

## ANDEAN TEXTUAL POLITY

*In approaching Fourth World literature in its great diversity of origin and form, we need to settle the matter not just of grammatology but also of text.*

Gordon Brotherston, *Book of the Fourth World*

*The institutions that constitute civil society functioned as passageways that channel flows of social and economic forces, raising them up toward a coherent unity, and, flowing back, like an irrigation network, distribute the command of the unity throughout the immanent social field.*

Michael Hardt and Antonio Negri, *Empire*

The world's remaking in the 1990s through information technology and communications has been unforeseen and all-encompassing. An electronic interface has enveloped daily life and manners of conducting business, with new communication media (computing, digital display, optical fibers, mobile telephones, e-mail, visible languages, geographic information systems) and textual practices (writing onto a computer screen, manipulating a PlayStation, or weaving a technotextile made of fiber-optic threads).

However, these new directions in technological development are rooted in the past and linked to countless institutions. One aspect of this technological dynamics is the role of communication media, and the textual practices associated with them, in the reproduction of distinct kinds of polity and the relations of

contrasting modes of production. As various authors have noted (Althusser, Williams, Bourdieu and Passerón, and more radically McLuhan), communication media are, at a profound level, the media of production. In their capacity to communicate pertinent information between different levels of society, according to McLuhan's famous dictum, "the medium is the message."

Andean societies developed textual polities founded in cloth.<sup>1</sup> Their principal textual practices of weaving, braiding, and the knotting of threads (to produce what in Quechua is called *kipu*, or quipu, and in Aymara *chinu*) gave rise to a multitude of other practices (dancing, painting images, oratory, making libations, praying, singing, playing music) and regional textual forms (cloth and braid, glyph and song) that stem from common weaving elements. All of these diverse practices are generated from predetermined additive sequences based in cloth. As communication media, such textual practices reproduce the modes of production of Andean societies grounded in particular territories. Their principal textual origin is fleece, the product of grazing flocks on extensive pastures, and as many have observed, the very quality of Andean fleece is a direct consequence of grazing animals on lush grasses and clear waters.<sup>2</sup>

In contrast, the textual practices of European reading and writing, as communication media foreign to the Andes and only introduced with the European invasion, help reproduce the modes of production of Hispanic society. Continuing the European tradition, their textual basis is paper, a product from distant woodland territories, which aided the bureaucratic functioning of the colony and, nowadays, of the nation-state.

Understanding the ways in which Andean populations historically managed this relationship between local productive and textual spheres by continuing certain aspects of their own practices while appropriating European writing, captures the reality of the present clash between different textual practices in the classroom.

#### TEXTUAL POLITY AND ALTERNATIVE FORMS OF WRITING IN THE ANDES

First of all, in the absence of alphabetic writing, how did Andean polities manage the multitude of populations, territories, and activities under their dominion? To what point can we apply Derrida's philosophical considerations to the Andes, where textuality and writing were originally based in cloth and knotted threads? As a preliminary answer, we suggest they did so through an archaic form of "network production" based in cloth, yet still grounded in territory.<sup>3</sup>

Let us trace how this functioned, basing our arguments on studies written to

date. Undoubtedly, certain insights into the workings of Andean woven polities have emerged from the interweaving of information sciences, cybernetics, and semiotics. The semiotic study of cloth locates the different signs and symbols of textile manufacture to referents in the physical and conceptual world. In essence, the relationship between the organizing language of textiles and speech suggests homologies between the formal structure of textile designs and the syntax and organization of discourse in spoken languages. The seminal essay by Verónica Cereceda, “Semiologie des tissus andins” (1978) opened a decade of studies of this type.<sup>4</sup>

A difficulty of this semiotic approach is that it tends to generate abstract and closed models, erasing the contexts in which weaving actually takes place. But there are certain advances: Cereceda’s approach challenges Saussure and supports Derrida, reconfiguring the relationship between the activity of weaving and speech. Instead of perceiving in writing a secondary representation of voice, Cereceda perceives in cloth, as a form of writing, the primary dynamics of voice. Her “text” of study becomes the interaction of textile with voice.

As part of the same semiotic tendency, in their essay “The Weaver’s Eye” (1992, 51–53), Edward and Christine Franquemont (both weavers) and Billie Jean Isbell intuit that the basic principle of weaving—whereby a small nucleus of information is repeated rhythmically and symmetrically in order to fill space and time—organizes all other fields of activity: conceptual, social, and physical. This suggests that the strategy (or *dispositif* in Foucault’s terminology) through which a polity founded in cloth configures its rule has a fractal-like nature, whether in its systems of communication or means of social control (of subjectivity or the peoples under its dominion). A common woven logic would also facilitate the deployment of this strategy.

This means abandoning the semiotic signification of texts as closed codes (whether written or woven) to examine the dynamics of communicative strategies and practices. Writing is just a part of a whole gamut of techniques and practices in the flow of information, from its production, storage, and retrieval to its dissemination. In present-day information technology and communications, the storing of information (codified in electronic circuits, characters, icons, and so on) occurs in the memory systems of computing. But before information technology, alphabetic writing stored information (codified in units of letters, words, sentences, and discourse) in deposits based in paper.

