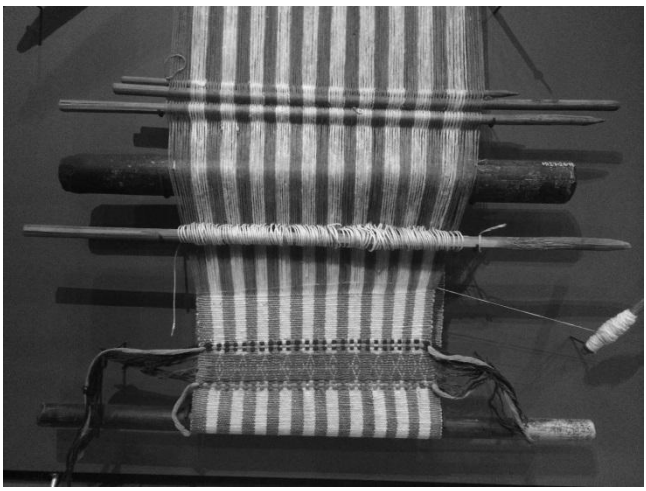
Appendix A: Loom Construction and Use

The loom is an unusual device in its variation – an object may be called a loom with no moving parts or with many hundreds. It can be completely hand-operated or entirely mechanized, and can range in size from a few inches to the size of a room. When one adds in the various ways in which a loom can be threaded or used to create a textile, the number of possibilities becomes nearly endless. Despite this apparently infinite variation, historic and modern looms can be generally grouped into one of two categories – heddle looms and tablet looms. Each of these groups can contain childishly simple looms as well as looms made of many hundreds of moving parts that require learning and practice to operate. Despite extreme differences in necessity, resources, and innovative chance, most cultures develop looms of one type or the other, with essentially no examples that do not fit either category. For a complete breakdown of all looms examined in this study, see Table 1.

Heddle Looms

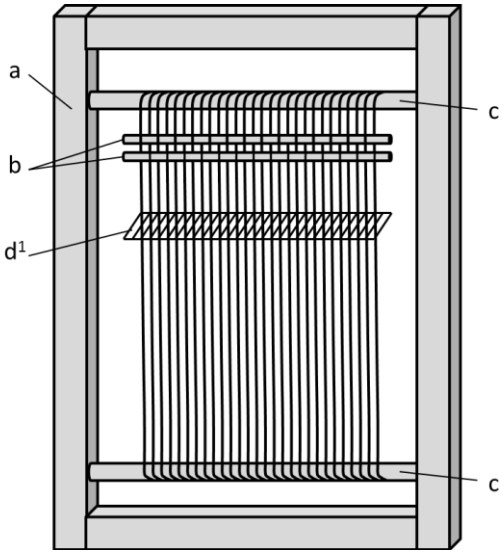
The most common type of loom worldwide is the heddle loom. A heddle loom is more variable in size than a tablet loom, and can have any number of moving parts. A heddle loom is what most who are unfamiliar with the complexity of looms might imagine. Although this category may be simplified to a single, non-moving part, a heddle loom is most accurately simplified to a few common parts. While any specific loom may be classified as "heddle" without any of these parts, they are common features that are easily understood. A heddle loom also allows for great freedom in the method of weaving employed, meaning heddle-woven textiles can have much greater variation in texture and appearance. The majority of looms in this study, as in cultures worldwide, are heddle looms.

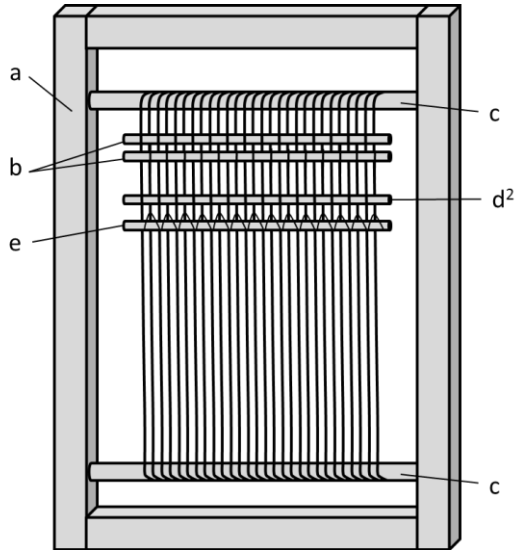


Figures 13 (left) and 14 (above)
A Tewa (Arizona) loom that employs a rigid heddle (left), and a Bodo Garo Atong (India) loom that uses a shed stick and heddle rods (right). Photos by V. Sluka, courtesy of the Pitt Rivers Museum, Oxford.

For the purposes of this study, heddle looms are divided into two groups. These groups are similar in all respects except in the type of heddle employed. The physical parts of both simplified heddle looms are a) the frame, b) tension rods, c) warp rods, and d1) a rigid heddle or d2) a heddle rod and e) a shed stick. The rigid heddle variation is illustrated in Figure 15, and the heddle rod variation in Figure 16.

The frame (a) of a heddle loom exists primarily to provide support for the





Figures 15 (left) and 16 (right)
The two variations of a heddle loom: using a rigid heddle (15) and a heddle rod (16). Drawn by V. Sluka

other parts. The frame may be oriented vertically or horizontally, and may be of any size. The frames of these simplified heddle looms support the warp rods suspended between them, and provide no other function. Some looms are handheld, and do not have a frame.

The tension rods (b) create tension in the warp, allowing the weaver to produce a uniform, solid, and usable textile. Internal tension rods (Figure 17) are inserted into the warp to take up slack in the threads. By wrapping the warps repeatedly around the rods, or even by passing the warps around the rods, the warps are shortened and held in tension. Tension rods can be placed at the top or bottom of the weaving space, and variations of the simple tension rod can even be placed outside of the warp rods. Any number and size of tension rods may be used, depending on the slack in the warp and the elasticity of the threads. Especially elastic threads may need to have more tension rods added as they stretch out.

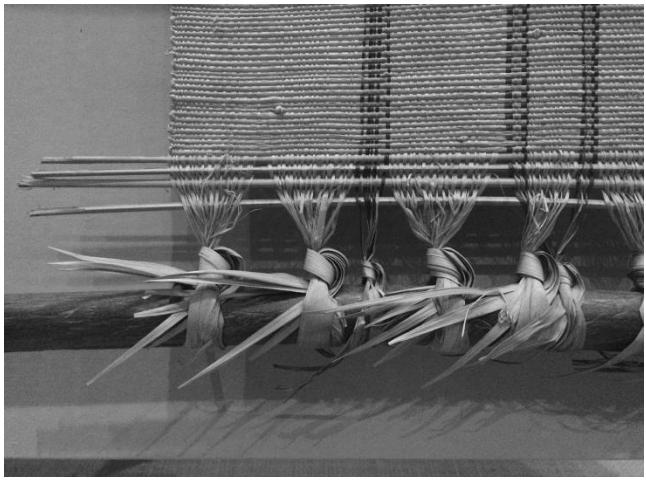


Figure 17

Four narrow tension rods have been inserted at the base of this textile to stabilize the weaving, organize the dividing warps, and provide a way to fine-tune the tension. Nigeria. Photo by V. Sluka, courtesy of the Pitt Rivers Museum, Oxford.

Warp rods (c) are the bars around which the warp is wrapped or secured. The distance between the warp rods limits the length of the textile to be produced. These rods are usually significantly more substantial than the tension rods, although this also depends on the weight of the yarn employed.

Figure 18

A rigid heddle, where the warps are alternately passed between slats and through holes in the slats. New Mexico. Photo by V. Sluka, courtesy of the Pitt Rivers Museum.

A heddle loom may use zero, one, or two warp rods, depending on the design. Sometimes a cloth rod is substituted for one or both warp rods.

The type of heddle employed is where the two types of heddle looms diverge. A rigid heddle (d1) eliminates the need for a separate shed stick. A rigid heddle allows the weaver to open and close each of two sheds quickly and without error by trapping alternating threads in its slats.

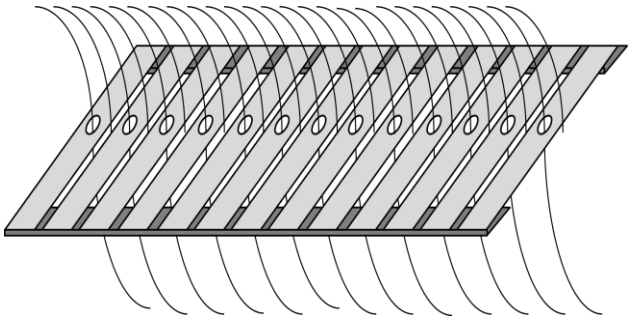
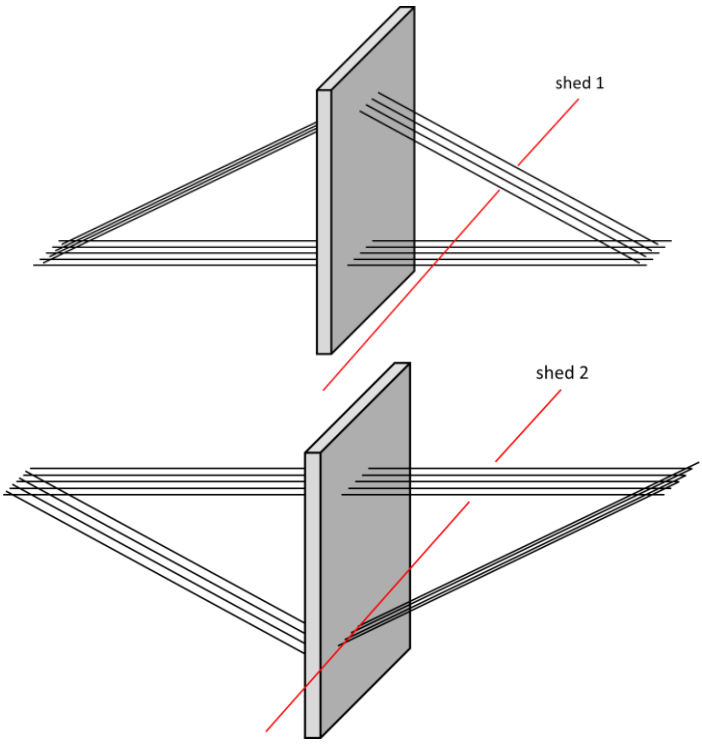


Figure 19
A rigid heddle with warp threads. Drawn by V. Sluka

Usually, the warps of the first shed are passed between the slats, while warps of the second shed are passed through small holes in the slats (Figure 19). When the heddle is lifted, it forces the warps of the second shed upwards and away from those of the first shed, creating a gap through which the weft may be passed (Figure 20). The heddle is then pushed down, pushing the warps of the second shed down and behind those of the first, creating the alternate shed through which the weft is passed (Figure 20). The woven textile is created as the weft is passed through these alternating sheds.

The other variation of heddle loom uses a heddle rod (d2) and shed stick (e) (Figure 16). These are the only two parts of a heddle loom that must be used in tandem – a functioning loom cannot have one without the other. They can, however, be used in different quantities. As long as a loom has at least one of each, it may have an infinite number of either. A heddle rod (d2) is used to open one of the sheds, while the shed stick (e) opens the other. Both parts operate in the same fashion, and indeed the names are interchangeable. It is really only a theoretical difference – in practice, a weaver is unlikely to know or care which is the heddle rod and which the shed stick.



Figures 20
The two sheds produced by movement of the rigid heddle. Drawn by V. Sluka

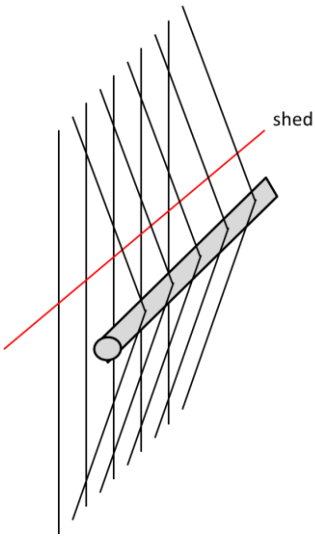


Figure 21
A shed is opened when the heddle rod is lifted. Drawn by V. Sluka

Generally, a loom will nominally have only one heddle rod and perhaps many shed sticks, but this distinction in quantity is not crucial. All of these parts are grouped together at one end of the warp. The heddle rod is suspended in the warp, and is not fastened to the frame in any way. Alternating warp threads are passed over or under the heddle rod so that when the rod is lifted one shed is opened (Figure 21).

The shed stick can vary greatly in design, but generally it acts in the same way as the heddle rod – by lifting alternate warps to open the second shed. Although a shed stick can be employed in the exact way a heddle rod is, a more common variation is illustrated here (Figure 22). The shed sticks may be suspended in the warp, or may be supported by the frame.

