Abstract

To date most studies of contemporary Andean textiles have focused either on the symbolic or semiotic analysis of designs, or on the description of weaving technology and techniques. In this chapter I focus on the value attributed by the Macha of Tumaykuri (Northern Potosí, Bolivia) to the acquisition by young women of technical competence in weaving. I propose a practice-orientated approach and argue that the symbolic is located in the making of objects, and that the analysis of textile designs cannot be divorced either from weaving technologies and techniques, or from the lives of weavers. I argue that technical competence in weaving is at the heart of the construction of a female-gendered aesthetic subject, is a motor of creativity and innovation, and is a means of distinction among marriageable young women.

Keywords

Textile technology, gender, culture, creativity and innovation, social networks and reproduction, ayllu Macha, Andes, Bolivia.

A Jacinta Kuwakira
‘Yus pagarasunki, mamay’

During the 1980s, while learning to weave in Tumaykuri, a Quechua-speaking community belonging to Macha ayllu in Northern Potosí, Bolivia, I tried to elicit weavers’ meta-discourse on textile symbolism, but faced difficulties. They were interested in discussing the technical aspects of their weavings and the physical qualities of woven cloth instead of the symbolic meanings of their designs. Since I lack recordings of Macha textile talk at the time, I include segments of discourse taped in 1995 during my evaluation of the ASUR textile project in Majada, a community belonging to the Quechua-speaking cultural group known as jalq’a, located in Northern Chuquisaca (Torrico 1995: 23–25). Weavers gathered at the textile workshop with their textiles in plastic bags tucked under their arms waiting for them to be evaluated and priced. Very shyly they placed them on the table around which the ASUR technicians evaluated the textiles. Gonzalo, a technician, suddenly asked:

1. Gonzalo (ASUR technician): ‘Is this a dancer or a devil?’
2. Weaver: ((Remains quiet))
3. Gonzalo: ‘Look, this cat looks like a rooster. Right?’
4. ((Everyone laughs))
5. Gonzalo: ‘I wonder what it is!’
6. Tomás (workshop and union leader from Marawa): ‘The buyers [at the store in Sucre] ask these things. “What does this mean? What type of a wild animal is it? Does this wild animal walk around during the day, at night? What type [of animal] is it?” That is what the gringos ask. “Now, this is a bear, right?” They ask, “Where, where do they have these types of bears? Where does it live? Does it walk during the day or at night? What types of sounds does it make? What does it eat?” That is what they ask when they want to buy [the textiles]. We have to inform them about these things. “Now, what is this? Is it called a devil? Maybe it really exists. How does it dress? Or does it just come from the mind/imagination? How do they dress here?” That is what they ask, right? That is what they want to know. “Is this a deer or what? Now, this deer where does it live? What type of animal is it?'}
Textiles, Technical Practice, and Power in the Andes

What colour is it? What does it eat? Who does it spend time with? Does it stay by itself? That is what they ask.

((Everyone laughs))

8. Tomás: ‘That is what we have to tell them right? Right here, this is a condor or what?’

9. Weaver: Mumbles inside her mouth (unintelligible).

10. Tomás: ‘What?’

11. Weaver: Mumbles inside her mouth (unintelligible).

12. Tomás: ‘A duck? It is not a duck!’

13. Weaver: ‘Absolutely so, it’s a duck.’

14. Tomás: ‘Duck?’ (in a louder tone of voice) ‘This, does this live with humans? It is called a duck, we all know ducks. Who does the duck live with? Is it a wild or domesticated animal? It lives with men. Now here we have a cat, right?’

15. Weavers: Mumble something in their mouths (unintelligible).

16. Tomás: ‘Cat?’

17. Weaver: ‘Yes.’

18. Tomás: ‘We all know cats. Now, in their weavings the Tarabuco have all sorts of animals that we know and see every day: horses, llamas, rabbits. While, here we raareely see that; once in a while they weave those types of animals. Rather, let’s say, they weave animals that are not known, that we cannot see, that we do not know directly. So here it is not about the world, it doesn’t show up.’

19. Weavers: ((giggle.))

Tomás has spent time organising the ASUR workshops in the communities around Sucre, and is familiar with the organisation’s meta-discourse and its importance to the commodification of textiles as an act of intercultural value production. In turn 18 of the interaction, he demonstrates that he has understood the structuralist analysis of oppositional categories of domestic animals (Tarabuco) versus wild and otherworldly creatures (Jalq’a) developed by the project director, who is an anthropologist. Yet, he was unable to engage the weaver in a discussion on the meaning of the figures she wove. A few days later, when visiting the ASUR textile museum and shop with my friend Simiana Colque, an accomplished weaver from Tumaykuri helping with the care of my two-year-old son, she judged Tarabuco and Jalq’a textiles primarily on their technical features. She found the Tarabuco to be superior weavers as they had better spinning, beating, and tension, and liked their cloth, while she found Jalq’a textiles ugly (Qu. jiru from the Spanish fiero), because the spinning was uneven, the beating weak, the cloth loose, and too dark, unlike tourists drawn to these textiles’ ‘culturally authentic imagery’ of fantastic creatures.

Understanding technical competence in weaving

As Simiana’s comments attest, Macha textile discourse is mostly a technical discourse and women value technical competence in weaving in their aesthetic appreciation and judgements of textiles, technical competence being understood as the ability to carry out an act (Greimas 1983 [1966]). This suggests the importance of technology and techniques to the cultural analysis of weaving and textiles. Furthermore, among the Tumaykuri, to be a woman is synonymous with knowing how to weave warp-patterns on the ancient Andean four-stake ground loom. And there, wearing an aksu, a backcloth with the most elaborate design and warp-patterns, is synonymous with being a civilised woman. Given the close association between technical competence and gendered constructs of the subject among the Macha, in this chapter I argue that we also need to integrate gender into the technical and cultural analysis of textiles.

