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CHINESE BEAD CURTAINS, PAST AND PRESENT

Valerie Hector

Relatively little is known about how beads were combined to form larger structures in China. To address this situation, this paper focuses on Chinese bead curtains. Adopting an approach that is broad rather than deep and empirical rather than theoretical, it collates evidence from the textual, material, oral, and pictorial records to consider bead curtains from various perspectives. To begin, this study defines bead curtains as textiles, door and window ornaments, screens, and types of beadwork. It then discusses bead curtains of the imperial era (221 B.C.-A.D. 1911) as they are referenced in the Chinese textual record from the 4th century on. A discussion of bead curtains of the post-imperial era (1912-present) follows, offering a small database of 20th- and 21st-century examples composed of organic and inorganic bead materials. While contemporary, commercially-produced Chinese bead curtains are mentioned in passing, they are not the focus of this article. Nor are bead-embellished valances addressed. As further research is undertaken, it should be possible to refine or revise the information offered here.

INTRODUCTION

Bead curtains have been made in many cultures. Structurally they tend to be similar, typically consisting of two elements: a horizontal board, bar, or rope at the top which supports a panel of beads below. In rare cases, the beaded panel consists in part or whole of netted, twined, woven, or knotted beads. Such a panel may be thought of as a textile, properly speaking. More commonly, especially in China, the beaded panel consists of parallel vertical strands of beads strung on long threads secured at the top but not at the bottom. Such multi-strand bead curtains are challenging to classify. Not textiles *per se*, they are textile-like, first, because the beads are usually strung on string, rope, or monofilament line and, second, because the strands can be likened to tassels or fringes,¹ well-known textile structures. Multi-strand bead curtains also resemble textiles in their ambiguous spatiality, appearing in a flat or 2-dimensional format one day (Figure 1) and in a curving 3-dimensional format the next (Figure 2). Finally, like most textiles, bead curtains are not self-supporting. They

are generally affixed to architectural structures, often to the frames of doors or windows, where they serve several purposes simultaneously. They embellish openings in the facade of a building, especially doorways and, to a lesser extent, windows. Usually, the bead curtain spans the height of the opening or most of it. Bead curtains also accentuate boundaries, distinguishing public and private realms or defining interior spaces.

In China, the bead curtains that hang in doorways belong to a broader category of door- and window-frame ornaments. While some of these are talismanic, part of a cultural system of attracting positive and repelling negative influences, it is not clear that bead curtains can be called talismanic. There is no question, however, that in China as elsewhere bead curtains serve other purposes, such as deflecting flying insects and promoting ventilation, especially in the warmer months. In North China, residential door and window bead curtains tend to be displayed seasonally, generally from April to October. In the winter they are usually taken down and stored. There are some exceptions; shops and restaurants sometimes keep them up all year. The bead curtains that hang in interior spaces may also be kept up year round.

Bead curtains also belong to the category of the “screen,” an ancient type of object in China which can be thought of as “a framework whose basic function is to distinguish space” (Wu 1996:10). Like many screens of wood, stone, or cloth, bead curtains generally function as portable space dividers capable of bearing images, geometric designs, or calligraphic inscriptions. But bead curtains are particular kinds of screens. Unlike the canonical screens of Chinese art history, which often hide from sight that which lies beyond them, bead curtains, being diaphanous in nature, simultaneously inhibit and permit sight, depending on how the beads are united and from what vantage point they are viewed. Multi-strand bead curtains are unique in other ways – they are permeable, permitting a body to pass through them. They are also kinetic, moving with the slightest breeze or the passage of a body, like lightweight cloth screen panels move. Yet, from the perspective of the human body, walking through a screen made of cloth panels is qualitatively



Figure 1. Plastic bead curtain in the courtyard of the 18 Tea Garden restaurant, Beijing, 2011 (photo: Valerie Hector).



Figure 2. Green plastic bead curtain tied in the center in the doorway of a tea shop in Qufu, Shandong province, 2012 (photo: Valerie Hector).

different from walking through a screen made of multiple strands of beads. The difference manifests itself not only at the tactile but the aural, visual, and temporal levels as well; it is a singular and profoundly sensuous experience, imparted by the fluidity of the moving strands.

While painted wooden screens surface in the Chinese archaeological record by the 2nd century B.C. (Wu 1996: Figure 5), we have no material evidence of bead curtains before the 20th century, though the beaded strands attached to the crowns worn for centuries by members of the Chinese imperial family and high ranking civil officials may be thought of as small beaded screens. These “crowns with suspended tassels” (*mian guan chui liu*) were worn on ceremonial occasions to screen illustrious faces from direct frontal view, shielding the wearers’ eyes and facial expressions. While they provided wearers a separate semi-private space, the tassels also served as mnemonic devices, reminding wearers to focus their eyes forward in a dignified manner (Gao 2001:196).

Instructions for making *mian guan chui liu* appear in the *Rites of Zhou* (*Zhou Li*), a text that may date to the 3rd century B.C. (Gao 2001:196). Tassel quantity and length combined with bead material and color to symbolize social rank. Regulations changed over time. Emperors of the Han dynasty (206 B.C.-A.D. 220) were allotted 12 tassels made of white jade beads at the front and back, while members of the royal family, high officers, low officers, and scholars wore 9, 7, 5, and 3 tassels, respectively. In China, jade and other hard, precious materials were thought to confer longevity upon the body during life and to protect or otherwise benefit the body after death. In the Tang dynasty, *mian guan chui liu* featured beads made of jade, emerald, coral, agate, and purple quartz (Gao 2001:196).

The earliest depiction of a *mian guan chui liu*, a drawing from a tomb in Shandong province dating to the Eastern Han dynasty (25-220), shows a scholar wearing one with three tassels (Gao 2001:197). More *mian guan chui liu* are visible in the *Thirteen Emperors Scroll* attributed to Tang dynasty (618-907) painter Yan Liben (601-673) (Gao 2001:197). An actual example with nine tassels suspended from a framework of lacquered cane survives from the early Ming dynasty (1368-1644) tomb of Prince Zhu Tan, King Huang of Lu (died 1389) in Shandong province (Yang 2006:40, Figure 1; Gao 2001: Figure 427). *Mian guan chui liu* fell out of use at the end of the Ming dynasty, terminating a 1,500-year custom of systematically using beaded tassels as wearable screening devices encoding status and rank.

Bead curtains may also be seen as examples of Chinese beadwork, loosely defined as objects for use or wear, embellished with or composed of beads. Much has been

written about the ancient history of beads in China (An 2006; Dubin 2009; Francis 1986, 1990, 2002; Han Han 1998; Hong-En Jiang et. al. 2008; Hui Li 2008; Kwan 2001; Liu 1975a-b, 1995; Rawson 2008; Zhang 2008; Zhu 2010) which goes back to at least 16,000 B.C. (Dubin 2009:58), but the subject is far from exhausted. As noted above, little is known about how the Chinese combined beads to create larger structures. Suffice it to say that the list is extensive, the objects diverse. Only a few will be mentioned here, focusing first on multi-strand structures and then on structures featuring other techniques.

Centuries before bead-tasseled crowns entered the written record, male and female nobles of the Western Zhou era (ca. 1046-771 B.C.) were buried with pectorals, and wrist and waist ornaments made of linked and/or tasseled beads and pendants of jade, agate, shell, serpentine, faience, and glass (Gao 2001:707-717; Gu 2007:146-147; Kwan 2001:32). One of the earliest such ornaments, found in tomb 6214 at the Tianma-Qucun site in present-day Shanxi province has 10 strands made of carnelian and shell beads suspended from a jade plaque. It dates to the 10th century B.C. (Rawson 2008: Figure 2).

The ornaments also took the form of knotted bead nets (Zhang Runping 2007: Figure 91). Like the crowns just discussed, these objects “were partners in a complex ritual display of rank and wealth” (Rawson 2008:3), emblematic of trading networks connecting Han Chinese peoples to the larger world (Rawson 2008:9ff.). Evidence of another type of multi-strand structure, called a “jade bead mattress, comforter, or quilt” (*yuzhuru*), was found in a Western Han (206 B.C.-A.D. 24) tomb in Yunnan province, long the home of minority or non-Han peoples. The object reportedly served, by itself or in combination with other materials, as a “corpse curtain” (*shiti de shilian*) (Gu 2007: 270).² Measuring 150 cm x 80 cm, roughly the size of a small human body, the object, as reconstructed, is composed of several dozen vertical strands of tiny jade cylinder beads united at regular intervals by thin horizontal strips of longer jade cylinder beads united in a ladder stitch. In short, it seems to be the case that Chinese peoples of Han and minority heritage have been making multi-strand bead ornaments for at least 2,000 years.

Evidence of bead embroidery and knotted bead netting also appear by the Western Zhou dynasty if not earlier. Funerary face covers of the era were made of jade and hard-stone plaques apparently stitched to cloth panels so as to depict the features of a face (Wang Tao and Liu Yu 1997). Garments were also embellished with beads or bead-like elements. In 1977, the remains of a “glass garment” were recovered from a Western Han tomb in Yangzhou, Jiangsu province (Cheng and Zhou 1991). How the 600

small, perforated glass plaques were united to form the garment is not known; they too could have been stitched to a fabric ground. Samples of complex bead netting in China apparently do not appear intact until the late Southern Song dynasty (1127-1279), when a woman was buried in Jiangxi province with a tiny scent bag-cum-hair ornament made of seed pearls united in octagon stitch (pers. obs.; cf. Zhou et al. 1992: Figure 3). Right angle stitch seems to have developed by the Ming dynasty (1368-1644) as an inscribed panel thought to have been made in China demonstrates (cf. Blair 1973: Figure 131). Hexagon stitch was also apparently known in China by this time, judging by an enormous lantern composed of 1.5 million glass beads. Housed at the Nanzenji Temple in Kyoto, the lantern is thought to have originated in China. Beadwork continued to develop during the Qing dynasty. To cite one example of many, Emperor Qianlong possessed a suit of armor made of 600,000 tiny steel platelets united to form a dense beaded ground depicting dragon and cloud motifs (Gong Yan 1985; Hector 2005:22).

The foregoing are but a few highlights of Chinese beadwork history. A complete study would fill several volumes.

BEAD CURTAINS OF THE IMPERIAL ERA (221 B.C.-A.D. 1911)

Textual References

In China, research often begins with the textual record, especially with respect to objects such as bead curtains. While examples from past centuries may not survive, references to them do. The first to study the topic in depth was Meng Hui who published three articles which cite references to bead curtains in approximately 40 poems, histories, and essays dating from the Eastern Jin (317-420) to the Qing (1644-1911) dynasties (Meng 2003, 2004, 2009). Bead historian Zhu Xiaoli (2010:233) follows suit, citing 10 additional references to bead curtains in texts of the Song dynasty (960-1279) alone. References to bead curtains may also be found in Chinese literary encyclopedias which define words by citing examples of usage in poems, histories, essays, and other texts. For instance, the *Great Chinese Word Dictionary (Hanyu dacidian)* contains approximately 17 references to bead and crystal curtains spanning a time frame similar to Meng's (Luo 2001:549-554). The *Encyclopedic Dictionary of the Chinese Language (Zhongwen dacidian)* provides 19 references (Zhang Qiyun et al. 1985:444-450).³ Together, these six secondary sources comprise approximately 86 references. After eliminating duplicates, we come up with approximately 76 references. What percentage of the total

number of references to bead curtains in Chinese texts from the 4th to 20th centuries these 76 represent is difficult to estimate without further research.

Twenty of the references are cited in the following paragraphs. Setting aside literary genres, poems, histories, and essays are given equal consideration, the better to focus on the early associations of bead curtains, as well as their venues of display, their material, visual, kinetic, and aural qualities, and, finally, their mnemonic potential. Time frames are disregarded for the most part and all references are treated without regard to when they were written. A more detailed study might show that the references increase in some centuries, or follow distinct trends in others. The relationship of these references to actual bead curtains is unknown. That figurative language is often involved, and descriptions of bead curtains tend to be imagined or remembered rather than factual, makes reconstruction difficult. Nevertheless, the references portray attitudes, beliefs, and customs. Admittedly the portrayals are biased; they give us bead curtains as perceived by members of the educated literate elite, since members of the lower social orders were generally illiterate.

Before proceeding, a few words about the Chinese term for "bead." *Zhu* is ambiguous; it means both "bead" and "pearl." Only when *zhen* ("real," "true") precedes *zhu* can we be reasonably sure that "pearl" is meant. *Zhu* also functions as an adjective meaning "beaded" or "pearl-embellished" on the one hand, or "exceptionally fine" on the other. Thus, a "pearl" or "bead" curtain might refer to an actual pearl or bead curtain, or to an exceptionally beautiful curtain that is not necessarily beaded. For purposes of disambiguation, in the excerpts below, *zhu* is translated as "bead," and *zhen zhu* as "pearl." Terms in braces have been checked against the primary texts, and where the primary and secondary texts differ, the primary text is followed. Information in brackets, apart from titles of books or poems, was supplied largely by Jeff Keller and Chyi Chung.

Early Associations

One of the earliest firmly dated accounts of a bead curtain was written by Wang Jia (d. 390) of the Jin dynasty (265-420). A writer of "stories of strange events" (*zhiguai*), some of which are vaguely historical in nature (Theobald 2010), Wang associates bead curtains with ancient emperors, opulent interiors, and beautiful, secluded women. In this account, two imperial concubines are secluded behind a bead curtain:

Yue had two beauties, one who was named Yiguang, and another Xiuming, and they were presented

to [Emperor] Wu. Wu placed them in the royal concubines' residence, and strung up a curtain {*lian huang*} of fine beads behind which they hid during the day and admired the moon at night. The two would come inside and sat down, making themselves up in front of a mirror behind the bead curtain. All who caught a glance of them were affected, and all called them goddesses (Zhang Qiyun et al. 1985:448 [under *zhu bo*], citing *Record of Omissions: King Ling of Zhou* [*Shiyiji: Zhoulingwang*] by Wang Jia; cf. Meng 2004:107).

Bead curtains often screen women who, in keeping with traditional Confucian values, are appropriately ensconced in the inner quarters of a home (Ebrey 1993:23ff.), but nevertheless look wistfully outward while awaiting the return of husbands or lovers. In this poem, a woman momentarily toys with the boundaries of propriety: “The imperial bodyguard armed with a halberd protected the hall, the multitudes admired the heavenly music. A beauty in the tower leaned and watched, passing her exquisiteness through the crystal curtain {*shui jing lian*}” (Meng 2003:101, citing “Palace Poetry” [*Gongci*] by Ma Feng [flourished ca. 804] of the Tang dynasty).

On occasion, solitude leads to resentment: “The beauty rolled down the bead curtain {*zhu lian*} and sat, frowning her brows” (Zhang Qiyun et al. 1985:449 [under *zhu lian*], citing “Resentful Feelings” [*Yuanqing*] by Li Bai [701-762] of the Tang dynasty).

Some writers, like this 5th-6th-centuries poet, underscored the fact that wealthy wives had little to do: “The eldest wife dusted her jade box, the middle wife tied up the bead curtain {*zhu wei*}, and the youngest wife, with nothing to do, tidied her eyebrows in the mirror” (Luo Zhufeng 2001:549 [under *zhu wei*], citing “Poem on Three Wives' Beauty” [*Sanfuyanshi*] by Shen Yue [441-513] of the Southern and Northern Dynasties [420-589]).

Venues

Other writers did not mention beautiful women. Instead, they emphasized the luxuriousness of the settings in which bead curtains were hung. In this 7th-century history, bead curtains appear in palaces: “Shi Hu [295-349] built the Taiwu Palace in Xiang and the East and West Palaces in Ye... both had lacquered tiles, gold dishes, silver rafters, gold pillars, bead curtains {*zhu lian*}, and jade discs, all made with the finest craftsmanship” (Meng 2004:108, citing *Book of Jin: Unofficial History of Shi Jilong* [*Jinshu: Shi Jilong Zaiji*], edited by Fang Xuanling [579-648] et al. of the Tang dynasty [618-906]).