By contrast, the majority of rural weaving activities in the Andes even today are based in fleece, and information is stored in materials (cloth, kipu, braids) derived from fleece. Likewise, the units of writing—letters, words, sentences, and discourse—find an analogous form in cloth. Contemporary Andean weavers



cluding details of local ecologies and the social organization of landscapes, flora, fauna, and avifauna.<sup>7</sup> As maps, textiles encode sites of local topography and the lines of communication interconnecting them.<sup>8</sup> Our own work in the Southern Andes found a persistent pattern of “thread-knot” that traces the alternation between movement and rest, whether of the gods, of humans in their daily productive tasks and festive breaks, or animals and plants.<sup>9</sup> In addition, weavings such as the mantle (which doubles as a carrying cloth) relate these earthly pathways to their celestial counterparts.<sup>10</sup> As an incipient “informatization of production” (Hardt and Negri 2001), woven logic differentiates here between sites of production and the pattern of routes connecting raw materials and labor to intermediate deposits or sites of consumption.

In the same region, textile production (obtaining quality fleece, dyeing it, setting up the loom, counting the warp yarns, and then weaving) is organized into a grammatology along three main axes: gender (the division between male and female), logical taxonomy (of position, and the interrelation between the whole and its parts), and age groups (according to relative age, and the genealogy of primary elements and their derivatives, or offspring).<sup>11</sup> Elements of these textile hierarchies can be traced historically at the level of visual languages. Mary Frame’s seminal essay, “The Visual Images of Textile Structures in Ancient Peruvian Art” (1986) deals with logical taxonomy in the structure of the linked and sprang textiles of the southern coast of what is now Peru. These early weavings, twisted by finger, still had no weft. She argues that underlying patterns of yarns (their direction, lay, and points of articulation) constitute the metalanguage (or *dispositif*) that organizes the designs of the surface structure.

Anne Paul’s studies (2000a and b) of the Early Horizon and Early Intermediate periods of Paracas culture (ca. 100 BC–200 AD) on the same coast suggest that such patterns reinforce the relation between garment and wearer. Her work identifies elements of the visual language of weavers of that period, when the body was perceived in terms of an alternating play of gyrations (around neck, waist, and knees) expressed through the patterns and placement of enveloping garments. She holds that key forms in this play of gyrations (like Foucault’s diagrams) reproduced fundamental aspects of social hierarchy in Paracas culture, including gender and age relations.

Such ideas begin to suggest how Andean and European forms of writing (in the broad sense) are ontologically different. An emerging body of scholarship reveals how textiles, as extensions of the person, embody aspects of being in their terminology and iconography.<sup>12</sup> As vital sites for constructing identity and subjectivity, weavings fulfil an important policing function in social control, allowing the tracing of wearers’ ethnic identities, tribute categories, and social status. The

body itself is perceived as something woven, while cloth as a kind of prosthesis integrates body and mind.<sup>13</sup> As living beings, textiles embody what René Devisch (1993) has called “synesthetics,” that is, a diffuse body-centered esthetics. Andean textiles differ fundamentally from alphabetic writing in the ways they embody notions of being, knowledge, and social memory and control.

Another weaver, Sophie Desrosiers (1997), traces how weaving and culture intersect according to the parallels between textile logic and cultural logic. Her idea shares features in common with the social semiotics developed by G. Kress and T. Van Leeuwen in their “grammar of visual design” (2001). These authors reject the usual semiotic notion of an intrinsic relation between signifier (form) and signified (meaning) in favor of a motivated conjunction of signifiers and signifieds “formulated in relation to the sign-maker and the context in which the sign is produced” (2001, 7).

Like Derrida, Kress and Van Leeuwen view forms of visual representation as essentially separate from language (forms of speech). Only in early forms of alphabetic writing does visual representation take over language as a means of recording. In other cultures, such as in the Andes, these remained quite separate. For them, artifacts such as *kipus* permitted Andean cultures to encode verbal language, together with other aspects of culture best represented in a visual (and tactile) form. Although there are important homologies between visual and linguistic structures, there is no priority of one medium over the other; the visual has not become subsumed to the verbal as its primary form of representation (2001, 19).

From this perspective, the textile logic of images that express the patterns of textile structures might also guide their vocal production in narrative. A historical example of this possibility is John Rowe’s conjecture (1980) that the iconographic codification of early Chavín culture (ca. 1200–300 BC), with its baroque ornamentation, was related directly to narrative structures and coded in visual units homologous to simile, metaphor, and metonymy. (He gives the comparative literary example of Old Norse court poetry, particularly the Icelandic kennings.) Mary Frame (1986) similarly suggests homologies between weavings and narrated stories in Andean coastal textiles. These are expressed through spatial and temporal markers of character (possibly also of voice) in the juxtapositions of textile designs, for example in the use of the evocative snake head image as a structural element where yarns cross.<sup>14</sup> Gail Silverman Proust’s contemporary ethnographic work in Q’eros (Peru) concerning the expression of narrative images (above all the Inka’s head) in certain textile designs reinforces this possibility (1994, 113ff.).