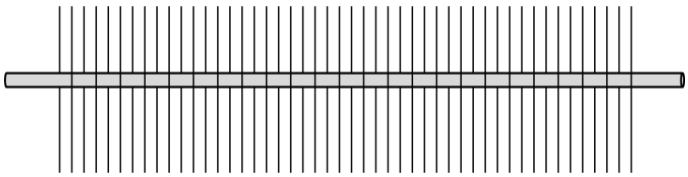


Figure 22
The warp threads passing in front of and behind the shed stick. Drawn by V. Sluka

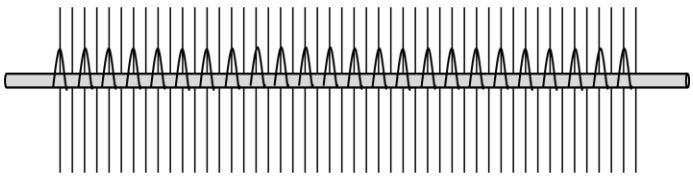


Figure 23
A common method of threading a heddle rod. Drawn by V. Sluka

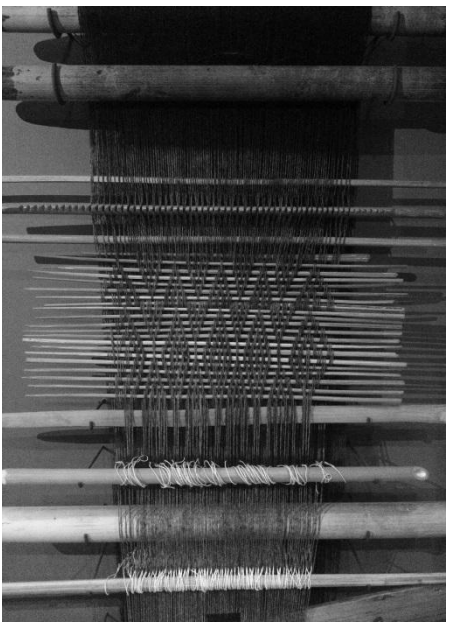


Figure 24
A loom that uses many shed sticks and a heddle rod to create a complicated diamond pattern. India. Photo by V. Sluka, courtesy of the Pitt Rivers Museum, Oxford.

Tablet Loom

Unlike a heddle loom, the mechanism of a tablet loom cannot be greatly simplified. Although only one part of a tablet loom really differentiates it as such, these pieces are difficult to understand and employ. Even a simple tablet loom must have many moving parts. A tablet loom is almost always used to produce double-woven textiles, and never for pile textiles. Tablet looms are also exclusively used to produce narrow textiles, or belts, because the complexity of the shedding system is not conducive to wider weaving. Although much less common than heddle looms, tablet looms also appear in unrelated cultures worldwide as a useful mechanism for intricate weaving.

Like a heddle loom, there are several parts of a tablet loom that are unnecessary for functionality but that may increase ease or speed of operation. A very simple tablet loom may have a) a cloth rod, b) a warp rod, and c) tablets (Figure 25).

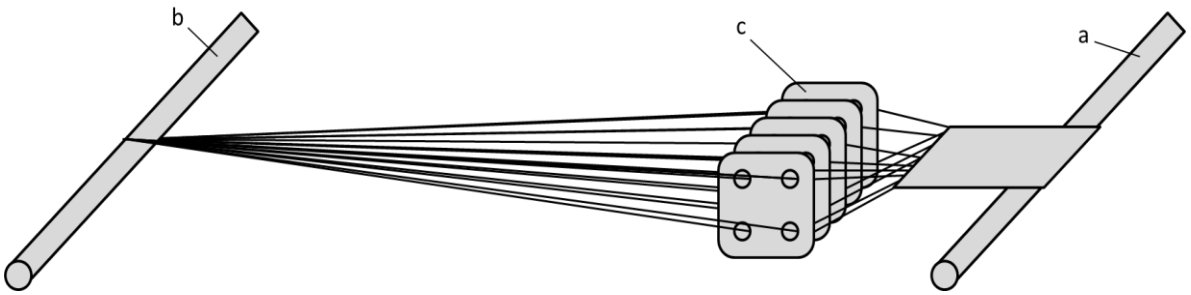


Figure 25
The basic components of a tablet loom. Drawn by V. Sluka

The cloth rod on a tablet loom (or, indeed, a heddle loom) may be replaced with a second warp rod, although because the belts produced on tablet looms are so narrow, a cloth rod is more common in order to maximize the size of the textile. A cloth rod rotates to take up completed textile, in order to clear the weaving space for continued work. This allows for the production of very long, continuous belts, much longer than the weaving space itself (Figures 26).

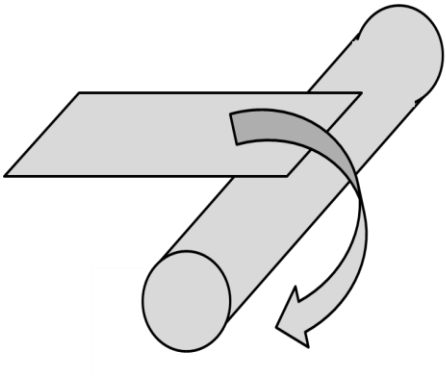


Figure 26
By rotating the cloth rod, completed fabric is wound up and the work space cleared. Drawn by V. Sluka.

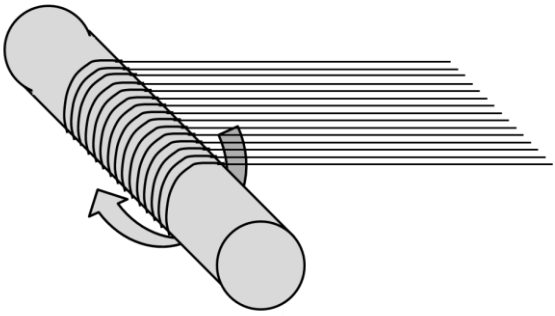


Figure 27
To account for rotation of the cloth rod, the warp rod is rotated to release more warp. Drawn by V. Sluka.

A warp rod is placed at the opposite end of the weaving space from the cloth rod, with the other ends of the warp secured to it. As the cloth rod reels in completed cloth, the warp rod is unwound to let out more warp (Figure 27).

The most complex part of a tablet loom is, by far, the tablets. Tablets, also called cards, are usually fairly small, thin, square pieces of wood. Warp threads are passed through holes drilled in each corner of the tablets, and they are stacked (like a deck of cards) and turned sideways, suspended by the warps between the cloth and warp rods. The sheds are opened by rotating the cards, either in unison or in any combination (Figure 28). This means that there is an exponentially large number of different sheds that can be opened, depending on which tablets are turned, and how far they are turned. Because of this variation in sheds, textiles made on a tablet loom are almost always double-woven.

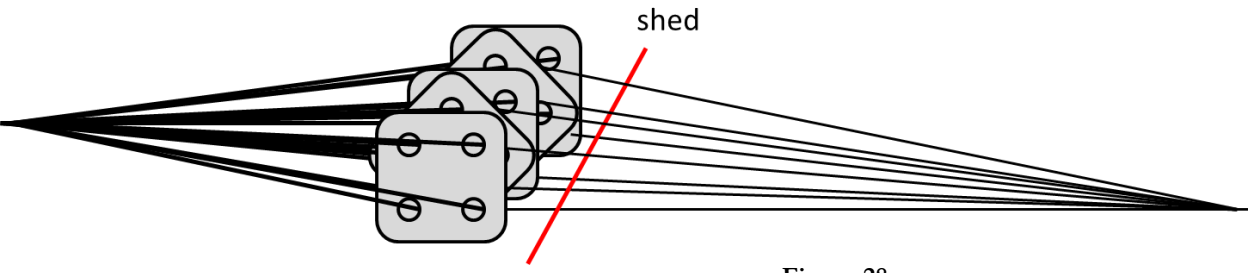


Figure 28
The shed of a tablet room is opened by rotating individual tablets. Drawn by V. Sluka

Weaving Methods

Like looms, variation in weaving method is extreme. Small differences in weaving pattern may produce a textile with a completely different look, texture, or drape, even without variations or patterns in color. Not all looms are even used for true weaving – many textiles, especially in Asia, are knotted rather than woven, and create a pile surface.

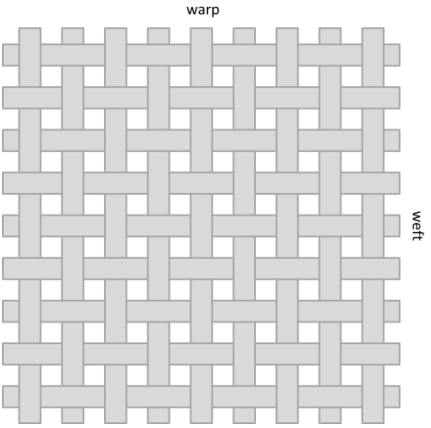


Figure 29
A simple weave. Drawn by V. Sluka

Simple Weave

The most basic and well-known weaving method, a simple weave passes the weft over and under alternating warps. With each added row, the weft changes which warps are passed over and which are passed under (Figure 29). A simple woven textile may be warp-faced or weft-faced. This is also sometimes called a tabby weave.

Checkerboard Weave

A decorative variation of a simple weave, the checkerboard weave creates a checked pattern in the finished textile. However, this weave is more akin to a tartan or plaid than a simple log cabin weave. By using alternating colors in the warp and a single color in the weft, a checkerboard pattern emerges (Figure 30).

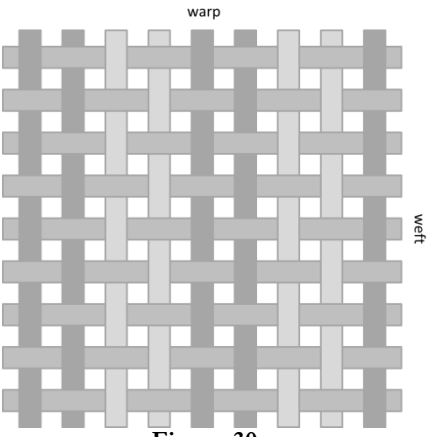


Figure 30
A checkerboard weave.
Drawn by V. Sluka

Twill Weave

A twill is a fabric with a diagonal pattern. The slope of the diagonal can be set in the weaving process, although a very shallow slope will result in a more porous, weaker fabric. A twill is achieved by passing the weft over one warp and then under two. Each successive row is offset one warp from the row

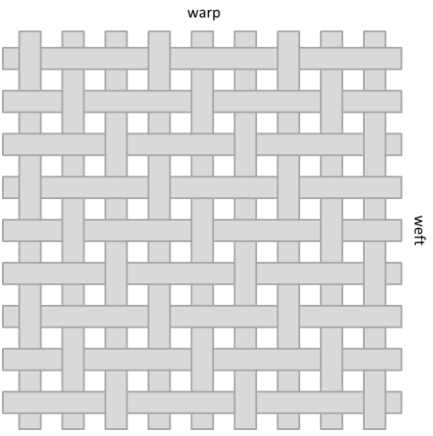


Figure 31
A twill weave. Drawn by V. Sluka

before, which creates the diagonal pattern (Figure 31). The slope is changed by varying the numbers of warps passed over and under.

Log Cabin Weave

Similar to a checkerboard weave, the log cabin weave creates a checkered effect. This pattern is achieved by using alternating colors in both the warp and the weft, but still uses a simple weave method (Figure 32).

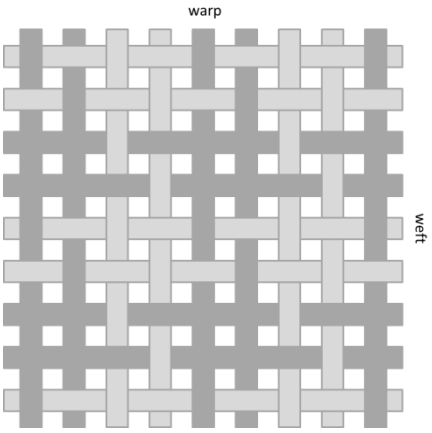


Figure 32
A log cabin weave. Drawn by V. Sluka

Knot & Pile

A knotted textile, such as a rug or velvet, does not use any weaving method to create its surface (although rows of simple weave may be present for structural integrity). Rows are created by tying knots between consecutive warps (Figure 33). Many knot types are used worldwide, and while they may have small effects on the finished textile, they will not be important here. The loose ends of the knots are left hanging off the surface of the textile – they are trimmed to a short, even length upon completion of the piece. This surface is called the pile.

