

汉语原文	英语新译	英文旧译
<p>钟铃解密</p> <p>这是祈福平安的钟声，这是辞旧迎新的钟声，这钟声里蕴含着亿万中国人祈愿国富民强的心声，这钟声是泱泱大国文明历史发展的强劲脉搏，伴随着这悠扬悦耳的钟声，让我们一起聆听钟铃文化的过去与现在。</p> <p>这被敲响了五百多年历史的古钟，就珍藏于北京北三环西侧的大钟寺内，大都市的喧嚣与繁华，鳞次栉比的高楼大厦，虽然屏蔽了古老的钟声，却依然为我们保留了这闹市深处的一块宁静与优雅。</p> <p>大钟寺原名“觉生寺”，觉生寺建于清雍正11年即公元1733年，这里曾是清代皇帝祈福求雨的地方，后来因为一口巨型大钟的落户，而更名“大钟寺”，那么雍正皇帝为何下令在这里修建寺庙呢，据寺内碑刻记载，京师西直门外曾家庄有园址爽垲，长林佳茂，此地右隔城市之器，左绕山川之胜，宜为寂静清修之地，用是肇建梵宇，所以大钟寺建成后便赐名“觉生寺”，觉生寺占地面积约三万多平方米，呈长方形，寺院坐北朝南，由南向北，依次为山门，钟鼓楼，天王殿，大雄宝殿，观音菩萨殿，藏经阁，大钟楼，中轴线两侧各有配殿和跨院，这里虽是佛教寺庙，却显示出一派皇家园林建筑的气魄与风范，觉生寺在北京现存寺庙当中算不上是历史最悠久的寺</p>	<p>Secrets of the Bells</p> <p>It is the bell praying for peace and happiness. It is the bell bidding farewell to the old and ushering in the new. The bell chants the wish for prosperous nation and wealthy families, from the hearts of billions of Chinese people. The bell pulses the civilization rhythm of this great country. Immersed in the melodious bell ring, let's explore the past and present of the bell culture.</p> <p>This ancient bell that has been heard for over 500 years, is now treasured in the Dazhongsi on the west road of North 3rd Ring Road of Beijing. Though its ring is submerged in the noisy metropolitan and rows of skyscrapers, we can still appreciate the tranquility and elegance kept deep at the heart of the busy streets.</p> <p>The Dazhongsi, or Dazhong Temple, was originally known as Juesheng Temple. The temple was built in the 11th year of Yongzheng of Qing Dynasty, or 1733 A.D., and was once the place where the Qing emperors prayed for rain. The temple got the other name Dazhongsi, which came after a giant bell housed inside, here Dazhong means "big bell". Why did the Yongzheng Emperor order to build a temple here? According to the stele inscriptions in the temple, outside the Xizhimen gate there was a garden in Zengjiazhuang. The garden was cool and dry, and nice covered with woods. It was exempt from city noise, and embraced by mountains, so an ideal place for calm, hermitage, and building a sangharama. Therefore the temple was built here, and</p>	<p>Leaks on Bell</p> <p>It is the bell of happiness and peace, and the bell of farewell to the past year and embrace to the new year, too. The bell tells us the hope of 1.3 million Chinese people to strengthen their country and improve their life, and echoes the strong pulse of development for such a great country of civilization. From the melodious bell, we enjoy the past and present bell culture.</p> <p>The ancient bell heard for over 500 years is hung in the Dazhongsi at the west side of the 3rd Ring Road of Beijing. Though it is submerged in the noise of modern city and shielded by row up row of skyscrapers, we are still able to taste tranquility and elegance at the heart of such a metropolitan.</p> <p>The Dazhongsi, also called the Temple of Juesheng in the past, was established in the 11th year of the Yongzheng Emperor Period of Qing Dynasty (1733 A.D.). It was once the temple for the emperors of Qing Dynasty to pray for rain, and then was renamed the Dazhongsi for the placement of a huge bell. Why did Emperor Yongzheng order his officials to build a temple here? According to the inscription on the stele in the temple, there was a garden in Zengjiazhuang of Xizhimenwai Street which was cool and dry, covered with trees everywhere, exempt from city noises and surrounded by mountains; it was a dreamed place for rest and vacation, and was perfect for building a temple. Therefore, the temple was named the Temple of Juesheng after</p>

批注 [m8]: Leak 更多是泄密的意思，放在这儿像是钟被敲出了缝。

批注 [m9]: “一百三十万中国人”

批注 [m10]: 译成了“三环路西侧”