In this way, woven elements shape discourse and its units, stylistics, and literary features, including the manifestation of textile voice. We indicate elsewhere certain homologies between the three- and four-yarn units of ancient textiles and

their associated design motives and the three or four characteristic voices of contemporary Aymara tales, in which tripartition has an expressive and emphatic quality. Embedded in indirect reported speech (the equivalent of “saying, they’d said, they say”), these voices are ordered in time, informing us of the identity of the original authoritative source of the tale even though they are long dead. Other modern studies indicate the “intertwined” nature of Aymara sentences that in critical junctures can transform into “hidden sentences” within the weave of the text, seeds of ideas that come to fruition later on.<sup>15</sup>

A woven underlay patterns discourse forms and processes in its image. This might be why the basis of Andean discourse is most often a braided dialogue between at least two people. Just as in musical performance, one person guides and the other follows, filling in any void in oral memory. This same woven underlay seems to organize suffixes as discourse markers that follow the thread of the narrator’s point of view throughout a tale, organizing the pragmatic coherence (or “evidentiality”) of the text. Similarly, one finds woven links between themes (what Huanca calls “opening and closing illustrative topics”) and woven connectors between stories, all of them sewn into one rhapsodic cycle.<sup>16</sup> As communicative devices, the names of elaborately decorated braids (*k’anata*) make rhymes in the wedding songs of Qaqachaka. But their presence in song also replicates the braiding together of couples in an interlacing of hands, which in turn forms part of a wider braiding of families with their animals and food produce, in different ecological niches.<sup>17</sup>

A similar woven logic pervades the organization of knotted threads. Used as accounting devices in other parts of the Americas (for example by the Mapuches), they reached the most complex forms in Tiwanaku and other early Andean cultures.<sup>18</sup> It was under the Inkas, however, that kipu were systematized into templates for state rule, administration, and planning, a development that made possible the immense reach of this Andean empire.

Various authors interpret Inka kipu as counting systems related to Inka administration. But J. V. Murra, in his classic essay of 1975, demonstrated that kipu functioned both mnemonically in registering numbers and also through a system of local categories with a logically predetermined ordering. In the past few years, other studies have attempted to widen kipu analysis by examining the logical coding and decoding of their woven language (by color; knotting; thickness of yarn and knots; direction of spin or lay; and whether they are twisted to the right, S, or left, Z).

Some researchers propose a common language between kipu and weaving. For example Silverman Proust (1994, chap. 6) perceives a relation in Q’eros (Peru) between kipu knot size and quantification and modern textile equivalents in the

width of stripes of everyday woven bags, a homology reiterated in the color code used. Other studies delve into kipus with a view toward their possible narrative structures; Martti Pärssinen (1992) especially proposes that kipus had a phonetic reading. Gary Urton (2003), on the other hand, perceives in the insistent binary language of kipus a meta-coding device, which he compares to the ASCII code of computer logic. Still others propose a dynamic relation between kipu, voice, and territory.<sup>19</sup>

In light of these possibilities, Andean kipus are said to have served as the basis of modern information technology, for example in the present use of kipu design in hardware organization, or as the model for bar codes in the global market.<sup>20</sup>

### TEXTILE DYNAMICS

In this other kind of writing—woven and braided, traced on the ground, or vocalized in a distinct manner—both grammatological (writing-centered) and grammatical notions are expressed differently than in alphabetic writing. Unlike written descriptive grammars with their strong standardizing tendencies, Andean folk grammars are disseminated at woven, visual, and oral levels. The North American linguist Bruce Mannheim (1986) argues that the Chomskyan notion of a “completely homogenous speech community” is the fantasy of scholars and standardizing movements in the West. Drawing his ideas from Jakobson, he encounters the real grammar of Andean languages not in linguistic texts but in the pragmatics of popular practices based in such textile devices, for example, in the organization of Quechua popular songs. Instead of a priori definitions (based in written Latin), Andean grammars function through a common visual-oral language of rotation, reflection, repetition, parallelism, sliding or staggered design, and duality.

Gordon Brotherston expresses the same idea in a different way. In his *Book of the Fourth World* (1992) he argues that if writing is based ultimately in the dynamics of voice, then the grammar of orality must be based on vocal expression. Drawing on Derrida, Brotherston rescues the Greek term *gramma* to describe the expression of writing according to its relationship with voice. For instance, a song line is a measure of *gramma* in the sense that the line is sung in one single breath. Likewise, as we shall see in later chapters, each passing of the weft in weaving in a sense “vocalizes” the warp, which acts as its written support.