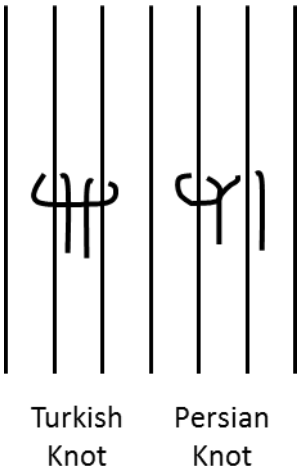


Figure 33
Turkish and Persian knot varieties used in pile textiles. Drawn by V. Sluka

Appendix B: Western Intellectual Property Categories

Without a thorough understanding of modern international intellectual property (IP) legislation, it would be impossible to fully understand the limitations of the existing system or to effectively suggest a system that would be more relevant to the protection of traditional cultural knowledge. It is not until one considers the strengths and weaknesses of the existing laws that one can hope to make a more effective system. Because these systems have been tweaked over time and are written to consider many variations and exceptions, they provide a base that may, one day, be effectively used to create a more targeted system. However, because the relationship between traditional knowledge and IP has only begun to take shape in the last few decades, existing state legislation rarely takes into account the unique aspects of traditional knowledge that make it culturally relevant and valuable.

By beginning with a brief survey of existing Western IP agreements and laws, I will provide a frame of reference on which to build the discussions of protecting traditional craft knowledge. It is important to remember that the majority of the following discussion is based on more advanced and highly defined Western systems of IP protection; however, this survey is by no means exhaustive, and other regional and national regulations will be discussed when relevant later in this study.

International Agreements

Because most nations maintain completely independent sets of IP laws, international peculiarities and agreements can play an important role in protecting IP. The most notable peculiarity relates to patents, that most nations will not recognize a foreign patent application if the product was publically available in the originating nation before the foreign filing date. This can be avoided by not publishing a work anywhere before it is protected in all relevant nations, or by applying for a patent in a nation that uses a multi-national filing treaty.

World Trade Organization

Like WIPO, the World Trade Organization (WTO) is an international body for the regulation of IP rights. It regulates trade, customs, and tariffs on IP worldwide, and manages several treaties and agreements. 161 nations are currently members of the WTO. The WTO is best known for its organization and management of the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS). This agreement is the most robust international agreement on IP

to date, and provides for international IP protection as well as regulates multi-national IP disputes (WIPO).

The World Intellectual Property Organization

The World Intellectual Property Organization (WIPO) is the overarching international governing body on IP protection. They maintain databases of international patents, trademarks, and copyrights, as well as manage many international IP treaties (WIPO). The most notable of these treaties is the Paris Convention, which was ratified in 1883 and was the earliest international agreement on the protection of industrial and intellectual property (WIPO). Today, 188 nations are members of the organization (WIPO).

European Patent Office

The European Patent Office (EPO) is an organization loosely tied to the European Union that regulates European patents. The various rules and treaties set out by the EPO aid primarily in the granting of patents in many nations simultaneously – through the EPO, it is possible for European inventors to file a single application for a patent in multiple member nations (Pressman, 2015).

African Regional Intellectual Property Organization

Like the EPO, the African Regional Intellectual Property Organization (ARIPO) is a regional entity that regulates IP laws and disputes in Africa. For this study, the most important treaty maintained by the ARIPO is the Swakopmund Protocol of 2010, which relates specifically to the protection of traditional heritage.

Types of Intellectual Property

Over the last century, regulations on intellectual property (IP) have become increasingly more narrowly organized while simultaneously covering more and more products of the human mind. This is the general definition of IP, something produced by the human intellect. In the Western world, there are generally five divisions of IP. Four of these are types of objects, processes, designs, and representations, while the last division relates to marketing more than to physical materials.

The five categories are 1) patents, 2) copyrights, 3) trademarks, 4) trade secrets, and 5) unfair competition (Pressman, 2015). Different nations regulate (or exclude) each subcategory differently, although Western developed nations tend

to use similar legal structures. This study will focus primarily on the first four subcategories: unfair competition is presented only briefly.

Patents

Of the five types of IP, one of the most well-known is the patent. Phrases like "patented design" and "patent pending" are common in advertisements and industrial settings, and the idea of the inventor working on bizarre, patentable inventions is a common trope in entertainment media. A patent protects the inventor/patent holder's right to control reproduction, sale, use, and import of an object or system. In the U.S., patents are divided by the U.S. Patent and Trademark Office (PTO) into three categories: utility, design, and plant. Patents, although fairly well known, may also be the most difficult type of IP to obtain. In Western legal systems, the complexity of gaining a patent can deter inventors and often requires professional legal advice. However, there is a basic set of requirements that a patent must meet, which will be discussed here.

By far the most common type of patent, in the U.S. and around the world, is the utility or industrial patent (Pressman, 2015). These patents are subdivided into five subclasses, including processes/methods, machines, articles of manufacture, compositions, or new improvements thereof (Pressman, 2015). One of the most fundamental requirements for an idea to be patentable is that it must have utility. This requirement is where a utility patent diverges from the other types of IP. While the utility does not have to be immense or world-changing, it does have to make some sort of improvement to its field. An inventor applying for a patent is required to prove utility of her invention, regardless of scale. This criterion eliminates works of art from the utility patent class, as purely aesthetic uses are non-patentable (Pressman, 2015). However, a utilizable invention does not have to be a system or a collection of moving parts: a single, useful object such as tape or an eraser will pass the utility requirement.

Assuming the invention can be shown to be useful in some way, it must then be shown to be novel (Pressman, 2015). Novelty, also known as unobvious, is perhaps the most difficult criteria of utility patents to determine. In the United States, an inventor must show that his invention has never been created or used before, in the U.S. or elsewhere in the world at any point in history. This vast collection of existing knowledge in the field is called prior art (Pressman, 2015). It is not relevant whether any existing prior art has been patented or not, it simply must have been available to the public. As one might expect, it can be nearly impossible to prove the existence, or nonexistence, of prior art. The simplest course of action is to cross-reference the new invention with all related inventions

that have been patented already. If the new object overlaps with an existing patent, it is not novel. However, this method does not account for any objects or techniques that were not patented, either because the inventor wanted it to be freely available to the public or because they existed in a time or place outside of patent regulation (Pressman, 2015).

The limitations of the prior art system are immense. An inventor may produce an object from her own mental effort, one that has never been patented or heard of in her own country, only to be prevented from obtaining a patent because of regional or historic knowledge in a distant part of the world. This prior art system also means that it is possible for an invention to appear truly novel, only to have relevant prior art surface after the patent issues, at which point the patent can be withdrawn. It also prevents similar or identical patents from issuing, even when inventors reached the design independently and at the same time. Because prior art includes all information and processes available to the public, the complete contents of the internet are also considered to refute novelty (Pressman, 2015). It is even possible to exclude an invention from patenting by your own prior art – any innovations you had made in the past and released to the public can derail a new patent application. This especially causes problems for groups that have been producing the same or similar products for decades or even centuries, and who then cannot patent it because of their own prior activities.

After utility and novelty are shown, an invention must be proven nonobvious. This criterion tends to be more subjective and dependent upon the patent examiner than the other criteria. An invention is obvious if it would naturally occur to "a worker in the field with ordinary skill and knowledge of all relevant prior art" (Pressman, 2015). Because patent examiners are rarely true workers in the relevant field, they must rely on prior art and relevant experts to determine obviousness. An extensive list exists of changes that are considered obvious, and would prevent a patent from issuing. For example, "ordinary innovation" in which multiple systems are combined but each part performs its original function, or "obvious by analogy" changes such as scaling a system up or down are considered obvious, and therefore are not sufficiently innovative to patent (Pressman, 2015). Changes in material used as well as improvements to portability or speed are considered obvious as well. However, if any minor change is made that significantly alters the function or end result, then the change is patentable. Several "secondary factors" of obviousness are also patentable, such as solving an unsolvable problem, or proving prior art inaccurate (Pressman, 2015). The complexity of determining non-obviousness can also be exacerbated

by the field in which the invention will operate – a relatively new, unexplored field may need a significant change in process or product in order to be considered a novel progression, while a very old and finely tuned field may only need tiny changes to be patentable (Pressman, 2015). For example, when genetics were first being explored, a significant invention must be made in order for it to not have been considered part of the obvious pathway of scientific innovation. In an older field, such as clockwork, a tiny change to a gear that slightly improves accuracy may be sufficient.

The other types of patents, design and plant, are much less common. A design patent protects the physical, aesthetic appearance of an object or mechanism. The appearance must have no impact on the performance of the object, i.e. the object can function just as well with another design (Pressman, 2015). The most common use of such patents is on clothing, where the physical appearance of the article does not affect its function as clothing, but may greatly affect the success of the product commercially. Unlike a utility patent, multiple parties can share a design patent as long as each can show that they arrived at the design independently (Lane-Rowley, 1997).

A plant patent protects floral materials that reproduce asexually, specifically cuttings and grafts of selectively bred or engineered plants (Pressman, 2015). This type of patent is becoming less applicable as genetic and biological sciences advance, allowing genetic copies of plants to be produced without direct access to the original specimen.

A patent, like most types of IP, can be held by an individual, a pair or group of individuals, or a corporation (Pressman, 2015). In the U.S., inventorship, and therefore original ownership of a patent, rest in a person – the inventor. Those rights can then be assigned to another party, including individuals or corporations. When a group of people control a patent, control of rights may depend on a formal agreement. Without such an agreement, one holder may be able to sell or license the complete patent without permission of the others. Like any physical object, patent rights can be sold, traded, inherited, gambled away, or divided up. A patent can also be licensed for use by others, wherein the inventor usually receives a flat sum or continuous royalties (Pressman, 2015).

American patents are rarely inherited, as they are the shortest-lasting of all IP types. A U.S. utility patent lasts seventeen years from the date of issue (U.K. utility patent = 20 years [Lane-Rowley, 1997], U.S. design patents = 14 years(Pressman, 2015), U.K. design patents = 15 years [Lane-Rowley, 1997]), although with exceptions relating to slow processing through the PTO, the protection can be extended based on the length of delay in processing (Pressman,

2015). After this time, the invention remains as prior art against which all future inventions are judged, but can be made, sold, imported, or used by any party without the permission of the original patent holder.

Patent infringement is a federally punishable offense in the U.S., and can be settled civilly or criminally (Pressman, 2015). An infringer is most often required to pay royalties for back-use of the patented system or design, and may be required to pay the legal fees of the patent holder as well. However, it is relatively easy (in theory) to avoid infringement charges. In the U.S., active and intentional attempts to create a system, object, or design with the same or similar parts and results is permitted as "designing around a patent" (Pressman, 2015). As long as the finished product does not technically overlap with the patented material, it is permitted even if it was obviously taken from the patented design.

Trademarks

Like patents, trademarks are relatively familiar to most of the public, as the registered trademark symbols ® and TM appear frequently in daily life. A trademark is defined as a symbol used commercially that distinguishes the source of one product from others. A trademark does not have to be visual, but may be auditory (such as the McDonald's jingle) or even olfactory (such as a Dutch company registering the distinctive "grass" smell of their tennis balls) (McJohn, 2009). In theory, trademarks are intended to protect a particular brand name. Through the use of a consistent mark, a consumer is able to associate the brand with a certain level of quality or reliability. This, in turn, can create brand loyalty that increases company profits. By maintaining a registered trademark, a company can prevent others from associating themselves with an established brand through similar marking of products or packaging (McJohn, 2009).

The most common type of trademark is that which is registered to a specific company, but other types of marks also exist. A collective or certificate mark is a trademark that is used to indicate that the product was made using certain techniques, contains only certain materials, or was made in a particular manner (Lane-Rowley, 1997). For instance, organic foods are often marked with a certificate mark indicating that they were grown organically and free from pesticides or growth hormones. Many fair trade collective marks also exist, indicating the product was made using ethical and environmentally friendly pay and labor systems. Such marks are sustained and enforced by particular groups, who ensure that all products marked with them meet the standards of the group. Such marks signify adhesion to particular values held by various consumers.

Counterfeits and knock-offs are the primary enemy of the trademark. A counterfeit is an item claiming to be of a certain brand that it is not (Lane-Rowley, 1997). A knock-off is a product that suggests a relationship with a popular brand, but through minor changes in the design or trademark is not a direct copy. For example, clothing trying to be passed off as the popular sporting brand Adidas may be labelled "Addidas," with a four-striped mark rather than the trademarked three stripes. Counterfeiting and knock-offs can destroy a market, as they are almost always produced more cheaply than the original brands (Lane-Rowley, 1997). However, the cheaper production often makes counterfeit and knock-off products less durable or effective. This leads to a loss of customer loyalty to the real brand, which is believed to be the source (Lane-Rowley, 1997).

Trademarks, unlike patents, can last indefinitely in both the U.S. and the U.K. As long as the corporation continues to use the marks, they maintain rights to them (McJohn, 2008). For this reason, popular, long-standing brands are known to occasionally produce "throwback" limited edition products using historic versions of their trademarks. This reuse of retired marks protects the historic marks from use by infringers, and expands the company's ability to protect their brand image.

