change that positions of dominance and dependency are reversed. In this liminal world of inversion, it is now humans who suffer from and are at times tortured by the animals and objects which served them for as long as they resided in the world of the living. Steve Bourget (2006:179-181, 233-235) has reconstructed a similar world of ritual inversion for the Moche [Andean coastal culture during the Early Intermediate Period, c.100-650 A.D.]. Drawing his data from the iconography of ceramic vessels, he postulates that the performers in sexual acts, funerary rites, and sacrificial scenes may be classified into three broad types of subjects: human beings and eventual sacrificial victims inhabit the World of the Living; the living-dead, skeletal and mutilated beings are housed in the World of the Dead; and individuals with supernatural attributes, sacrificial victims, as well as animals populate the Afterworld (Bourget 2006:225). Rituals enable passage from one world to another and entail multiple levels of inversion: for example, the passage from the World of the Dead into the Afterworld implies that the deceased regains a certain form of life; Bourget interprets his findings that the vast majority of actors on the sex pots who perform non-reproductive sex belong to the worlds of the living and dead while those who have reproductive sex are supernaturals and others from the afterworld as strategies of inverted fertility which serve to link the living with the beings endowed with supernatural attributes, sacrificial victims, and animals in a dualistic relationship. Salomon (1998:9-11) speaks of a similar, third liminal world called *Uma Pacha* where the lifeforces of the deceased have been stored and continue to interact with the living. Bourget (2006:210-213) further demonstrates that the theme of inversion was expressed in material terms by a stirrup spout bottle which had been carefully placed in an upside down position into a niche in the second elite female tomb in San Jose de Moro. I suggest that the step in carvings constitute the Inka vocabulary for this concept of inversion. Thus the stepped in overhang at Saqsawaman marks a liminal place at which the vital energies of natural elements, such as stone, could be approached; it is also a potentially dangerous place where power configurations can be inverted (see below). The dark cleft and cave-like space the rock overhang covers implants such existential feelings into human beings of any time period or culture from the point of view of phenomenology. Archaeologist Sabino Quispe Serrano shared with me in 2004 that INC [Instituto Nacional de Cultura] discovered burials in natural vaults at Saqsawaman with carvings stepping into the earth so-to-speak.

More generally, Spanish writers report that stones (*pururaucas*) turned into warriors to assist Pachakuti during his battle against the Chanka; Thupa Inka spoke with carved stone idols (Guaman Poma 1993:193 [1615:261]); a large stone block – the *Piedra Cansada* or Tired Stone situated in the Saqsawaman area - cried and resisted to be moved any further (Guaman Poma 1993:123 [1615:159]); and mountains were personified. These selected examples illustrate that the world of stone was alive, endowed with timeless *enqa* (life force) which defied death, and the Inka actively engaged with this world. Nature in all its many forms was composed of numerous agents with whom the Inka sought to negotiate dynamic reciprocal relations.

Third, what made Inka engagement different from pan-Andean engagement with stone is that it was channeled by the state in the imperial vision of landscape. While local *wak'a* worship continued on one level, the Inka ruler and his officials activated through ritual rocks as strategic *wak'a*s in state-sponsored settlements, on *zeq'e* lines and on roads (Figure 10). I have argued elsewhere (Christie 2006) that the Inka may have been implementing an extended *zeq'e* system that would eventually have encompassed and integrated the entire empire and reconstructed it as an imperial landscape. This line of reasoning explains the existence of isolated and far-outlying carved rock complexes, such as Sayhuite, Ingapirca, Samaipata, as stations or endpoints of extended *zeq'e* lines (for a map of Inka carved rocks, see Van de Guchte [1990]). This extended *zeq'e* system has remained incomplete and only a few lines can speculatively be postulated based upon outlying carved rock complexes. However, its existence is partly supported by the consensus of numerous Colonial and contemporary writers that other Inka *zeq'e* systems existed outside of the area of Cusco (see Bauer 1998:143-154; Polo de Ondegardo 1916 [1571]) and by the documented facts that the conceptualizing of ray centers and straight ritual lines is profoundly Andean (Christie 2008).