I draw upon feminist discussions of gender and technology, in particular Bray’s (1997) anthropological history of domestic technologies in Imperial China between 1000 and 1800, where she introduces the concept of ‘gynotechnics’ to refer to female-gendered technologies, and the ways in which cultural norms and material culture intersect to shape women’s identities, bodies, roles, and self-perception. Weaving on a four-stake ground loom is one such Andean gynotechnics, as a set of practices that manufacture femininity (ibid.: 176). One of the characteristics of this weaving technology is that it is subject-centred, and dependent on weavers’ technical knowledge and competence. It is thus a productive site in which to explore the weaver-subject that technical competence presupposes and entails, and the exercise of female agency through this technical competence. Technical competence and talk, in turn, focuses our attention on the weaving process and physical qualities desired and valued in warp-patterned cloth. In this chapter, I argue that the culturally and socially valued aesthetic and physical qualities desired in their textiles, and the technical competence required to achieve them, is bound to the formation of a Macha female-gendered subject, and ideals of femininity.
Dobres (2000) has argued for ‘technical agency’ as a way of looking at the dynamics of everyday interactions around material practices fraught by power and ambivalence, and has noted that technical knowledge can be a source of social differentiation in egalitarian societies. Here, I focus on young unmarried weavers and argue that their technical competence in weaving comes into play in the reflexive constitution of their self-identities, in processes of distinction, and the creation of social hierarchies within their age group and peer networks. Technical competence in weaving an aksu is a social marker of femininity and adulthood for girls coming of age. They are under pressure to learn how to weave, and to perform and display their technical competence in their aksus, and so build their reputations as marriageable partners. Young weavers do not mindlessly reproduce their mothers’ textile designs, rather each group of girls coming of age innovates in the aksus’ design, though these innovations may elude the untrained and inexperienced eye.

Technical competence as a form of practical knowledge and material practice, tied to the construction of a desirable gendered social identity, feeds into an economy of desire and strategies of social reproduction between patrilines. At this level, weaving is a medium of sociability and identification within and across patrilines and ethnic groups in Northern Potosí. From this perspective, then, weavers are simultaneously engaged in the construction of their self-identities and social worlds. Further, technical competence in weaving is at the heart of the constitution of a desirable feminine subject and the phenomenological constitution of relational networks that feed into the reproduction of the patrilines scattered throughout Macha territory and the region.

The Macha cabildo called Tumaykuri and dress styles

The Macha ethnic group, located in Northern Potosí (see Figure 7–1), is organised in a hierarchically integrated system of segmentary lineages in moieties. They are divided into upper half (Alasaya) and lower half (Majasaya). Each half, in turn, is further divided into five ayllus and each again into cabildos, for the most part divided into four hamlets, where patrilines who claim descent from a common ancestor reside and maintain control over common resources. A cabildo is a Spanish-style village council, taxpaying and territorial unit recognised by the National Institute for Agrarian Reform after the 1952 revolution, and re-conceptualised as a ‘community’. My specific focus within Macha is on Tumaykuri, a cabildo belonging to the lower-half Majasaya and minimal ayllu Majapicha.

The Tumaykuri are a high-altitude (or puna), 15,000-acre cabildo, located on the road that cuts across Northern Potosí from the tin mining centre of Llallagua-Siglo XX-Catavi to the city of Sucre, between the agricultural town of Macha and the mining town of Ocurí, where the largest NGO in Bolivia, IPTK, is found. They are high-puna monolingual Quechua-speaking llama herders who live in dispersed settlements and practise transhumant grazing. They also eke out much of their subsistence through trading salt they mine at Salinas de Macha (a salt mine located within Macha territory) for agricultural products, such as maize and wheat, located at lower ecological tiers, while producing a highland variety of potato resistant to low temperatures (known as papa luki) and increasingly a low-puna variety, but on a small scale. They raise llama and sheep, and the fibre and wool from these animals is spun into yarn for weaving.

Among the Tumaykuri there is a complementary gender division of work within the domestic unit. Men are in charge of agricultural production, weaving plain cloth on the treadle loom, braiding, knitting, sewing and embroidering clothing, and making small pots, and engaged in male llama herding and inter-ecological exchange. Women are in charge of herding female llamas and sheep, weaving on the four-stake ground loom, cooking, the daily care of children, and have limited participation in agricultural production. There are no specialised textile or fibre artists, and every single Macha girl is involved in all aspects of textile production from herding, shearing, spinning, plying and dyeing, to weaving. She is expected to master the technical skills that will enable her to produce high-quality warp-patterned cloth.

In this context, the aspects of technical competence that interest me are played out in Macha dress. Contemporary Macha dress is an amalgam of prehispanic, Colonial Spanish peasant-derived styles, and industrially made clothing assembled from four different technical systems of production. The first concerns manufactured clothing known as ranty pacha, the ‘purchased clothing’ of shirts, turtlenecks, sweaters, trousers, jackets, baseball caps, hats, scarves, miner’s boots, belts, sneakers, watches, sun-glasses, and other accessories. Second is the family-owned ethnic cottage
industry of mining centres and towns throughout the region, also known as *rantiy p'acha*, where white felt hats, yardage woven on the treadle loom, and full-skirted, elaborately embroidered black dresses (*almillas*) and shawls (*rebozo*) are made. Third is the domestically woven yardage from sheep's wool and synthetic yarn on the treadle loom by men to tailor garments such as jackets, vests, trousers, and the black dress with far less elaborate embroidery.

Fourth and finally there is four-selvedge cloth woven with llama fibre, sheep's wool, and synthetic yarn by women on the four-stake ground loom, known as *away p'acha* (the ‘woven clothing’ of ponchos, shawls, backcloths). Apart from the daily wear woven with sheep's wool and llama fibre, *away p'acha* includes festive wear, made with sheep's wool, llama fibre, and plied synthetic yarn in the warp-pattern.