Like patents, trademarks are not completely airtight methods of protection. While the theory of a trademark is good, it does not necessarily work in practice. A trademark indicates a level of quality to a consumer, but in no way stops the production of counterfeit or knock-off items. It is possible that a consumer will know that an item is not legitimate, and will purchase it anyway. In this way, a trademark is in no way a guarantee of monopoly (Lane-Rowley, 1997). If the goal is to protect a process, object, or design, then a trademark can encourage ethical consumption but cannot enforce it.

Copyrights

The last of the well-known types of IP is the copyright. A copyright is "any original work of ownership, fixed in a tangible medium" (McJohn, 2008). Copyrights are intended to protect works of art, musical compositions, audio and visual recordings, written works, etc. (McJohn, 2008). A material must meet three requirements to be copyrightable: originality, work of authorship, and fixed in a tangible medium of expression (McJohn, 2008). Almost any product of the human mind can be copyrighted, except facts. Even when a fact is discovered through the creative effort of an individual, it is uncopyrightable (McJohn, 2008). Copyrights also do not protect the process through which an item was produced – this would be more effectively covered by a patent. However, unlike patents

and trademarks, a copyright does not have to be registered. A work is inherently copyrighted, and the copyright symbol © can be used without official registration.

Originality is fairly easy to show. The work must have been thought up and produced independently by the author, and must demonstrate at least a little creativity (McJohn, 2008). This means that multiple authors could hold the same or similar copyrights, as long as each reached the material on their own and did not copy it from the other. Creativity is also such a subjective description that most works of a human can be called creative – even when the obvious or boring route is taken in a work, it could be argued that the author made a conscious, creative decision to do so in order to make some sort of statement.

The author of a material is the person(s) who created it. Generally, this is straightforward. However, it can cause problems in certain cases. It is possible for an author to describe a story idea to a friend, and then for the friend to write the story itself and control the copyright. The original author did not fix the idea in a medium, and so has no authorship of the finished work. Similarly, a recording of a singer can be held entirely by the recorder, as long as he makes sufficient creative choices in the production of the recording (McJohn, 2008). The authorship idea also means that in cases of very old items, it is usually impossible to establish authorship. This means that oral histories and legends, such as the fairytale Cinderella, are impossible to copyright because the original author is unknown, even when the item is strongly associated with a particular group (such as Cinderella to the Brothers Grimm).

Finally, a material must be fixed in a tangible medium to be eligible for copyright. Again, this is straightforward. A performance of music or dance cannot be copyrighted, but any video or sound recordings of the performance can be. A story is unprotected until it is written out or recorded, and a painting is not protected until it is painted, regardless of how long the artist held the image in her head (McJohn, 2008).

Once a work is considered copyrighted, the author is granted certain rights relating to the work. He may make unlimited copies, make or license derivative works, distribute the work or copies to the public, perform the work publically, or display it publically (McJohn, 2008). Like with a patent or trademark, the holder may choose to sell or license any of these rights (McJohn, 2008). For this reason, a single copyrighted character, image, sound, etc. may be exploited in any number of media (such as Disney characters appearing in film, in books, on clothing, and as toys). However, once a good is released for free to the public, it becomes nearly impossible to stop free use, especially in the modern internet age (Bettig, 1996). For example, now that images of the popular internet star Grumpy

Cat have been released for free on the internet, it would be nearly impossible to revoke free use. The author is always the holder of the copyright (until they choose to sell it or it is inherited), unless the work was made on commission. In this case, the copyright is held by the commissioning party.

A common misconception on the ownership of copyrighted materials is that the owner of a work is the holder of the copyright (McJohn, 2008). By purchasing a copyrighted material, whether the original or a copy, one does not gain any rights (McJohn, 2008). It is for this reason that anyone can make copies of items like the Mona Lisa – Leonardo da Vinci is long dead and his copyright long expired, and the Louvre holds no rights to the image simply by having the original in their collection (Deak, 2015).

Trade Secrets

While one of the five official types of IP, trade secrets are not as thoroughly regulated by law. A trade secret is knowledge held usually by a particular corporation that is kept, predictably, secret, and that provides economic value or gain. This knowledge usually relates to a process of manufacture or ingredients used that produces a product unlike any other on the market (McJohn, 2008). By maintaining secrecy in production, the corporation is able to maintain a monopoly on the product. A trade secret, because it has basically no legal regulation, lasts as long as it is kept a secret (McJohn, 2008).

Objects and systems that are held as trade secrets are often eligible for utility patents (Pressman, 2015). For this reason, it is usually a judgement call on whether to maintain knowledge as a trade secret or to patent it. If the object is available to the public and easily reverse engineered (e.g. easily dismantled and independently reconstructed to understand the workings or contents [Pressman, 2015]), then it would be in the company's best interest to patent the process or machine. This way, they would hold exclusive rights to the knowledge for the length of the patent. If they do not patent but maintain the trade secret and the object is reverse engineered, then the secondary corporation will be able to use it freely. If the product is difficult or impossible to reverse engineer, then holding it as a trade secret will essentially guarantee an indefinite monopoly (McJohn, 2008).

Unfair Competition

The last element of IP regulation is the concept of unfair competition. Unfair competition legislation prevents individuals or corporations from falsely claiming similarity or association to another producer or brand. It also restricts

false advertising of a product's contents or function (McJohn, 2008). Unfair competition will not be discussed or referenced at length in this study.

Glossary

Backstrap – a length of material that wraps around the back of the weaver and connects to the cloth rod that allows the weaver to create tension in the warp by bracing their legs against the cloth rod or frame
Band – see Belt
Belt – a long, narrow (< 3") textile, usually with an intricate pattern. Also called a Band or a Ribbon
Beater – an implement used to compact rows of weaving into a tight fabric by sliding the implement between the sheds and pushing down towards the completed rows. Also called a Sword Beater
Beating Comb – a comb used to compact rows of weaving or knots into a tight fabric by putting the teeth of the comb between consecutive warps and outside of all sheds and pushing down towards the completed rows
Card – see Tablet
Card Loom – see Tablet Loom
Card Weaving – see Tablet Weaving
Checkerboard Weave - a warp/weft weaving method where alternating colors are used in the warp, and a single color is used in the weft to create a checkerboard pattern
Cloth Rod – a rod suspended across the width of the loom around which one end of the warps are wrapped or secured. There is a mechanism to rotate the rod to take up completed fabric as the weaving progresses. Always located at, or near, the bottom of the loom. A loom may or may not have a cloth rod, depending on the length of the fabric to be produced
Continuous Warp – a warp that wraps around the warp rods in such a way as to make a continuous loop of warp, allowing the creation of an enclosed loop of fabric
Decorative Weft – see Extra Weft
Double-Faced Weave – a weave in which the visible surface of the textile is made up of both the warp and the weft equally
Double-Sided Fabric – a fabric that has no definite right or wrong side, because of a continuous surface without a decorative pattern, or a symmetrical decorative pattern that is visible on both sides
Double Warp Weave – see Double Weave
Double Weave – a weaving method in which two sets of warps are used simultaneously. This allows for the production of more complicated patterns with

a single weft, as parts of the weft and warp are hidden inside the extra set of warp yarns. Also called a Double Warp Weave

External Tension Rod – a rod or stick added outside the warp rod but within the frame, where a cord or rope is wrapped between the frame and the tension rod, and between the tension rod and the warp rod. Even on a loom with two warp rods, only one external tension rod will be used (the other will be grounded in the frame)

Extra Weft– a decorative weft added on top of the primary weft, where the extra weft does not add strength or integrity to the fabric but creates a decorative pattern or texture on the surface. Also called a Decorative Weft or a Supplemental Weft

Frame – the base of a loom that provides structure and support for other pieces. In simple looms, the frame can double as the warp and cloth rods

Hand-Held Loom – a loom that is small enough to be used in the lap of the weaver and transported, usually employing a backstrap and oriented horizontally. Also called a Lap Loom

Heddle Loom – a loom that uses heddles and/or shed sticks to change the shed

Heddle Rod – a rod or stick that is suspended across the warps where alternating warps are secured to it so that by pulling outward on the stick, one of the sheds may be opened quickly and easily

Internal Tension Rod – a rod or stick added within the warp and cloth rods, where the tension rod is suspended in the warp and creates tension by taking up slack in the warp. Any number of internal tension rods may be used, at either end of the loom

Inverted Pattern Fabric – a fabric made with a double-warp weave that has a decorative pattern visible on both sides, but where the colors are inverted from one side to the other. This fabric may or may not have a right side, depending on the intentions of the weaver and its use

Knot – an individual unit of yarn with unsecured ends that is wrapped around two or more consecutive warps. Knots come in many forms that are symmetric or asymmetric, easier or harder to produce, and take up more or less space

Lap Loom – see Hand-Held Loom

Log Cabin Weave – a warp/weft weaving method where alternating colors are used in both the warp and weft to create a checkerboard effect

Loom – device used to produce woven or knotted textiles

Pile – the loose ends of a knot that, when trimmed, create the surface of the textile. Most commonly seen in rugs and velvets

Ribbon – see Belt

Rigid Heddle – a stiffly secured row of narrow slats between which alternate warps are passes, where the rest of the warps are passed through small holes in the center of the slats. By moving the rigid heddle, the weaver may open alternating sheds quickly and easily

Segmented Warp – a warp that is made up of many individual yarns secured independently to the frames of the loom

Selvages – the self-finished lateral edges of a textile, produced in the weaving process

Shed – a selection of the warps that are all part of the same weaving position, e.g. all the warps over which the weft will pass in one row of a simple weave, or all the warps under which the weft will pass in one row of a simple weave

Shed Fork – achieving the same function as a shed stick, an implement with the shape of a tuning fork that is slid into one shed to allow easy and quick access to it

Shed Stick – a rod or stick that is suspended in the warps where alternating warps are passed in front of and behind it, so that the stick may be rotated or pulled outwards to easily and quickly open a shed

Shuttle – an object around which a length of weft is wrapped to facilitate the passing of the weft back and forth between the sheds

Simple Weave – a weaving method in which the weft alternatively passes over a single warp and then under a single warp. In consecutive rows of weaving, the warps alternate between passing over and under the weft.

Single-Sided Fabric – a fabric that has a definite right and wrong side, whether because of weaving method, a pile, supplemental wefts, or a non-reversible decorative pattern (such as text)

Stationary Loom– a loom that is too large to move or that requires connection to external points, can be oriented horizontally or vertically

Supplemental Weft – see Extra Weft

Sword Beater – see Beater

Tabby Weave – See Simple Weave

Tablet – a thin sheet of a rigid material, usually wood, cut into a small, regular shape with holes drilled through each corner. Warp yarns are passed through each hole, and many tablets are stacked together to complete the continuous warp. Also called a Card

Tablet Loom – a loom that uses tablets to change the shed. Also called a Card Loom

Tablet Weaving – a weaving method that uses rotating tablets or cards to change the sheds and create patterns. The tablets can be rotated individually or together. Also called Card Weaving

Twill Weave – a warp/weft weaving method in which the weft alternatively passes over one or more warps and then under two or more warps. Each row of weaving is offset one stitch from the row before to create a diagonal pattern. Different diagonal slopes and effects can be achieved by passing over and under different numbers of warps

Upright Loom – a stationary loom that is oriented vertically

Warp – lengthwise yarns held taught by the loom. Can refer to the warp as a whole, or to any individual lengthwise yarn

Warp-Faced Weave – a weave in which the visible surface of the textile is made up of the warp, where the weft has been completely hidden by the warp. This is usually achieved by using a warp of heavier weight than the weft

Warp/Weft Patterns – an image or pattern created on a double-faced fabric by using differently colored warps and wefts in different sections

Warp Patterns – an image or pattern created in a warp-faced fabric by using differently colored warps

Warp Rod – a rod suspended across the width of the loom around which one end of the warps are wrapped or secured. There is usually a mechanism to pull on the warp rod to create tension in the warps, and may be a mechanism to rotate the rod to release extra warp length to make longer textile pieces. Always located at or near the top and bottom of the loom. A loom may have one or two warp rods, depending on whether or not a cloth rod is employed

Weave – a method of producing textiles on a loom by passing a weft back and forth between the warp, where the warp goes over or under alternating patterns of warp

Weft – yarns passed widthwise through the sheds of the warp

Weft-Changing Weave – a weft-faced or warp/weft faced weaving method in which differently colored wefts are used to create a pattern

Weft-Faced Weave – a weave in which the visible surface of the textile is made up of the weft, where the warp has been completely hidden by the weft. This is usually achieved by using a weft of larger weight than that of the warp

Weft Patterns – an image or pattern created in a weft-faced fabric by using differently colored wefts in different sections larger weight than that of the weft

Yarn – the basic unit of a textile, the string or yarn that is used to create the material

Yarn Weight – a descriptive scale of yarn thickness, in which small numbers are fine yarns and larger numbers are more bulky

Photo Index

Photo 1
Photo by Trevor Keevil
Photographed 27 July 2014
Olduvai Gorge, Ngorongoro Conservation Area, Tanzania
Pictured (left-right, around the table): Eri Ohara-Anderson, Pendo Melau, Kristen Welch, Victoria Sluka, Nairoshi Zebedayo, Carmen Martin Ramos, Eli Diaz.
Learning to make traditional Maasai bracelets.

