Travelers on the Silk Road carried more than trade goods—they also brought stories with them, many of which still delight us today. Here are a few tales from those long-ago times that might seem familiar to you.

The Stonecutter Who Was Never Satisfied
In this Chinese folktale, many wishes come true, but happiness is still hard to find.

On a hot summer day in ancient China, a stonecutter worked long and hard swinging his hammer under the blazing sun. As he wiped the sweat from his brow, he thought to himself, "Surely the sun is the most powerful being in the world. I wish I could be the sun!" he cried. A fairy heard his wish and the sun he became.

Without wasting a second, he began to send hot sunbeams down to the land. It was wonderful to shine so bright! Then a cloud came drifting along and his light grew dim. How could that be? A cloud mightier than him! Now a white, fluffy cloud was what he wanted to be.

That wish too was granted and he became a cloud, happy just to float through the blue Chinese sky. Then along came the wind. It fluttered and whirled around him and would not let him be. "If I can't have my peace, then I'd rather blow free," he declared. "I want to be a fierce wind!"

The fairy listened and once more she offered help. Now he twisted and twirled. He teased branches and chased leaves. He dashed here and there, until he blew against a rock that stood in his way. He blew as hard as he could, but the stone didn't move. "If I were a stone," he thought, "no one would bother me. A stone is the best thing to be!"

So the fairy turned him into a big, heavy rock. He sat very still and watched time go by. Until one day a group of stonecutters came his way. They pounded away at him—just doing their job.

"Please, fairy!" he begged. "Being a stone is not what I want after all. From now on I want to be nobody else but me."

One last time, the stonecutter got his wish. He picked up his hammer and went back to work under the sweltering sun.

The Goose That Laid the Golden Eggs
This Greek story is one of Aesop's fables and was told in many lands along the Silk Road. The scenes shown here are based on a mural illustrating the tale, found near Samarkand in the ruins of a merchant's home.

There once was a man who owned a wonderful goose. Every morning, the goose laid for him a big beautiful egg—an egg made of pure, shiny, solid gold. Every morning, the man collected the golden eggs. And little by little, egg by egg, he began to grow rich.

But the man wanted more. "My goose has all those golden eggs inside her," he kept thinking. "Why not get them all at once?"
One day he couldn't wait any longer. He grabbed the goose and killed her. But there were no eggs inside her! “Why did I do that?” the man cried. “Now there will be no more golden eggs.”

The Lion and the Hare

This tale appears in an ancient Indian book of stories. In the time of the Silk Road, the book became very popular in the Middle East after it was translated into Persian, Arabic, and Hebrew.

In ancient times, a ferocious lion lived in the forest, killing without remorse. The other animals were terrified. To stop the lion's deadly hunts, some animals offered to provide him with food each day. Some animals would still die, of course, but the rest would live in peace. The lion agreed and enjoyed months of the easy life.

One day it was the hare's turn to present himself to the lion. Although small, the hare was very crafty. “Lion, Lion,” the hare cried out as he approached. “Help me, help me! Another lion is trying to eat me. But I am to be your dinner! You must stop him!”

Furious that someone was trying to steal his food, the lion demanded, “Take me to the thief. I will make him pay for this mischief!”

The hare and the lion made their way through the forest, eventually reached a deep well. There the lion looked down and saw his own reflection in the water. Thinking he had found the creature who tried to steal his food, the lion jumped down, ready to fight.

Alas, the lion never came out of that well, and the animals lived in peace from that day on.
According to legend, Islamic armies stole the secret of paper in 751, when they defeated Chinese forces at the Battle of Talas in central Asia. Several Chinese artisans were taken as captives and whisked off to Samarkand, where they founded the first paper mill in Islamic lands. Though this story is likely a myth, from that time on, Samarkand became famous throughout the Islamic world for its especially fine paper.

We may take it for granted today, or even claim we can do without it, but of all the treasures that moved along the Silk Road, none was more powerful than paper. This Chinese invention launched nothing short of a revolution in learning and literacy. Light, flexible, and inexpensive to make, paper became the ideal surface for recording ideas and made transporting and sharing them easier than it had ever been. As paper spread from China to the Middle East, it opened up a remarkable age of writing, reading, and learning.

Silk may have given the ancient trade routes their name, but paper gave them a brand-new and crucially important purpose.
People have been writing for at least 5,000 years—much longer than they have been making paper. What did they write on before it was invented?