Macha women dress in a layer of mestizo clothing, consisting of a full skirt (*pollera*), synthetic blouse(s), and sweater(s) underneath their indigenous clothing of an embroidered black dress (*almilla*), a backcloth (*aksu*) held at the waist with a *cañara* (thick underbelt), a *ch'umpi* (belt), a woven and an embroidered shawl (*rebozo*), a white hat, rubber-tyre sandals, and an assortment of

---

Figure 7-1. Map of Macha ayllu showing Tomaykuri and other neighbouring ayllus. (Source: Based on a map drawn by Tristan Platt.)
adornments. When not wearing an aksu, women say their buttocks are bare (’q’ala siki), and as Albó (1986) has noted, to be ’q’ala or ’q’ara, meaning ‘naked’ in both Aymara and Quechua languages, is to be uncultured and uncivilised.

The importance attributed to this particular textile suggests that Macha dress should be broken down into its constituent elements, and the function of each explored, as Bogatyrev (1971 [1937]) did for Moravian-Slovakian costume. In the case of the aksu, this garment consists of two rectangular four-selvedge pieces of warp-patterned cloth sewn together, pinned over one shoulder and tied at the waist with woven belts. It is the most elaborate Macha textile. It has the sole function of beautifying the indigenous female body, unlike the liklla, another item of female dress, which has a multiplicity of functions: it can be used as a shawl, carrying cloth, sitting mat, ritual mat, and for storage, and can be used by men. Married women weave backcloths with ‘small’ designs for their daughters; girls coming of age who are learning to weave are under pressure to become technically competent and weave as many high-quality aksus as possible with large and complex designs (jat’un payllay) to wear at feasts, risking great shame otherwise.

Franquemont (1991: 295) has noted that Andean weaving technology is centred on the development of skills, intellectual and physical, rather than mechanical contrivances. Macha weavers undergo a process of technological, technical, and visual socialisation in a savoir-faire, a technical and practical ‘know-how’ (Greimas 1983 [1966]), understood in local epistemological terms as a ‘yachay’ in the sense of knowledge to which the subject becomes habituated (cf. Crickmay 2002). In this process scrawny, soot-stained, tomboyish girls with wild hair and runny noses transform into graceful teenagers with all the delicate bodily techniques and bodily hexis (or predisposition) associated with Macha femininity. Small girls learn from their mothers, aunts, and older siblings to prepare fleece, skein, spin, ply, and dye. They also learn to warp four-selvedge warp-faced plain weave textiles, maintain the tension, and beat the weft into place while weaving small carrying cloths and bags on the portable four-stake ground loom. Then they learn to weave pick-up designs by weaving ch’umpis (belts) on the body-tension loom. When weaving ch’umpis they learn to place the heddles and to understand weave structures.

Once they have mastered the skill of warping, in terms of placing the four stakes into the ground, and then choosing and laying out the yarns and placing the heddles, young girls start to weave larger textiles with the aid of small samplers woven with thick yarn (saka), which facilitate passing a thick, large needle (yawri) through the warps and selecting them. While the jalq’a follow the emerging design (Desrosiers 1986), the Macha follow numerical sequences as they have to choose warps from two sets of heddles. When girls encounter difficulties during learning they are beaten by their mothers, whose reputations are on the line, given the system of parallel transmission from mother to daughter and father to son. Once the skill is mastered, the girls spend their days painstakingly bent over their ground looms weaving a finger width or two of large warp-patterns with over 100 bouts, and three colours per bout.

Weaving the large design areas called payllay distinguishes Macha women from non-indigenous women living in towns and mining centres, who weave warp-faced plain weave. In 1982 I learned of this distinction when I asked my mother-host to teach me to weave warp-patterns and was snarled upon by my father-host who, annoyed, asked why I wanted to learn to weave if I wasn’t an Indian. Only women who know how to weave payllay are referred to as ‘warmi’ and addressed with the honorific ‘mamay’ (my mother); all other women are referred to and addressed as Siñura or else Ruña (Mrs). Weaving is so highly valued that one of the worst insults a woman can receive is being told that all she’s good for is ‘giving birth to children like an animal’ (wachananpaq), indicating the value they place on female productivity.

Warp-patterned designs and the constitution of social relations between weavers

Ethnographies of contemporary Andean textiles have focused mostly on the meaning of woven designs from various perspectives. One of these is a traditional symbolic analysis of the cosmological meanings of warp-patterns (see Silverman 1998; Solari 1983; Seibold 1992; Heckman 2003, 2006; Callanaupa Alvarez 2007). This approach tends to be restricted to the interpretation of lexical units (see Kress and Van Leeuwen 1999 [1996]) with the exception of the structuring principal of dual symmetries (Franquemont et al. 1992). A second approach is a semiological analysis of the design of stripes of opposite colours (Cereceda 1978). A third approach is a post-structuralist visual semiotic (Floch 2000 [1995]) using Greimas’s narrative semiotics and structural semantics (1983 [1966]), focused on the plastic and figurative language of textiles, colour, space, form, and their optical effects.

By contrast, Tumaykuri women have been socialised to ‘analyse’ the weave structure and are expected to acquire visual/technical competence in this, not to ‘read’ or ‘interpret’ the meaning of woven designs. Their textile talk and aesthetic judgements are mostly technical, based on the weave structure and warp-count, and the physical qualities of cloth. For this reason, I argue for a practice-orientated approach focused on the technical competence of weavers as a source of agency. Schneider (1987) has noted that the very technology of the backstrap loom and hand-picked warp-patterns is premised

Figure 7–2. Pre-1950s Macha cloth with ‘tiny’ warp-patterned designs. (Source: Photograph by Cassandra Torrico.)
on the agency of the weaver, while Berlo (1992: 125) has argued that Latin American weavers are active agents of their own artistic styles instead of passive recipients of a hegemonic (visual) culture, and Franquemont (1991: 284), that the ‘true equipment of Andean weaving is the mental agility of Andean weavers’. Warping and placing the heddles to create a structure, and picking the warps to create a design, entails exercising agency within social, cultural, and technical constraints. Tumayakuri weavers, when asked why they weave what they weave, invariably answer, ‘Sunq’uymant’u’ (‘I do what I feel like doing’), ‘Munasqaymant’u’ (‘I do whatever I please’), that is, the process of weaving is said to be rooted in the individual’s will, a product of their agency, instead of being regulated by rules or norms. However, Rowe (1977), Seibold (1992), and Zorn (1997: 313–314) have noted that it is competitive imitation that orients choice and provides a motor for innovation.