Beginning with Dell Hymes (1981), a whole generation of linguists and anthropologists interested in the ethnography of communication has attempted to express this vocal dynamics on paper. If the characteristic pattern of orality is tracing threads of sound in the air, then they seek to express these threads of



sound on the page. For them, the notion of prose is only possible in a written register of language that overlooks the original vocalization, whereas orality always follows its voiced *grammar*.

Apart from simply emitting threads of sound (like furrows or lines in the air), orality gives an importance to this sonic emission of language (and its units: phones and syllables) quite distinct from the grammar of written language. Modern Saussurean linguistic theories, based on the significance of the larger units of language according to a mode of analysis that excludes vocal dynamics, is not much help in understanding the perception of these units. More useful are medieval theories of language, for example the phonological theories of the grammarian Antonio de Nebrija (written in 1492), and Julia Kristeva's observations about the Sanskrit grammar of Pānini (1989). These authors point to the sacred nature of sound quality as a fundamental element in vocalization. For Nebrija, the quality of sound is founded on the Christian Logos of the period. For Kristeva, the Sanskrit *sphota* is an instance of sacred Indo-European language, "wherein meaning bursts forth, spreads out, germinates and gives birth to itself." Similarly Plato's reflections on *chora* express a vocal rhythm that precedes and underlies figuration.<sup>21</sup>

This dynamics based in live performance (versus the written word) is a feature in common with other textual practices throughout the world. Saskia Kersenboom's exploration in her book *Word, Sound, Image* (1995) of the "life of the text" among the Tamil of Southern India helped us appreciate other forms of textuality. There, as in the Andes, the representation of a text, its meaning, and the proof of its comprehension are all produced through performance. The object of a text is not to "read it" but rather "witness it" or make it present in the world. In the Andes, similar ideas concern the dynamics of the text and its life, genealogy, and corporeality.

In *Writing without Words* (1994, 22), Elizabeth Hill Boone proposes that in a medium such as the kipu, the dynamic interrelation between the elements gives them meaning. In contrast with phonetic and logocentric writing, the kipu for her is a meaning-centered system that functions according to the codification of the relative position of elements that are more conventional than iconic (color, texture, form, and size, and form of knots and threads). Basing her arguments on Ignace Gelb's earlier study of writing (1952), Boone terms such meaning-centered forms of writing a "semiography" (from the Greek *semasia*, "meaning"), citing as examples the semasiographic systems in the West such as musical scores, mathematical formulae, and the international symbols found at airports. In each case, meaning is revealed through a common conceptual network of graphics, icons, and symbols. She suggests that the kipu functioned outside linguistic references,

perhaps at a supralinguistic level, by means of “codes of knowledge” shared in a common Andean cultural domain, but where different languages were spoken (1994, 15–22).

Archibald Hill (1967, 94) calls such systems (whose meaning is given by internal conventions and structures) “discourse systems,” a definition that captures the capacity of weavings and kipus to generate an ample vocal discourse from a shared background knowledge, in spite of giving a minimum of information.

As meaning-centered or discourse systems, weaving and braiding provide conceptual bridges between the more colloquial notions of writing in Europe and the Andes. This possibility goes against the positions of Walter Ong and Jack Goody, who hold that cultures without writing are incapable of expressing or thinking in the abstract. Goody in *The Domestication of the Savage Mind* argues that only writing allows the possibility of abstract thinking, through the technique of recording and organizing information in lists inscribed in paper.<sup>22</sup> As we shall see, making libations based on the configurations of a kipu is also a way, both abstract and practical, of recalling in speech a list of categories and inscribing them in memory, in a writing-like way, whose elegance lies in the possibility of generating a maximum of discourse from a minimum of information.

So how might Andean textual practices (voice, weaving, and kipu) be integrated into the wider communication and control systems of which they form a part? Understanding these dynamics is crucial. As Marx himself said, only when the interconnections of the whole flow with incessant renovation does each social process of production become, at the same time, a process of reproduction ([1869] 1973, 543).

In place of alphabetic writing, a ubiquitous logical ordering of kipus and textiles must have been instrumental in registering information flow between different levels of the Inka empire. A key for understanding the empire’s spread lies in the dynamics of kipu or textile use, ignored until now. Therein we find not only the notions of voice, body, memory, being, and knowledge, but also the dynamic relation among all these to territory.

To understand this relation, the corporeal site of vocal production must be linked with its dissemination. Until now, this matter has not been researched adequately in Andean studies of vocal practices. Oral genres, their taxonomies and characteristics (for example in the works of Jesús Lara), the social and cultural context of their production, and the major and lesser units of their organization (whether as part of the poetics of libation making or of song) have all been studied.<sup>23</sup> Now we need to study the dynamics of voice from a regional and a corporeal point of view. We need to ask: How does vocal performance link the body, through texts, with social memory and Andean terrain?

The dynamics between the different levels of organization found in rural weavings and other writings outside the immediate ambit of modern Europe is based in tangible and often corporeal units. The pragmatics of its operation defies the abstract models of space and territory so favored in the Western world. We must turn our perspective from dry electronic networks toward more organic and corporeal ones. In parallel, we must relate the language of regional writing dynamics, and the very notions of voice, to this organic world.