Venues considered appropriate for bead curtains included imperial temples: “The emperor built a spirit hall... with a curtain {*bo*} made of white beads hung from a tortoise-shell support” (Meng 2004:107, citing *Stories of Han Emperor Wu* [*Han Wu gushi*], traditionally attributed to Ban Gu [32-92] but may have been compiled during the Eastern Jin [317-420] or Southern and Northern dynasties [420-589]).

Bead curtains were also displayed in temple gate towers, according to this Song dynasty (960-1279) text:

Shisun lies outside the west gate of the Yamen where two tree stumps remain, and it is called the Pearl Tower Base. Barbarians had erected the Daqin Temple here, which had ten gate towers that each had its own curtain {*lian*} made of pearls {*zhen zhu*} and green jade {*cui bi*}. The temple was destroyed and now every time it rains at its base rare objects like pearls, precious blue stones, and gold and jade can be found (Meng 2004:111, citing *Stories of the Shu Capital* [*Shudu gushi*] by Zhao Qingxian of the Song dynasty [960-1279]).

In such passages, exactly where bead curtains were hung – whether in doors, windows, or interior areas – is often left to the reader's imagination; it is the evocative presence of bead curtains rather than their precise location that seems to matter. In one 12th-century text, however, a precise location is specified: “I looked up and saw green buildings and magnificent towers, and doorways decorated with bead curtains {*zhu lian*}” (Zhu 2010:233, citing *Record of Dreams of Former Glory in the Eastern Capital* [*Dongjing Menghua Lu*] by Meng Yue [b. 1103] of the Song dynasty [960-1279]).

Bead Materials

Bead materials are not always specified in textual references to bead and crystal curtains. Pearls, jade, and white beads have already been mentioned in the texts excerpted above. Multiple curtains made of real pearls are reported in a 9th-century text: “Ever since Princess Tongchang came down her residence was in Guanghua, and in its halls were placed pearl curtains {*zhu zhang*} made from real strings of pearls” (Zhang Qiyun et al. 1985:446 [under *zhu zhang*], citing *Duyangzabian* [*Random Writings from Duyang*] by Su E [flourished ca. 890] of the Tang dynasty [618-906]).

Glass is sometimes named. The word *liuli* seems to appear more frequently than its counterpart, *boli*. Both mean “glass.”⁴ The transparency and reflectivity of glass are frequent themes: “[The people of] Wu skillfully made

tinkling-jade... weaving a sea of silver with ten thousand strands” (Meng 2003:99, citing “Ode to a Liuli Curtain” [*Yong liuli lian*] by Ma Zuchang [1279-1338] of the Yuan dynasty [1271-1368]).

Occasionally, colors are noted: “A tortoise-shell tower was built on the city gate that was decorated solely with gold and silver, a 5-colored bead curtain {*wu se zhu lian*}, and white jade hooks...” (Meng 2004:110, citing *Spring and Autumn Annals of the Sixteen Kingdoms: Later Zhao: Shi Hu* [*Shiliuguo Chunqiu: Hou Zhao lu, Shihu*] compiled 501-522 by Cui Hong of the Southern and Northern dynasties [420-589]).

In some cases, *liuli* curtains, apparently made of glass strips instead of glass beads, are monochrome and blue (or blue-green) in color, or so we are told in *Random Jottings of Mt. Yan*, a memoir written in 1665 by Sun Tingquan (1613-1674) of the late Ming to early Qing dynasties:

A blue curtain {*qing lian*} was probably the most expensive and noble kind of glass {*liuli*} product. Blend a certain amount of crystal with Mohammedan blue [cobalt]. Make the mixture into strips shaped like chopsticks {*ru zhu si tiao*}, as sparkling as ice. Weave into curtains {*wei wei huang bo*} and apply them to the vermilion window lattice {*fu yu zhu ling*} (Sun [1665]; cf. Meng 2003:104 and Zhang Weiyong 2008:279).

Visual Qualities

Other visual characteristics were also described. An unspecified light source may create reflections within or around beads. Or a particular light source may play across the surface of a curtain, producing other visual effects: “The candle flame dances in the bead curtain {*zhu lian*}, moonlight floats on the bright columns” (Meng 2003:101, citing “Four Poems on a Winter’s Night” [*Dongxiao gewei siyun*] by Li Shimin [599-649], personal name of Emperor Taizong of the Tang dynasty [618-907]).

Shadows also attract attention: “The cold moon fills the quiet inner rooms, the shadow of a parasol tree falls on a pearl curtain {*zhu lian*}. Hands first feel the arrival of autumn frost, the tailor’s scissors are cold in the lamplight” (Meng 2003:103, citing “Lament on Empty Inner Chambers” [*Kongguiyuan*] by Bai Juyi [772-846] of the Tang dynasty).

Wafting incense smoke creates other effects, activating the senses of sight and smell: “Repeatedly adding incense to the jade burner, light smoky lines float across the floor. Thick smoke passes through the hanging bead curtain {*zhu lian*}, a painted swing waits leisurely outside, under the

brilliant sky” (Meng 2003:103, citing “Beauty from Yu” [*Yu meiren*] by Mao Wenxi [fl. ca. 913]).

Kinetic Qualities

Kinetic qualities sometimes enhance visual qualities while betraying structural particularities. The movements of long vertical strands seem to be described in this 6th-century reference to what might be a multi-strand bead curtain: “enchantingly fluctuating – now clustered, now spread apart, secretly reflecting the person in the window” (Meng 2003:101, citing “Ode to Bead Curtains” [*Yongzhulian*] by Lu Sidao [531-582] of the Sui dynasty [581-618]).

An object with a different kinetic range seems to be implicated in this 8th-century reference: “The western palace was quiet at night among a hundred flowers’ fragrance, I wanted to roll up the bead curtain {*zhu lian*} as I felt spring sorrow” (Zhang Qiyun et al. 1985:449 [under *zhu lian*], citing “Lamenting Spring in the Western Palace” [*Xigongchunyu*] by Wang Changling [698-756] of the Tang dynasty).

In these and other references, verbs in their various forms betray different types of movements. It seems doubtful that multi-strand bead curtains could be rolled up or down while hanging; their very structure prohibits such treatment. Instead, the strands were probably tied to one side or gathered in the middle (Figure 2). How then to account for the many texts that speak of handling a bead or crystal curtain in such a way, rolling it up or down according to a mood or time of day? Another structure must have been involved (Meng 2003:101; Meng 2009). We will return to this issue later when we discuss crystal curtains.

Aural Qualities

Pleasant aural effects are typically attributed to bead curtains. A woven curtain tinkles in the wind in this early reference: “Pearls were woven {*zhi zhu*} to make a curtain {*lian*} at the Zhaoyang Hall; when the wind blew it would make sounds like the tinkling of jade” (Luo Zhufeng 2001:558 [under *zhu lian*], citing *Miscellaneous Records of the Western Capital* [*Xijingzaji: Qinling fenglian*], traditionally attributed to Ge Hong [284-364] of the Jin dynasty [263-420] but may be later; cf. Meng 2004:107).

In one 9th-century text, the strands carry on a sort of metaphorical dialogue: “A cold bead curtain {*zhu lian*} of dew on red strings, the long fine threads talk as they hang” (Meng 2003:98, citing “Tune for Spring Sorrows” [*Chunchouqu*] by Wen Tingyun [812-870] of the Tang dynasty).

Mnemonic Potential

At least one writer of the imperial era commented on the mnemonic potential of bead curtains. Meng (2003, 2004) refers obliquely to this writer by subtitled her articles *jishi zhu*, which may be translated as “remembering beads,” “memory beads,” or “beads for remembering things.” Meng was probably thinking of Feng Zhi (flourished ca. 907), a late Tang dynasty writer who composed a series of anecdotes under the title *Jishi zhu* in which he recalls counting “the beads on a bead curtain in his house to keep track of what he learned” while he was a student (Kieschnick 2003:132). The association of beads and memory may not be surprising, given the ancient use in China and elsewhere of rosaries for telling prayers and abacuses for performing calculations. At some point, certainly by the Tang dynasty, the association seems to have crystallized in the term *jishi zhu*.⁵

A Scathing Critique

The early associations of bead curtains with beautiful, secluded, and pampered women endured, eventually becoming tropes or conventional metaphors which were still in use at the end of the imperial era. Some found the tropes oppressive. Moving beyond our six secondary sources, we discover that early Chinese feminist Jin Tianhe (1874-1947) launched a scathing critique in his 1903 essay “A Woman’s Bell” (*Nüjie zhong*). Jin urged women to liberate themselves from the confines of the inner chambers, the proper place of women in traditional Confucian thought: “Pearl-stringed curtains {*zhu lian*} and embroidered chambers may look like palaces in the heavens, but in fact they are worse than prisons” (Jin Tianhe 2013 [1903]:255). While Jin’s critique did not end the production and use of bead curtains in post-imperial China, it may have contributed to shifts in perception and function. In other words, by the end of the Qing dynasty, bead curtains no longer symbolized idealized femininity, or not to the same extent.⁶

Terms for Bead Curtains, Crystal Curtains, and Related Objects

At least 13 terms for bead curtains, crystal curtains, and related objects appear in texts of the imperial era, according to the six secondary sources. Precisely how these terms apportion the semantic universe of bead curtains and related objects has yet to be studied. The diversity of terms does not necessarily correspond to a diversity of objects. Terms

such as “wind curtain” (*feng lian*), for example, seem to originate in the figurative use of language. The first seven terms, consisting of “curtain” (*lian*) preceded by a modifier, may be found in Meng (2003, 2004, 2009): *feng lian* (wind curtain), *jing lian* (crystal curtain), *liuli lian* (liuli [glass] curtain), *qing lian* (blue or blue-green curtain), *shui jing lian* (crystal curtain), *wu se zhu lian* (5-colored bead curtain), and *zhu lian* (bead curtain). Six additional terms and their definitions are listed in sub-entries under “bead/pearl” (*zhu*) in the *Great Chinese Word Dictionary* (Luo Zhufeng 2001:549-554). In each case, the word “bead” (*zhu*) modifies a different noun referring to a type of curtain-like structure: *zhu bo* (bead curtain), *zhu huang* (bead curtain), *zhu lian* (bead curtain; i.e., “a curtain made of strings of beads”), *zhu long* (bead window; i.e., “a window lattice decorated with beads), *zhu wei* (bead curtain or net), *zhu xuan* (a window decorated with pearls), and *zhu zhang* (bead tent or curtain; i.e., “a net or curtain decorated with beads”).

While a few of the terms (*huang, bo, lian*) connote flat or 2-dimensional structures such as curtains or screens, others (*zhang, wei, long*) connote 3-dimensional structures such as tents, canopies, veils, or window frames. Terms could be conjoined for poetic effect, with no change in meaning; *lian huang*, for instance, simply means “curtain.” Terms such as *zhu xuan* may be archaic.

Zhu lian seems to have been the most common term over the centuries. Cao Xueqin’s *Dream of the Red Chamber* (*Honglou meng* or *Shitouji*), one of the most widely read novels in classical Chinese literature, makes an interesting case in point. First published in 1791, the novel offers unique insight into 18th-century China and the social, intellectual, and material lives of wealthy families with close ties to the Qing imperial court, living in elegant, object-filled interiors. As many as seven references to *zhu lian*, one reference to a *jing lian*, and one reference to a *lian zhu zhang* or canopy-like beaded curtain may be found in the *Renmin wenzue chubanshe* edition of *Dream of the Red Chamber*, that is, if we include a bead curtain discussed in a footnote (Cao 2000).⁷ Unfortunately, these objects are not well described. The material from which a bead curtain is made is specified only once, in Chapter 48, where it is said to be “pearls” or *zhen zhu*, or twice if we are inclined to view a “crystal curtain” or *jing lian* as a type of bead curtain. Far more attention is lavished upon other kinds of curtains and blinds; Chapter 17 alone lists some 1,120 curtains and blinds made of silk, satin, felt, and lacquered bamboo, special-ordered for an important event. None of these is described as beaded. Thus, in the richly furnished imaginary world of *Dream of the Red Chamber*, bead curtains are rare – rare enough, perhaps, to seem exotic. Most of them were called *zhu lian*.

Linking the Textual and Material Records

The textual record only goes so far; words alone cannot show us what bead curtains of the imperial era might have looked like. The material record can be considered, but it too reduces us to speculation. Meng Hui (2004:110) is apparently the first to try and link the textual and material records, seeking real-world correlatives for bead and crystal curtains mentioned in texts of the imperial era. As noted above, Meng posits two correlatives that are especially thought-provoking: the first, concerning a hypothetical 6th-century glass bead curtain at the Yongning Temple in Luoyang, and the second, concerning actual “crystal curtains” produced at the Old Summer Palace (Yuanmingyuan) in Beijing during the Qing dynasty. These will be discussed in turn.

A Hypothetical Bead Curtain at the Yongning Temple, ca. A.D. 534

It seems fair to assume that where bead curtains once existed, mass quantities of beads might later turn up. In 1994, 151,000 glass beads (Plate VIIA top) were recovered by archaeologists excavating the former west gate area of Yongning, a Buddhist temple complex built in Luoyang, Henan in the year 516, Northern Wei dynasty (386-534). A lightning strike reduced the complex to ashes in 534, scattering the beads.

Approximately 145,000 of the Yongning Temple beads range from 1.0 to 3.0 mm in diameter, while some 6,100 have diameters of 3.1-4.5 mm. Bead lengths are not provided, but images of them reveal that, on average, they are less than or equal to the bead diameters. Most of the beads are oblate, a small number are cylindrical, but all are monochrome and of drawn manufacture. The perforations are quite small: from 0.5 to 1.0 mm. Bead colors and opacities are as follows: black (31.2%), translucent green (17.9%), opaque yellow (15.8%), opaque brick red (14.3%), colorless (7.2%), transparent dark blue (4.3%), opaque white (3.8%), transparent sky blue (3.5%), and opaque purplish red (1.9%) (An 2000:81). Chemical compositional analysis of seven beads indicates they were “made from soda glasses that were high in alumina and low in lime,” a composition consistent with what Francis calls “Indo-Pacific beads” (An 2000:82). According to Robert Brill and others, glass of this composition is known to have been “made in India from perhaps the 2nd c. B.C. to 9th c., but not elsewhere, as far as is known at present” (An 2000:83, citing Brill, Fenn, and Lang 1995:270-279). More recent studies support additional production of Indo-Pacific beads (and very likely the raw glass used to make them) in Sri Lanka and Thailand (James Lankton 2013: pers. comm.). A few beads of rock crystal

and agate were also found among the Yongning beads (An 2002:59).

How did such a quantity of foreign glass beads arrive at the Yongning Temple? They might have been “transported there by Indian monks who came to live and work in China;” during the 6th century, as many as 3,000 Buddhist monks “from 100 countries (including India), resided in the Yongningsi Temple” (An 2000:84). Other possible sources include Indian workers employed in the building of the temple, or pilgrims who came to visit it (An 2002:61). A large market flourished in 6th-century Luoyang that was frequented by many traders (Lewis 2009:163), and this too might have been a conduit for bead distribution.

After they arrived in Luoyang, Meng Hui (2004:109-110, 113) posits that the Yongning Temple beads led “illustrious... lives” in a multi-strand bead curtain that hung in or above the temple’s west gate. Five texts support this hypothesis, Meng argues. Two of them, the *Stories of Shu Capital* (excerpted above) and *Huayangji*, relate legends of beads found in the ground where temples and towers once stood (Meng 2004:111). The next two texts, the 6th-century *Spring and Autumn Annals of the Sixteen Kingdoms: Later Zhao: Shi Hu (Shiliuguo Chunqiu, Hou Zhao lu, Shi Hu)* and the *Jin Remnants (Jin Shiyi)* by Xie Chuo, reproduced in *Tai ping Yulan*, vol. 700, compiled 977-983, refer to bead curtains made of “5-colored *liuli*,” which might describe the colors of the glass beads found at the Yongning Temple (Meng 2004:110).⁸ Most convincingly, the fifth text (*Record of Luoyang Buddhist Monasteries*, vol. 2: *Eastern City [Luoyang qielangji: chengdong]*), purportedly provides a retrospective eyewitness account written in 547 by Yang Xuanzhi (1984) of bead curtains hanging at Jingning, another Buddhist temple in mid-6th-century Luoyang (Meng 2004:110-111). Yang does not, however, mention bead curtains at the Yongning Temple.