There was an evident political component in the Inka strategy of forming an inherent (see van

Dommelen 1999:277-278) Inka landscape by dotting roads and conceptual lines with carved and/or unmodified but foregrounded (emphasized) rock wak'as, which was part of the strategy of stone ideology. The recognition that stone has powerful animating essences is pan-Andean and has great time depth (for Chavin de Huantar, an Early Horizon center dated about 1000 B.C., see Burger 1992; Conklin and Quilter 2008; for Tiwanaku, a Middle Horizon state reaching its florescence about 700-900 A.D., see Kolata and Ponce Sangines 1992; and for post-contact stone idols, see Pablo Jose de Arriaga 1968:201 [1621:chap. II] and Cristobal de Albornoz 1968 [c.1582]). I argue that the Inka co-opted this general form of Andean stone worship and manipulated it for their own political strategies. In anthropological terms (see above), they instilled the egalitarian experience of stone with authoritative meaning as one manifestation of the hegemonic practices of the Inka state. These state wak'as replicated aspects of the Inka stone paqarinas (rock outcrop on the Island of the Sun, Pumaurqu - see above) and constructed Inka territory as an Inka version of the Aymara space-time concept of taypi which implies an original concentration on a central place of origin (rock sanctuary on the Island of the Sun/Cusco, the capital) followed by a phase of spatial diffusion and extension (paqarinas of individual ayllus or lineages/wak'as on zeq'e lines and roads) (Bouysee-Cassagne and Harris 1987:19-21). This spatial extension was likely ordered by Pachakuti into macro- and micro suyu and zeq'e systems in order to reciprocate administrative, economic and ideological needs (Duviols 1976). Roads and stone wak'as defined many of these divisions. Rostworowski (1999:138-139) reconstructs similar cross-links of physical space and political power in the settlement pattern in and around Cusco: the royal panaqas and ayllus of the nobility resided in the center of Cusco; each seniorio (Andean chiefdom in the Late Intermediate Period dated about 900-1200 A.D.) annexed by the Inka was required to send one of their dual chiefs to live in the capital to ensure its loyalty; these chiefs occupied the geographical suyu corresponding to their home within the city and those who had been integrated earlier resided and owned land closer to the center (see also Nair 2003:112).

Sherbondy (1992:61-62) argues that the Inka used the Sea as a symbol that would help unite all the diverse people they had conquered because all Andean groups respected the Sea or the Pacific Ocean as the source and end of all water. To apply this symbol to their political advantage, they developed what Sherbondy (1992:62) calls a water ideology which included placing the Sea at the religious and political center of the empire by filling the central plazas of Cusco, Awkaypata and Kusipata, with sand two and a half palms thick brought from various Pacific beaches. This sand stood for the Sea which highland and coastal peoples revered as an origin place. I would add to this the symbol of stone and the concept of stone ideology. Stone in its form as mountains was visible to all highland and most coastal peoples and for all Andean inhabitants, mountains are paramount sources of water because rivers originate in their high altitudes. Thus water, stone, and mountains are intimately linked in Salomon's (1991:15) image of the world mountain around which water circulates.

Thus, stone ideology became one of various political, administrative, and ritual tools authored by Pachakuti. It served to construct a public image of the state which sanctified Inka origins as supernatural, to negotiate relations with the natural environment and conquered peoples, and to advertise Inkaness throughout its territories by means of rock art.

REFERENCE CITED

- Albornoz, Cristobal de
1967 [1580?] Un inedit de Cristobal de Albornoz: La instruccion para descubrir todas las guacas del Peru y sus camayos y haciendas, edited by Pierre Duviols. *Journal de la Societe des Americanistes*. n.s. Vol.56, num.1:7-39. Paris.
Allen, Catherine
1998 When utensils revolt. *Mind, matter, and modes of being in the pre-Columbian Andes*, in RES 33, pp.18-27.
2002 The Incas have gone inside: Pattern and persistence in Andean iconography, in RES 42, pp.180-203.
Unpublished manuscript The sadness of jars: separation and rectification in Andean understandings of death.
Arriaga, Pablo Jose de
1968 [1621] La extirpacion de la idolatria del Piru. In *Cronicas peruanas de interes indigena*, edited by Francisco Esteve Barba. Biblioteca de Autores Espanoles (continuacion), vol.209, pp.191-275. Ediciones Atlas, Madrid.
Bauer, Brian S.
1998 The Sacred Landscape of the Inca. The Cusco Ceque System. University of Texas Press, Austin.
2004 Ancient Cusco. University of Texas Press, Austin.
Bauer, Brian and Alan Covey
2002 Processes of State Formation in the Inca Heartland (Cuzco, Peru). *American Anthropologist* 104(3):846-864.
Bauer, Brian S. and Charles Stanish
2001 Ritual and Pilgrimage in the Ancient Andes. The Islands of the Sun and Moon. University of Texas Press, Austin.
Bourget, Steve
2006 Sex, Death, and Sacrifice in Moche Religion and Visual Culture. University of Texas Press, Austin.
Bouysee-Cassagne Therese and Olivia Harris
1987 Pacha: en torno al pensamiento aymara. Tres reflexiones sobre el pensamiento andino pp.11-59. Hisbol, La Paz.