Jean Aitchison's concept of "the language web" (1996), at once social, cultural, and biomorphogenetic, proposes the kind of organic network that would coordinate activities at a linguistic level. When we think of Andean textiles as a kind of original "written" support, then the linguistic dynamics between different levels of organization might find homologies in the levels of vocalization. In this sense, each woven garment, as an expression of the speech of its weaver (Saussure's *parole*), concerns a more individual perspective toward a particular woven territory and its life forms. At a higher level, the different textile genres (*aguayo*, *punchu*, *wallqipu*, *istalla*), like different languages (Saussure's *langue*), express the aspects of a common woven territory. At a higher level still, the different voices intertwine in a common language of identity in a recognizable woven territory. Through this deliberate interlinking of woven aesthetics, vocalization, and territory, the Inka state was able to control the different ethnic groups under its dominion.

This same hierarchical encoding of voice, number, color, and design enables weavers to "think through cloth" in organizing and articulating productive relations at different levels (between person, family, community, the state, the gods), of lands and herds, throughout the body politic. At times, the symbolic-analytical dimensions of woven practice functions communicatively to exchange information in highly creative ways. In *River of Fleece, River of Song* (Arnold and Yapita 2001, chap. 6) we show how the weaver-singers of Qaqachaka, conscious that textile ontology derives from the fleece of their flocks and the produce of their lands, develop song episodes that communicate to others the conditions of production for generating quality fleece by grazing their herds on good waters and pastures.

It seems to us that these weaver-singers attribute to fleece, as a communication medium, an expansive quality based in the organic material of which it is composed, in a conscious expression of the material basis of fleece as the primary reproducer of the local modes of production. They recognize that the elementary particles of fleece are made up from a germinal seed element, which then generates another stemlike element. These elements intertwine in quantity to generate a woolen covering to the whole territory. The human activity of weaving reproduces these elements. The movement of the weft is compared to

the boustrofedon movement of plowing furrows in a field (as were the lines of writing on the pages in our field notebooks). Textile designs (like seeds) reiterate this germinal nature of fleece (and other vegetative) structures, from which they are constituted. These develop in time through the intervention of other nourishing elements (so other designs, stripes and figures, express images of water and rains, dung and urine) to germinate and then expand the elementary units of growth (in roots and shoots) into a vegetative-animal covering.<sup>24</sup>

All this is driven by human intervention in the daily farming and herding chores (physical labor, weeding) facilitated by a homologous network of paths leading to fields, expressed in certain weaving figures, and longer pathways to the warmer valley lands, where highland produce is exchanged, expressed in other figures. Then, at a cosmological level, this network of earthly pathways has its celestial counterparts, in the Great Path of the Milky Way, and its tributaries, remembered on festive occasions in the songs to the animals.<sup>25</sup>

Productive spaces, along with the elements of production, are thus replicated in textile spaces and their figurative elements. Innumerable studies confirm that textile stripes, pampas (fields or meadows), and other designs replicate localities themselves, the paths that conjoin them, and the produce resulting from local lands.<sup>26</sup> Different kinds of territory are reiterated in the terminology of these textile parts. In the Qaqachaka region, some relate more to farming; others more to herding. In their function as maps (of *ayllus*, with their rivers and boundaries), the inhabitants of Coroma (Potosí, Bolivia) have used their weavings juridically, to prove their claims for land.<sup>27</sup> At the same productive level, generative notions centered in cloth agree with genetic science; an initial “seed” unit develops in the textile sense according to the generative rules (codes, transition rules, genetic algorithms, and mutations) of cellular automata.<sup>28</sup>

In all this, there are universal factors of realization, taken for granted by those who practice these textual forms but ignored by those who only pay attention to the meaning of written texts (on paper). A key element among these is the corporeality of the productive processes, whereby the sonority of voice is considered to have generative power, like seeds that sprout, and breath, an animating character. In practice too, the weaver-singers of Qaqachaka literally mix fertilizing breath with the seeds of the corn beer (*chicha*) they drink, to direct the power of vocalization in their songs to the animals, like seeds, toward the future germination as new offspring of the harvest.<sup>29</sup>

For Andean populations that practice farming and herding, the basic units of germination, seed, and stem are primordial. They transpose this organic imagery to the structure of fleece, weaving, and kipu making and its logic to alphabetic writing. At a higher level of organization, the Inka state resorted to knotted kipu

(much older than the Inka empire itself) to “bind” local communities into its immense territory. Kipu dynamics seem to have worked in much the same way as that of other textiles. Inka state kipun ordered the documentation of imperial units (in people, animals, food products, and other goods and chattel), registering the flow of tribute from the far ends of the empire toward its center and of recompense to the periphery in turn. We know from colonial chroniclers and modern historians that the working of the empire depended on physical labor rather than tribute in kind, although on occasions there was tribute in children, for example in the sacrifices of the Qapaqjucha.