Intriguing though they are, these textual parallels (for the possible presence of beads in the ground where temples and towers once stood; for the possible existence of multi-colored glass-bead curtains; and for the supposed appearance of bead curtains at another Buddhist temple in mid-6th-century Luoyang) amount to circumstantial evidence for the presence of one or more bead curtains at the 6th-century Yongning Temple. Considering such issues may not lead to firm conclusions but it broadens our understanding of the contexts, physical characteristics, and legends associated with bead curtains during the imperial period.

Interestingly, the quantity of glass beads found at the Yongning Temple would have been sufficient to create a multi-strand bead curtain of a size consistent with some 20th-century glass bead curtains. Table 1 provides a range of

Table 1. Width Estimates for the Beaded Area in the Yongning Temple Bead Curtain.

Bead Length (in mm)	Number of Beads (per 183-cm strand)	Total Strands (at 6.3-mm intervals)	Width of Beaded Area (in meters)
2.0	915	165	1.0
2.5	732	206	1.3
3.0	610	247	1.5
3.5	523	288	1.8

estimates for the width of the beaded area, assuming strand lengths of 183 cm, strand intervals of 6.3 mm, and bead lengths of 2.0-3.5 mm. If, for instance, the 151,000 Yongning Temple glass beads averaged 3 mm in length, the strand area would be about 1.5 m in width. These calculations assume that the beads formed a single curtain; it is also possible that they formed more than one curtain. In any case, a question remains: would glass beads of ostensibly high value have been used to form a curtain displayed far from the temple's inner precincts?

Other scholars envision other applications for the beads within the inner precincts. An Jiayao (2000:84) suggests that beads similar to those found at the Yongning Temple served “as necklaces and strings of ornaments on Buddhist images” of the era. This is consistent with a passage in the 6th-century *Record of Luoyang Buddhist Monasteries* that tells of three *xiu zhu xiang*, meaning bead-embroidered, bead-embellished, or bead-studded statues or images that once stood in a Buddha hall near the center of the Yongning Temple grounds. Mark Edward Lewis interprets the passage as follows: “North of the pagoda was a Buddha-hall, modeled on the Supreme Ultimate Hall of the imperial palace. It contained an eighteen-foot-high gold statue, ten man-sized gold statues, three statues studded with pearls {*xiu zhu xiang*}, five statues woven from gold thread, and two jade statues” (Lewis 2009:110).

The *Record* does not say how the beads were combined, but the presence of the word *xiu* is significant. Usually translated “embroidery,” it also connotes other types of textile-like structures. Bead historian Zhu Xiaoli (2010:200-201) believes the Yongning Temple beads were linked together to form peyote-stitch-like coverings for the three statues. This seems doubtful, given the disparity in bead sizes and shapes. Textile historian Li Wenying (2013:184) envisions another type of object altogether, interpreting the *xiu zhu xiang* as motifs on a large panel embroidered with pearls and gold. Li does not mention the Yongning Temple's glass beads at all. James Lankton reminds us of another possibility: perhaps the beads were not used, but merely collected as offerings from the Buddhist faithful.

Crystal Curtains at the Yuanmingyuan in Beijing

Other real-world correlatives for the bead curtains and related objects referenced in imperial-era texts may lie in the *shuijing lian* fabricated in imperial workshops at the Old Summer Palace or Yuanmingyuan (Garden of Perfect Brightness) in Beijing during the Qing dynasty. *Shuijing* is an ambiguous term – it refers to both “rock crystal” and “glass,” making “crystal” an acceptable English equivalent. *Lian*, as we have seen, means “curtain.” Located on the outskirts of Beijing when construction began in 1707 under the Kangxi Emperor (1654-1722), the Yuanmingyuan was an imperial resort full of pagodas, palaces, lakes, ponds, and gardens. Successive emperors continued work on the Yuanmingyuan and the adjacent Changchunyuan (Curtis 2009:44-48). Both compounds were sacked and looted in 1860 by Anglo-French forces engaged in the Second Opium War. Today almost nothing remains of either one. The luxury objects they once contained have been dispersed across the globe. If examples of the *shuijing lian* have survived intact, I am not aware of them.

The best evidence for these imperial crystal curtains is once again textual, and one text is especially productive. Written anonymously as one of many texts detailing “handicraft regulations and precedents” (*jiangzuo zeli*) (Song and Moll-Murata 2002), the resolutely factual “Regulations on Crystal Curtains” (Wang Shixiang et al. 2000:832; Meng 2009) lists the materials, measurements, and numbers of man days required to make crystal curtains (*shuijing lian*). As administrative texts for regulating quality and controlling costs, *jiangzuo zeli* are silent on a number of issues including, in this case, how many crystal curtains were customarily displayed at the Yuanmingyuan and Changchunyuan, when or where they were displayed, what they looked like, and how they were assembled. Archival research may help resolve some of these questions.

The opening lines of the “Regulations” text are most relevant for our purposes. They contain archaic terms, reproduced in italics below, which have fallen out of use, making translation difficult. The lines read:

In regard to crystal curtains, its height should be in accordance with the *ge chuang xin* [probably the center opening of a wood lattice partition] and five *fen* [ca. 16 mm] should be removed from both its top and bottom for every square *chi* [ca. 1/9 sq. m] in area. In addition to the twenty-one *liang* [imperial treasury {*kuping*} *liang*: 37.37 g] of glass strips used, add three *liang* of strips for every catty [600 g], and use five *qian* [five maces; approx. total 18.79 g] of copper [possibly red brass] thread/wire for every *chi* [1/3 m]. In regard to brass *mietiao* [typically strand-shaped slices of bamboo, rattan, reeds, or sorghum stalks cut for use in weaving, braiding, or plaiting; here possibly, trim strip or molding], its length should be calculated in accordance with the width of the *ge chuang xin*; they have a width of five *fen* and are one *fen* thick; [use] 3.6 *liang* in weight for each *zhang* [3.33 m] in length. The length of brass *yatiao* should be calculated in accordance with the height of the *ge chuang xin*; they have a width of five *fen* and are five *li* thick. For each one *zhang* in length of both *mietiao* and *yatiao*, use twenty-five wrought brass nails, with each nail three candareens [about 1.13 g total] in weight. (Information in brackets supplied by James Stand.)

We may draw several conclusions from these lines. Much care was expended on the production of imperial crystal curtains. That materials, weights, and dimensions were standardized suggests the curtains were produced in some quantity. *Zhu*, the word for bead, is absent from the text. Instead, we have *boli tiao*. *Boli* usually refers to “glass” but it also means “rock crystal” (An 2002:80, n. 22). *Tiao* typically means “strip,” “long thin piece,” or “rod;” i.e., an object devoid of a hole.⁹ It probably makes sense to assume that *boli* in this context refers to “glass,” if only because of the difficulty of carving rock crystal into long thin strips. The “Regulations” text does not say how the *boli tiao* were united, but it appears they were somehow framed with copper or red brass strips or moldings and secured with brass nails. The ensemble was situated within a *ge chuang xin*, probably the center opening of a lattice partition (Meng Hui 2009), a kind of free-standing, multi-panel wooden screen used to divide a room or frame a window. Judging by the ostensible weight of strips needed for each crystal curtain (21 x 37.37 g = 0.7847 kg), the center openings of the lattice partitions may have been relatively small. Small panes of glass, possibly made in imperial glass workshops, were also set within lattice partitions and windows at the Yuanmingyuan and Changchunyuan during the 18th century (Curtis 2009:47). Examples of wood-lattice partitions inset with silk gauze, jade, glass, or porcelain survive in the 18th-century Qianlong Garden of the Palace Museum in Beijing

(Berliner et al. 2010:218-219, Figures 2-8). *Shuijing lian* are associated with small openings not only in the “Regulations” text but in the 13th-14th-centuries *Ancient Matters from Wulin Garden (Wulin Jiushi)* by Zhou Mi (1232-1308). Zhou (1956, 2:368) describes decorations at the imperial court during the Lantern Festival: “A 5-colored *liuli* pavilion was set up in the court.... The small crystal curtains were hung among the miniature windows (*xiao chuang jian chui xiao shui jing lian*). The fringes and precious bands reflected brilliant lights at each other.”

In addition to establishing a precedent of several hundred years for the crystal curtains in the “Regulations” text, this account also alludes to the reflection of light, which is part of what would have made glass in any guise – strip, sheet, or piece – a desirable material for this application. The word “strip” (*tiao*) in the “Regulations” text is significant in another way. It allows us, following Meng, to relate the crystal curtains at the Yuanmingyuan to: 1) the *qing lian* (blue or blue-green curtain) described by Sun Tingquan in his 1665 essay *Random Jottings of Mt. Yan: Glass*; 2) a 19th-century reference to a blue glass blind introduced to us by Peter Francis (1986:21); and 3) a possible correlative for a crystal curtain in the material record. It should be noted that Sun refers to *liuli tiao*, possibly meaning translucent or opaque glass strips, instead of the *boli tiao* in the “Regulations” text. Sun gives us a few other details; his *liuli tiao* are blue or blue-green, “woven” into curtains (*wei wei huang bo*) and applied to vermilion window lattices (*zhu ling*), the conceivable structural counterparts of the center openings of lattice partitions (*ge chuang xin*) referenced in the “Regulations” text. What did Sun mean by “woven?” Was it a metaphor for a dense, intricate structure composed in part with thread, or an attempt to describe an actual technique? Clues to a possible technique are provided by a British Protestant missionary who spent 57 years in China, 30 of them in Beijing. In 1869, Joseph Edkins observed blue glass curtains he called “venetians” hanging in the windows of the “structure rising over the north altar” of the Temple of Heaven in Beijing (Francis 1986:21, citing Hommel 1969:305). This is precisely the type of location identified by Sun Tingquan as appropriate for the display of *qing lian* (cf. Meng 2009 and Zhang Weiyong 2008:279). The blue glass rods used in the Temple of Heaven “venetians,” Edkins wrote, came from Shandong province. In 1867, another European observer named A. Williamson reported that glass “rods” were being produced at glass workshops in Boshan, Shandong. The rods were “about 30 inches long,” tied up in “bundles,” and exported “to all parts of the country” (Hommel 1969:305). If by “venetians” Edkins was referring to “Venetian blinds,” the glass rods were probably oriented horizontally and connected with sets of vertical threads spaced at regular intervals. If so, it makes sense that Sun

Tingquan and others might have likened the technique to “weaving.”

As previously mentioned, a correlative survives in the material record for the Yuanmingyuan crystal curtains and Temple of Heaven glass-rod blinds. Rather, fragments of the correlative survive. Housed at the Kanazawa Bunko Museum in Yokohama, Japan, they consist of more than 800 glass strips in shades of transparent yellow and light green (Miho Museum 2006: cat. 76), plus a portion of the brocade-embellished frame that once surrounded the strips. The object they once formed is known in Japanese as a *tamasudare* (*tama*: “bead,” “jewel,” or “precious;” *sudare*: “blind,” “curtain”). The equivalent term in Chinese would be “jade curtain” (*yu lian*). Although it is believed that the *tamasudare* originated in the late Kamakura period (1185-1334) (Miho Museum 2006: cat. 76), the object does not appear in the written record until the year 1486 of the Muromachi period (1334-1573). By this time it had been donated to the Shomyoji Temple in Yokohama where it may have hung in the pagoda, perhaps in an inner shrine room. Measuring 78.7 cm in height by 90.6 cm in width when unrolled, the *tamasudare* is relatively small. Dimensionally variable, it was stored at the temple in rolled-up form inside a box which is also preserved at the museum (Mukozaka 2012:482).¹⁰

The *tamasudare*'s glass strip fragments measure 0.2-0.4 cm in width and 4.8-30 cm in length (Miho Museum 2006: cat. 76) (Figure 3). They look to be rectangular in profile. The strips' specific gravity of 3.83-4.0 corresponds to a relatively high lead content, potentially qualifying them as “crystal,” which was one of the ingredients of the *qing lian* noted by Sun Tingquan. In fact, precisely because of their presumed high lead content, museum officials believe the strips are of Chinese origin. A high lead content, however, is not diagnostic for Chinese glass. Where in China the strips might have been made has not been established; Boshan specialized in leadless glass in the 14th century (Francis 2002:74-75). At any rate, the strips were probably not made in Japan. Glass production there had declined by the Kamakura period (1185-1333) and, with the exception of beads, glass was “chiefly... imported” (Blair 1973:145). Glass beads were made in Japan “from glass rods” by the Edo period (1615-1868), however, and “*sudare*” (door curtains) were sometimes composed of strings of glass beads (Blair 1973:204, 245).

As for the technique used to join the rods in the *tamasudare*, it is believed they were “twined in hexagonal fashion” with threads that disappeared long ago¹¹ (Mukozaka Takyua 2012: pers. comm.). Fortunately, the Kanazawa Bunko Museum houses more than fragments; it also houses a reproduction of the *tamasudare* (Plate VIIA bottom).

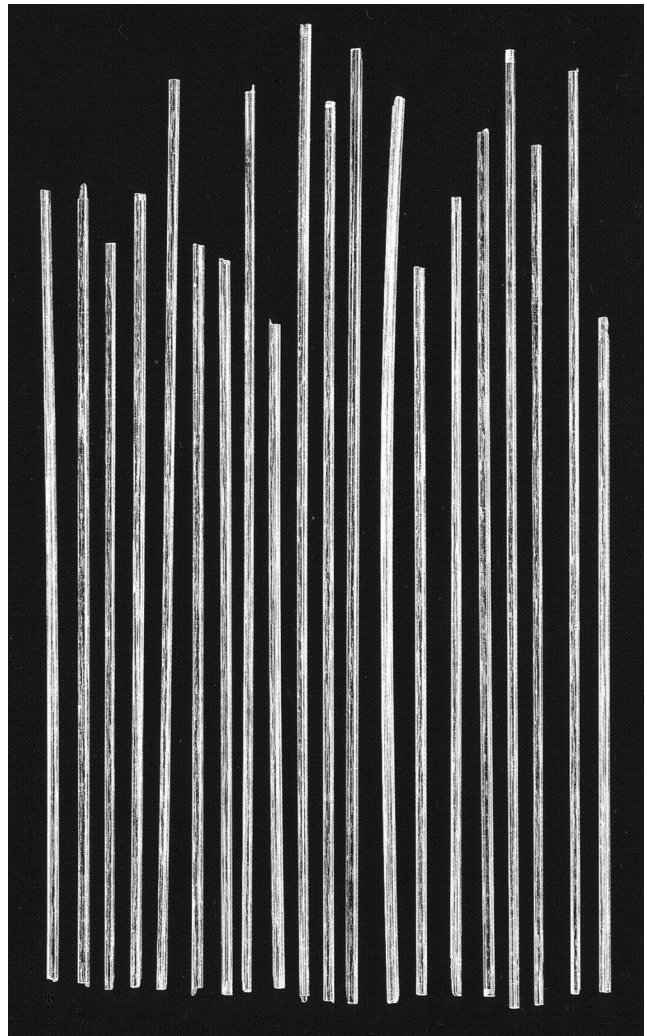


Figure 3. Fragments of glass strips from an original *tamasudare* found at the Shomyoji Temple, Yokohama, Japan (ca. 15th century) (courtesy: Kanazawa Bunko Museum).