**EAST AND SOUTH ASIA**

**Bamboo and Silk**
Some of the earliest Chinese books were written on strips of bamboo, wood boards, or silk.

**Talipot Palm Leaf**
In India and Southeast Asia, writers once used strips cut from dried palm leaves to record their works.

**WEST ASIA**

**Cuneiform Clay Tablet**
Scribes of the ancient Middle East used a stylus made from a carefully cut reed to press wedge-shaped letters into clay.

**Wood and Wax Tablet**
Greek and Roman writers sometimes spread wooden tablets with a layer of wax, then traced letters in the wax with a stylus.

**Parchment and Papyrus**
In early Islamic times, the Qur'an and other sacred works were copied on vellum or parchment—animal skins that were scraped, soaked, and dried. Court records were kept on papyrus, made from the Egyptian papyrus plant.
In the Rough
Most of the paper we use today comes from wood pulp, but Chinese papermakers experimented
with many kinds of plant fibers, including hemp, flax, and the bark of the paper mulberry tree. In
central Asia and the Middle East, most paper was made from linen or cotton rags.

Ornamental paper was popular in China as well as the Islamic world. To prepare fine paper
for writing, Islamic craftsmen coated the sheets with rice starch, polished them with a smooth
stone, and tinted or decorated them with various dyes.

Papermaking, Step by Step

1. Shred plants or pieces of cloth and soak them in
water.

2. Boil the plants and pound them to a pulp.

3. Mix the pulp into a pulp and hang it up.

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Early papermakers in central Asia used a papermaking mold that had two basic parts: a wooden frame and a flexible screen made of woven reeds. When the mold was dipped in the vat, the plant fibers formed a sheet on the screen. Then the screen was lifted off the frame and the sheet of paper was turned out to dry.

3. Mix the pulp with water in a vat. The tiny fibers will hang suspended in the water. Dip a paper mold in and lift it out. It will pick up a thin layer of pulp, forming a sheet.

4. Turn out the wet sheet of paper and press it to squeeze out the water.

5. Hang the paper to dry.
Paper, Pen, and Ink
As paper spread from east to west along the Silk Road, books became more bountiful than ever before. Chinese artists learned to smear ink on carved wooden blocks, which they used to print thousands of pages very quickly. When paper came to the Islamic world, a passion for reading and writing blossomed there, and Islamic scholars took the lead in the study of science, language, and literature.

In 1023, the Chinese were using specially made paper with watermarks and other marks to identify their paper. Silk Road traders also used paper for notes, letters of credit, and invoices. In the Tang dynasty, paper was used as a lightweight but strong material for records.

Precious Uses
When paper was first used for clerical tasks, it was often made of fine silk. The arrival of paper in the Islamic world led to the creation of new books and records that were previously impossible. The use of paper in this lightweight sub-

Handcrafted
For many centuries, books were written by hand in the Middle East, not printed with wooden blocks as they sometimes were in China. But Islamic authors could still publish many books at a time. They would recite or read aloud, while a group of scribes took dictation.
In 1023, the Chinese government began block-printing money, using specially made mulberry paper to discourage counterfeiting. (This is not unlike our current practice of incorporating watermarks and other special features that are difficult to replicate into our paper currency.) Silk Road traders also bought and sold goods using promissory notes, letters of credit, and other paper records to avoid carrying cash. And, as we learned earlier, silk itself was sometimes used as a lightweight but precious substitute for money.

**Precious Uses**

When paper was first introduced to the Islamic world, it was used for clerical tasks such as keeping tax accounts and other records. The arrival of paper also facilitated the blossoming of science and scholarship in the Middle East. It’s safe to say that neither government, business, nor the arts could have been all that they were in the ancient world without the introduction of this lightweight substance—more precious than gold.

*An early example of Chinese paper money*
Though paper was quickly put to use in the arts and sciences, it is thought that Muslims were distrustful of paper to some degree. Their most sacred text, the Qur'an, continued to be transcribed on parchment and vellum for many years. Complete paper books dating back as far as 848 CE have been found—and it is suspected that thousands of paper manuscripts were produced around this time—but the Qur'an did not appear in this medium until the tenth century. The oldest paper copy on record is from 971–972 and was transcribed by the calligrapher Ali ibn Shadhan al-Razi. The script style in which the Qur'an was written also changed around this time, moving away from the artful Kufic scripts to a more contemporary cursive that was common in literary works. This change in style continued to transform the art of the written word in Islamic lands throughout the next centuries.
Of all the goods that traversed the Silk Road, it is paper—the most humble—that arguably had the greatest impact on global history. Chinese records mention the invention of paper by a court official named Cai Lun (ca. 50–121 CE) around 105. However, excavations at numerous sites in central Asia have yielded paper that can be dated earlier, and it is thought that this versatile material was actually first developed in south China sometime in the second or first century BCE. Prior to the development of paper, Chinese records were written on strips of wood and bamboo and pieces of silk.