Included in these dynamic processes were the access and handling of territorial waters needed for farming and grazing. Evidently, the kipun of Chachapoyas measured the water at a local level, just as did the Waruchiri kipun examined by Salomon.<sup>30</sup> In this sense, a vital part of their workings concerned the flow of liquids.

Another part of kipu dynamics concerned head counts (animal, plant, and human). In his *Book of the Fourth World*, Brotherston reminds us that the Inka kipu system was essentially a pastoral discourse, a register of heads of cattle, where the economic origins in animals were inseparable from the roots of empire.<sup>31</sup> Later, we shall see that kipun were equally a farming discourse, which dealt with the “heads” of farming produce. As for the circulation of persons, Tristan Platt and others hold that kipun registered the transactions of matrimonial alliances, and they must also have indicated the flow of manual labor, of fiscal obligations and loans, and of people and their goods.<sup>32</sup> Finally, during warfare, kipun must have registered the flow of heads (as war trophies) and of available military reserves (as a contribution in blood).

On the other side of the coin, something “owed” (or still to be contributed in time or quantity) in the dynamics of the system was considered a crime. The Andean notion of *jucha* as something owed was transposed in the colonial period toward the Christian meaning of “sin.” But, the importance of its original sense was at the heart of institutional ways of confessing outstanding obligations orally before the highest *ayllu* authorities (the guilt was evidently cumulative), and of noting them on the kipu knotted cords.

Under new guises, kipun continued in use for many decades after the invasion, even serving as the textual foundation for translations into the new written mode of documentation.<sup>33</sup> Evidence suggests that the famous two-thousand-page-long letter to the King of Spain attributed to Guaman Poma (*Nueva corónica y buen gobierno*, ca. 1613) was based on the reading of kipun and other mnemonic devices.<sup>34</sup> Guaman Poma’s insistence on ordering things (whether written or drawn) according to an Andean hierarchy (as if he were following a predeter-

mined logic), suggests that the direction, colors, textuality, and type and sequence of knots marked not only the quality, gender, and class of objects annotated but also the spatial logic of Andean hierarchy, as Murra intuited. Even today, it is possible to hear a wise one, such as Don Domingo Jiménez, “read” his Aymara tales with directional suffix markers, as if he were reading a kipu (or its Aymara equivalent called *chinu*).<sup>35</sup>

In a new kind of analysis, some scholars are considering the written transcriptions into Spanish of kipu from the early colonial period. The parallel reading of these two communicative media, kipu and alphabetic writing, has stimulated these researchers to “penetrate the code” of the kipu (just as the Rosetta stone facilitated the decipherment of Egyptian hieroglyphics) by seeking their grammatical units.<sup>36</sup>

Kipu were not only used for bureaucratic matters. The recent discovery of colonial drawings of a “literary” kipu attributed to Father Blas Valera, a mestizo Jesuit, implies the mnemonic use of a syllabic model of organization, based on suffix position and rhythm, to record the famous “Hymn to the Rain” of an Inka princess.<sup>37</sup>

<i>Súmac ñusta</i>	<i>Pulchra Nimpha</i>	Fair maiden,
<i>Toralláiquin</i>	<i>Frater tuus</i>	Thy brother
<i>Puiñuyquita</i>	<i>Urnam tuam</i>	Thine urn
<i>Paquir cayan</i>	<i>Nunc infringit</i>	Is now breaking.
<i>Hina mantara</i>	<i>Cuius ictus</i>	And for this cause
<i>Cunuñunun</i>	<i>Tonat fulget</i>	It thunders and lightens
<i>Illapántac</i>	<i>Fulminatque</i>	And thunderbolts fall,
<i>Camri ñusta</i>	<i>Sed tu nympa</i>	But thou, royal maiden
<i>Unuiquita</i>	<i>Tuam limpham</i>	Their clean waters
<i>Para munqui</i>	<i>Fundens pluis</i>	Shalt give us rain;
<i>Mai ñimpiri</i>	<i>Interdunque</i>	And sometimes too
<i>Chichi munqui</i>	<i>Grandinem, seu</i>	Shalt give hail
<i>Riti munqui</i>	<i>Nivem mittis</i>	And shall give snow.
<i>Pacharírac</i>	<i>Mundi factor</i>	The world’s Creator,
<i>Pacha cámac</i>	<i>Pachacámac</i>	Pachacámac
<i>Viracocha</i>	<i>Viracocha</i>	Viracocha,
<i>Cai hinápac</i>	<i>Ad hoc munus</i>	For this office
<i>Churasunqui</i>	<i>Te sufficit</i>	Has appointed thee,
<i>Camasunqui</i>	<i>Ac praefecit</i>	And has created thee.