The activity of weaving is embedded in and constitutive of social relations between young women within Macha, and between these women and neighbouring ethnic groups. In this context, competitive imitation becomes a framework for the structuring of social interaction between young weavers in the ‘field of weaving production’, understood as a space of positions and position taking at both macro- (Bourdieu 1984, 1992) and micro-interactional levels (Hanks 2000). At the macro level, technical competence in weaving warp-patterns indexes a feminine indigenous identity, while at the micro-interactional level it feeds into processes of symbolic distinction and identification between women, their patrilines, and their ethnic and cultural groups. I argue that we conceptualise techniques and designs as ‘visual semiotic resources’ and that weavers choose from a common repertoire of visual semiotic resources, just as speakers choose from a linguistic repertoire (Gumperz and Hymes 1972; Van Leeuwen 2008), and put their technical competence and reputations in play when choosing from this common repertoire.

The Macha woven repertory is varied and dynamic. The few weavings dating to the early part of the twentieth century include only what are today known as tiny warp-patterned weave designs (Figure 7–2). Sometime in the 1950s, the three-colour 2/1 twill complementary-warp weave with two wefts was introduced in Macha territory. Since then Macha women have had the following choices. They can weave plain warp-faced cloth. Or they can weave the designs called payllay. Among the payllay, they can weave the tiny designs (una payllay), also known as ch’ulla, consisting of 4 to 10 warp-bout complementary-warp uneven twill (Cason and Cahlander 1976: 43) (Figure 7–3). Or they can weave the small ruskara payllay (called juch‘uy payllay) (Figure 7–4) or large ruskara payllay (called jatun payllay) (Figure 7–5), which

![Figure 7–3. Two-colour 2/1 alternate pair complementary-weave (known as una ch’ulla payllay).](Source: Photograph by Cassandra Torrico.)
are three-colour uneven twill with two wefts (Cason and Cahlander 1976: 110), or else three-colour 2/1 diagonal complementary-warp weave with two wefts (Rowe et al. 2007: 185). Alternatively they can weave the small designs with two-colour warp-faced double cloth with one weft (ch’ulla) (Cason and Cahlander 1976: 77) (Figure 7–6), or those with three-colour warp-faced two-weft double cloth (ruskara) (Figure 7–7) used on the borders of aksus.³

With each of these structures they can generate a variety of abstract geometrical designs. From the 1950s to the 1960s, Macha women wove a wide range of ‘tiny’ payllays and ‘small’ and ‘medium-sized’ ruskara payllays. (See Figures 7–8(a) and (b).) Sometime in the second half of the 1970s, they started weaving larger ruskara zigzag payllays (Figure 7–9) at the expense of a larger repertoire of designs. At the same time, these zigzags became symmetrical. In the 1980s, the use of synthetic yarn for the payllay became normative among young women. Since then the tendency has been to weave even larger zigzag ruskara payllays with higher and higher warp-counts in combination with ruskara juch’uy payllays, leading to the virtual disappearance of tiny payllays by the end of the 1990s (Figure 7–10). Weaving with higher warp-bout counts enables them to vary features such as the ‘eyes’ and what are known as ‘rivers’ (twill effect) in the zigzag. The recognition of, and circulation of visual semiotic resources that index technical competence, such as a large zigzag during the 1980s, is at the heart of processes interactively achieved, in inter-subjective alignments between young weavers. They use these semiotic resources to align themselves in this field, at the same time that the field is defined by the circulation of these semiotic resources. I use the concept of alignment to mean that activities align participants toward one another in specific ways (Goodwin 1990: 10), and in the sense of projecting a self (Goffman 1981).

In practice, the innovative motor of competitive imitation starts within the residential unit and hamlet. Arnold and Yapita (1994: 328), Franquemont (1986), and Zorn (1997) have noted that girls weave together while herding. However, they have not emphasised that hamlet and intra-hamlet kin-based peer networks are important to the development of technical competence. The relations between girls from the same patriline are structured around hierarchies within that patriline. There, the children of an eldest brother’s wife (kuraqmaya, lit. ‘my older mother’) are considered hierarchically superior to those of the youngest brother’s wife (sulkamay, lit. ‘my younger mother’). Within the same family the eldest sibling (kuraqniy, lit. ‘my older sibling’) is considered hierarchically superior to the youngest sibling (sulkitay, lit. ‘my younger sibling’); she is often addressed as ‘mamay’ (my mother), and as the eldest acts as a surrogate mother and guide.

Age grading sometimes overlaps these kinship hierarchies. Relations can be cooperative, with older and more experienced weavers guiding younger and less experienced ones by correcting their errors, but also fiercely competitive between girls close in age and skill, as a common identity and emergent social hierarchies are achieved through the manipulation of visual semiotic resources. I learned this when caught in the midst of a bitter competition (atipanaku) between two sisters close in age.⁴ Girls learn to use these semiotic resources to construct their self-identities and to position and align themselves when competing with one another and evaluating and discussing one another’s weavings. The selection and combination of payllays taken from a common repertoire becomes a hallmark of their competence, individuality, and creativity (Figure 7–11).⁵ However, the agency of Macha weavers defies Western romantic notions of individual creativity and artistic originality. It is premised on the paradoxical relation of empathy,

---

**Figure 7–4.** Small designs in three-colour 2/1 twill complementary-warp with two wefts (known as juch’uy ruskara payllay). (Source: Photograph by Cassandra Torrico.)
Technical competence in weaving

Figure 7–5. Large designs in three-colour 2/1 twill complementary-weave with two wefts (known as jatun ruskara payllay). (Source: Photograph by Cassandra Torrico.)