Thought to be faithful to the original, the reproduction was made ca. 1970 of acrylic rods twined together with string and encased in a frame partly covered with the same Japanese-style cotton brocade that framed the original. The reproduction resembles a type of blind common in East Asia that is made of twined lengths of split bamboo (Figure 4). Such a blind can be rolled up or down as it hangs, much like a Venetian blind. In fact, it seems plausible that blinds of twined glass strips or rod could have developed by analogy with such bamboo blinds. Going one step further, it is possible that the glass strips used to make the Yuanmingyuan crystal curtains and Sun Tingquan's *qing lian* were also twined. If they were twined, the curtains could be rolled up or down like blinds, and this might explain the many references in imperial-era texts to bead or crystal curtains that could be handled in this way.

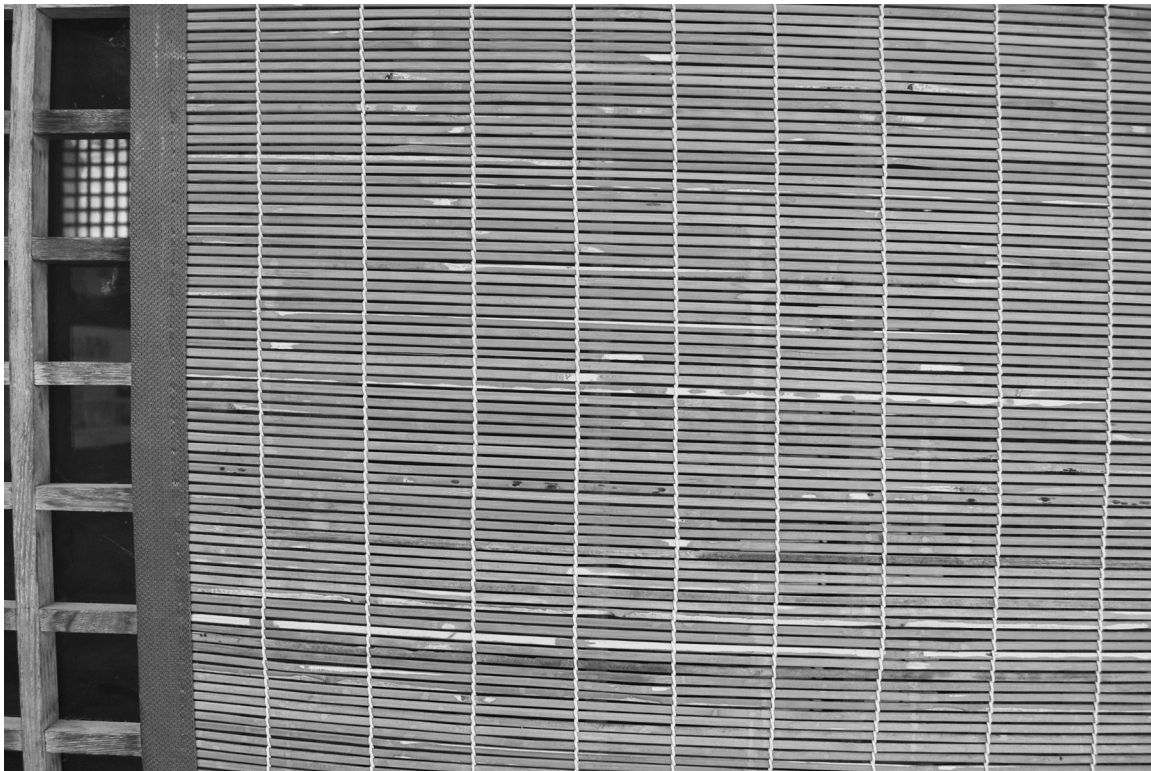


Figure 4. Detail of a twined bamboo-strip door curtain, Cuandixia, 2012 (photo: Valerie Hector).

A few caveats are in order before we depart the topic of “crystal” curtains. First, we cannot be sure that the terms *jing lian* and *shuijing lian* refer in every case to a curtain or blind made of twined glass strips or rods; other structures might have been involved. Further, multi-strand bead curtains might also have been called “crystal curtains” to capture their light-reflecting capacities. Second, crystal curtains or blinds composed of glass strips or rods are not “bead” curtains properly speaking if no beads are involved. Yet, the strips or rods could have been confused for beads. Third, whatever their structure, crystal curtains might have been relatively less common than other types of bead curtains in China over the centuries. We have already encountered a hypothetical 18th-century ratio in *Dream of the Red Chamber* which mentions one *jing lian* or “crystal curtain” as against six *zhu lian* or “bead curtains.” Fourth, even when they are structurally distinct, crystal curtains seem to have been thought of as special kinds of bead curtains in imperial China, as Meng (2003, 2009) points out.

BEAD CURTAINS OF THE REPUBLIC OF CHINA (1912-1949) AND PEOPLE’S REPUBLIC OF CHINA (1949-PRESENT)

Here we take up the material record. Instead of trying to imagine what bead curtains of the past may have looked

like, we now examine bead curtains made during the last 75-100 years. Much of my research on bead curtains has been limited to the greater Beijing area and to parts of Shandong province, so there is a North China bias to the information that follows, and it cannot be taken as representative of China as a whole. To temper this bias, I adopt a wide perspective, exploring curtains made of various bead materials, displayed in various contexts, and conveying various sensibilities. The material is assigned to two major categories: organic and inorganic.

Curtains Made of Organic Bead Materials

In the previous section, historic texts made reference to bead curtains made of real pearls, but since no examples are known, we cannot be sure they actually existed. The same can be said for curtains made of shells and the parts of various animals. Nevertheless, it seems reasonable to suppose that Chinese bead curtains have long been made of organic materials, especially those derived from plants. This section examines bead curtains made of four such materials: Job’s tears, bamboo tubes, various seeds or seedpods, and recycled paper. These are modest substances by today’s standards, but Chinese people have long recognized their potential, going to great lengths to collect, modify, and string

them in both commercial and domestic settings. Although bead curtains made of wood beads are also popular in China, they will not be discussed here since the examples available for study are products of the mass market.

Job's Tears and Bamboo Tubes

Job's tears and bamboo stems have long been used as beads in China, perhaps because they are naturally hollow and highly durable. Both plants belong to the grass family known as *Poaceae*. Necklaces made of Job's tears (*Coix lacryma-jobi*) have been found at an archaeological site dating to 2000 B.C. in modern-day Xinjiang province (Hong-En Jiang et. al. 2008:1311). It is possible that bamboo tubes, created from the cylindrical inter-nodal sections of a stalk, have been used as beads in China for many centuries as well. We know that they have been used since at least the Qing dynasty to form knotted net garments (Hector 2005:24).

The curtain in Plate VIIB is made of Job's tears and bamboo tube beads. The design is simple. The bamboo tubes create a horizontal zigzag band that runs across the top of the curtain breaking the monotony of the Job's tears below (Plate VIIC top). Bamboo tubes also appear at the bottom of the curtain as a kind of border. While the two bead colors, greyish-white and tan, are soft and neutral, the bead surfaces are opaque and unreflective. If bead curtains made of inexpensive organic materials existed in China's imperial era, this is one example of what they might have looked like.

Lobed Brown Seedpods

Another simple curtain appears in Figure 5. At first glance it looks to be made solely of seedpods that range in color from caramel to dark brown. There are 8,138 of them, and they measure 4.5-6 mm in diameter and 9-13 mm in length. As yet unidentified, the pods are lightweight and the entire curtain, which measures 0.88 m wide by 1.6 m high, weighs only 1.36 kg. Black striations run the length of the pods, imparting texture as they delineate the boundaries between lobes. Although the pods are somewhat glossy, they are totally opaque. This is not a bead curtain that dazzles the eyes with refracted light; its plain brown expanse bespeaks traditional Chinese cultural values such as modesty, sobriety, and frugality. Its origin is unknown.

Closer inspection reveals that brown is not the only color in the curtain. Nearly a third of the surviving bead strands contain beads made from small, irregular lengths of plastic tubing (Plate VIIC bottom). The 978 plastic tubes vary greatly in size, measuring 2.0-3.0 mm in diameter and 0.5-15.0 mm in length. They appear in three colors, all of them somewhat faded: red, yellow, and blue. No discernible rationale governs the size, color, or placement of the plastic

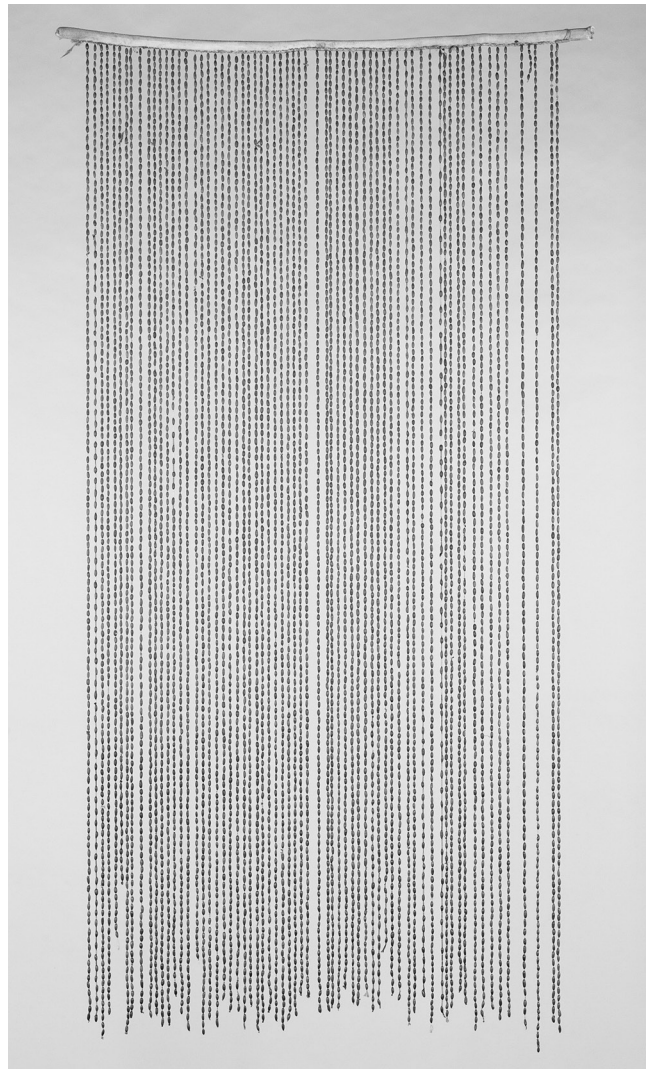


Figure 5. Bead curtain of lobed brown seedpods and plastic tubes, 20th century. Private collection (photo: Sanders Visual Images).

beads. Perhaps they were introduced when the curtain was repaired, in part, with black cotton threads. The black threads are visible in only 8 of the 22 plastic-bead-bearing strands. Most or all of the remaining 59 strands are strung on tan-colored 3-ply synthetic threads. These same threads were used to create the narrow panel of commercially woven fabric that encases the curtain's hanging rod, a bamboo stalk or tree branch. The 67 surviving bead strands are stitched directly into the fabric where the two edges meet to form a tube. Specifics concerning this curtain are presented in Table 2 ("Seedpod").

The same lobed brown seedpods are mixed with beads of plastic and other materials in another curtain found hanging in a residential doorway in the Liulichang area of Beijing's Xuanwu district in 2008 (Plate VIID top).

Table 2. Comparative Data for Seven Select Bead Curtains.

Curtain	Dimen. (in meters)	Weight (in kg)	Bead Shape	Ave. Bead Dimen. in mm (diameter x length)	Bead Symmetry (and possible Chinese name)	Ave. no. Beads per Strand	Total Strands	Intervals Between Strands (in mm)	Est. Total Beads in Curtain
Seedpod (Fig. 7) seed pods, plastic; 20th c.	0.88 x 1.6	1.36	oval (seedpod) tubular (plastic)	4.5-6 x 9-13 2-3 x 0.5-15	regular irregular	136	67	9.5	9,116
Geometric (Pl. VIID) wound glass; 20th c.	1.27 x 2.12	9.09	oblate to globular	4-6 x 3-8.5	highly irregular ("5-qian" beads/ <i>wu qian zhu</i>)	345	130	8	44,850 (not incl. netted panel)
Landscape (Pl. IXB) wound glass; 20th c.	0.99 x 1.99	8.64	oblate	4.5 x 3	regular ("curtain" beads/ <i>lianzi zhu</i>)	596	137	6-7	81,652
Self-Reliance (Fig. 8) wound glass; 20th c.	1.0 x 2.02	6.82	barrel: white oblate: red oval: amber blue pink	5 x 6 5 x 2-2.5 4.5-5 x 8-10 4.5 x 7-11 4.5 x 7-10	regular ("curtain" beads/ <i>lianzi zhu</i>)	357	114	7-8	40,719
Crane/Pine (Pl. IXC) wound glass; 20th c.	0.88 x 1.83	7.27	oblate teardrop (1-hole)	5 x 3-5 5 x 10-11	irregular ("5-qian" beads/ <i>wu qian zhu</i>) irregular (name?)	480	118	6-8	56,640
Peacock (Pl. XA bottom) drawn and wound glass; 20th c.	0.89 x 1.9	3.64	tubular (drawn) oblate (wound)	3 x 4.5-13 4 x 2.5-4	irregular ("tube" beads/ <i>guan zhu</i>) irregular ("5-qian" beads/ <i>wu qian zhu</i>)	217	108	7-8	23,436
Hutong Pizza (Pl. XD) molded plastic; ca. 2007	1.06 x 1.39	5	ovoid biconical	12 x 13.5 6 x 5	regular regular	156	72	10	11,232

Miscellaneous Seeds or Seedpods

Other seeds or seedpods have been used in Chinese bead curtains as well. The curtain in Plate VIID bottom

consists of variegated brown seeds or seed pods mixed with segments of green plastic tubes. Irregular in length, the tubes were probably cut by hand (Plate VIIIA top). Along with the curtains in Figure 5 and Plate VIIB, this curtain appears

to be homemade and fashioned from low-cost materials. It hung in the doorway of a small residence in the Liulichang neighborhood of Beijing's Xuanwu district.

Paper Beads

The Chinese are believed to have invented paper during the later Han dynasty (206 B.C.-A.D. 220). It is conceivable that curtains composed of paper beads were made in China long ago, but surviving evidence dates to the later 20th and early 21st centuries. Two kinds of paper beads have been recorded: rolled and folded. Both are made from recycled paper which reduces cost while assuring a range of colors.

Rolled-Paper Beads

Curtains made of rolled paper beads were fashionable in China in the 1960s-1970s (An 2012: pers. comm.). Bead-curtain makers found outdated calendars especially useful. After cutting the pages into long, tapering triangles they would roll the triangles into elongated bicones. Dimensions varied but the average bead seems to have measured about 8 x 35 mm (pers. obs.). At some point in the process, glue or a fixative was applied to the paper to render the bicones stiff and durable. The bicones were subsequently connected with wire loops to form multi-strand curtains. When the Chinese learned to make beads in this way is not known; this simple technique may be quite old. In any case, it was also circulating in the West in the 20th century (Littlejohns 1930:90-99; Seyd 1973:18-23).

Rolled-paper-bead curtains can still be found in rapidly modernizing Beijing, although curtains made of plastic and wood beads enjoy greater popularity. A different ratio prevails in Cuandixia, a small village some 100 km west of central Beijing. Cuandixia operates as a living tourist site for day-tripping Beijing urbanites and others seeking a sense of old-fashioned village life. At least a dozen paper-bead curtains may be seen during a short walk at Cuandixia, where they typically hang in the doorways of rooms facing courtyards. In some cases, the curtains contain only rolled beads in mixed colors; in others, rolled beads combine with Job's tears to sketch intriguing patterns and color schemes (Plate VIII A bottom). Once in a while the beads are painted, but not so as to depict pictorial scenes. After being exposed to the elements for a period of time, the rolls begin to unravel, creating the illusion that the beads are significantly longer. It remains to be determined who makes the beads and strings them into curtains. It is likely that they are made in domestic settings for domestic use. That such curtains are difficult to find on the Internet suggests they are not produced in great quantities.