Brotherston (1992, 78)

The hymn alludes to a prayer for rains addressed to four protagonists: the princess and her brother, the coastal god Pachacámac, and the great god Viracocha. The Inka Garcilaso, in his *Comentarios reales* ([1606–17] 1982, book 2, chap. 27) tells how he obtained this hymn composed by an Inka “poet and astrologist,” based on the “knots” and accounts of certain annals in “threads of diverse colors,” designed to encourage faith in Viracocha and his power over thunder, lightning, and thunderbolts, hail, snow, and rain. He mentions a comment by Blas Valera that the verses, composed of four syllables, had a “spondaic” quality, as if used for recording a sequence of libations. Garcilaso holds that the verses also constituted a fable in which the “Maker put into the sky a maiden, daughter of a king, who carried an earthenware jar full of water, to pour out whenever the earth needed it.” If this is so, then the kipu structure could be read according to different literary genres: hymn, narrative, and libation.

Aside from the value of these verses as Quechua literature and the matter of deciding if the organization of this kipu does or does not constitute “writing” in the narrow sense, we should take into account other aspects of its multigenre and multimodal creation. What calls our attention is that the Quechua word *p'uñu* in the third verse not only denotes a small jar, but also an elongated form of head, just like those that Father Blas Valera drew in his papers to illustrate certain knots on the same kipu. The Inka custom of shattering the heads of small children on high mountain shrines, as a way of beseeching rain from Viracocha, is well known. In this light, the question arises if poetry also dealt with tributary matters through the violence of sacrifice.

The same historical document suggests that kípús expressed other kinds of knowledge besides counting. While the most common kípús were used in a more widespread language of daily accounting and communication, other cult kípús, in a more controlled language, were used for safekeeping religious and caste secrets, and could be consulted only by the emperor, the Virgins of the Sun, priests and philosophers (and presumably by Garcilaso and Father Blas Valera). Evidence suggests that only the official kipu readers (*kipukamayúq*) could read each individual kipu, as a form of speech (*parole*).

#### TRADITIONAL ANDEAN FORMS OF TEXTUAL-TERRITORIAL ORGANIZATION

Andean textual polities founded in cloth developed very different kinds of institutional support from those of alphabetic writing to assure the production and reproduction of the territories enveloped under their charge. Under the Inka, state ideology emphasized work for the multitude, especially agricultural pro-

duction and grazing, as ritual acts through which everyone contributed toward the maintenance of equilibrium in the cosmos and the reproduction of society.<sup>38</sup> Sovereignty prevailed through an ideology of hierarchical obligations between the Inkas and their subject groups. The quasi-divine status of the Inka emperor and Coya (*Qhuya*) was deployed through a language of love for their subjects, materialized in exchanges of sufficient food and drink as recompense for tribute in farming and herding labor and, in some cases, going to war. This formal hierarchy based in gift exchange was a dominant mechanism through which state power was enforced.<sup>39</sup>

As part of the fields of production and cultural action (in Bourdieu's terms), these exchanges would at times have been controlled through threats (and the execution) of both real and symbolic violence, as new groups were incorporated into the empire, or brutally defeated.<sup>40</sup> The corporeality of this violence can be sensed in the Quechua song *tinyacusun* collected by Guaman Poma:

<i>Aucap umanuan upyason</i>	Let's drink from the enemy's skull
<i>quironta ualcarisun</i>	Let's put on their teeth as beads
<i>tullunuan pinkullusun</i>	Let's play the flute with their bones
<i>Caranpi tinyacusun</i>	and the tambourine with their skin
<i>taquecusun.</i>	Let's dance in this way.

Guaman Poma, *Nueva corónica* ([1613] 1989, f. 314)

With Inka expansion, these institutional mechanisms of state power developed into nested levels of hierarchy. From the heart of the Inka empire in Cusco, state power controlled a pan-Andean network that penetrated into chiefdoms, villages, and households. Under its aegis, the coded artifacts in stone and thread of a woven economy were disseminated by the extensive communication systems of roads and way stations or places for deposit of emergency supplies called *tambos*, which stretched to the remotest corners of the empire. Institutional mechanisms controlled space and time, regulating annual and other more extensive cycles according to state administration goals.

These mechanisms also controlled literary genres and their expression, uniting the whole Andean region into one single cultural center that stretched from present-day Ecuador to northern Argentina, with far-flung outliers that reached the depths of the Amazon basin and southern Chile.<sup>41</sup> (We examine elsewhere how Quechua, Aymara, and other Andean language groups, with their forms of literary organization, were drawn into the same orbit of power relations.)<sup>42</sup>

This is why historical Aymara texts, like Quechua ones, register in many instances the Inka's greatness, a curious fact since the Inkas were present in the Qulla nation of the Southern Andes (most of whom were Aymara speakers) dur-



ing a period as brief as fifty years. However, this praising of Inka status was undoubtedly a part of formal state politics which sought to erase the memories of other groups in favor of their own and exercised strict control of public debate. Moreover, they obliged the diffusion of the Quechua language while forbidding the use of other languages, accelerating the incursion of Quechua for administrative purposes in areas where formerly Aymara was spoken.<sup>43</sup> At the same time, this pan-Andean state formation recognized and encouraged other local differences.