Photo 2
Photo by Victoria Sluka
Photographed 27 July 2014
Olduvai Gorge, Ngorongoro Conservation Area, Tanzania
Photographed July 2014
Traditional Maasai bracelets made by Victoria Sluka (left) and Georgina de Barros (right). Instructed by Nairoshi Zebedayo and Pendo Melau.

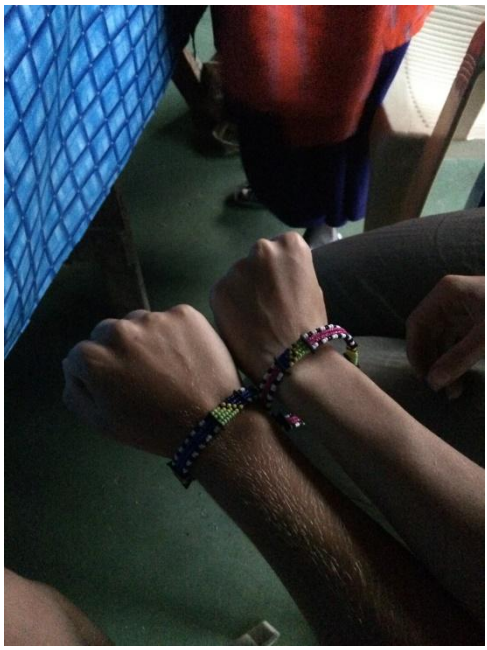


Photo 3
Photo by Victoria Sluka
Photographed 13 August 2015
Victoria & Albert Museum, London, UK
Catalogue #I.M.2(59)-1917
Late 19th century, Punjab, India. Weaver-Saint Kabir, his wife, and a musician.

Photo 4 (Photos 4-6)
Photo by Victoria Sluka
Photographed 13 August 2015
Victoria & Albert Museum, London, UK
Catalogue #I.S.26-1969
19th century weaving code, Kashmir.

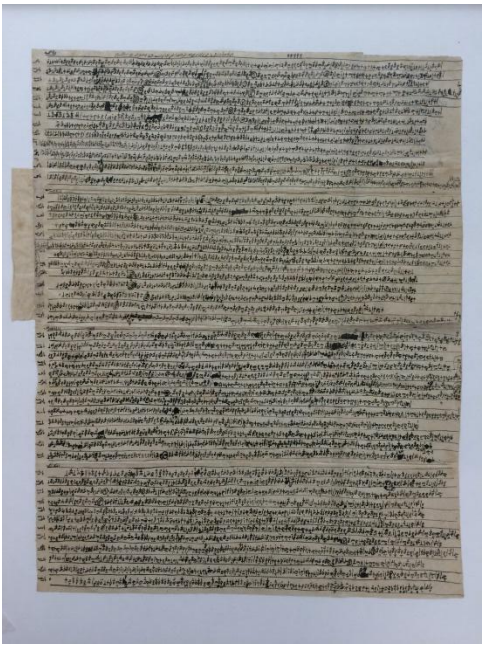


Photo 5

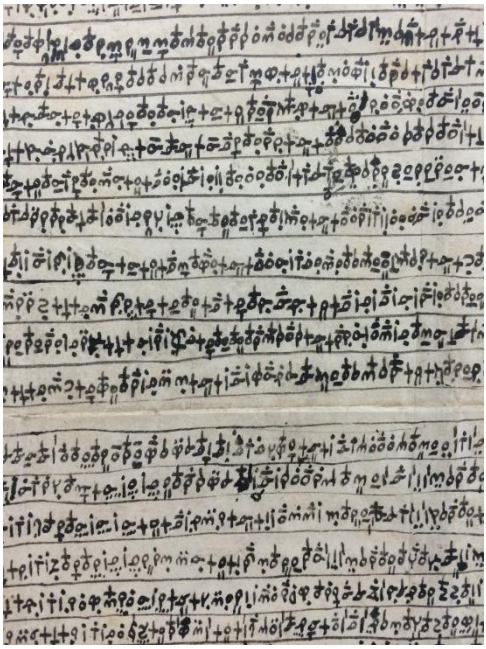


Photo 6

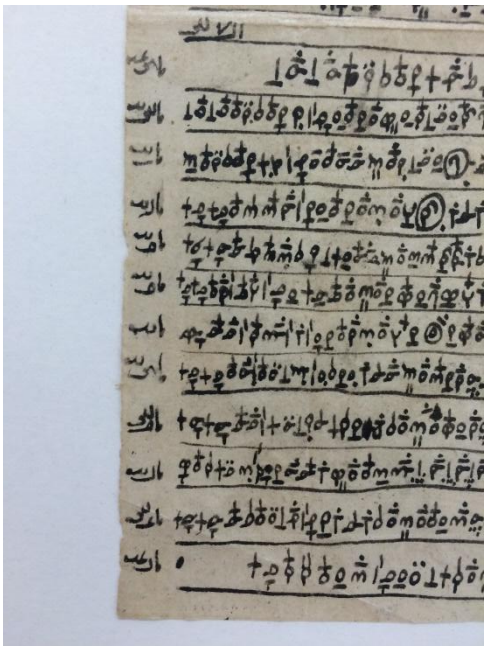


Photo 7
Photo by Victoria Sluka
Photographed 11 August 2015
Victoria & Albert Museum of Childhood, London, UK
Catalogue #B.2704-1999
Plans for a child's circular loom. Denys Fisher Toys, Limited. 1979.

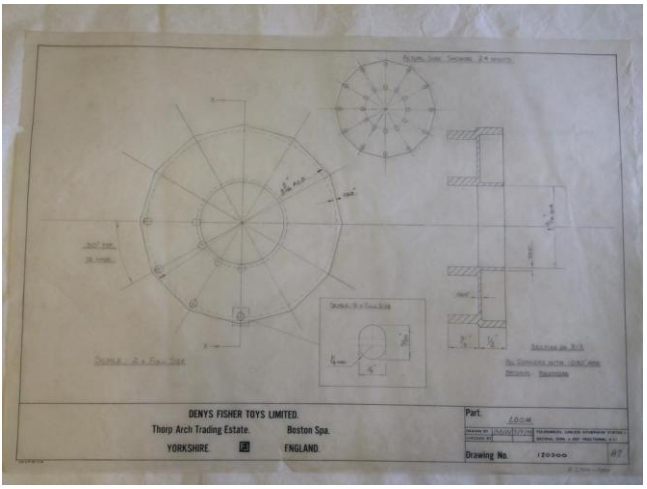


Photo 8 (Photos 8-10)
Photo by Victoria Sluka
Photographed 10 August 2015
Pitt Rivers Museum, Oxford, UK
Catalogue #1884.46.7
Backstrap loom produced by the Pueblo Zuni tribe, New Mexico, USA.

Photo 9
Rigid heddle.

Photo 10
Beating sword and completed textile.

Object plaque reads: "ZUNI, NEW MEXICO, U.S.A. Rigid heddle band loom. The heddle is of separate wooden laths, tied to sticks. The warp is of wool, with reinforcing threads at the selvedges. The band being woven is warp faced, and is wrapped round the weaver's waist, so that tension can be maintained by leaning back on it. There is a wooden sword for beating in. Coll. Stevenson (75732). P.R. coll. 1884.46.7."

Photo 11 (Photos 11-16)
Photo by Victoria Sluka
Photographed 10 August 2015
Pitt Rivers Museum, Oxford, UK
Catalogue #1891.36.27
Stationary loom produced by the Formosan people of Taiwan.

Photo 12
Tension stick, shed fork, and completed textile.

Photo 13

Shed fork.

Photo 14

Interior of the loom base, including the warp rod.

Photo 15

Completed textile, showing extraneous wefts.

Photo 16

End of the stationary log base, with the turnable warp rod protruding.

Object plaque reads: "HILL TRIBES. T loom. The warp beam is a large piece of is inserted into the ends of a dugout log box. The weaver provides tension by leaning on the backstrap and bracing her legs against the box. The box is also used to store the loom. The cloth beam is in two parts, carefully carved to interlock and hold the fabric firmly (the warp is continuous). There is a coil rod: a forked stick acts as a shed stick, one leg passing through the shed: and there is a sword beater. The plainw pattern. d.d. P.E. Matheson. 1891.36.27."

Photo 17
Photo by Victoria Sluka
Photographed 10 August 2015
Pitt Rivers Museum, Oxford, UK
Catalogue #1914.67.1-2
Tablet looms produced in the Reykjavik District, Iceland.

Object plague reads: "REYKJAVIK DISTRICT. ICELAND. Two card weaving sets, spjaldvef. In card or tablet weaving, the warp ends are threaded through different holes in a set of cards, which lie in line with the warp. This is done in such a way that, by turning a card, the ends threaded through it are caused to lie uppermost, in the middle, or underneath. By turning the cards thus, in groups, or all together, various sheds can be created for the passage of a weft thread. As there is virtually no limit to the combinations in which the cards can be turned, a great variety of patterns can be produced be weaving in this way. Due to the complexity of turning the cards however, this method is normally restricted to the weaving of narrow bands. The two examples shown have tablets of thin pieces of wood. The lower specimen has had the warp separated into two strands to show the way in which the threads can be moved independently of each other to create patterns. Purch. Mrs. B. Asmundsson. 1914.67.1 and 2."

Photo 18 (Photos 18-21)
Photo by Victoria Sluka
Photographed 10 August 2015
Pitt Rivers Museum, Oxford, UK
Catalogue #1917.47.3
Backstrap loom produced by the Tewa (Hano) tribe, Arizona, USA.

Photo 19

Rigid heddle and double warp.

Photo 20

Completed textile.

Photo 21
Rigid heddle and double warp.

Object plaque reads: "TEWA. HANO. ARIZONA, U.S.A. Large, rigid heddle hand loom, with backstrap. The heddle is composed of pierced lengths of reed, tied to wooden battens. Warp and weft are of woold, the warp striped in red, black and green, with red and black ends alternating in the centre to allow the patterned part to be woven. The band is warp faced. B. Freire-Marreco coll. 1913.149. Purch. 1917.47.3."

Photo 22
.Photo by Victoria Sluka
Photographed 10 August 2015
Pitt Rivers Museum, Oxford, UK
Catalogue #1917.47.141
Loom produced by the Pueblo Hopi tribe, Arizona, USA.

Object Plaque reads: "HOPI. ORAIBI. ARIZONA, U.S.A. Loom, made at HANO. Striped wooled warp in two colours. The same two coulours in the weft are supplied from two stick shuttles. Three heddle rods are present, together with a shed stick. The loops from the heddle rods raise different warp ends, so that the three heddles, together with the shed stick can be used to produce the twill weave seen on the specimen. Weaving has been done from one beam and

the the loom reversed, to complete the cloth from the other beam. A sword beater is used. The pointed stick is for pulling threads into place. Coll. B. Freire Marreco. Purch. 1917.47.141. 141a and b."

Photo 23 (Photos 23-27)
Photo by Victoria Sluka
Photographed 10 August 2015
Pitt Rivers Museum, Oxford, UK
Catalogue #1923.84.370
Backstrap loom produced by the Kuki peoples, Manipur, India.

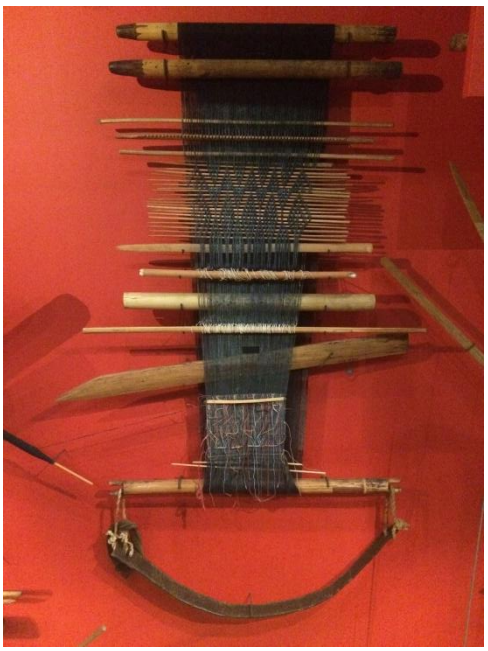


Photo 24
Decorative sheds produced by many shed sticks.