- Burger, Richard
1992 *Chavin and the Origins of Andean Civilization*. Thames and Hudson, London.
- Christie, Jessica Joyce
2006 *Inca Copacabana: A Reconstruction from the Perspective of the Carved Rocks*. *Anthropos* 101:179-201.
2008 *Inka Roads, Lines, and Rock Shrines: A Discussion of the Contexts of Trail Markers*. *Journal of Anthropological Research*, vol.64, no.1, pp.41-66.
- Coben, Lawrence
2006 *Other Cuzcos: Replicated Theaters of Inka Power*, in *Archaeology of Performance*, edited by Takeshi Inomata and Lawrence Coben, pp. 223-259. AltaMira Press, Lanham MD.
- Conklin, William J. and Jeffrey Quilter (editors)
2008 *Chavin: Art, Architecture, and Culture*. Cotsen Institute of Archaeology, University of California, Los Angeles.
- D'Altroy, Terence
2002 *The Incas*. Blackwell Publishers, Malden, Massachusetts.
- Van Dommelen, Peter
1999 *Exploring Everyday Places and Cosmologies*. In *Archaeologies of Landscape* edited by Wendy Ashmore and A. Bernard Knapp, pp.277-285. Blackwell Publishers, Malden, Massachusetts.
- Duviols, Pierre
1976 *La Capacochoa*. *Allpanchis phuturinga* 9:11-58.
- Gonzalez Holguin, Diego
1952 [1608] *Vocabulario de la Lengua General de Todo el Peru Llamada Lengua Qquichua o del Inca*. Edicion del Instituto de Historia, Imprenta Santa Maria, Lima.
1989 [1608] *Vocabulario de la Lengua General de Todo el Peru Llamada Lengua Qquichua o del Inca*. Universidad Nacional Mayor de San Marcos, Editorial de la Universidad.
- Guaman (Huaman) Poma de Ayala, Felipe
1956 [1615] *La nueva cronica y buen gobierno*, edited by Luis Bustios Galvez. Part I. Editorial Cultura, Ministerio de Educacion Publica del Peru, Lima.
1987 [1615] *Nueva cronica y buen gobierno*, edited by John Murra, Rolena Adorno, and Jorge Urioste. 3 vols. *Historia* 16, Madrid.
1992 [1615] *Nueva cronica y buen gobierno*, edited by Franklin Pease and Jan Szeminski. Tomo I. Fondo de Cultura Economica, Mexico D.F.
- Kolata, Alan and Carlos Ponce Sangines
1992 *Tiwanaku: The City at the Center*. In *The Ancient Americas: Art from Sacred Landscapes*, edited by Richard Townsend, pp.317-333. The Art Institute of Chicago, Prestel Verlag, Munich.
- Nair, Stella Elise
2003 *Of remembrance and forgetting: The architecture of Chinchero, Peru from Thupa 'Inka to the Spanish occupation*. Unpublished Ph.D. dissertation, Department of Anthropology, University of California, Berkeley.
- Niles, Susan
1999 *The Shape of Inca History*. University of Iowa Press, Iowa City.
- Polo de Ondegardo, Juan
1916 [1571] *Relacion de los fundamentos acerca del notable dano que resulta de no guardar a los indios sus fueros*, edited by Horacio H. Urteaga. In Vol.3, *Informaciones acerca de la religion y gobierno de los Incas*. Colección de Libros y Documentos Referentes a la Historia del Peru, ser.1, 45-189. Sanmarti, Lima.
- Rostworowski de Diez Canseco, Maria
1999 *History of the Inca Realm*. Cambridge University Press, Cambridge, UK.
- Rowe, John H.
1990 *Machu Picchu a la Luz de Documentos de Siglo XVI*. *Historica*, vol.XIV, no.1, 139-154, Pontificia Universidad Catolica del Peru, Departamento de Humanidades, Lima.
- Salazar, Lucy C.
2004 *Machu Picchu: Mysterious Royal Estate in the Cloud Forest*, in *Machu Picchu: Unveiling the Mystery of the Incas*, edited by Richard Burger and Lucy Salazar, pp.21-47. Yale University Press, New Haven and London.
- Salomon, Frank
1991 *Introductory Essay: The Huarochiri Manuscript*. In *The Huarochiri Manuscript* edited by Frank Salomon and George Urioste, pp.1-38. University of Texas Press, Austin.
1998 *How the huacas were: the language of substance and transformation in the Huarochiri Quechua manuscript*. *RES* 33:7-17.
- Salomon Frank and George Urioste (editors)
1991 *The Huarochiri Manuscript*. University of Texas Press, Austin.
- Sharman, Russell Leigh
2006 *Re/Making La Negrita: Culture as an Aesthetic System in Costa Rica*. *American Anthropologist*, Vol.108, Issue 4, pp.842-853.
- Sherbondy, Jeanette
1992 *Water Ideology in Inca Ethnogenesis*. In *Andean Cosmologies through Time*, edited by Robert Dover, Katharine Seibold, and John McDowell, pp.46-66. Indiana University Press, Indianapolis.
- Urton, Gary
1990 *The History of a Myth. Pacariqtambo and the Origin of the Inkas*. University of Texas Press, Austin.
1999 *Inca Myths*. British Museum Press and University of Texas Press, Austin.
- Van de Guchte, Maarten J. D.
1990 *"Carving the World": Inca Monumental Sculpture and Landscape*. Unpublished Ph.D. dissertation, Department of Anthropology, University of Illinois, Urbana-Champaign.
1996 *Sculpture and the concept of the double among the Inca kings*. *RES* 29/30:256-268.
1999 *The Inca Cognition of Landscape: Archaeology, Ethnohistory, and the Aesthetic of Alterity*, in *Archaeologies of Landscape*, edited by Wendy Ashmore and Bernhard Knapp, pp.149-168. Blackwell Publishers, Malden, Massachusetts.
- Wright, Kenneth, Alfredo Valencia Zegarra, Ruth Wright, and Gordon McEwan
2000 *Machu Picchu. A Civil Engineering Marvel*. American Society of Civil Engineers Press, Reston, Virginia.
- Zuidema, R. Tom
1964 *The ceque system of Cuzco: The social Organization of the capital of the Inca*, translated by E. M. Hooykaas. *International Archives of Ethnography*, supplement to vol.50. Leiden, E. J. Brill.