Figure 7–6. Small designs with two-colour warp-faced double cloth (known as juch'uy ch'ulla ch'umpi payllay). (Source: Photograph by Cassandra Torrico.)
sympathy, and competition (envy), where weavers copy one another but create a unique design by varying the warp-counts of what they copy, and by combining visual semiotic resources in original ways.

Competitive relations extend to public interactional spaces and visual environments, such as sanctuaries and towns. This became evident during the Feast of the Cross in the town of Macha on 3 May (1986) – where thousands of bulky young women lavishly embellished in layers of resplendent cloth walk around singing and seducing the gallantly dressed drunken and lewd young warriors who have congregated for the ritual battle of the Holy Cross. There, talk among my Tumaykuri friends was rampant about the stellar aksu of a teenager (sipas) from the area known as Macha pampa, since it had a payllay with a breathtaking 500 warp bouts (with three warps per bout) 2/1 twill complementary-warp zigzag pattern. Girls are identified by their place of origin and surname (Llawisa Suyu, Jankokoru Lopez). A 1,500 warp-count entails an extraordinary level of technical virtuosity and is a true badge of distinction. In the act of weaving young women are producing themselves as desirable cultural beings; in the act of weaving technically stellar weavings they are producing themselves as extraordinary cultural beings. She was the hottest teenager in the town of Macha that year.

When a young woman displays her technical virtuosity, she aligns herself with her consociates. She aligns the viewers – who do not require any esoteric knowledge to decipher the deep hidden meaning of the design as a precondition for mutual understanding – by conveying something like ‘Look at what a spectacular weaver I am, and either fall madly in love with me (if you are a man) or become envious and try to weave like me (if you are a woman).’ The object of admiration, awe, and envy, my young friends speculated that someone would surely outdo her, and eagerly wove bigger payllays the following year. What mattered about her backcloth was a technical feature of weaving, the warp-count, not the symbolic meaning of the design. Macha weavers can tell the warp-count
Technical competence in weaving

by looking at the terminal area, which is divided into stripes of colour each consisting of a number of warp bouts. If each stripe has five warp bouts of three colours, they multiply the number of warps in each stripe by the number of stripes. Ten stripes of 15 warps (with three warps per bout x five bouts) would be equivalent to 150, and so forth.

Practical know-how, skill, and the embodied self Technical competence among Tumaykuri weavers is not only performed in warp-patterned designs,
but can also be appreciated in the overall quality of the cloth. When I started weaving warp-faced plain cloth striped bags, women looked at them carefully and commended me on the evenness of my spinning and beating. While I wove a poncho, women often sat at my loom to show me how to hold the beater (wich’uña) at a slant so I could beat with strength without tearing the yarns. For the Tomaykuri, high-quality cloth is made from wool and fibre that has been carefully teased, thinly spun and plied with the proper tension, is properly warped and the tension maintained to keep the selvedges as straight and
even as possible to facilitate the sewing of the two halves together, and is beaten with strength and tightly woven so it becomes ‘so hard it can stand by itself’ and one ‘cannot see through it’ and is ‘paper thin’. The colours are saturated, bright, and luminous, something rather hard to achieve given the low quality of the aniline dyes available in the region, and there must be enough white or light in the textile’s overall design. And, lastly, high-quality cloth has a high-count warp-patterned design. All of these features distract our attention from the symbolic meaning of the design to the physical qualities of the cloth. It is also highly pertinent that the name (semantic denotation) of the zigzag design in the region, the link’u (‘pathway’), does not vary from 15 to 500 warp bouts, whereas the technical competence and conditions needed to weave it do.

The physical qualities of cloth index the weaver’s identity. According to my Tumaykuri friends, one ‘knows’ (riqsiy) a ‘woman’s hands’ in her weavings, for this reason great shamans can read the coca leaves for an unknown and absent person just by holding a piece of their cloth. This presumes that there is no hidden inner ‘real’ self as in the West, but that the self is in the cloth readily available to everyone. It also suggests transcendence of the subject–object divide, that the textile object is more than an extension of the self and, as Allen (1988) has already argued, that there is an intrinsic connection between the maker and made thing. Both Murra (1980) and Reid (1989) have elaborated upon the talismanic and magical properties of cloth in pre-Columbian societies. Today, cloth still has magical qualities: young women are protective of their weavings being stolen by young men in the habit of kissing and keeping them as cholero (womaniser) trophies, since they are afraid that unrequited lovers may take their ire out and bewitch (layqa) them, causing them to die. Every so often there were rumours about young women killed in this way.

Moreover, judgements on the physical quality of cloth are tantamount to socio-moral judgements about the person (Godell 1969; Crickmay 1997; Callanaupa Alvarez 2007; Castillo and Bolivar 2002). In her analysis of Aymara aesthetics, Cereceda found that in Ludovico Bertonio’s seventeenth-century Aymara vocabulary, lexical units used to denote beauty were associated with those things that were well crafted, and with emotions of fear (Cereceda 1987: 135–137). She pursued the analysis of aesthetic emotions without relating them to skilled craftsmanship. Among the contemporary Macha, an excellently woven aksu with a clearly defined high three-colour warp-bout count of 100, woven without mistakes (ch’uyitalla), is k’achitu (beautiful), and points to positive personal attributes of the weaver such as being k’acha (beautiful), umayuq (intelligent, perceptive, and receptive), wiwu, and with being civilised. The term wiwu comes from the Spanish vivo or vivacious, and refers to someone who is full of vitality, quick, active, alert, intelligent, inquisitive, curious, and is often used to refer to someone who is good humoured, joyful, and well tempered, buoyant (‘aliri’), and energetic and strong.