批注 [m11]: Establish 多指制度之类无形的东西。

批注 [m12]: 觉生寺并未改名，只是加了个俗名大钟寺。

批注 [m1]: 这个“所以”不太连贯，英文没有按这个翻译。

批注 [m13]: 原文只说西直门外，没说是西直门外大街。

批注 [m14]: 这个“所以”在校对稿里被去掉了。

院，也称不上是规模最大的寺院，然而它却在中国第一历史档案馆保存的《京师寺庙细数折》中列位第三，这又是为什么呢？那还要从寺庙钟楼里悬挂的这口举世罕见的大钟说起，这口古钟的背后，又隐藏着多少扑朔迷离、鲜为人知的故事呢。

明永乐元年，也就是公元 1403 年，明成祖朱棣登基后的第一道诏书，就是从南京迁都北京，迁都北京的时候，最重要的三件大事，除了修建故宫和天坛，便把铸造一口大钟，提到了他最重要的议事日程之上，历史上称作“永乐大钟”，今天这口举世罕见的铜钟，仍然悬挂在大钟寺钟楼的巨型支架上，但它却经历了五百多年的风风雨雨，这口大钟有两层楼高，钟体通高为 6.75 米，直径 3.4 米重 46.5 吨，大钟保存非常完好，迄今为止没有一处裂缝，大钟内外一共铸有经文二十三万多字，却没有一字遗漏或错误，钟体内外铸满了经文，如果以最快的速度将这些经文诵读一遍，至少也要花费一天一夜的时间。大钟外部铸有《诸佛至尊如来菩萨尊者神僧名经》《弥陀经》《十二因缘咒》，里面为《妙法莲花经》，钟唇部铸有《金刚般若经》钟钮处铸有《楞严咒》等。其中还包括梵文经咒共计十七种，绝大部分为汉字楷书书写，字体工整古朴，苍劲俊秀，布局均衡地分布在钟体各处，那么朱棣为何下令在这口硕大的铜钟上铸满经文呢？仅仅是为了弘扬佛法普渡众生吗，当然不是，这里面还隐含着另外一层意思，那就是为了超度那些曾经为他攻打江山而死去的将士们和被杀害的

named Juesheng. The Juesheng Temple covers an rectangular area of over 30,000 m². It faces south, and the buildings lined up from south to north are: the Mountain Gate, Devaraja Hall, Mahavira Hall, Guanyin Hall, Sutra Library Tower, and Great Bell Tower. The Bell Tower and Drum Tower stand on two sides of the midline, along with the accessory halls and yards. It is a Buddhist monastery but meanwhile an imperial garden with spectacular courtly manner. The Juesheng Temple is neither the earliest nor the largest in Beijing, however, it is listed as the 3rd in *The Temple Collection of Beijing*, preserved by the First Historical Archives. Why is that? The story has to start from the giant bell hung in the Great Bell Tower. What are the mysteries behind it?

In the first year of Yongle of Qing Dynasty, or 1403 A.D., Zhu Di, the Yongle Emperor issued the first imperial edict since his enthronement, and commanded the capital migration from Nanjing to Beijing. Three major tasks were planned to be done before the migration. Besides constructing the Forbidden City and the Temple of Heaven, casting a great bell was also among the top three priorities. The bell is thus called the Great Bell of Yongle. Today, after over 500 years of vicissitudes, it is now hung in the Great Bell Tower of Dazhongsi. The bell, 6.75 meters tall and 3.4 meters in diameter, weighs 46.5 tons. It is very well preserved and crack-free so far. Over 230,000 characters of Buddhism scriptures were engraved inside and outside the bell without any omission or mistake. It would take at least a whole day to read all the scriptures. The Names of Buddhas and Bodhisattvas, Amitabha Sutra, and Twelve Nidanas Dharani are inscribed outside the bell, and Lotus Sutra

establishment. The temple, being rectangular and covering an area of over 30,000 m², is faced to the south as far as its entrance was concerned. From south to north, the Mountain Gate, Devaraja Hall, Mahavira Hall, Guanyin Hall, Sutra Library Tower, Great Bell Tower, Bell Tower, Drum Tower are located at the two sides of the axle together with the accessory halls and yards. It is not only a temple of Buddhism, but also an imperial garden with spectacular charm and vigor. It is neither the oldest nor the largest temple in Beijing, but it is listed at the 3rd place in the Temple Collection of Beijing which is saved in the First Historical Archives. Why? It is because of the huge bell hung in the Big Bell Tower. What's behind of the bell? How many mysterious stories shall the bell tell us?