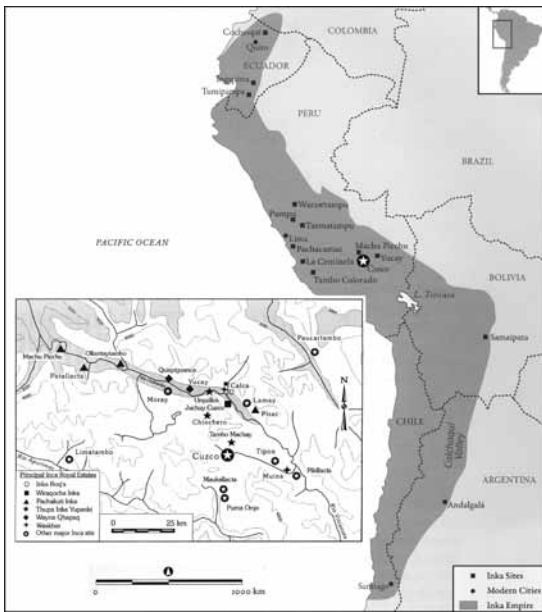


Figure 1: Map of the Inka empire.



Figure 2: Example of carved rock in the geometric style from the Saqsawaman area, Cusco. Photograph by Brian Garrett.



Figure 3: Machu Picchu, Cave formation below the Temple of the Sun. Photograph by Brian Garrett.



Figure 4: Machu Picchu, Sacred Rock copying distant mountain in the northeastern sector. Photograph by Brian Garrett.



Figure 5: Rock Sanctuary on the Island of the Sun, Lake Titicaca, Bolivia. Photograph by Brian Garrett.

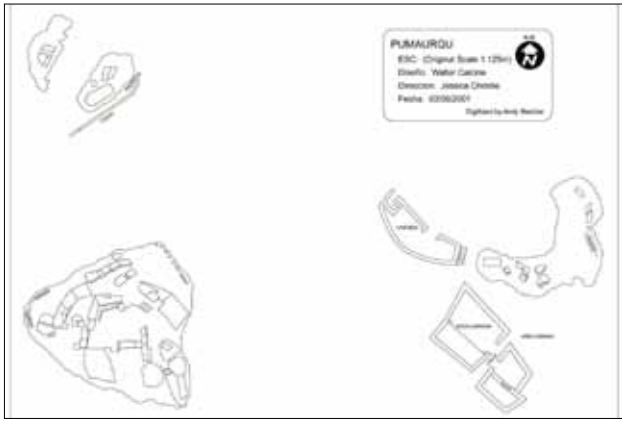


Figure 6: Rock Outcrop Pumauroú with carvings. Photograph by Brian Garrett.



Figure 7: Unmodified stone wak'a in Wina Wayna. Photograph by Brian Garrett.



Figure 8: Ollantaytambo, Inkamisana sector. Photograph by Brian Garrett.



Figure 9: Example of stepping in rock from the Saqsawaman area, Cusco. Photograph by Brian Garrett.



Figure 10: Kusilluchayoq with road to Antisuyu, plan. Field drawing by Jessica Christie; digital rendering by M. and J. Labadie.