Another highly valued quality is the strength of the weaver and the cloth. A strong weaver beats with force to make stiff and resistant cloth. My mother-host insisted I take her likilla on my trip to the valleys. As we were crossing a mountain peak back from the valleys a hail storm broke out. I protected myself against hail the size of golf balls huddled under her likilla. The cloth was so tightly woven it easily resisted them, as it would probably resist the pounding of stones in warfare. Lechtman (1984) has pointed out that Andean warfare relied mostly on weapons which crushed instead of cutting and piercing the opponent, and that cloth was an essential component of the Inka military. It is no surprise, then, that a people known for

Figure 7–9. 1980s weaving style in the aksu (backcloth) and likilla (shawl or carrying cloth).  
(Source: Photograph by Cassandra Torrico.)
their bellicosity should value cloth with protective qualities.

There is yet another quality associated with being a good weaver. In my meanderings through Southern Bolivia, I came across a concept that underlies all physical labour, namely ‘interes’, which in Spanish means curiosity, dedication, motivation, but which for weavers refers to engaged, involved, and focused human action, which in turn is directly related to the development of skill in the making of things and in the engagement in activities, and is tied to notions of abundance. In all the Quechua-

![Figure 7–10. 1990s weaving style in the aksu (backcloth) and likilla (shawl or carrying cloth). (Source: Photograph courtesy of Henry Stobart.)](image-url)
speaking communities where I have worked (whether Tumaykuri in Macha territory, Nohata in Visixsa, or Ampa-Ampa in Calcha), herd fertility and reproduction, as well as the overall well-being, good fortune, and monetary prosperity of a family (especially in Pisili, Tarabuco), is believed to be the product of a person’s ‘*interesniyuq*’ in the sense of the wilful and focused engagement in an activity (Torrico 1996 on Calcha, and 1997 on Pisili). In local thinking, material things are the product of the person’s capacity to realise and concretise their will, thoughts, and desires in making them. My *compadre* in Tumaykuri explained that during the month of August I had to concentrate on what I desired, focus my thoughts, since this would enable me to achieve what I set out to accomplish and acquire what I wished for. As he spoke he pointed to his forehead. According to Zorn (1997: 308), the most important skill a weaver must develop is envisioning the textile she wants to weave, while Stone-Miller (1992: 20) has pointed out that pre-Columbian weavers ‘used highly developed powers of visualization, making use of what is known as eidetic thinking’.

This awareness of visual prowess is evident on a daily basis. First, weavers are not in the habit of lending their weavings to one another as models for warping since they are afraid that they might lose ‘their hands’, their ability to weave, and face a cognitive challenge: if they see a design they desire, they must figure out what the weaver has done from afar, and ‘fulfil the cultural expectation of being exceptionally observant’ (Zorn 1997: 307).  

That is, a woman’s ‘*atinshun*’ (attentive observation) in the rigorous training of her perceptual field and

---

**Figure 7–11.** Distinctive combinations among young weavers demonstrate their ability and creativity. *(Source: Photograph by Cassandra Torrico.)*

**Figure 7–12.** A ‘walking wardrobe’ of new clothing to display technical competence during Carnival. *(Source: Photograph courtesy of Henry Stobart.)*

---

209
analytical capacity come into play. Second, weavers rely on their knowledge and memory instead of woven models to reproduce a structure and design. They read the warp-count from afar by looking at the terminal area of the textile after observing the design. Third, weavers are actively engaged in the world, self-motivated, self-disciplined, industrious, and careful; they work with precision and are invested in what they do, whether they are transforming fleece into yarn as they walk the mountains with their drop spindles, or weaving yarn into textiles with their looms. These qualities also come into play when teenagers display their technical virtuosity, and become the object of the gaze of their elders, their peers, and their potential lovers and spouses. Technical competence speaks to power over the other, and to the subjection of the self to the gaze and judgement of the other through the cultivation of skill and a carefully crafted physical appearance.

The weaver-subject and the social reproduction of Macha patrilines

The feminine aesthetic subject that has emerged is that of an intelligent, observant, focused, competitive, energetic, quick, strong, and technically competent weaver. Technical competence in weaving also indicates that she will be skilful and productive in all other female-gendered tasks such as herding, spinning, and cooking, and thus key to Macha perceptions of the female-gendered competences desirable for the social reproduction of their domestic units. Because these socially and culturally valued qualities are associated with technical competence in weaving, talk about young unmarried women's technical competence is pervasive. My young male friends mentioned they paid attention to teenagers' weavings when looking for a wife, although their amorous interests were often sparked by local 'alcahuetes,' older women who provide information on girls coming of age in their localities of origin, and try to arrange marriages.

The knack for observing and judging young women's weaving(s) is particularly ubiquitous on Carnival Monday – the time of year when teenagers make their first appearance on the fiesta circuit – and at the Feast of the Cross on 5 May, both times at which brides are 'stolen.' During Carnival, teenagers wear their newly woven textiles. They veil their faces, hiding their identities, wear copious quantities of new clothing and textiles amounting to about 20 pounds in weight, bulking up and weighing down their bodies, and look like walking wardrobes (Figure 7–12). They travel in hamlet-based troupes visiting the houses of recently deceased men throughout the ayllu.

Young men carefully observe teenagers' backcloths. In fact, teenagers' shawls are smaller than those of married women and when worn leave the space between the hips and knees visible, precisely where the jatun payllay is located (Figure 7–13), indicating that they want to draw attention to their weavings instead of their figures, as in the West. Those with the largest payllays become the most sought-after brides, and the object of lengthy disputations between patrilines, since it is believed they will be good wives (see Arnold 1997; Arnold and Yapita 1998; Zorn 1988: 69, 1997: 274–275). When a teenager is 'stolen' by her lover, her mother goes armed to his house and says things like, 'I think you have something of mine,' and demands she be returned. The boy must acquiesce but will 'steal' her again (these are actually mutually bargained elopements without parental consent), and the mother will return until the boy's family visit her and her husband in what is known as the warmiy mañay. With lots of coca and drinks in hand they honour her family and implore them to allow her to remain in her new abode. Even then she is not allowed to carry any of her belongings as she has the option of returning should her relationship fail.