The dark color of a fragment of a list of accounts found at Loulan, an ancient oasis town at the northeast edge of the Lop Nor desert, is typical of early examples. By the third century, paper made of mulberry bark and other fibers was lighter in tone. By the time of the Tang dynasty, paper was used for records and accounts, in textiles, for cosmetics, and to make kites (for entertainment and military signaling) and decorations such as flowers. Tang papermaking was highly specialized with different manufacturers producing papers of varying sizes and quality, and in colors such as white and green. After the fourteenth century, paper also became the primary medium for painting and calligraphy in China.

The dry climate around Loulan and other oasis centers helped to preserve documents including...
letters, religious texts, and administrative records in some number. However, some of the most spectacular finds of the twentieth century—including a hidden library holding more than 10,000 manuscripts and paintings—were discovered within the cave-temples at the famed Buddhist site of Mogao near Dunhuang in northwestern China. Most of the paintings were on silk, but the records, which date from the fifth through the eleventh century, were written on paper in languages that included Sanskrit, Sogdian, Khotanese, Tibetan, and Chinese. These invaluable documents took several formats, including scrolls, books bound in a variety of fashions, and those folded in an accordion-like shape.

Some of the earliest examples of wood-block printing, which began in China around 700, were among the documents found in the caves at Mogao. The earliest dated example of a printed book is a manuscript of the Diamond Sutra, a Buddhist text that was first translated into Chinese around 400. It consists of seven strips of paper bound together as a scroll that is over 17 feet (5 meters) long. As is often the case, the sutra has an illustrated frontispiece that shows a Buddha seated before an altar as he teaches an assembly of celestial beings and lay people. A colophon at the end has a date of 868 and indicates that a man named Wang Jie commissioned the piece to ensure blessings to his parents and to help spread the doctrine.

Buddhism, which stresses the making of images to gain merit, played a significant role in the development of wood-block printing in China. Monks used printing to quickly produce numerous texts and images, which were widely distributed for devotion, teaching, and
use of this technology to the same degree as English or other languages that use an alphabet with a limited number of letters that are combined to form words.

Like the story of the invention of paper in China, that of its introduction to the Samarkand region in the mid-eighth century is apocryphal: the number of paper documents found at sites on the Silk Road makes it unlikely that Chinese prisoners—captured during the battle between Chinese forces and those of the Abbasid dynasty (750–1258)—introduced papermaking to Samarkand. This story, however, reflects the importance of paper in the Islamic world after the eighth century. It served a critical role in record keeping during the Abbasid caliphate that was based in Baghdad, as well as in earlier times when the Umayyad dynasty (661–750 CE) ruled from a center in Damascus.

Paper replaced earlier materials such as papyrus and parchment that were widely used throughout the ancient world. A market in Baghdad contained more than one hundred shops selling paper and books, and the availability of this material contributed to the development of science and literature that characterized early Islamic culture. For example, some of the earliest preserved records of the Materia Medica—a five-volume compendium of materials used in medicine, which was originally compiled in the first century CE by the Greek physician Dioscorides—are texts written and illustrated in Baghdad in the thirteenth century. The well-known One Thousand and One Arabian Nights was first recorded on paper in the ninth century.

Although the first paper versions of the Qur'an were produced in the middle of the tenth century, the text was written predominantly on more expensive parchment at this time. The earliest printed (as opposed to hand-
written) Qur’an was produced in the sixteenth century.
Jewish and Christian texts were also originally written on parchment.

Paper was introduced to Spain in the eighth century when the Islamic Umayyad dynasty was reestablished there after its defeat by the Abbasids. The first European document written on paper (probably made in the Islamic world) is a book of Catholic rites, which has been preserved in a monastery in Spain. By 1400, paper was produced in both Italy and Germany. After Johannes Gutenberg (ca. 1398–1468) developed a movable type in the mid-fifteenth century and printed a version of the Bible, bookmaking and literacy also became more widespread in Europe.