In the first year (1403 A.D.) during the period of Yongle Emperor of the Ming Dynasty, the Emperor called Zhu Di issued his first imperial edict after being enthroned to migrate the capital of his empire from Nanjing to Beijing. However, three important jobs had to be done before the migration. Besides the establishment of the Forbidden City and the Temple of Heaven, making a great bell was also among three priorities of his agenda. Therefore, the bell was named the Great Bell of Yongle, which is now hung in the Big Bell Tower after over 500 years. The bell, 6.75m high and 3.4m wide, is as heavy as 46.5t. It is well protected with no break left but over 230,000 characters of religious texts inscribed, which would take a whole day to read them all. For instance, the Text of Buddha, the Sutra on Amida Buddha and Twelve Nidanas are inscribed at the external cover, Lotus Sutra in the internal side, Diamond

批注 [m15]: Charm 不是气派的意思。

批注 [m16]: “大钟楼”的其他译处都写 Great Bell Tower，大钟寺古钟博物馆宣传册亦翻为 Great Bell Tower，故统一为 Great。

批注 [m17]: Task 更合适。

批注 [m2]: 般若。

批注 [m18]: High 指的是悬空的高度，或者高山的高度，对于钟的高度，应该用 tall。

批注 [m19]: Protect 偏重保护此物不受暴力侵犯，用 preserve 更合适。

逆臣的亡灵，于是便将这二十三万多字的佛经，铸刻在永乐大钟之上，每当敲击大钟时，便相当于念诵了无数遍经文，字字皆声声不息，既昭示佛法无边功德无量，也体现了他巩固新政永世太平之决心。

在清代，觉生寺被当作皇家寺庙，除了祈福求雨朝圣祭祀之外，凡是国家举行重要庆典和佛事活动的时候，都会敲响这口大钟，它的声音非常独特，近听沉雄洪亮，远闻悠扬悦耳，而且在10公里以外，钟声依然清晰可辨，经专家测试，这口大钟的声音振荡频率与音乐上的标准频率十分相同，轻击时圆润嘹亮，重击时雄浑厚重，音波起伏荡漾，节奏明快悠扬且余音袅袅长达3分钟以上，由此可见，古人的聪明才智和铸造工艺之精湛，不得不令人钦佩。

经化学专家检测发现，永乐大钟除含有金属铜、锡、铅、铁、镁外还含有金和银，而且含量很高，其中含金18.6公斤，含银38公斤，据专家分析表明，将金铸于铜器之中，不仅可以防止生锈，同时还可以使钟体在敲击时声音更加洪亮，而银不仅能提高浇铸液的流动性，增强钟体的凝结强度，同时还可以提高声音的传播性，这也许是永乐大钟能历经五百年仍然保存完好钟声洪亮悠扬悦耳动听的秘诀吧。

中国的永乐大钟不但铸造成功，而且声音洪亮而优美，传播久远，特别是铸于大钟之上的那二十三万多字的经文，更是令人称奇叫绝，叹为观止，那么如此硕大的铜

inside. Diamond Sutra covers the bell lips, and Shurangama Dharani is at the crown area. The inscribing also includes 17 Sanskrit incantations mostly presented in Chinese, and neatly distributed over the bell. Why did Yongle Emperor demand so many texts engraved on this giant bell? Was that just for spreading Buddhism and awaking the mass? Of course not. He wanted to pray for those who died for his ruling power, including his soldiers and the rebels. When the bell peals, it was believed that the scriptures were chanted and even the almighty Buddha and Dharma were praying. All these represented his resolution of building a peaceful and prosperous nation as well.

During the Qing Dynasty, the Juesheng Temple was built as an imperial temple where the emperors and their families prayed for happiness and harvest, or offering sacrifice. When holding important national or Buddhist ceremonies, the bell was rung. The distinctive bell ring, sonorous at near and melodious from far, can be heard 10km away. Its vibration frequency fits well in the music standard scales. The bell chimes euphoniously and peals resonantly. The vigorous, springy, and resounding ring can linger for 3 minutes. The great intelligence and workmanship of the ancients are truly admirable.

It was discovered by Chemical experts' sampling that the Yongle bell contains copper, tin, lead, iron, magnesium, and high content of gold (18.6kg) and silver (38kg). According to the experts' analysis, alloying gold into copper can retard rusting and make the bell ring more sonorous. Silver not only increases the mobility of the casting liquid, strengthens the bell's intensity, but also

Sutra at the bell lips and **Nirvana Sutra** at the **top**. What's more, there are 17 Sanskrit sutras with most of them inscribed in Chinese and well distributed over the bell. Why did Emperor Yongle inscribe so many texts on such a great bell? To spread Buddhism? Of course not. He wanted to pray for those who were killed while conquering the nation. As the bell was heard, the texts were also heard, telling his people that the almighty Buddha was even praying for heroes of the nation and he was determined to create a peaceful and prosperous country for his people.

The Temple of Juesheng was regarded as an imperial temple in the Qing Dynasty, where the emperors and his families prayed for happiness and harvest, and held sacrifice, Buddhist ceremonies and all national activities. At that moment, the bell was heard clearly even 10km away, for its vibration frequency was so similar to the standard musical frequency, and it just sounded uniquely, melodiously, vigorously and lively. The sound could even linger for 3 minutes. How smart the ancient craftsmen and how great the ancient crafts are!