A young couple is expected to celebrate their wedding and start their own household after...
living together a few years; if they don’t they are heavily criticised for not making enough textiles and food to share with others and enter into relations of exchange, and become fully social. During the wedding ceremony the groom’s (qhari ayllu) bilateral female kin, sisters and cousins (irmana) and aunts (ipala), sing verses similar in form to the Wolof Insult Poems studied by Irvine (1996), teasing and insulting the bride for her temper, weaving abilities, and sexuality. One of my friends was upset at the wedding couplets since they dis-counted the number of textiles she brought into her marriage and accused her of being lazy, while her family responded by accusing her husband of being too lazy to produce enough food to celebrate their wedding on time. At the end, the families gather to count the gifts. Aunts and sisters give likllas, shirts, sweaters, yarn, industrially made blankets, while uncles and brothers give kustalas (storage sacks) and wask’as (ropes). A particular man lists and assigns a monetary value to each item, which does not necessarily correspond to market prices, and then tallies the total value each has received. The one who has received the most gifts of value is considered more beloved (khuyay), and the patriline more prestigious. A few weeks later, the newlyweds gather the wife’s loom and weaving tools from her home along with her other belongings. Her best pre-marital weavings will be stored until her death. At her death she will be buried wearing some of these, while the rest will go to her children.

The marriage ceremony is the first of many feasts that the couple will sponsor throughout their lives as they fulfil their ritual-political duties toward their community. Technical competence in weaving enables women to make the cloth needed by their new and growing families and create the necessary networks of labour and material exchange (ayni and mink’a) that will enable them to produce the onerous amount of textiles they will need for their family’s highly ritualised social life in the years to come. A woman is expected to weave between two and six shawls and ponchos for each feast she sponsors with her husband, and 24 for the jat’un fiesta (big celebration), the last and most splendid feast in Tumaykuri, celebrated on 24 September for the Virgin of Mercedes. In 1986, I observed a sponsor in her sixties wear over 12 likllas, while 12 likllas and 12 ponchos covered the 24 llamas she and her husband sacrificed for the occasion. Dignified and honourable, Mama Santusa elegantly shouldered the fertility of her herds and her work for everyone to see.

A practice-orientated approach and its consequences

In this chapter, I have argued for a practice-orientated approach and for the integration of gender, technical, and cultural analysis of contemporary weaving practices. I centred my analysis on the formation of, and technical agency of a competent weaver-subject (instead of the textile in and of itself), and argued that the act of weaving is embodied knowledge and bodily hexis but is also at the heart of the reflexive constitution of their self-identities and processes of social distinction and identification between weavers. Among the textiles woven by young women, the aksu (backcloth) is the most highly valued and the only specifically female textile and garment; it has the most elaborate and complex payllays and overall design. It is also an ‘inalienable possession’ in Weiner’s terms (Weiner 1985), whereby the fiesta aksus woven during their youth will be stored until their death, while the rest will be worn but never given as a gift. Every single girl in Macha is expected to become technically competent in weaving warp-patterns, and to perform and display her technical competence in the aksu as she starts to participate in the fiesta cycle and make herself available for marriage.

In their work on skilled practice and craftsmanship, Ingold (2001) and Sennett (2008) have noted that the division between art and technology is recent in Western history. This is also the case in Aymara seventeenth-century lexical units (Cereceda 1987 citing Bertonio’s 1612 Vocabulario) and in contemporary Macha discourse, which both call for the integration of the aesthetic and the technical. Weavers’ discursive focus is on technical know-how, and their sitting of beauty on the physical qualities of cloth points to a feminine aesthetic subject with embodied dispositions to action through technical socialisation. The physical qualities valued in cloth, such as stiffness, impenetrability, durability, shine/brilliance, a ‘clearly visible’ high-count three-colour 2/1 twill complementary warp-weave, are associated with the cognitive and socio-moral qualities and bodily techniques that constitute a Macha feminine aesthetic subject. This aesthetic subject is intelligent, a fast learner, has a good memory, is careful, competitive, imaginative, creative, focused, engaged in the world, an attentive observer, capable of visualising a textile, full of vitality, energetic, productive, quick, strong, protective, well tempered and cheerful. In Peru, excellence in weaving is associated with having ‘a noble heart’ (llamp’u sunqu) (Castillo 2006). In the Tarabuco
region, llamp’u sunq’u is synonymous with llano and used to refer to people who are kind, courteous, polite, and affable. This suggests that the aesthetic qualities outlined may also be associated with ideals of sociability.

Girls coming of age are eager to become technically competent weavers as this is essential to their self-identities and self-presentation in public. Without a new finely woven wardrobe that includes a shawl, belts, a coca purse, and an excellently woven backcloth (all with the same designs and colours), a teenager simply cannot participate in the cycle of feasts that lead to her eventual marriage. Once a teenager simply cannot participate in the cycle of feasts that lead to her eventual marriage. Once

Without a new finely woven wardrobe that includes their self-identities and self-presentation in public. For a period of three to six years or more, families will make any number of accommodations so that their pre- and pubescent daughters can weave outstanding textiles. As teenagers learn to weave they engage in relations of competitive and creative imitation with one another, and display who they are, and what they are capable of in their aksus. In this way they position themselves vis-à-vis one another by creating hierarchies and defining their membership in a peer network through the circulation of payllays.

For this reason, I have thought it analytically convenient to think of a ‘field of weaving production’ in which an ethnically and linguistically diverse group of weavers share a mutual orientation and co-engage in an activity. This is the case for Northern Potosí. The Macha share the same dress and textile aesthetics with their neighbours, the Aymara-speaking K’ulta to the west, the Quechua-speaking Tinkipaya to the south, and Quechua-speaking Yampara to the east. Competitive imitation, technical competence and cognitive challenges, and the circulation of techniques and designs conceptualised as visual semiotic resources are at the heart of the dynamics of this field within Macha ayllu, and between the Macha and their neighbours. The manipulation of these visual semiotic resources is at the heart of processes of interactively achieved symbolic distinctions, at the core of the relations of identity and difference between women belonging to different patrilines across Macha and the region. Through creative acts within the constraints of the formal mathematical construct of the weave structure, weavers engage in ongoing inter-subjective alignments (as cognitive challenges) with one another. They imitate one another at the same time that they attempt to outdo one another year after year, as they vie for status and prestige, respect and admiration, during ritual and festive encounters across the region. This dynamic is what drives changes in textiles over time, from one age group to another, from one generation to the other.