WAYS OF THE ROAD
The Sogdian merchants of Samarkand were experts on every aspect of trade along the Silk Road. Some put up the money for long-distance exchange. Some haggled in markets. And some acted as camel drivers and caravan leaders.

A single caravan might include peddlers, pilgrims, soldiers, guides, and many horses, mules, and camels. The leader had to be a special individual indeed, possessing great courage, skill at handling both animals and people, and vast knowledge of the trails and terrain.

After a long day's journey along the Silk Road, weary travelers could stop to rest at a caravanserai. In Islamic lands, these inns took on a standard form: rooms for sleeping and storing goods were arranged around an open courtyard where guests could water and feed their camels and horses. A thick wall with a guarded gate kept them secure from intruders. At a caravanserai, travelers of many cultures ate, bathed, traded goods, relaxed, and exchanged news and ideas.

"Every two leagues along this desert road, small towers with water tanks have been built to collect rainwater . . . so that travelers may stop off and rest of awhile, out of the heat and cold. We saw great areas of shifting sands along the way. If anyone were to stray from the markers and wander into these shifting sands, there is no way he could come out again and he would surely perish."

—Persian scholar and poet Nasir-i Khusraw, 1052

A night at a caravanserai is filled with the sound of music, laughter, shouting, poetry, and prayer. Clanging camel bells signal travelers that it is time for them to load up their bags as their caravan prepares to depart by night.

PACK ANIMALS
Miraculously well-adapted to the harsh desert conditions of central Asia and the Middle East, camels make ideal pack animals for travel along the Silk Road. These hardy creatures thrive on tough desert plants and can carry more weight than horses or donkeys—as much as 750 pounds (340 kilograms). And they need less water, too—a loaded camel can survive for many days without a drink if it has to.
**Humps**
Camel humps don't store water. They store fat, which provides energy when food can't be found.

**Eyes**
Bushy eyebrows and long, heavy eyelashes help protect camels' eyes from dust and sand.

**Nose**
Narrow nostrils can close to protect camels' noses from blowing sand.

**Mouth and Stomach**
Camels eat both grass and salty plants that grow in deserts. Their thick, tough lips can even put up with thorns.

**Coat**
A shaggy winter coat helps Bactrian camels stay warm in central Asia, where temperatures can drop to -30 degrees Fahrenheit (-34.5 degrees Celsius). Camel herders shear them and spin their hair into yarn to weave rugs, blankets, clothing, and bags.

**Feet**
Wide, padded feet help camels keep their balance on rocky paths and walk across the sand without sinking.
Camels and Caravans

The popular image of a camel is a shaggy Dr. Seussian sort of creature that can go days without water, traverse large stretches of desert, and subsist on a meager diet of scrubby bushes—all with a smile on its oversized head, contrasting with big sorrowful eyes and lashes to die for. In reality they are remarkable creatures, sturdy animals adapted to and among marginal environments. They are also flea-bitten, tick-infested, smelly, and generally ill-tempered.

Camels are artiodactyls, meaning they have an even number of toes on each foot, and they are closely related to sheep and goats. Surprisingly, llamas, vicuñas, alpacas, and guanacos of the South American Andes and pampas are in the same family as camels, and fossil evidence demonstrates that camels originated in North America. The two varieties of Silk Road camels are the one-humped North African and Middle Eastern dromedaries, or Arabians (Camelus dromedarius), and the two-humped central Asian Bactrian camels (Camelus bactrianus). Both species were first domesticated more than 4,500 years ago and have played an integral role in the development of civilization in Asia, Africa, and the Middle East as a food source and, more importantly, as vehicles that transport goods, people, and ideas across vast expanses of land.

Most of the camels on the Silk Road were Bactrian camels, although farther west dromedaries were encountered more frequently. One bas-relief carved into the pink rock walls of the abandoned Nabatean city of Petra (in present-day Jordan) shows a caravan of dromedaries entering the city. Similar artistry from eastern Asia almost always depicts Bactrian camels. The Bactrian camels are sturdier caravan animals, although stockier and not as fast as their one-humped cousins. They were originally domesticated from central Asian stock, and today only about a thousand truly wild Bactrian camels are left. These can be found primarily in the mountainous Trans Altai borderlands of Mongolia and China.