Perhaps these Inka memories reminded Aymara speakers of their own history as a people, when the fleece of their herds bequeathed the very roots of their literature. Brotherston suggests this in his *Book of the Fourth World*. Citing Matienzo (1567), he describes how, historically, the Aymara speakers of the Qulla nation affirmed that the Inkas took Qulla animals to found their own herds. As one of the four quarters (or *suyus*) making up Tawantinsuyu (the empire under Inka rule), the Qullas retained more rights in property over the local herds. In this situation, there was deference toward the Qulla llamas during the Inka's initiation and other ceremonies,<sup>44</sup> and Aymara literary forms that lauded the herds received state patronage.

Andean institutional ways of administering power relations must have shaped the learning of key practices for reproducing this woven polity. By studying learning sequences we can ascertain modes of processing data and their hierarchical relation within the same structures of power. We begin here with the Inka period as the basis against which we can develop comparative studies of the present institutional modes of transmission of textual and numerical practices.

Garcilaso calls schools the *yachay wasi* or "houses of learning" of the elite under the Inka state. He tells us how, in Cusco, the center of the empire, there was a whole "school district" linked to the palace, principally for males of royal blood and the sons of chiefs in regions under Inka domination.<sup>45</sup> Murúa ([ca.1590] 1961, 107) describes how the course lasted four years, each year under a different teacher (*amawta*, philosopher; *jarawiq*, poet and musician; *willaq umu*, priest; *warachiku*, who taught the art of war; and *kipukamayuq*, the reader of kipun), as the required level of reading and interpreting kipun demanded various years of formal apprenticeship in an institutional setting.

Once trained, this chosen elite administered the woven polity of empire. Guaman Poma ([1613] 1989, f. 358–59) details how the Inkas managed kipun at a state level according to a division between the government (that gave orders) and the administration (that collected accounts). The former put the empire into order according to a vocal hierarchy measured according to its distance from the original order given by the Inka's voice; the latter according to a hierarchy of ac-

counting. Guaman Poma differentiates between the Inka's secretaries (*kipuq*) who "governed the whole empire with their cords," and the accountants and treasurers (also called *kipuq*) charged with the numerical accounts of the empire.

In the first rung of the hierarchy of the first group, a personal secretary carried the "accounts of the words of the Inka," and then a secretary of counsel carried the "words of the Inka and the royal lords of Tawantinsuyu." These were the sons and grandsons of the great lord Waman Chawa, called Lliwyaq Puma, Apu Puma, an indication that these were of the line of wise ones, chosen by lightning. On a lower rung, a secretary "of the most excellent lord Viceroy, second person of the Ynga" was selected from the sons of the "great Lords" (*apukunas*). Among them there was a division of tasks between the *qillqa kamayuq*, "charged with iconography," and the *killla wata kipuq*, who carried the "account of the months and years." On a still lower rung were the "clerks of the chapter council or *cabildo*," "royal clerks" and "named clerks." The latter went to the provinces with the judges and mayors. For Guaman Poma, these men "wrote without lying," because in the cords "they knew so much that they made me think that they were in writing."

Among the accountants there were, in a lower rank, the *condor chawa* or greater treasurer, son of the *apu*, "he who carries the accounts of the people of Tawantinsuyu, he who receives the income of the Inka." This person counted by combining a kipu with quinoa grains. In a lesser rank, there was "in each city and town and village of Indians" a "greater accountant" and a "lesser accountant" who counted with a combination of kipu and counting board. For Guaman Poma, these had such a "great skill" that "it was better than in paper and ink."

Still today, the specialized readers of kipus and colonial texts (the so-called title bearers) are selected people (more often than not wise ones) who acquire their art during a long process of apprenticeship, according to the regional norms of legitimate textual transmission, from father to son, and from guide to follower.

For the female members of the Inka royal families, there was another formal institution: the *aqlla wasi*, "houses of the chosen ones" in which virgins were trained in state cults, weaving, the care of the flocks charged to the cult, and the preparation of food and drink.<sup>46</sup> At a more regional and local level, formal education for the other people in the empire was of a familiar and daily "collective learning," even though it was still evidently made up of three principal areas: farming, crafts, and religion.<sup>47</sup>

From their textual basis in fleece, Andean textual practices were and still are disseminated according to a predetermined logic and hierarchy. The same live performance derived from supporting texts (whether poetry or libations based on kipus or choreography based on weaving) guarantees the production and re-

production of their proper textual basis. It provides at the same time a mnemonic way of reflecting on and storing knowledge, and a communication medium of the dynamic movement of its elements from one level of the system to another.

In its maximal territorial expansion from Ecuador to Argentina, and from the highlands to the rainforest, the different textual levels were managed under the control of the Inka state, governed in cloth by the voice of the Inka and his great lords, and interpreted by his scribes, accountants, and secretaries. In this sense, woven and braided Andean texts as regional instances of writing always had—and still have—specialists in their reading and interpretation, those from the local textual community, versed in the communication media of the locality, who simply transferred their abilities to the new forms of writing introduced from Europe.