Folded-Paper Beads: Rectangular Shapes

Curtains composed of folded-paper beads are also made for domestic use in China by individuals of modest means, working in homes or small shops. Once again, the raw material consists of recycled paper cut into rectangular strips. Some curtain makers harvest the paper from garbage dumps. Color is a key criterion; several trips may be needed to assemble the desired variety. Ramen noodle containers, frozen food wrappers, and cigarette packs are said to deliver the strongest hues. Uniformity of bead size is a second criterion. Typical dimensions are 10 x 22 mm, a size that corresponds well to the paper clips commonly used to connect these beads, one at a time, to form long curtain strands. It is probably the case that several initial folds are made before the bead is finished as it is folded around the paperclip (Plate VIII B top). Occasionally, folded-paper beads are strung with Job's tears and plastic beads in the same curtain (Plate VIII B bottom).

Curtains of both rolled- and folded-paper beads were on display at Cuandixia in September 2012, sometimes hanging on all four sides of a courtyard or in a row of three doorways (Plate VIII C top). By September 2013, things had changed. Adjacent doorways in at least two courtyards near the entrance of the village featured commercial plastic bead curtains in the same solid color, either pink or blue. These plastic bead curtain groupings had not been on display a year earlier. Whether the beads are old-fashioned or modern, the presence of bead curtain groupings certainly contributes to a sense of visual coherence, one presumably arising from traditional neighborhood life and shared values. In the past, quantities of bead curtains were also hung in small neighborhoods, heralding festive occasions, or so it seems in *Dream of Sorghum* (*Mengliang Lu*), a set of essays written by Wu Zimu (1956) of the Song dynasty (1127-1279). Recounting the Lantern Festival as it was celebrated in Lin'an (modern-day Hangzhou), Wu states: "And even in some obscure neighborhoods and small, unknown alleys, there were embroidered hangings and bead curtains {*zhu lian*}." People wore creatively designed fashionable clothes, flaunting the splendor and luxuriance (Gernet 1962:188; Wu Zimu 1956, 1:141). Further research is required to determine whether the bead curtain groupings at Cuandixia are considered to be festive.

Folded-Paper Beads: Star Shapes

A third type of bead curtain featuring recycled-paper beads folded into five-lobed, star-shaped structures was hanging in the doorway of the *Wei Shan Lake* Specialty Foodstuffs Shop in Qufu, Shandong province, in September

2012. The stars are separated by clear plastic tubes just long enough to allow all sides of the stars to be seen (Plate VIII C bottom). The juxtaposition of paper and plastic beads generates subtle contrasts: between curvilinear and rectilinear contours; colored and uncolored elements; fragility and durability; and opacity and translucency. The beads are strung on red string which can be seen inside the clear plastic tubes, adding an additional contrast between visible and hidden threads. One wonders whether such a delicate curtain could withstand much use.

Where did the technique for making these five-lobed structures originate, and how did it come to Qufu? One source might be print media. Dozens of small books are now published in China with instructions for many types of handicraft projects, including beadwork. Perhaps one of the books contained instructions for these folded-paper puff beads and/or their rectangular counterparts. Other explanations are also possible; the technique may have been transmitted orally.

Curtains Made of Inorganic Bead Materials

This section deals with curtains made of glass beads which date principally to the 20th century and those made of plastic beads which date to the 20th and 21st centuries. Generally, the production of inorganic beads entails raw materials and technologies more complex than those used to produce organic beads. Nevertheless, many of the same design strategies that inform organic bead curtains also inform inorganic bead curtains. For the most part, stringing techniques are also similar between the two genres. It is possible that curtains were also made of stone beads, but no evidence for such has yet been found.

Wound Glass Beads

Glass beads have been made in quantity in China since the middle of the Warring States period (475-221 B.C.) of the Zhou dynasty (ca. 1046-221 B.C.) (Hui 2008:115). Over the centuries, one of the most common Chinese glass beadmaking techniques was “winding.” Beadmakers in many parts of the world have produced wound beads. In the process, a strand of molten glass is twisted or “wound” around an iron mandrel. At least three methods have been distinguished by Peter Francis (2002:11): furnace winding, drip winding, and lamp winding. As it now stands, most, if not all, of the glass beads used to create 20th-century Chinese curtains were furnace wound. The steps involved in heating and manipulating the glass require further research. It is possible that the molten glass was worked in strip form,

as Paddy Kan observed in Boshan in 1984 (Kan and Liu 1984) or that the molten glass was worked from a crucible inside a furnace (Francis 2002:11).

Although we know that glass beads and possibly bead curtains were produced in the Chinese cities of Guangzhou, Quanzhou, and Suzhou (Francis 2002:58-59), my research has thus far focused on Boshan which eventually became “the glassmaking center of China” (Francis 2002:59-60). A brief history of the industry in the 20th century is presented in Appendix A.

Wound beads have been used in Chinese beadwork for centuries, in knotted net garments and toggles (Han Han 1998:88, 101), scent bags (Hector 2005:15), hair ornaments, lantern ornaments, table screens, beaded beads, and so on (pers. obs.).

Glass bead curtains may be divided into five major iconographic categories: geometric, pictorial, inscriptive, hybrid, and monochrome. The recovered data suggest that purely geometric, pictorial, inscriptive, and plain bead curtains were relatively uncommon in the 20th century, but the database is relatively small (ca. 50 curtains) and biased towards North China. Hybrid combinations of two or more design categories, uniting geometric, pictorial, and/or inscriptive motifs, seem to have prevailed. If monochrome glass bead curtains existed in the 20th century, no examples have been found to date; the one example seen dates to 2012.

Geometric Glass Bead Curtains

Plate VIII D depicts a simple geometric design consisting of vertical stripes of various widths and colors. Blues and greens predominate. At 1.27 m across, it is unusually wide, indicating that it was made to span the doorway of a large home or other building. Its height of 2.12 m is also unusual. Another clue to the curtain’s pedigree lies in the narrow panel that hangs from the wooden support bar. The panel is made of netted beads (Plate IX A) edged with cotton tassels. Netted panels are rare. The panel features diamond shapes, some of which may represent *panchang* or endless knot motifs.

The curtain’s larger bottom register comprises 130 strands strung on what looks like heavy cotton string. Under the netted panel the strands are devoid of beads; this may indicate a desire to conserve beads and limit weight. Each strand bears an average of 345 beads which brings the estimated total of beads in the strand area alone to 44,850. Highly irregular, the beads are 4.0-6.0 mm in diameter, 3.0-8.5 mm in length, and range in shape from oblate to barrel-like. Sharp points protrude from edges where the

molten thread was disengaged during the winding process. Occasionally, two beads are fused together. The curtain weighs approximately 9 kg, the heaviest recorded thus far. Further data for this curtain are summarized in Table 2.

Pictorial Glass Bead Curtains

The pictorial category is exemplified by the curtain in Plate IXB which depicts a landscape. The mountains at the upper right and the tree-studded outcropping at the lower left seem to float off the picture plane, echoing the implicit motions of the two boats that drift between them. The three sets of motifs are elegantly united by the clear glass beads of the background, which reads ambiguously as sky or water until interrupted by a dozen or so undulating black lines, probably intended to represent waves or currents. Countless fine Chinese artists have depicted landscapes of this general nature in their paintings. Whether the design of this curtain derives from a particular landscape painting or amounts to an aspirational emulation remains to be determined. In any case, this is not the first time that a landscape has been rendered in Chinese wound glass beads; small beaded screen panels dating to the late 19th or early 20th century also manifest landscapes motifs (pers. obs.).

This landscape curtain is quite large, measuring 0.99 m wide by 1.99 m high. As Table 2 indicates, it weighs 8.61 kg. The 137 strands carry an average of 596 beads for an estimated total of 81,652 beads, an unusually high number. The beads are an average of 4.5 mm in diameter and 3 mm in length. Although the beads are uniform and smooth, various small irregularities and conjoined beads indicate they are of wound manufacture. The strands are neatly attached to holes in a groove on the back of the smoothly-finished curtain board (*lian ban*) (Figure 6). Less effort was expended on the board in Plate VIIIID where threads run through holes drilled vertically through the bar, a more common approach.

Either the beads in the landscape curtain were made with more care than the beads in the geometric curtain, or they were graded more carefully. In any event, the beads in the geometric curtain fare poorly when compared to the beads in the landscape bead curtain. These differences pertain to Chinese wound beads generally, not just those used in bead curtains. Bead scholars have long been aware of the existence of two grades of furnace-wound glass beads in China: “those that were ordinary, and those that were well-made” (Jamey Allen 2012: pers. comm.). These disparities may have originated long ago, but they are reflected in glass bead terminology current in 20th-century Boshan where “5-*qian*” beads (*wu qian zhu*)¹² were poorly made and irregular, while “curtain beads” (*lianzi zhu*) were more regular and therefore more costly to produce (Zhang Weiyong 2008:270,



Figure 6. Detail of the suspension board of the landscape curtain showing wound glass beads on cotton threads (photo: Sanders Visual Images).

279). Further, curtain beads were reportedly invented by master Boshan glass beadmaker Ren Silong in 1964 (Zhang Weiyong 2008:270). It may be that the geometric curtain is made of 5-*qian* beads and the landscape curtain of *lianzi* beads. If we allow 45 seconds for the production of each bead in the landscape bead curtain, the total would have absorbed about 1,021 hours or about 127 8-hour days. This highly speculative estimate does not include the time spent to prepare other curtain materials, design a layout, or string the beads. Thus, the estimate may fall far short of the actual amount of time expended on this one bead curtain.

A much larger curtain with landscape motifs was observed by Robin Atkins during her 1991 visit to the Zibo Color Glass and Art Factory in Boshan (Figure 7). The curtain dwarfs her student interpreter. The landscape motifs are well-placed, seemingly according to a pre-existing design. How many glass beads are involved is unknown; assuming bead lengths of 3-3.5 mm, 320,000 seems a credible guess. Neither is it known if the beads are wound or drawn.

Inscriptive Glass Bead Curtains

A third design category consists solely of inscriptive motifs; i.e., Chinese characters. It is represented by the curtain in Figure 8 which contains four characters framed on at least three sides with bands of red and amber-colored beads, bands that may be interpreted as geometric motifs. Repairs at the bottom of the curtain make it difficult to tell whether bands were once present there. The curtain presently measures 1.0 m wide x 2.02 m high. The four characters



Figure 7. Interpreter Zhang Jinghong by the enormous glass bead curtain at the Zibo Color Glass and Art Factory, Boshan, 1991 (photo: Robin Atkins).

create a phrase that became a political slogan. Written in bold red standard script on a plain white ground, they read *zili gengsheng* which may be translated as “self-reliance.” Self-reliance, a virtue extolled in China for many centuries, assumed added significance in the 1950s to 1970s when, struggling to modernize with minimal resources and little foreign aid, Chairman Mao urged the Chinese people to rely upon their own initiative to further the country’s social, economic, and political progress. Although it is not possible to accurately date this curtain, it probably does not predate the 1960s or 1970s, when the same slogan, often worked in red, asserted itself on other items of Chinese visual and material culture, among them political banners and wall posters (Landsberger and van der Heijden 2009:183).

The “self-reliance” curtain is unusual in that it is composed of three different shapes of beads, all of them smooth and made with care, not unlike the beads encountered by Sprague in China in 1986 (Sprague and An 1990: Plates VIC, VIG-H), but more regular. Yet small inconsistencies

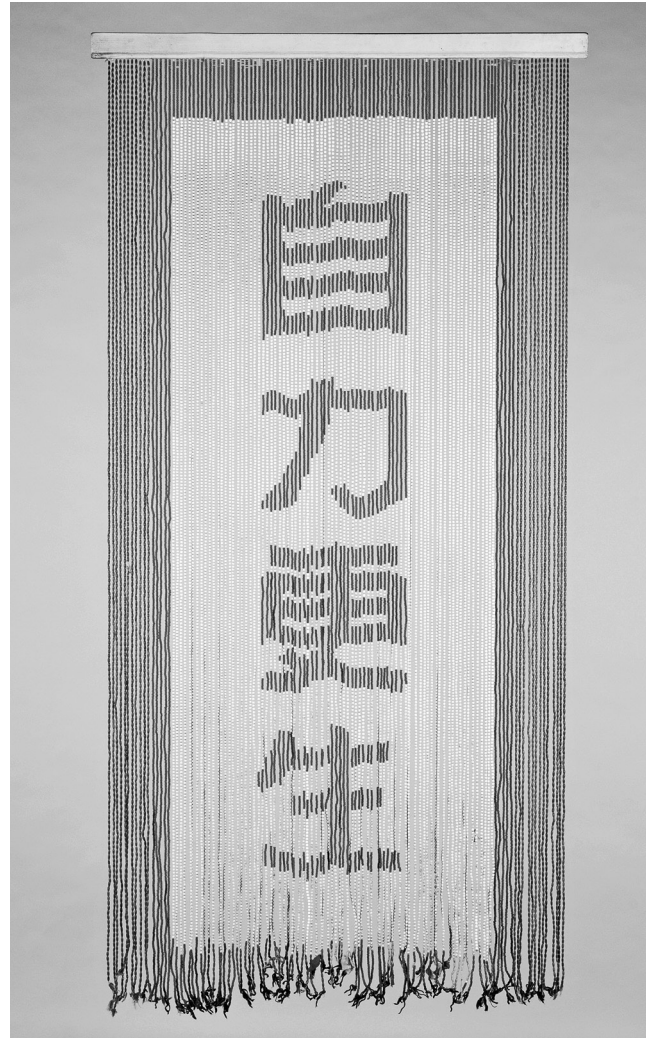


Figure 8. “Self-reliance” curtain of white, red, and amber-colored wound beads, 20th century. Private collection (photo: Sanders Visual Images).

remain, suggesting that all of the beads in the curtain are wound, possibly according to curtain bead (*lianzi zhu*) standards (Figure 9). Exactly 40,719 beads comprise the curtain: 18,490 opaque red, 17,282 opaque white, 4,842 translucent amber, 102 opaque blue, and 3 opaque pink. The two latter colors were probably introduced when repairs were made. Perhaps some 1-2% more beads have fallen away over time.

Laser Ablation Inductively Coupled Plasma Mass Spectrometry (LA-ICP-MS) analysis of one red and one white bead conducted by Laure Dussubieux of The Field Museum in Chicago reveals the beads are made of a silica glass containing significant quantities of soda, alumina, and lime. The red bead is unusually high in boron; the white bead contains far less. The red bead also contains significant

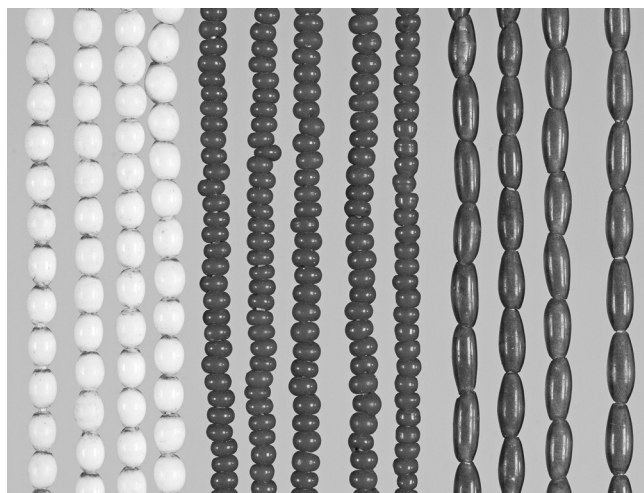


Figure 9. The white, red, and amber-colored wound beads of the “self-reliance” curtain, possibly known as *lianzi zhu* or “curtain beads” (photo: Sanders Visual Images).

quantities of the coloring agent cadmium, with no excess of the expected companion element zinc. The white bead contains low concentrations of iron and high quantities of arsenic. Further details are provided in Table 3.