The secret to the camel’s ability to penetrate some of the most hostile areas on Earth is due to a series of physical and physiological adaptations. Several of these are ways in which camels conserve water, which is an extremely limited resource in deserts. A camel’s water supply is regulated by their peculiar ability to lose up to 30 percent of their body weight to dehydration. This would kill most animals. Camel dehydration can be quickly recharged by drinking prodigiously—up to thirty gallons in ten minutes. Hydrating at this level would also kill most animals through water intoxication.

Other specialized water conservation features include nostrils that reabsorb water while exhaling and a urinary and digestive system that is extraordinarily efficient in recovering almost all metabolic water. When stressed, camel urine is thick and goopy, and their fecal matter is so dry that it can be burned as fuel almost immediately. They even have specially shaped red blood cells that are
adapted to withstand severe dehydration. But even with all of these evolutionary tricks, camels still need water at least every five days to stay in good health, and the caravanners’ knowledge of the location of wells and springs to water camels on the Silk Road was paramount.

It is commonly believed that camels store water in their humps. This is a myth, and a bad one at that.

Camel humps are made of fat: camels with firm humps are well-fed camels, and camels with saggy humps are poorly nourished. While some water can be generated by the metabolism of these fat deposits, it is minimal. Camels can eat almost anything, as their lips, palates, and tongues are tough enough to allow them to consume even the spiniest and thorniest desert bushes. Camels
can also healthily endure a range in body temperature of about 10 degrees Fahrenheit—compare that to how we feel with a slight fever. Their paws (a Mongolian delicacy on their own) are huge and allow for the even distribution of weight on unsteady sands.

Exquisite pottery figures and tomb paintings, especially from Tang-dynasty China, preserve the look and feel of the loaded camels and their masters, passengers, and pullers. From these we can tell that both people and cargo were a mixed lot. There are camel pullers and grooms with decidedly non-Han Chinese faces, probably representing Sogdians, Kashmiris, Uyghurs, and Mongols; some of these have even been called Semitic. While some ancient documents written in Hebrew have been found in central Asia, recent scholarship concludes that these were probably Persian peoples of a sort. Records of business transactions concerning the camel loads have been found, sometimes written in the form of “contracts” on wooden sticks, which would be broken when the contract was fulfilled. Most provide pretty dry information, such as lists of mercantile goods and payments given or received.

Few historical records of the inner workings of camel caravans exist. Curiously, one of our best views of an ancient camel caravan comes from Owen Lattimore’s early twentieth-century classic The Desert Road to Turkestan. Here, in 1926, Lattimore details one of the last camel caravans as he accompanied it across the Gobi

A tomb sculpture from 550–577 CE, China

in China from Turkestan. Lattimore points out the seemingly hard and odd nature of respect and care for the camels.

Although the caravan’s weather conditions at times were harsh, the animals had a lot of care and attention, and the camels were included up front, all with a separate transport.

In addition to the camels, supplies of wool, not to be found in China, were brought back to the Silk Road, and the animals themselves, well cared for, were often made into art objects.
in China from Hohhot (in Inner Mongolia) to Xinjiang. Lattimore portrayed the life on a caravan as excruciatingly hard and hierarchical, with strict codes of respect and place enforced by cruelty.

Although probably not as large as the caravans in antiquity, these twentieth-century caravans marched sometimes by day and other times by night depending on weather conditions, topography, and fear of bandits—as has been the case throughout the history of the Silk Road. Each camel could carry up to 750 pounds (340 kilograms) of cargo; however, to preserve the health of the animals, they often carried much less. On caravan, camels were arranged in strings, called files, that included up to twenty-five animals each guided by a separate camel puller.

In addition to the cargo, each camel had to carry supplies of its own fodder in case requisite feed could not be found along the routes. Each day the caravan would cover a length, or stage, of 10 to 25 miles (16 to 40 kilometers) depending on the terrain and how recently the camels had been watered. As tough as these animals were, historical sources indicate that camels needed to rest for two months after a desert trek before they were physically recovered and ready for their next journey.

Today Bactrian camels are still a very vital part of nomadic society in Mongolia and parts of China. They are raised for their fur, milk, and even meat. A large male Bactrian can produce several kilograms of camel hair in a year. This hair, which wild camels shed in the springtime, is necessary as insulation from the harsh central Asian winters. Domestic camels are shorn in the spring, and their winter hair is packed in bales. Camel-hair traders purchase the bales, and the hair is sent to Milan and Paris to hit the runways and racks as fine couture.