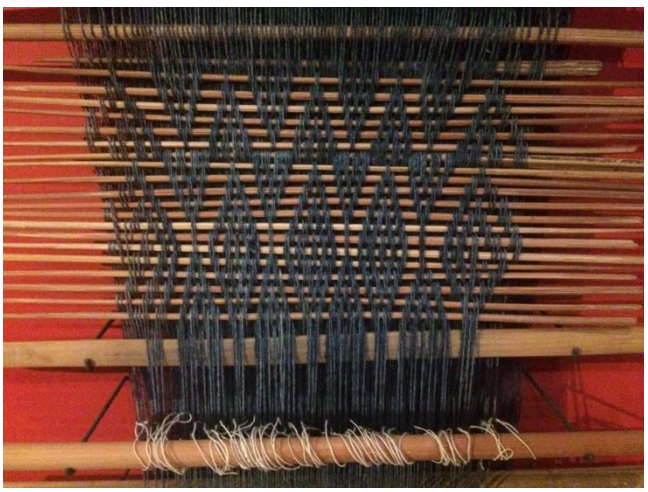


Photo 25

Top to bottom: cloth rod, tension rod, spacing stick, tension rod, multiple design shed sticks (21), shed fork, shed stick, heddle rod, shed stick, sword beater.

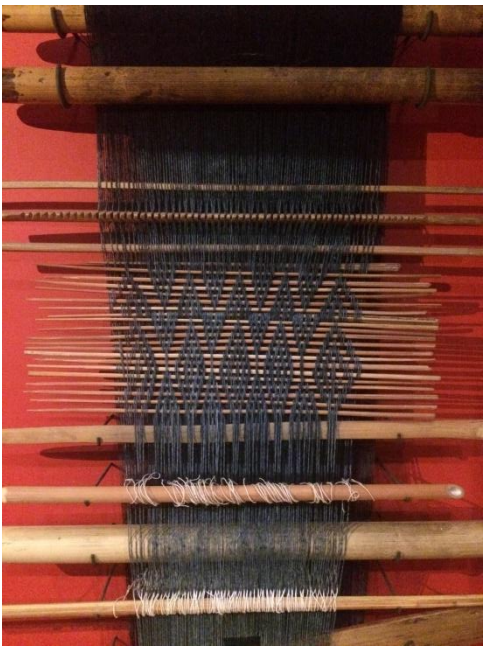
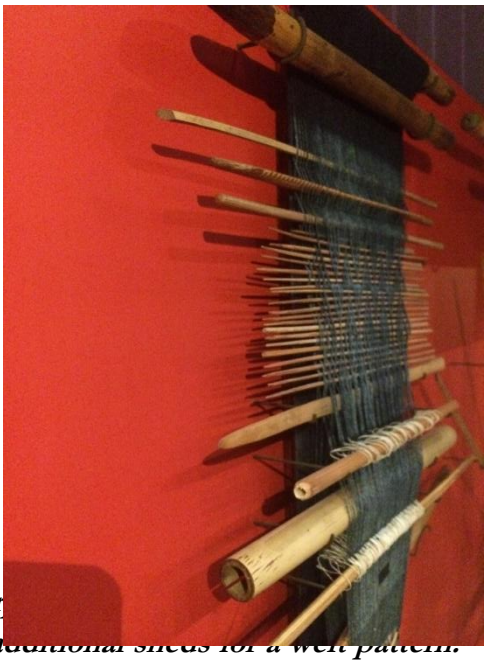


Photo 26

Reverse of the completed textile, where extraneous wefts have been left uncut. Sword beater shown at top, warp rod at bottom.

Photo 27
View of the continuous nature of the warp.



Object plaque reads: "THADO KUKI. MANIPUR. Backstrap loom, thilbu, for weaving thangnangpun cloth in patterns, formerly worn exclusively by men of social importance. The warp is continuous. There are two stick heddles, a bamboo shed stick and a wooden sword beater. Two sets of cross-sticks are present, one pair acting as a heading for the woven part, the other pair having in addition a notched-stick war[illegible] sticks inserted as pattern rods, to act as additional sheds for a weft pattern. On the woven section, the reverse of which can be seen, the added weft threads have been left uncut. A bamboo temple is present. The shuttle is of the spool form. d.d. J.H. Hutton. 1918. 1923.84.370."

Photo 28 (Photos 28-31)
Photo by Victoria Sluka
Photographed 10 August 2015
Pitt Rivers Museum, Oxford, UK
Catalogue #1927.26.15
Handheld loom produced by the Bodo Garo Atong people, Garo Hills, Meghalaya, India.

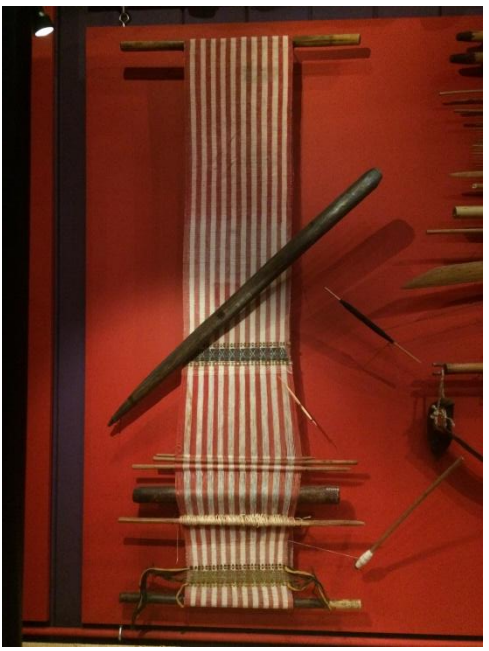


Photo 29

Top to bottom: tension rods (3), heddle rod, shed stick, completed textile, warp rod. The shuttle is at right.

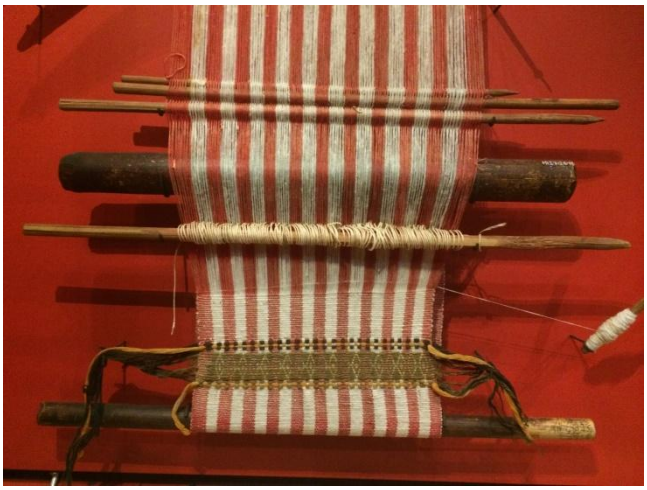


Photo 30

Single color primary weft creates a striped pattern on the alternating two-tone warp. Extraneous wefts create the pattern.

Photo 31

View of the continuous nature of the warp.

Object plaque reads: "GARO ATONG. GARO HILLS, ASSAM. Loom. The striped warp is continuous, with cross-sticks, a shed stick and a single heddle rod. The heddle loop is continuous. There is a spool type shuttle to hold the white weft thead, and two bands have also been woven with separate lengths of coloured supplementary weft threads. There is a wooden sword beater, and a short porcupine quill serves to arrange the threads. d.d. G.D. Walker. I.C.S. 1927.26.15."

Photo 32 (Photos 32-35)

Photo by Victoria Sluka
Photographed 10 August 2015
Pitt Rivers Museum, Oxford, UK
Catalogue #1930.43.102
Loom produced by the Igbo people, Anambra/Onitsha, Nigeria.

Photo 33
Alternating colors in the warp and a single
weft create stripes in the finished textile.

Photo 34
Shed stick and heddle rod.

Photo 35

Extra tension sticks (4) are used to divide the warp bunches.

Object plaque reads: "IBO. INYI VILLAGE, ONITSHA PROVINCE, NIGERIA. Vertical loom for weaving fabric from unspun lead-strips of the fan palm, and two bags made of this. The palm leaves appear to have been finely shredded once they were tied to the cloth beam. Four sticks are inserted as a heading, against which weaving starts. The warp has been dyed a reddish colour, with dark stripes, but the colours are bery much faded. The bags indicate the original colours. A single heddle and shed stick are present, to produce a tabby weave. The two bags show patterns which can be produced on such a loom. The upper one has a pattern similar to that being woven, with two colours in the warp and one in the weft. The lower one is patterned in one in the weft. The lower one is patterned in "log-cabin". This plainweave design is produced using alternate light and dark threads in both warp and weft, with the sequence being rebersed periodically. Thus at the junction between blocks on the pattern, the sequence would be either light, dark, light, light, dark, light, or dark, light, dark, dark, light, dark. Coll. and d.d.H. Balfour. 1930.43.102. (bags). 1930.43.99 and 100."

Photo 36 (Photos 36-40)
Photo by Victoria Sluka
Photographed 14 August 2015
Victoria & Albert Museum, London, UK
Catalogue #156-1893
Miniature tapestry loom used for teaching, England.

Photo 37
Shedding mechanism, where each alternating warp is connected to the shed stick via a loop.

Photo 38
Shed stick and shedding mechanism.

Photo 39
The completed textile, showing how different warps overlap. The warps are untrimmed.

Photo 40
The rigid heddle, which uses only slats.

Photo 41 (Photos 41-47)
Photo by Victoria Sluka
Photographed 14 August 2015
Victoria & Albert Museum, London, UK
Catalogue #293.1983
Miniature pile rug loom, produced by William Morris, England.

Photo 42
Selvedges of the completed textile, made of continuous Persian (asymmetrical) knots.

Photo 43
The pile of the completed textile, most of which has been sheared.

Photo 44
Dual rigid heddles, which can be moved independently to open the two sheds.

Photo 45
The lever that shifts the dual heddles.

Photo 46

Reverse of the textile, where the individual knots are visible.

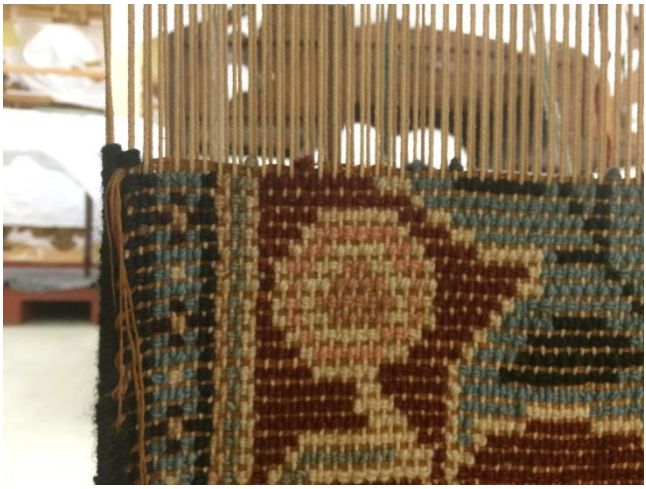


Photo 47

The upper of the two heddles, made of a wooden frame with metal slats.

Photo 48 (Photos 48-54)
Photo by Victoria Sluka
Photographed 14 August 2015
Victoria & Albert Museum, London, UK
Catalogue #501-1894
Scandinavian band loom, built in 1894.

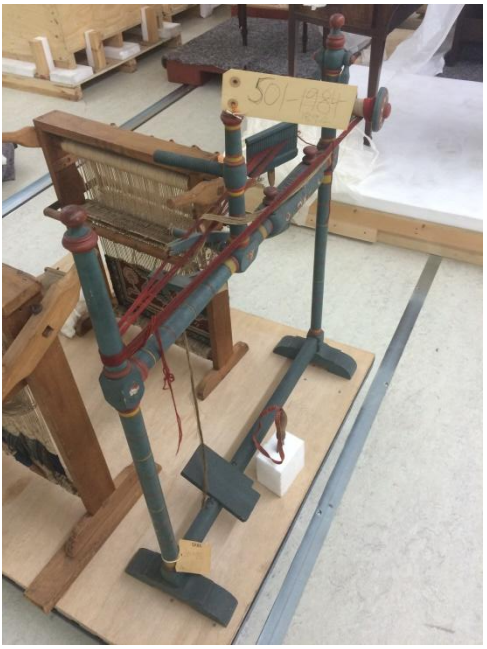


Photo 49
The route of the warp, starting on the warp rod, then around a tension peg, passes through a rigid heddle, then is taken in by a cloth rod.

Photo 50

The warp rod (left) and cloth rod (right), including the finished textile.

Photo 51

The rigid heddle suspended in the warp. The thinner tan warps have snapped over time.

Photo 52

A lever is used to open the extra sheds created by the double warp.