Hybrid Glass Bead Curtains

A fourth style of glass bead curtain may be thought of as “hybrid” in that it merges geometric, pictorial, and/or inscriptive motifs. An example appears in Plate IXC. It measures 0.88 m wide by 1.83 m high. Because the cotton (?) threads have stretched over time, the motif outlines are blurred. The majority of the beads are irregular oblates, probably *5-qian* beads. The depictive space is divided into two registers: a small, horizontal register at the top with three red *shou* or longevity motifs on a black ground, and a larger, vertical register at the bottom featuring an asymmetrical vignette of a crane looking skywards, standing before a pine tree against a clear ground. Individually and collectively, the crane and the pine tree are symbols of longevity. Together, they may be read as a rebus, a pictorial pun that calls to mind a saying, in this case, a typical birthday wish: “May you, like the crane and pine, enjoy similar longevity” (Bartholomew 2006:7.13.5). The crane is also a symbol of high civil rank, a rare and treasured achievement. The motifs are framed on all four sides by blue meander motifs on a white ground. A common decorative device since the Yuan dynasty, meander (*huiwen*) motifs have appeared on Chinese textiles, porcelain, wood, bronze, and stone. Because they create a visual effect

Table 3. LA-ICP-MS Analysis of Beads from the Self-Reliance and Crane/Pine Curtains.

Elemental Oxide	Self-Reliance Curtain, Red Bead	Self-Reliance Curtain, White Bead	Crane/Pine Curtain, Black Bead	Crane/Pine Curtain, Green Teardrop
SiO ₂ (Silicon dioxide)	71.77%	68.31%	61.40%	66.46%
Na ₂ O (Sodium oxide)	19.06%	21.87%	17.47%	16.13%
MgO (Magnesium oxide)	0.51%	0.03%	0.37%	0.17%
Al ₂ O ₃ (Aluminum oxide)	1.57%	6.60%	8.12%	6.39%
P ₂ O ₃ (Phosphorus triox.)	0.04%	0.01%	0.08%	0.01%
Cl (Chlorine)	0.03%	0.02%	0.79%	0.10%
K ₂ O (Potassium oxide)	0.31%	0.17%	2.13%	0.95%
CaO (Calcium oxide)	6.19%	2.88%	9.10%	9.26%
Fe ₂ O ₃ (Iron oxide)	0.18%	0.09%	0.44%	0.29%

of being unending, meanders are associated with longevity, eternity (Bartholomew 2006:7.39), or never-ending luck or fame. One wonders whether the strands of a bead curtain, themselves quite long, might also have connoted longevity. As components of 20th-century glass bead curtain design, meander motifs energize a curtain's edges and balance its other design elements, transforming a composition into a stable, well-structured, symmetrical whole.

The same design modules – registers, pictorial center panels, and meander borders – recur on many 20th-century glass bead curtains. In fact, they appear to be interchangeable and drawn from a stock set of motifs combined so as to produce variations on a theme, thereby likely satisfying all tastes (Hector 2013). Lothar Ledderose (2000:1-7) has studied the principle of modularity in China, tracing evidence from ca. 1200 B.C. on to demonstrate that modular patterns and production procedures were applied in many media, including bronze, pottery, lacquer, and wood, not to mention in the Chinese writing system itself.

The crane/pine curtain affords rare glimpses into the manufacture of 20th-century glass bead curtains. At least one family of curtain makers was active in Boshan, Shandong province, during the Republic of China period (1912-1949) (Zhang Weiyong 2008:279-280). The family, headed by Liu Zaihai, a master glass beadmaker with many master apprentices, owned several bead furnaces. In fact Liu Zaihai is reportedly responsible for initiating glass bead curtain production in Boshan. Liu reportedly developed specific bead curtain designs, among them “phoenix piercing (or amongst) peony” (*feng chuan mudan*), possibly a marital bliss motif, “phoenix flying towards the sun” (*danfeng chao yang*), and “mountain solitude” (*gaogang du li*). Many of the patterns featured inscriptions and meanders. The Liu family used two-part bamboo boards to support their curtains. One of the boards was small and hinged in the middle. The bead strands were connected to this board which was later folded for ease of packaging and transport. When the folded board reached its destination it was unfolded and embedded in the back of a second, larger board, making the small board invisible from the front. The curtain board in Figure 10 is constructed in precisely this way, likely shaped by hand. Thus, it might have been made by the Liu family between 1912 and 1949. A curtain with such a folded board could be strung by two people in the course of a long working day. Liu family bead curtains were reportedly sold mainly in Sichuan province and, later, in Yantai, Shandong province. The curtains were also sold in Boshan, where they hung in the doorways of barber shops and restaurants.

Liu Zaihai is said to have used 5-*qian* beads in his curtains (Zhang Weiyong 2008:279). He may also have used one-holed glass teardrops such as those wired to the bottoms



Figure 10. The small hinged bar set in the larger wood curtain bar of the crane/pine curtain (photo: Sanders Visual Images).

of many strands in the crane/pine curtain (Plate IXD top). This is the only one of about 50 curtains that features such pendants. Possibly called “flower petal” (*huaban*) or “water droplet” (*di shui*) beads (Zhang Weiyong 2008:272), they average 5 mm in diameter by 10-11 mm in length.

LA-ICP-MS analysis of one green teardrop and one black bead indicates that they too are made of silica glass containing significant quantities of soda, alumina, and lime. The teardrop beads are colored using chromium (1075 ppm), an ingredient found in 19th-century green-glass beads from the Sullivans Island site, Washington state (Burgess and Dussubieux 2007:69). The teardrop also contains selenium (155 ppm), an ingredient “used to color glass no earlier than the end of the 19th century, and more likely around 1910” (Dussubieux 2013: pers. comm.). Thus, the teardrop pendant establishes a *terminus ante quem* for the production of the crane/pine curtain: it cannot predate the late 19th century and may not predate 1910. The black bead exhibits “no excess of any coloring agent such as cobalt or manganese, although iron is present in slightly high concentrations (0.44%).” Table 3 provides further chemical data.

The crane/pine curtain also affords some insights from former owners of glass bead curtains. Glass scholar An Jiayao (2012: pers. comm.) remembers that her mother had a similar crane curtain, although “the patterns were more complex and prettier.” A native of Shandong, An grew up in the port city of Yantai in a home whose furnishings included two glass bead curtains. According to An,

glass bead curtains were the best. They were very decorative and felt good when hung. The sound they made when passing through them was pleasing to the ear, and they effectively prevented mosquitoes and flies from entering the room.... They were

mainly used when it was hot, the door to the house would be open, and the curtains would let in air while preventing flies from entering. They also could prevent people in the yard from seeing what the people inside were doing.

An's mother received the curtains as part of her dowry in the 1940s. The curtains were displayed seasonally in the front door of the house from May until October. Glass bead curtains, An notes, were luxury items owned only by "wealthier families in Shandong." She believes that only 10% of all Chinese bead curtains at the time were made of glass beads; others were made of "grass seeds" or rolled-paper beads (An 2012: pers. comm.). It is unclear what "grass seeds" refers to but could be Job's tears or some other seeds or seedpods.

Drawn Glass Beads

The glass beads comprising the next two curtains were probably made using a drawing method that came into use in the mid-1980s. Drawn beads known as "tube beads" (*guan zhu*) were produced in Boshan at that time (Zhang Weiyong 2008:280). Whether the technology was indigenous or imported has not been established. Tube-bead curtains (*guan zhulian*) soon followed. While curtains composed of tubular beads may have seemed modern in the 1980s, there were probably earlier versions. Bead scholars believe that drawn tubular beads may have been made in Boshan during the 1937-1945 Japanese occupation of northeast China. Evidence is provided by small cardboard boxes containing tubular glass beads of uncertain date and irregular dimensions; the boxes were labeled "Made in Japan" and distributed by the Japanese (Plate IXD bottom). Bead scholars believe these beads may have been made in Chinese factories (Francis 1990:126; Liu 2013; cf. Fenstermaker and Williams 1979: Figure 1). It is difficult to imagine what such tube beads were used for, if not bead curtains (Robert K. Liu 2013: pers. comm.). On some curtains, knots might have been made between beads to prevent edges from chipping (Plate XA top).

Intact examples of 1980s tube-bead curtains are hard to find. One was, however, hanging in the doorway of the Jiuheng Car Service station (*Jiuheng Qiche Fuwu*) in Boshan in September 2012 (Plate XA bottom). Owned by the Li family, it has been in their possession for decades. Measuring 0.89 m in width and 1.9 m in height, the curtain features a single pictorial motif of a colorful peacock displaying its feathers against a clear background. Most of the beads are tubular, and probably would have been called *guan zhu* (Plate XB top), though wound beads of the

5-qian variety are also present. As Table 2 shows, there are approximately 23,436 beads in the curtain which, at 3.6 kg, weighs significantly less than the wound glass bead curtains discussed above.

The Li family owns three other tube-bead curtains, two of them still rolled up inside worn cardboard boxes stamped with characters that read "Spark Brand *liuli* bead curtain, Zibo, Boshan Fine Arts Glass Factory." Two of the curtains feature leafy bamboo trees; the other, another peacock, albeit in different colors (pers. obs.). All of the tube beads resemble those found by Sprague in Chengde in 1984 (Sprague and An 1990: Plate VIH).

Monochrome Glass Bead Curtains

Another bead curtain was hanging in a different Boshan doorway belonging to the Desheng Glass (*Desheng Liuli*) artistic glassware shop. Devoid of motifs, this curtain consisted entirely of bright yellow glass beads, reportedly made recently in Boshan (Plate XB bottom). It is the only example of a motif-less, monochrome glass bead curtain. A number of other shops in Boshan displayed identical yellow curtains, indicating that as of 2012, they were being made or distributed locally, probably in a commercial fashion. Such yellow curtains have not yet been observed elsewhere in Shandong or in the Beijing region, but a similar one hangs in the canopy bed frame of a young girl at the Kang Family Manor in Henan province, which was restored in the 1990s (Knapp 2005:153). Whether the curtain was introduced before, during, or after the restoration process is not known.

Plastic Beads

When people think of plastic bead curtains, they generally think of mass-produced beads made in two halves, permanently bonded around curtain threads. The beads may not move, but the strands do, producing a gentle clicking sound. Plastic bead curtains are common in China today; their attraction is understandable. A recent search of alibaba.com using the term "plastic bead curtains" brought up listings for 3,147 products offered by wholesale suppliers in Zhejiang, Fujian, Guangdong, and other provinces. The documentary film *Mardi Gras: Made in China* (Redmon 2005) provides a general sense of the kind of factory in which plastic beads and curtains might be made. Judging by the wide variety of available designs, bead factory personnel are ingenious, devising bead colors ranging from intense sky blues to soft pale yellows, shapes ranging from round and oval to gourd shaped (Figure 11), and surfaces either plain or faceted to reflect light. Plastic bead curtains owe their

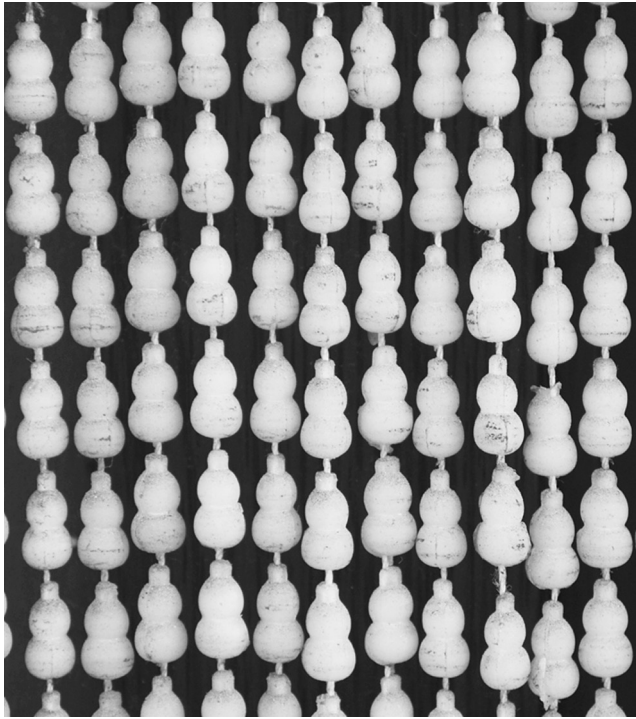


Figure 11. Plastic gourd-shaped beads in a curtain of a shop at Mt. Tai in Shandong province, 2012. Gourds are auspicious symbols in China (photo: Valerie Hector).

origins to China's petrochemical industry which launched in the 1950s with equipment bought from the Soviet Union (Li and Todeva 2000:3). Today it is one of the world's largest industries. In the last decade, numerous small retail shops selling plastic beads individually and in bulk have opened in home-product malls in Beijing and other cities. The shops are generally filled with buyers wanting to make their own beaded figures, purses, curtains, and so on.

Plastic Tube-Bead Curtains

Presented here are interviews with several Chinese individuals who either made or commissioned plastic bead curtains for their homes or shops between 1984-2009, thereby personalizing an impersonal petrochemical industry, adapting global products for local needs.

It is not known exactly when plastic bead curtains first appeared in China, but Peter Haslund, Professor of Political Science at Santa Barbara City College, photographed one in Shijiazhuang village, Anqiu county, Shandong province, in 1984 (Plate XC). The photo was reproduced later that year in an English-language magazine published in China. Mentioning the curtain, the article's author erroneously wrote that it was made of "dried Chinese sorghum stems

threaded together on long strings" (Wang Zheng 1984:26). When interviewed in January 2013, the owner, Liu Fengwei, said the curtain was made of plastic tube beads about 4-5 cm long that she cut with the help of her husband from longer lengths of plastic tubing obtained from a local store. No sorghum stems were used. At Liu's request, a local carpenter carved the wood hanging board from the branch of a parasol tree (*wutong*; *Firmiana simplex*). Liu's husband helped her string the plastic tubes using heavy nylon monofilament. Liu had never seen a glass bead curtain, nor were any bead curtains displayed in Liu's mother's home. Liu learned to make bead curtains by observing other local women making them. The Chinese government had built new homes in Shijiazhuang village in the early 1980s, some of them two stories tall. Women wanted to hang bead curtains in the doorways to deflect flying insects and allow ventilation, as well as to beautify their new homes. Sometimes a plastic bead curtain was displayed on one floor and a paper bead curtain on another. Liu had strung other bead curtains over the years, including five or six made of rolled calendar-paper beads. Her husband helped her make and string those beads, too. Bead curtains generally lasted three or four years, she recalled, before they had to be replaced.

Nowadays, Liu Fengwei observes, it is almost impossible to find old plastic tube-bead curtains where plastic tubes are mixed with Job's tears to create a zigzag pattern. Photos taken in the 1980s help date this type of curtain. Two bead curtains with zigzag motifs not unlike the ones favored by Liu Fengwei in 1984 are shown hanging in two doorways of the Zhang Yanfu family home in Gaomaowan village near Yan'an, Shaanxi, ca. 1985-1990 (Golany 1992: Figure 4.33). Another photo of unknown date shows a similar curtain hanging in a traditional cave home in Yan'an, Shaanxi province (Chen et al. 2008:301), which served as headquarters for Mao Zedong and the Chinese Communist Party from 1936-1948. Photo captions in Golany and Chen do not say whether the curtains are made of plastic, painted bamboo, or glass. In fact, the captions do not mention the bead curtains at all.