The production and circulation of increasingly higher-count and larger zigzags with three-colour 2/1 twill warp pattern in the 1980s indicates that they were used to establish hierarchies between young weavers who engage in a common activity and share a mutual orientation, as well as being a source of identification between them and their patrilines, and between the Macha and their neighbouring ayllus of K’ulta, T’inquipaya, and Yampara. Thus, warp-patterned cloth in this area is not emblematic of an ethnic identity, rather it is a material and symbolic practice at the heart of relational networks of identification and differentiation, as weavers strive to distinguish themselves personally, at the same time that they re-create collective identities.

When choosing from a common repertoire of visual semiotic resources weavers actively engage in the construction of their self-identities and personal biographies throughout their lifelong weaving career. They are also engaged in the construction and representation of their local histories as the act of weaving is embedded in and represents local historical processes as these are lived out in social interaction, identification, and differentiation, in the context of ongoing shifts in social alliances between patrilines and ayllus. Ayllu history, when seen through weaving practices and the circulation of visual semiotic resources, is literally woven on to the female body. The circulation of payllays is not restricted to or emblematic of patrilines or ayllus. Instead, as examples of female patrimony, they circulate in the making of affinity and neighbourhoodliness, and index the phenomenological constitution of these relational networks. This suggests that Macha territory, and possibly the whole region of Northern Potosí, is fragmented into micro-stylistic spaces and circulatory routes, given the nature of relations of competitive imitation between weavers and the fluidity of social relations between patrilines over time.

Acknowledgements

Research for this paper was supported by an NEH Youth Grant 1981–1982, a Watson Fellowship 1984–1985, and a UNESCO WID Fellowship 1986–1987 and an EEC financed research project
in Tumaykuri 1994–1995. During this time I wove belts, small bags and carrying cloths, and a poncho and took hundreds of pictures of textiles in Tumaykuri, Ocuri, Macha, and K’ulta. I would like to thank Thomas Abercrombie, Silvia Arce, Denise Arnold, Rossana Barragan, Maggie Bolton, Cristina Bubba, Deborah Caro, Verónica Cereceda, Sophie Desrosiers, Kevin Healy, Nobuko Kajitani, Philip Keyes, Maria Lagos, Brooke Larson, Antonio Males, Javier Medina, Jo Murphy-Lawless, Lynn Meisch, Ramiro Molina, Primitivo Nina, Ámy Oakland, Ana Maria Presta, Rayna Rapp, Silvia Rivera, Beatriz Rossells, Mamerto Torres, and the late Antonio Rojas, Gabriel Martinez, Gunnar Mendoza, Thierry Saignes, and Elayne Zorn for their friendship and all of the members of IPTK for their help with logistics. I would like to thank Anne Rowe, Terence Turner, and Maggie Bolton for their patience in reading and commenting on a longer version of this chapter, Tristan Platt for suggesting Tumaykuri as a field site, guiding the fieldwork, and for his comments, and Henry Stobart for sharing his images of Kalankira.

References


—– 1998. ‘Kankisíña: trenzarse entre la letra y la música de las canciones de boda de Qaqachaka, Bolivia.’ In Gente de carne y hueso: las trama de parentesco en los Andes, Arnold, D. Y. (comp.): 525–580. La Paz: CIASE and ILCA.


—– 1990. ‘A partir de los colores de un pájaro’. Boletín del Museo Chileno de Arte Precolombino (Santiago de Chile) 4: 57–104.

—– 2006. Diseños de los textiles Tinkipaya. Sucre: ASUR


—– 2002. ‘Transmission of knowledge through textiles. Weaving and learning how to live.’ In Knowledge and Learning in the Andes: Ethnographic Perspectives,


Notes

1 Asur is the Fundación para la Investigación Antropológica y el Etnodesarrollo ‘Antropólogos del Surandino’.

2 I focus on weaving’s role in processes of symbolic differentiation between patriline and ayllus instead of social classes within Bolivian society.

3 This technique is also used in belts.

4 Spedding (1994) has discussed the competitive relation among Aymara women coca leaf producers in Yungas, La Paz, and Van Vleet (2008: 179) the structural relationship of rivalry and competition among siblings and in laws of the same generation in Pukwata, Northern Potosí.

5 Murra (2002: 157) writes that, ‘To weave the finest mantle was a source of prestige and envy among the wives of the same man’ (author’s translation). According to Seibold (1992), ‘for approximately the past twenty years, Choquecancha and Ccahin women have engaged in a fierce rivalry, weaving new likllas for every year’s patronal fiesta and creating new and better designs each year.’


7 In Puti, Peru, the forensic anthropologist Jose Pablo Baraybar (personal communication 22 October 2009) was able to identify corpses in mass graves by their hand-woven textiles with the help of local women.

8 In Macusani and Taquile, Peru, and Sacaca, Bolivia, weavers claim to learn by ‘just looking’ (rikuspalla, qhawaspalla) according to Zorn (1997: 305).

9 During the Fiesta of the Gran Poder in La Paz, urban Aymara women dressed in abundant clothing display their successful economic activities on their bodies (Tassi 2007), while women in Abancay, Peru, display their wealth in cloth (Ackerman 1991).

10 Medlin (1986: 202) noticed that in Calcha, ‘the areas in which kinship and affinal ties are strongest overlap areas which share the greatest similarity of weaving design’, while Zorn (1997: 189) noted that hamlets on ayllu borders copy their neighbours.