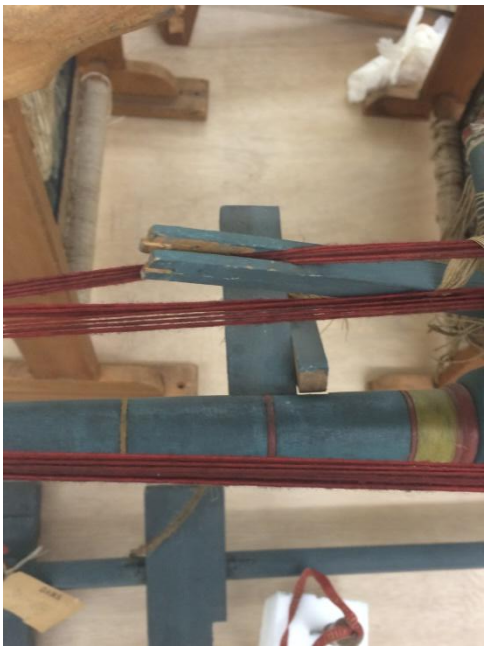


Photo 53

The rigid heddle, and the foot lever used to operate the secondary shedding system (Photo 52).

Photo 54
Shedding lever holding a shed open.

Photo 55 (Photos 55-59)
Photo by Victoria Sluka
Photographed 14 August 2015
Victoria & Albert Museum, London, UK
Catalogue #T172-2000
A narrow band loom, England.

Photo 56

The completed textile, including two tension sticks and the warp rod.

Photo 57

The shed stick, which must be rotated to take up the slack in the loops that are attached to alternating warps.

Photo 58

Tension is creating by (un)screwing the pins, making the frame wider or narrower.

Photo 59

Pins at the end of the frame organize the warps into groups to ease threading.

Photo 60
Photo by Victoria Sluka
Photographed 13 August 2015
Victoria & Albert Museum, London, UK
Catalogue #0929.4
"A Shuttle Maker," sketched by John Lockwood Kipling for the British Imperial Government. Amritsar, India, 1870.

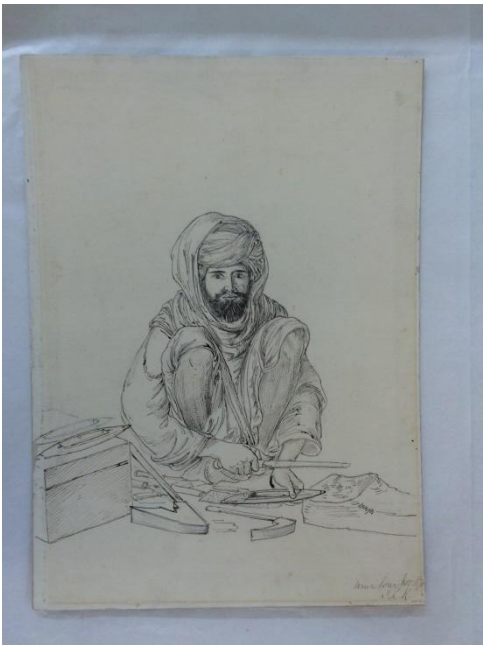


Photo 61
Photo by Victoria Sluka
Photographed 13 August 2015
Victoria & Albert Museum, London, UK
Catalogue #0929.5
"A Shawl Loom," sketched by John Lockwood Kipling for the British Imperial Government. Amritsar, India, 1870.

Photo 62
Photo by Victoria Sluka
Photographed 13 August 2015
Victoria & Albert Museum, London, UK
Catalogue #0929.6
"A Loom for Weaving Shawls," sketched by John Lockwood Kipling for the British Imperial Government. Amritsar, India, 1870.

Photo 63
Photo by Victoria Sluka
Photographed 13 August 2015
Victoria & Albert Museum, London, UK
Catalogue #0929.15
"Edging and Belt Weaver," sketched by John Lockwood Kipling for the British Imperial Government. Amritsur Jail, India, 1870.

Photo 64
Photo by Victoria Sluka
Photographed 13 August 2015
Victoria & Albert Museum, London, UK
Catalogue #0929.21
"Gold Lace Making," sketched by John Lockwood Kipling for the British Imperial Government. Delhi, India, 1870.

Photo 65
Photo by Victoria Sluka
Photographed 13 August 2015
Victoria & Albert Museum, London, UK
Catalogue #0929.22
"Gold and Silver Lace Making," sketched by John Lockwood Kipling for the British Imperial Government. Delhi, India, 1870.

Photo 66
Photo by Victoria Sluka
Photographed 13 August 2015
Victoria & Albert Museum, London, UK
Catalogue #0929.24
"Untitled," sketched by John Lockwood Kipling for the British Imperial Government. Unknown location, India, 1870-72.

Photo 67
Photo by Victoria Sluka
Photographed 13 August 2015
Victoria & Albert Museum, London, UK
Catalogue #0929.24
"Loom for Weaving Pile Carpets," sketched by John Lockwood Kipling for the British Imperial Government. Amritsar, India, 1870.

Photo 68
Photo by Victoria Sluka
Photographed 13 August 2015
Victoria & Albert Museum, London, UK
Catalogue #0929.34
"Carpet Loom," sketched by John Lockwood Kipling for the British Imperial Government. Lahore, India, 1871.

Photo 69
Photo by Victoria Sluka
Photographed 13 August 2015
Victoria & Albert Museum, London, UK
Catalogue #0929.36
"A Weaver at Work," sketched by John Lockwood Kipling for the British Imperial Government. Punjab, India, 1870.

Photo 70
Photo by Victoria Sluka
Photographed 13 August 2015
Victoria & Albert Museum, London, UK
Catalogue #0929.37
"Muslim Turban Weaving," sketched by John Lockwood Kipling for the British Imperial Government, Delhi, India, 1870.

Photo 71
Photo by Victoria Sluka
Photographed 13 August 2015
Victoria & Albert Museum, London, UK
Catalogue #0929.38
"Loom for Weaving Daris (pileless carpets)," sketched by John Lockwood Kipling for the British Imperial Government. Amritsur, India, 1870.

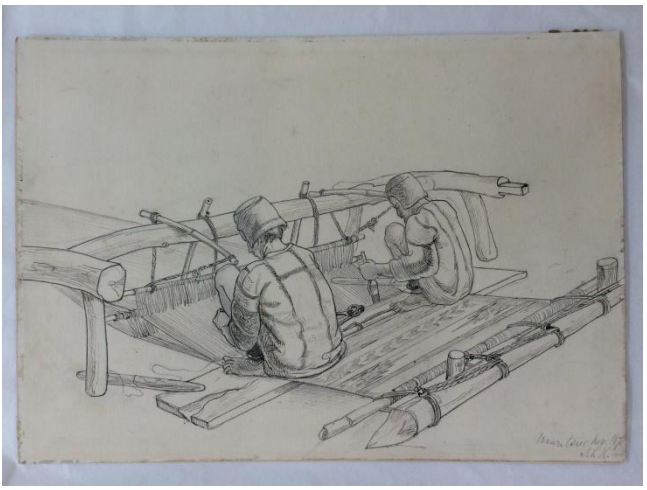


Photo 72
Photo by Victoria Sluka
Photographed 13 August 2015
Victoria & Albert Museum, London, UK
Catalogue #0929.39
"Loom for Weaving Silk Fabrics," sketched by John Lockwood Kipling for the British Imperial Government. Amritsar, India, 1870.

Photo 73
Photo by Victoria Sluka
Photographed 13 August 2015
Victoria & Albert Museum, London, UK
Catalogue #E.339.34-2010
"Carpet Weaving," photographed by Antoin Sevruguin. Sultanabad, Iran, 1880.

Photo 74 (74-75)
Photo by Victoria Sluka
Photographed 13 August 2015
Victoria & Albert Museum, London, UK
Catalogue #E.4414-1911
Cashmere scarf design, drawn by George C. Haité (1855-1924).

Photo 75
Detail of drawing.

Photo 76
Photo by Victoria Sluka
Photographed 13 August 2015
Victoria & Albert Museum, London, UK
Catalogue #E.4415-4418-1911
Cashmere scarf designs, drawn by George C. Haité (1855-1924).

Photo 77
Photo by Victoria Sluka
Photographed 13 August 2015
Victoria & Albert Museum, London, UK
Catalogue #E.4423-4430-1911
Cashmere scarf designs, drawn by George C. Haité (1855-1924).

Photo 78
Photo by Victoria Sluka
Photographed 13 August 2015
Victoria & Albert Museum, London, UK
Catalogue #E.4425-1911
Cashmere scarf designs, drawn by George C. Haité (1855-1924).

Photo 79
Photo by Victoria Sluka
Photographed 13 August 2015
Victoria & Albert Museum, London, UK
Catalogue #E.4429-1911
Cashmere scarf designs, drawn by George C. Haité (1855-1924).

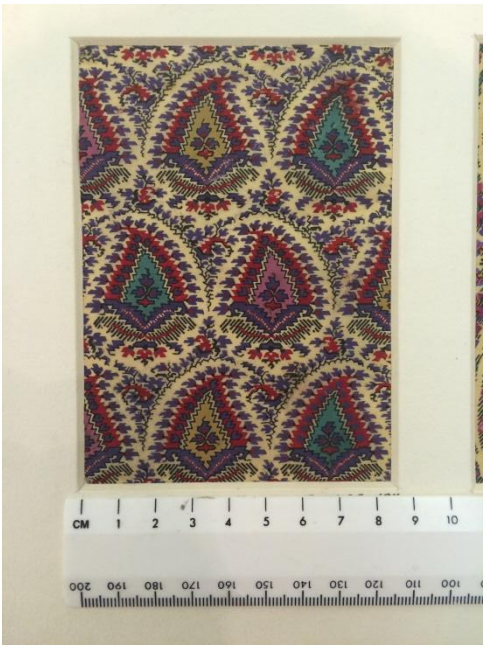


Photo 80
Photo by Victoria Sluka
Photographed 13 August 2015
Victoria & Albert Museum, London, UK
Catalogue #E.4434-4437-1911
Cashmere scarf designs, drawn by George C. Haité (1855-1924).

Photo 81
Photo by Victoria Sluka
Photographed 13 August 2015
Victoria & Albert Museum, London, UK
Catalogue #E.4440-1911
Cashmere scarf designs, drawn by George C. Haité (1855-1924).

Photo 82
Photo by Victoria Sluka
Photographed 13 August 2015
Victoria & Albert Museum, London, UK
Catalogue #E.4443-4444-1911
Cashmere scarf designs, drawn by George C. Haité (1855-1924).

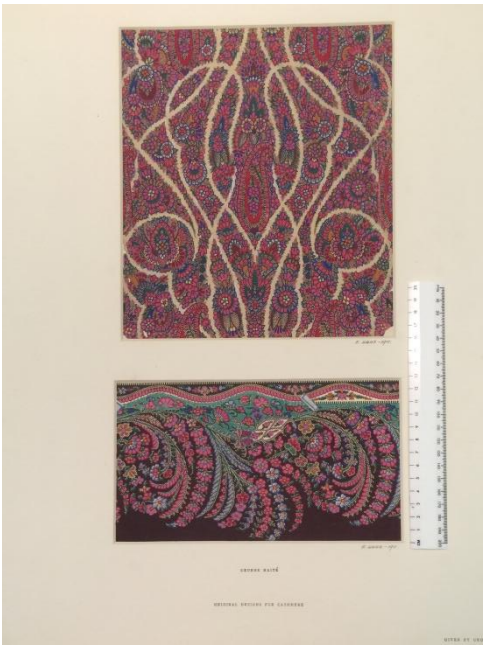


Photo 83
Photo by Victoria Sluka
Photographed 13 August 2015
Victoria & Albert Museum, London, UK
Catalogue #E.4445-4446-1911
Cashmere scarf designs, drawn by George C. Haité (1855-1924).

Photo 84
Photo by Victoria Sluka
Photographed 13 August 2015
Victoria & Albert Museum, London, UK
Catalogue #E.4449-1911
Cashmere scarf designs, drawn by George C. Haité (1855-1924).

Photo 85
Photo by Victoria Sluka
Photographed 13 August 2015
Victoria & Albert Museum, London, UK
Catalogue #E.4449-4450-1911
Cashmere scarf designs, drawn by George C. Haité (1855-1924).

Photo 86
Photo by Victoria Sluka
Photographed 13 August 2015
Victoria & Albert Museum, London, UK
Catalogue #E.4450-1911
Cashmere scarf design, drawn by George C. Haité (1855-1924).

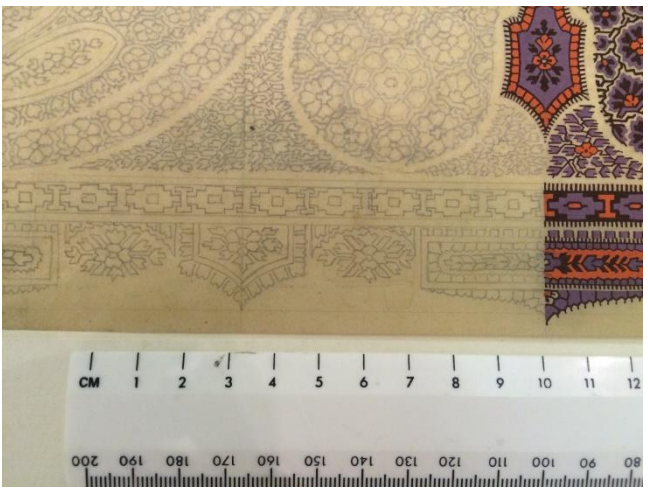


Photo 86
Photo by Victoria Sluka
Photographed 13 August 2015
Victoria & Albert Museum, London, UK
Catalogue #E.4450-1911
Cashmere scarf designs, drawn by George C. Haité (1855-1924).