Plastic Faceted-Bead Curtains

A curtain of faceted plastic beads was created in 2007 for the Hutong Pizza restaurant in Beijing. The business opened in a historic building at no. 9 Yindingqiao Hutong in Beijing's Xicheng district in 2003. Located in Shichahai, a heavily touristed scenic neighborhood, the restaurant needed to keep its front door open without letting flies enter or *qi* (understood as positive energy) escape. Privacy was also a concern. In 2007, the staff decided to make their own bead curtain. The boss determined that the curtain should

portray the shop's logo, the same one printed on its menus and business cards (Plate XD). The logo playfully spells out the word *hutong* in classical Chinese, a reference to the China of centuries past. Plastic beads in corresponding colors were obtained from a small Beijing home-goods mall, as was an aluminum curtain rod. The pastry chef, a man in his 20s, came up with the idea of using beads of different sizes. It took a long time to string the curtain; everyone helped. It measured 1.06 m wide x 1.39 m high. Suspended in the restaurant's doorway, the curtain did not last long, even though it was only displayed during the warm weather months, from April until the end of November. The sun bleached the bead colors and children tore at the strands. After only a few years, the staff made an identical curtain to replace the first, but the same things happened. In the spring of 2012, the second bead curtain was put away for good. A cloth curtain now screens the front door, its blandness a lackluster substitute for an engaging predecessor.

Plastic Unfaceted-Bead Curtains

In 2009, the 18 Tea Garden (*Shiba Chayuan*) restaurant and tea house opened at no. 8 Banchang Hutong in Beijing's Dongcheng district. A number of window, door, and wall curtains were commissioned from a Beijing curtain company as part of the interior decoration. The curtains' designs were planned by Huang Rui, one of China's most famous contemporary artists and the brother of Huang Ling, the restaurant's manager. He chose to use non-reflective plastic beads in restful shades of pale blue, black, and clear. The beads all measure about 12 mm in diameter, rather large for a bead curtain. Chinese characters are the only motifs. Eight small bead curtains hang in the windows facing the street (Figure 12). The curtain at the left spells out "18 Tea Garden." The others begin to spell out a couplet from a poem by Song-dynasty poet Su Dongpo (1037-1101) entitled "Tasting Huoyuan New Baked Tea Given by Caofu." The couplet likens tea to a beautiful young lady: "good tea is like a pretty young lady/heavy makeup, light makeup, she will always be pretty" (*cong lai jia ming si jia ren/nong zhuang dan mo zong xiang yi*). The curtains reportedly contain a total of 180,000 beads. The work took place in a curtain workshop over a two-month period and cost 20,000 *renmimbi*, about US \$30,000 in 2013. The beads are strung on heavy nylon monofilament making the curtains resistant to weather and wear.

The large curtain that hangs in the shop's doorway is often tied to one side or gathered in the middle, reducing the risk of wear while easing access. It bears a single character from the poem mentioned above. As one enters the shop, another curtain hangs in the vestibule. Others

gradually become visible in the adjacent courtyard, bearing further characters (Figure 13). This bead curtain grouping, a layered construct, can be interpreted as a kind of living logo. Part business branding strategy, part aesthetic device, the grouping evokes the ambience of a traditional Chinese tea house as it is understood in early-21st-century Beijing. Cognizance of Chinese literary culture and, by implication, Chinese history is part of that ambience, as is a certain minimalist, modern sensibility. Whether traditional Chinese tea houses actually displayed bead curtains in like manner is almost beside the point. It is a near certainty, however, that older pieces of Chinese beadwork were inscribed with lines from poems. A small panel thought to date to the Ming dynasty survives in the Tokyo National Museum in Japan (Blair 1973: Figure 131). As mentioned previously, the panel appears to be composed of right angle stitch. The glass beads measure a scant 2 mm in diameter (Blair 1973:398). Seven characters in highly expressive running script flow down its length, forming a sentiment that may be transliterated as *kan qu dan qing chang bing bing*. It does not quote any published poem. Several translations are possible, among them, "to look upon a work of art brings endless longing" (Kenneth J. DeWoskin 2000: pers. comm.). In sum, the bead curtains at 18 Tea Garden participate in China's history of rendering poetic language in beads. Quite possibly, Chinese bead curtains of past eras did so too.

CONCLUSION

Information about early Chinese bead curtains is almost entirely to be found in texts of the imperial era which often associate the curtains with beautiful, secluded women, properly situated indoors and surrounded by attractive furnishings. These perceptions seem to have shifted towards the end of the imperial era as bead curtains accrued new layers of meaning. Twentieth-century glass bead curtains often bore motifs and inscriptions that conveyed auspicious wishes or, in some cases, political slogans. It is possible that another shift has been underway in the early 21st century. In curtain maker Liu Fengwei's experience, bead curtains are appropriate for low-rise buildings of the sort that used to fill China's traditional residential neighborhoods. Nowadays, across China, many of those neighborhoods are being torn down to make way for high-rise apartment blocks and commercial buildings (Johnson 2013). Yet, demand for bead curtains, especially plastic bead curtains, continues as Chinese people slowly relocate to multi-story buildings. Experts in *feng shui* or Chinese geomancy advocate the use of plastic bead curtains to redirect the *qi* or energy of a residence or business, believing that plastic bead curtains, carefully selected for length and color and hung in exactly



Figure 12. The 18 Tea Garden restaurant in Beijing's Dongcheng district, 2011, with plastic bead curtains in its windows. The curtain at the far left spells out the restaurant's name (photo: Valerie Hector).



Figure 13. Plastic bead curtains in the courtyard of the 18 Tea Garden restaurant, Beijing, 2011 (photo: Valerie Hector).

the right spot, can act like “liquid correction fluid” (*xiu gai yi*), attracting positive while deflecting negative influences (Buddha Tower Team 2013). Although it is possible that *feng shui* theory influenced bead curtain use in centuries past, it does not appear to be mentioned in the groups of textual references that were explored for this article.

Thus, it seems that bead curtains are being displayed in new venues, even as they acquire new layers of meanings. For now, it appears that the bead curtain genre will endure, in part by adapting to the needs of the times. As of 2013, bead curtains continue to enjoy an enduring place in Chinese visual and material culture. Their longstanding place in the Chinese imaginary also seems assured; contemporary novelists such as Wang Anyi (1995:145) continue to reference bead curtains in their texts. In the future, perhaps Chinese museums will consider bead curtains worth preserving and documenting. Although bead curtains tend to be vernacular, everyday objects, sometimes equated with “kitsch,” they are also beautiful, expressive, and thought-provoking. Their history follows no simple linear trajectory. Influences stem from the past as well as the present, as ideas with deep roots in Chinese culture are rendered in new materials and modalities. This capacity for self-renewal contributes to the incredible tenacity of a genre that spans a minimum of 1,500 years.

Much still needs to be learned about Chinese bead curtains. The archival records of factories that produced beads and bead curtains may contain valuable information. Ideally, we could learn more about Liu Zaihai, Ren Silong, their families, rice-bead furnaces, and curtain-making operations. For a start, we might ask to what extent tasks were apportioned by gender, who determined designs, whether templates were used, and how social and political upheavals affected bead curtain production. Chinese municipal, county, and other archives might also be worth consulting for information on the production of other kinds of bead curtains.

Photographic archives also need to be investigated. Photos taken in the 19th and 20th centuries may show bead curtains in production or on display. Chinese, Japanese, and Western photographers have all left extensive photographic records. Chinese paintings and prints could also be reviewed for depictions of bead curtains, although such depictions seem to be rare.

Insights into bead curtain production, display, and lore may also be culled from interviews with bead curtain owners, makers, and sellers. This generally requires fieldwork in China, which may reveal experiences, perspectives, and tensions not reflected in the existing bead curtain literature. Interviews with An Jiayao, Liu Fengwei, the staff of

the Hutong Pizza shop, and Huang Ling, manager of 18 Tea Garden, have already told us something about lived experiences of bead curtains in China in the 20th and 21st centuries. Future interviews will no doubt reveal more. For, as Peter Francis often reminded us, “It’s not about the beads. It’s about the people.”

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APPENDIX A: 20TH-CENTURY GLASS FURNACES IN BOSHAN

Ten types of glassmaking furnaces were in use in Boshan during various parts of the 20th century (Zhang Weiyong 2008:256-265). Four are relevant to this study. “Big” furnaces (*da lu* [*da*: “big,” *lu*: “furnace”]) were generally housed in large workshops or factories (*zuofang*) that produced glass from raw materials as well as finished glass products. “Glass strip” or “strip” furnaces (*liaotiao lu*,

tiao lu) produced strips or rods, in part to supply “round” furnaces (*yuan lu*), which produced large beads (*gan zhu*), accessories, furnishings, artistic objects, bracelets, snuff bottles, buttons, gaming pieces, etc. Beads for curtains were produced using rice-bead furnaces (*mizhu lu*) which were owned by individual families and located in homes.¹³ While the largest rice-bead operations had two or three furnaces run by four to six people, the smallest had one furnace run by a husband/wife or older brother/younger brother team who sold their products in a small store attached to the home, called a “husband-and-wife store” (*fuqi laopo dian*) (Zhang Weiyong 2008:265). Thus, both genders appear to have been involved in rice-bead production in Republican (1912-1949) Boshan. In some cases, unmarried girls made rice beads, but they were not taught all of the procedures for fear they would eventually transfer their natal family’s proprietary knowledge to their marital families. The technique of preparing iron mandrels (*gan zhangzi*) was one such proprietary technique (Zhang Weiyong 2008:269). In addition to family members, furnace owners also engaged apprentices who had to work a year or more before they were entrusted with proprietary techniques.

Like artisans in general, rice-bead workers were poor. They ranked low on the social ladder partly because they worked in cramped, smoky spaces that darkened their skin and dirtied their clothes, conditions not easily remedied at the time since bathing facilities were rudimentary or not easily accessed. Production halted when supplies of the raw materials needed to produce rice beads ran short. When small rice-bead-furnace workers did not have enough work, they would serve as temporary workers for larger rice-bead furnaces (Zhang Weiyong 2008:269). Small or large, all rice-bead furnaces operated only part of the year, from December to May or thereabouts, months that encompassed the lucrative New Year period and also avoided the summer heat. More research is required to determine what the rice-bead and other furnaces looked like and whether they used glass strips as a primary raw material.

The vicissitudes of war and political change adversely affected Boshan’s glass industry. From 1911 to the 1980s, the overall trend for glass bead production was one of decline, characterized by periodic upticks as furnaces reopened after closing. The first major closure was at the outbreak of World War I. Then again in 1937, when the Japanese invaded North China, and once more in 1949, when the Communists came to power (Zhang Weiyong 2008:260-261). Zhang (2008:258, 273) estimates that around 1911 there were some 300 beadmakers in Boshan with perhaps 50 furnaces making beads and 30 more factories with 40 furnaces making strip (*liaotiao*). By 1936, there were only 80-90 beadmakers using about 14 furnaces. In the 1950s

there were 12 furnaces, all run by the government, and by the 1980s, most or all of the furnaces had disappeared (Zhang Weiyong 2008:273; cf. Shandong 2013). Only very small factories still made beads. Furnace-wound glass beads continued to be made until at least 1984, when Paddy Kan witnessed three glass beadmakers at work around a coal-fired furnace with six openings at the Boshan Glass Factory in Shandong province (Kan and Liu 1984: Figures 1-15). Of the 4,000 workers employed at the factory, only five still made beads.

ENDNOTES

1. The distinctions between “strand,” “tassel,” and “fringe” are difficult to articulate, making the use of one term over another an arbitrary decision. In this article “tassel” is used to denote a relatively short string of beads or group of threads and “strand” to denote a long string of beads.
2. The term “corpse curtain” may be a modern derivation. In ancient texts the more common term is “beaded shroud jade cover” (*zhuru yuxia*) (Alice Yao 2013: pers. comm.).
3. The references in these two dictionaries appear in the sub-entries *zhu zhang*, *zhu wei*, *zhu huang*, *zhu bo*, *zhu lian* and *zhu long* under *zhu*, bead/pearl.
4. It is generally accepted that the term *liuli* was in use in China by the 2nd century B.C. during the Han dynasty (206 B.C.-A.D. 220), and that it might derive from the Sanskrit *vaidurya* (Francis 1986:5) or Pali *vainurya*, both meaning “blue stone or lapis lazuli” (Dien 2007:287). The term *boli* came into use later (Francis 1986:5); its derivation is more obscure. By the 6th century, *boli* and *liuli* were recognized as distinct substances (Dien 2007:287). The distinction, then as now, seems to turn on relative degrees of opacity. Albert Dien clarifies current usage as follows: “Today the terms are used with a certain degree of imprecision to distinguish the degree of opacity; that is, *liuli* applies to opaque or semitranslucent glass used for jewelry, beads, and other such objects while *boli* refers to transparent glass. The term *liaoqi* seems to have referred generally to glassy substances” (Dien 2007:287). Dien regrets the terminological inconsistencies that vex archaeological reports on Chinese glass beads, in which “*liao*, *liuli*, and *boli*” are sometimes used interchangeably (Dien 2007:287). Another point worth underscoring is that in addition

to meaning “glass,” *liuli* has also meant “radiance,” and been used as “a metaphor for dispersion” (Kim 2012:11, citing Needham 1962:104). Thus, there is an outside chance that a *liuli* curtain might not always refer to a “glass” bead curtain *per se*.

5. It is possible that the curtain in question was made not of beads but of cloth, and Feng may have been counting the beads affixed to the lower edges, ostensibly to weigh the cloth down. If this is correct, the object in question was more like a bead-edged curtain than a multi-strand bead curtain. The association of beads and memory also drives the use in China of “mutual-longing beads” (*xiangsi dou*), which are strung on thread and worn as bracelets. The beads are seeds of the *Adenanthera pavonina* tree.
6. Dorothy Ko (1994:12) argues that even before the advent of the 20th century, “the image of the cloistered woman, crippled by bound feet and imprisoned in her inner chambers” was to some extent a misconception. In fact, boundaries between the domestic and public spheres were often negotiable.
7. The references in the *Renmin Chubanshe* edition are as follows (Han Zhang 2012: pers. comm.; Jeff Keller 2012: pers. comm.): Chapter 5 (1 ref., p. 71, *lian zhu zhang* [bead curtain or canopy]; 1 ref., p. 79, *zhu lian* [bead curtain]); Chapter 18 (1 ref., p. 237, *zhu lian* [bead curtain]); Chapter 37 (1 ref., p. 500, *jing lian* [crystal curtain]); Chapter 48 (1 ref., p. 649, *zhen zhu lian* [pearl curtain]); Chapter 116 (3 refs., pp. 1546-1547, *zhu lian* [bead curtain]); and a footnote (1 ref., p. 250, no. 1, *zhu lian* [bead curtain]).
8. The term “5-colored” apparently originated centuries earlier in a text from the 4th century B.C. which relates how the goddess Nuwa smelted “stones of all five colors to patch up the flaws” in one of the pillars that supports Heaven (Kim 2012:5). In some cases it may function as a figure of speech. Its association with glass is longstanding. According to An Jiayao (2002:46), Daoist philosopher Ge Hong of the Western Jin period (265-316) refers to “bowls that look like rock crystal” being made in foreign countries “by melting a mixture of five different types of sands.”
9. “Cane,” a term favored by glass scholars, might be an acceptable English translation of *tiao*. For the purpose of consistency, however, “strip” will continue to be used in this article unless sources dictate otherwise. “Strip” is an established term in the English-language literature on 20th-century Chinese glass beadmaking; it appears several times in Kan and Liu 1984. Francis seems to prefer “cane” (Francis 2002:60).
10. Another object (a 12th-century sutra wrapper) apparently made of twined (?) glass strips and resembling the reproduction *tamasudare* is shown on the Miho Museum website: <http://www.miho.or.jp/english/collect/archives/tp060821ne.htm>, “World of Beads 2” link, accessed August 30, 2012).
11. According to Irene Emery (1966:196), twining involves two distinct sets of thread elements, in which one set typically consists of two threads that pass “alternately over and under successive elements of the opposite set.” In the *tamasudare*, the horizontal glass rods function as one set of thread elements.
12. Prior to 1911, the term *qian* referred to a unit of money, but now, when referring to beads, it appears to denote a unit of weight, with one *qian* weighing 3.78 g and five *qian* weighing 18.9 g. It seems to be the case that some beads were organized in strings of 100, so that 100 “5-*qian*” beads weighed 18.9 grams, or five *qian*. Exceptionally skilled glass beadmakers could make beads so small that 100 of them weighed only two instead of five *qian* (Zhang Weiyong 2008:271).
13. Glass bead nomenclature was diverse in early-20th-century Boshan. The *ganzhu* or large bead category produced in round furnaces (*yuan lu*) included “round” (*yuan zhu*), “abacus” (*shuanshi zhu*), “lotus-seed” (*lianzi zhu*), “flat lotus seed” (*bian lianz zhu*), “pomegranate-shape” (*shiliuzi zhu*), and “gourd-shaped” (*gualengxing zhu*) beads. The smaller *mizhu* category included “round” (*yuan zhu*) and “lotus-seed” beads, plus “necklace” (*xianglian zhu*) and “Yao” beads (*Yao* [a minority group] *zhu*). The “round” bead (*yuan zhu*) category of *mizhu* beads was further divided into “small rice” (*xiao mizhu*), “two-six” (*erliu zhu*, which ran 260 beads to the string, with each string weighing one *liang*), “5-*qian*” (*wu qian zhu*), “bean-shaped” (*douxing zhu*), and “curtain” (*lianzi zhu*) beads. The “necklace” category of *mizhu* beads included “pagoda-shaped” (*baota zhu*), “egg-round” (*danyuan zhu*), “lotus root” (*ouxing zhu*), “pomegranate” (*shiliuzi zhu*), “porcelain bottle” (*ciping zhu*), “lion’s-head-shaped” (*shizitou zhu*), “pagoda-egg-shaped” (*danyuan baota zhu*), “Yao”, etc. Old-fashioned glass beads included “buddha” (*fo zhu*), “burning hot” (*tang zhu*), and “flower-petal-shaped” (*huaban zhu*), which were apparently also known as “water droplet” beads (*di shui zhu*) (Zhang Weiyong 2008:269ff.).

GLOSSARY

Note: Terms in italics are Chinese unless otherwise noted. When multiple English translations are possible, only the ones most relevant to this study are listed.

bo (curtain, screen) 箔

boli (glass) 玻璃

boli lu (glass furnace) 玻璃炉

boli tiao (glass strip, rod, or possibly “cane”) 玻璃條

chui liu (suspended tassels) 垂旒

cong lai jia ming si jia ren/nong zhuang dan mo zong xiang yi (good tea is like a pretty young lady/heavy makeup, light makeup, she will always be pretty) 从来佳茗似佳人/浓妆淡抹总相宜

cui bi (green jade) 翠碧

da lu (large furnace) 大炉

danfeng chao yang (phoenix flying towards the sun)
丹凤朝阳

di shui (water droplet) 滴水

feng chuan mudan (phoenix piercing peony) 凤串牡丹

feng lian (wind curtain) 风帘

fu yu zhu ling (vermilion window lattice) 傅于朱棂

fuqi laopo dian (husband-and-wife store) 夫妻老婆店

gan zhangzi (lit.: to roll, polish, or otherwise prepare strips or rods, in this case, possibly iron mandrels) 擀杖子

gaogang duli (mountain solitude) 高岗独立

ge chuang xin (center opening of wooden lattice screen)
榻窗心

guan zhu (tube bead) 管珠

guan zhu lian (tube bead curtain) 管珠帘

gui (woman’s apartment) 闺

huaban (flower petal) 花瓣

huiwen (meander) 回纹

jiangzuo zeli (handicraft regulations and precedents)
匠作則例

jing lian (crystal curtain) 晶帘

jishi zhu (memory beads) 记事珠

kan qu dan qing chang bing bing (possibly, to see a thing of beauty brings endless longing) 看取丹青长怳怳

li (Chinese mile; equal to 0.3106856 English mile) 里

lian (curtain) 帘

lian ban (curtain bar or board) 帘板

lian hua (lotus) 莲花

lian huang (curtain) 帘幌

lian zhu zhang (canopy-like bead curtain) 联珠帐

liang (unit of measure; an imperial liang was equal to 37.37 grams) 量

lianzi zhu (curtain bead) 帘子珠

liaotiao lu (glass strip or rod furnace) 料条炉

liuli (glass) 琉璃

liuli lian (glass curtain) 琉璃帘

liuli tiao (glass strips or rods) 琉璃条

mian guan chui liu (hats or crowns with suspended tassels)
冕冠垂旒

mietiao (long thin strips) 篾條

mizhu (rice bead) 米珠

mizhu lu (rice-bead furnace) 米珠炉

panchang (endless knot) 盤長

qian (a unit of weight equal to 3.78 grams) 錢

qing lian (blue or blue-green curtain) 青帘

qing lou (blue or blue-green buildings) 青楼

ru zhu si tiao (strips shaped like chopsticks) 如箸斯条

shiti de shi lian (corpse curtain) 尸体的尸帘

shui jing lian (crystal curtain) 水晶帘

Shuijing lian zeli (Regulations for Crystal Curtains)
水晶簾則例

tamasudare (Japanese: bead, jewel, or precious blind or curtain) 玉帘

tiao (measure word for long thing objects; strip or rod) 条

tiao lu (furnace for making strips or rods) 条炉

wei wei huang bo (woven into curtains) 纬为幌薄

wu qian zhu (5-qian bead) 五錢珠

wu se zhu lian (5-colored bead curtain) 五色珠帘

xiao chuang jian chui xiao shui jing lian (the small crystal curtains were hung among the miniature windows)
小窗間垂小水晶簾(小窗間垂小水晶帘)

xiao shui jing lian (small crystal curtain) 小水晶帘

yatiao (trim strip or molding) 押條 or 壓條

yu lian (jade curtain) 玉帘

yuan lu (round furnace) 圆炉

yuzhuru (jade bead mattress, comforter, or quilt) 玉竹褥

zhang (distance equal to 10 feet) 丈

zhen zhu (precious bead or pearl) 珍珠
zhen zhu (“real” bead, i.e. “pearl”) 真珠
zhen zhu lian (precious bead or pearl curtain) 珍珠帘
zhi zhu (beads were woven) 织珠
zhu (bead, pearl) 珠
zhu bo (bead or pearl curtain) 珠箔
zhu huang (bead or pearl curtain) 珠幌
zhu lian (bead or pearl curtain) 珠帘
zhu ling (bead or pearl lattice) 朱棂
zhu long (bead or pearl window) 珠櫺
zhu wei (bead or pearl curtain or net) 珠帷
zhu xuan (a window decorated with beads or pearls) 珠軒
zhu zhang (a bead or pearl tent or curtain) 珠张
zuofang (workshop or factory) 作坊

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Valerie Hector
1187 Wilmette Ave.
Wilmette, IL 60091
E-mail: valeriehector@sbcglobal.net

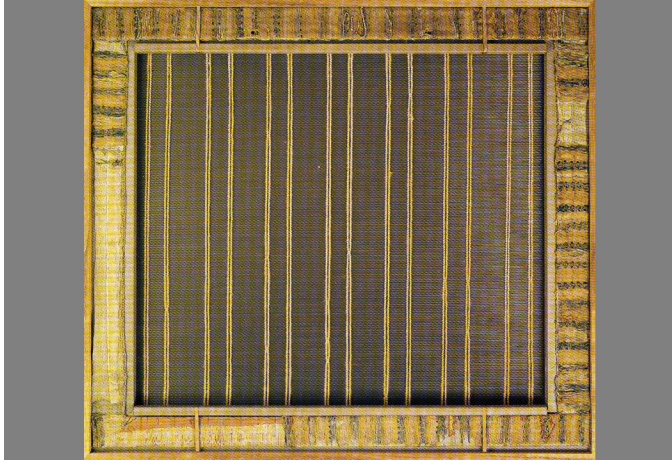


Plate VIIA. Curtains: **Top:** Indo-Pacific glass beads from the Yongning Temple (photo: An Jiayao). **Bottom:** *Tamasudare* reproduction (courtesy: Kanazawa Bunko Museum).

Plate VIIC. Curtains: **Top:** The Job's tears in Plate VIIB. **Bottom:** Curtain detail showing seedpods, plastic tubes, and suspension bar (photo: Sanders Visual Images).

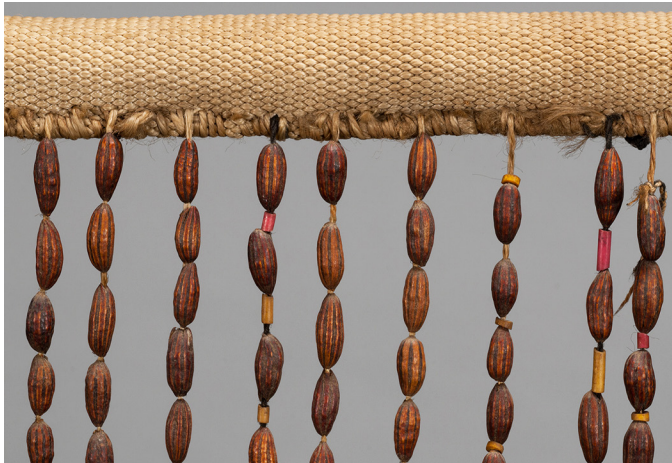
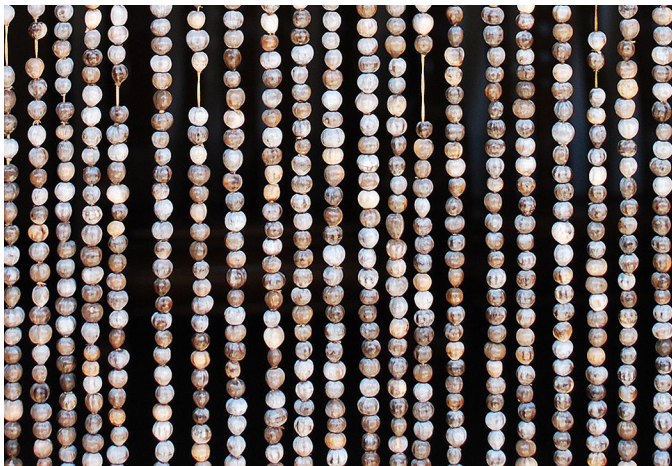
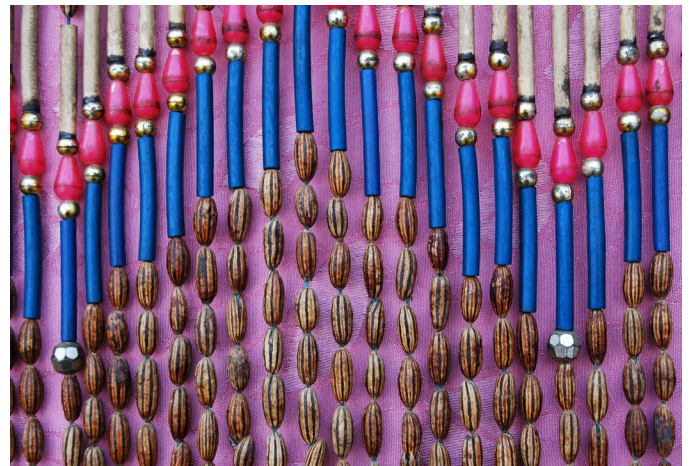


Plate VIIB. Curtains: Curtain of bamboo tubes and Job's tears, Beijing, 2008 (all photos by Valerie Hector unless otherwise indicated).

Plate VIID. Curtains: **Top:** The lobed seedpods and plastic beads of a Beijing curtain, 2008. **Bottom:** Bead door curtain of seeds and plastic tubes, Beijing, 2013.



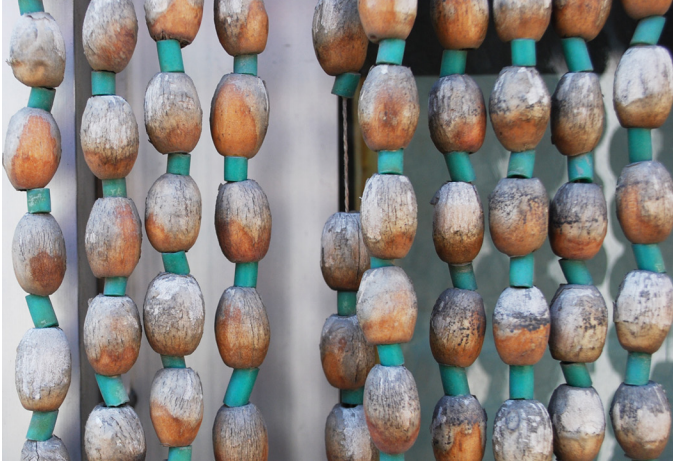


Plate VIII A. *Curtains:* **Top:** The seeds and green plastic tubes of the curtain in Plate VIID bottom. **Bottom:** Rolled paper beads, Job's tears, and plastic tubes, Cuandixia, 2012.

Plate VIII C. *Curtains:* **Top:** Folded-paper bead curtains hanging in doorways, Cuandixia, 2012. **Bottom:** Star-shaped folded-paper beads and plastic tubes, Qufu, Shandong province, 2012.



Plate VIII B. *Curtains:* **Top:** Folded-paper beads connected with paper clips. **Bottom:** Folded paper and biconical plastic beads, and Job's tears. Both Cuandixia, 2012.

Plate VIII D. *Curtains:* Curtain featuring geometric motifs and a rare netted valance, 20th century. Private collection (photo: Sanders Visual Images).





Plate IXA. *Curtains:* Detail of the netted valance of the geometric curtain.



Plate IXB. *Curtains:* Curtain featuring landscape motifs, 20th century. Private collection (photo: Sanders Visual Images).

Plate IXC. *Curtains:* Curtain featuring hybrid motifs, with a crane standing before a pine tree, 20th century (photo: Sanders Visual Images).

Plate IXD. *Curtains:* **Top:** The beads and pendants at the bottom of the crane/pine curtain. **Bottom:** Box of drawn glass tubes (courtesy: Robert K. Liu). (Photos: Sanders Visual Images).



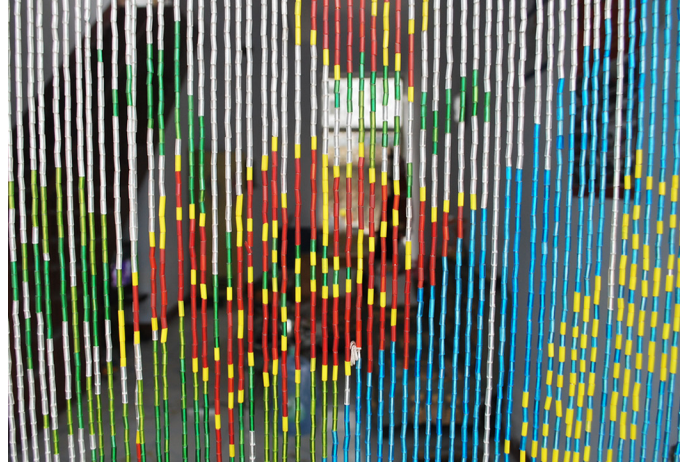


Plate XA. Curtains: Top: Knotted strands with drawn tubular and wound oblate glass beads, probably Chinese, 20th century (courtesy: Jamey Allen). **Bottom:** Peacock curtain, Boshan, 2012.

Plate XB. Curtains: Top: Detail of the peacock curtain. **Bottom:** Large yellow curtain of drawn glass beads, Boshan, 2012.

Plate XC. Curtains: Prof. Peter Haslund with Liu Fengwei's mother in front of the Liu home with its colorful plastic curtain, Shijiazhuang, Shandong province, 1984 (courtesy: Peter Haslund).

Plate XD. Curtains: Reproduction of the plastic faceted-bead curtain of the Hutong Pizza restaurant, Xicheng district, Beijing, 2012. Private collection (photo: Sanders Visual Images).