Photo 87
Photo by Victoria Sluka
Photographed 13 August 2015
Victoria & Albert Museum, London, UK
Catalogue #E.4456-1911
Cashmere scarf designs, drawn by George C. Haité (1855-1924).

Photo 88
Photo by Victoria Sluka
Photographed 13 August 2015
Victoria & Albert Museum, London, UK
Catalogue #E.4461-4462-1911
Cashmere scarf designs, drawn by George C. Haité (1855-1924).

Photo 89
Photo by Victoria Sluka
Photographed 13 August 2015
Victoria & Albert Museum, London, UK
Catalogue #E.23247-1957
Textile design, drawn by William Morris (1834-1896).

Photo 90
Photo by Victoria Sluka
Photographed 13 August 2015
Victoria & Albert Museum, London, UK
Catalogue #E.23250-1957
Textile design, drawn by William Morris (1834-1896).

Photo 91
Photo by Victoria Sluka
Photographed 13 August 2015
Victoria & Albert Museum, London, UK
Catalogue #E.23252-1957
Textile design, drawn by William Morris (1834-1896).

Photo 92
Photo by Victoria Sluka
Photographed 13 August 2015
Victoria & Albert Museum, London, UK
Catalogue #E.23256(1)-1957
Textile design, drawn by William Morris (1834-1896).

Photo 93
Photo by Victoria Sluka
Photographed 13 August 2015
Victoria & Albert Museum, London, UK
Catalogue #E.23256(2)-1957
Textile design, drawn by William Morris (1834-1896).

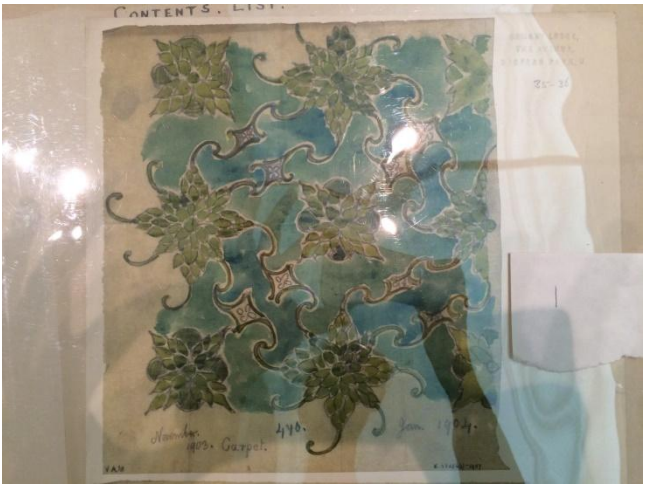


Photo 94
Photo by Victoria Sluka
Photographed 13 August 2015
Victoria & Albert Museum, London, UK
Catalogue #E.23257-1957
Textile design, drawn by William Morris (1834-1896).

Photo 95
Photo by Victoria Sluka
Photographed 24 January 2016
Indiana, USA
Shuttle from modern European child's loom.

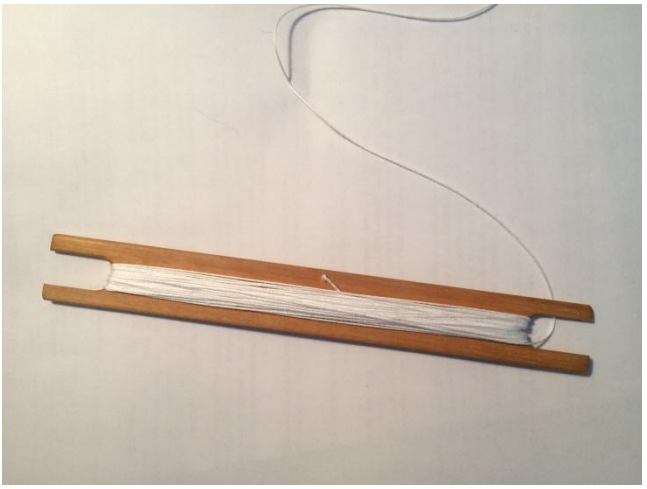
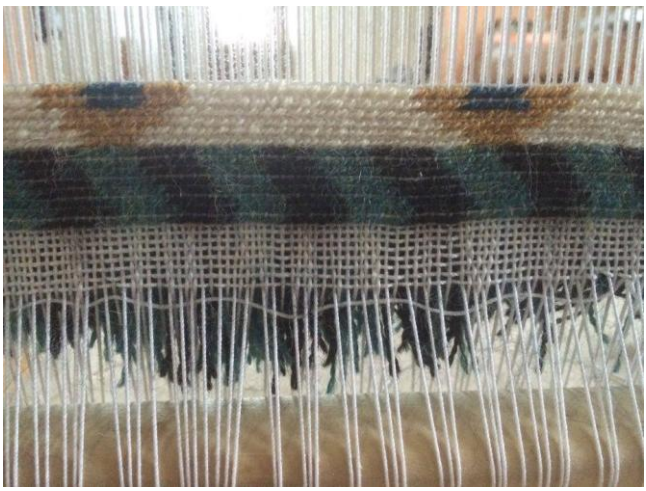


Photo 96
Photo by Victoria Sluka
Photographed 26 July 2015
Indiana, USA
Threaded Persian loom built by Victoria Sluka, 2015.

Photo 97
Photo by Victoria Sluka
Photographed 04 August 2015
Indiana, USA
Reverse of a Persian rug, made by Victoria Sluka. 2015.



Museum & Collection Information			Cultural Data				Loom Type	
Loom	Format	Location	Origin Location	Cultural Group	Date	M/F/U	Heddle	Tablet
Coll. Stevenson (75732). P.R. coll 1884.46.7	Object	PRM	NM, USA	Pueblo Zuni	L.1800s	W	X	
d.d.P.E. Matheson. 1891.36.27	Object	PRM	Taiwan	Hill Tribes	L.1800s	W	X	
d.d.G.D.Walker. I.C.S. 1927.26.15	Object	PRM	Assam	Bodo Garo Atong	E.1900s	W	X	
d.d.J.H.Hutton. 1918. 1923.84.370	Object	PRM	Manipur	Kuki	E.1900s	W	X	
Coll. and d.d.H.Balfour. 1930.43.102	Object	PRM	Nigeria	Igbo	E.1900s	W	X	
Coll. B. Freire Marreco. Purch. 1917.47.141 (a & b)	Object	PRM	AZ, USA	Pueblo Tewa	E.1900s	W	X	
B.Freire-Marreco coll.1913.149. Purch. 1917.47.3	Object	PRM	AZ, USA	Pueblo Hopi	E.1900s	W	X	
Purch. Mrs. B. Asmundsen. 1914.67.1-2	Object	PRM	Iceland	Icelandic Euro.	E.1900s	W		X
E 339:34-2010	Photo	VASR	Iran	NA	NA	W	X	
.0929.5	Sketch	VASA	Umritsur, India	NA	1870	M	X	
.0929.6	Sketch	VASA	Umritsur, India	NA	1870	M	X	
.0929.15	Sketch	VASA	Umritsur, India	NA	1870	M		X
.0929.21	Sketch	VASA	Delhi, India	NA	1870	M	X	
.0929.22	Sketch	VASA	Delhi, India	NA	1870	M	X	
.0929.33	Sketch	VASA	Amritsur, India	NA	1870	M	X	
.0929.34	Sketch	VASA	Lawnpore, India	NA	1871	M	X	
.0929.36	Sketch	VASA	Punjab, India	NA	1870	M	X	
.0929.37	Sketch	VASA	Delhi, India	NA	1870	M	X	
.0929.38	Sketch	VASA	Amritsur, India	NA	1870	M	X	
.0929.39	Sketch	VASA	Amritsur, India	NA	1870	M	X	
.0929.24	Sketch	VASA	India	NA	1870-72	M		X
156-1893	Object	VAF	England	English Euro.	L.1800s	M	X	
293-1893	Object	VAF	England	English Euro.	L.1800s	M	X	
501-1894	Object	VAF	Scandinavia	Scandiavian Euro.	1894	W	X	
T172-2000	Object	VAF	England	English Euro.	1930s	U	X	

Simple Weave Pattern								
Simple	Weft-Changing	Twill	Log Cabin	Tabby	Selvages	Shuttle(s)	Backstrap	Frame
	X						X	
	X						X	X
	X					X		
	X					X		
			X	X		X		
		X				X		
						X	X	
X					X	X		X
	X				X	X		X
					X	X		X
						X		X
						X		X
						X		X
X					X			X
X					X			X
						X		X
						X		X
						X		X
						X		X
							X	
	X				X	X		X
X								X
	X							X
	X							X

Tension Rods		Fabric Sideness			Patterns					Yarn Weight	
Internal	External	Single	Double	Inverted	Warp	Weft	Warp/Weft	Extra Weft	Pile	Single	Multi
			X		X						X
1	1	X				X		X		X	
3		X				X		X		X	
5		X			X			X		X	
4			X				X			X	
	1		X				X			X	
			X		X					X	
				X	X					X	
		X							X		X
2+										X	
2+										X	
1				X	X					X	
										X	
										X	
1		X							X		X
	2	X							X		X
1										X	
3										X	
	1	X					X			X	
3										X	
				X	X					X	
1		X				X					X
		X							X	X	
1				X			X				X
2			X			X					X

Mobility		Orientation		Construction		Warp Length		Warp Type		Textile Size	
Hand-Held	Stationary	Vertical	Horizontal	Weaving	Knotting	Segmented	Continuous	Single	Double	Sheet	Belt
X			X	X		X		X		X	
X			X	X		X		X		X	
	X	X		X			X	X		X	
X			X	X			X	X		X	
	X	X		X		X		X		X	
	X	X		X		X		X		X	
X			X	X		X			X		X
			X	X		X			X		X
	X	X			X	X		X		X	
	X		X	X		X				X	
	X		X	X		X				X	
	X		X	X		X			X		X
	X	X		X		X		X			
	X	X		X		X					X
	X	X			X	X		X		X	
	X	X			X	X		X		X	
	X		X	X		X				X	
	X		X	X		X				X	
	X		X	X		X				X	
	X		X	X		X					
	X		X	X			X		X		X
	X			X		X		X		X	
	X	X			X	X		X		X	
	X		X	X		X			X		X
	X		X	X		X		X			X

Textile Facing				Comapacting Tool		Heddle		Shed			Support Beams	
Warp	Weft	Double	Pile	Sword	Comb	Rigid	Rod	Stick	Fork	Tablets	Warp Rod	Cloth Rod
X				X		X						
	X			X			1		1		1	
	X			X			1	1				2
X				X			2	21				2
		X		X			1	1			2	
		X		X			3	1			2	
X						X					1	
X										X		
			X		X			1			1	1
						X		2+			1	1
						X		2+			1	1
X				X		X		1		X	1	1
						X						1
						X		1				1
			X		X		1	1			1	1
			X		X		1	1			1	1
						X		2+			1	1
						X		2				1
	X				X			2			1	
						X		2			1	1
X										X		
	X					X		1			1	1
			X					2			1	1
		X				X			1		1	1
	X					X		1			1	1

Table 2: United Nation's 1948 Human Rights: Categorized (article number)

Economic	Social	Political	Cultural
- Right to Own Property (17) - Right to Choose Employment (23) - Right to Ownership of Intellectual Creations (27)	- Right to Life, Liberty, and Security (3) - Protection against Slavery (4) - Protection against Torture and Cruelty (5) - Right to Privacy (12) - Right to Live Anywhere and Move at Will (13) - Right to Seek Asylum (14) - Right to a Nationality (15) - Right to Marry and have a Family (16) - Right to Opinion and Expression (19) - Right to Peaceful Assembly (20) - Right to Social Security (22)	- Right to Personhood (6) - Protection against Discrimination in Law (7) - Right of Access to Justice (8) - Protection against Arbitrary Arrest and Exile (9) - Right to Fair Trial by Peers (10, 11) - Right to have Voice in and Access to Politics (21) - Protection against the Cancellation of Rights by a State (30)	- Freedom of Thought and Religion (18) - Right to Participate in Culture (27)

	- Right to Rest and Leisure (24) **- Right to Health and Healthcare (25)** **- Right to Education (26)** **- Right to Claim Human Rights (28)** **- Protection against the Infringement upon Rights of Others (29)**		

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