As tested by the chemical experts, the bell contains copper, tin, lead, iron and magnesium. What's more, high amount of gold (18.6kg) and silver (38kg) is also found. According to the analysis of experts, mixing gold into copper is able to prevent the bell from rusting and make the sound stronger; silver is able to promote the mobility of the casting liquid, strengthen the intensity of the bell and help the sound spread further. Maybe, gold and silver is the key to that why the bell sounds still melodious and lively after over **500 years**.

批注 [m20]: Nirvana Sutra 是涅槃经，不是楞严咒。

批注 [m21]: 钟的各部位的英文，采用维基百科查到的资料，见最后一页。

批注 [m22]: 并没有错，只是需要经常改一下用词，不致单调。

<p>钟，到底是哪里铸造的，为什么在铸成之后几经搬迁，它又经历了什么样的离奇命运呢。</p>	<p>helps the sound spread further. This might be the key reason why the Yongle bell still sounds sonorous and melodious even after 5 centuries.</p>	
<p>永乐大钟是北京德胜门内的铸钟厂铸造的，时过境迁五百多年过去了，过去的铸钟厂已经被今天这繁华的闹市所取代，只为我们遗留下了这块地标性的指示牌，但是它的铸造技术却永远载入了史册，今天的人们已经无法亲眼目睹当时的铸钟场面，只有借助史料来了解这口巨型大钟的铸造过程了。</p>	<p>The great bell can be seen as an unrivaled sight of the world, not only for its beautiful sound, but also for its marvelous inscriptions. People cannot help wondering where and how this huge bell was casted, why and how it was hung here, and what a legendary history it has witnessed.</p>	<p>The great bell can be seen as an unrivaled sight of the world, not only for its beautiful sound, but also for its marvelous texts. However, people cannot help wondering where such a huge bell is casted and how many stories it witnessed.</p>
<p>永乐大钟是采用地坑造型表面陶范的泥型法铸造而成的，铸造时几十座熔炉同时开炉，熔化的铜汁沿着泥做的槽道注入陶范，一次成形，其规模之浩大，场面之壮观，铸造技术之高超可想而知。有多少没有留下姓名的铸钟者，将辛劳与汗水，挥洒在了铸钟现场，也把自己长达九年的青春与时光，铸刻在了这口巨型大钟之上，更令人赞叹不已的是这口大钟的设计师和那位把二十三万多字的经文，镌刻在大钟上的书法家沈度，他们共同创造了这口举世无双名垂青史的大钟，奇怪的是永乐大钟铸成之后，并没有立即悬挂，因为它周身刻满佛教经文，特别是铸有皇帝朱棣亲自编写的《御制诸佛名称歌》，却便被当做珍贵的佛经文献版本收藏于汉经厂，大钟闲置而不鸣响，不仅失去了钟本身的意义，也不是皇帝朱棣的初衷，直到万历三十五年，也就是公元1607年，永乐大钟才被移到西直门外新建的万寿寺悬挂了起来，每天由</p>	<p>The Yongle bell was casted by a foundry located at Deshengmennei of Beijing. Over 500 years passed and time has replaced the factory with today's busy streets. All that left is a historical road sign. Nonetheless, its casting technique went down in history. The foundry could not be replayed to today's people, but is only imaginable among the historical materials.</p> <p>The bell was built with pottery mould method. It was formed in one piece by casting the copper liquid from tens of smelting furnaces into the pottery mould. That must be a spectacular scene. Many unnamed craftsmen, including the designer, devoted their laborious 9 years to this giant bell. They were not remembered, however, except for Shen Du, the calligrapher who wrote 230,000-character scriptures, which were inscribed on the well. Strangely enough, the bell was not hung immediately once it was finished. It was stored in the Chinese Religious Text Factory as a precious Buddhist text version for all its inscriptions, especially the Song of Buddha Names, drafted by Zhu Di, the Yongle Emperor. A silent bell, of course, was not what it was built for, and</p>	<p>In fact, the bell was build by the factory in Deshengmennei of Beijing, which has gone after over 500 years, leaving us a historical guiding board. However, its great casting techniques have never been forgotten but recorded forever. People are able to know the building process through materials, though the casting site can never be seen.</p> <p>The bell was made with pottery pattern method by casting the copper liquid from tens of smelting furnaces into the pottery pattern. What a great job it was. Many craftsmen, including the designer, contributed their witness, hard work and 9-year life to the bell, but none of them were remembered except for Shen Du, the calligrapher who inscribed over 230,000 characters in the bell. It is their great techniques that create the miraculous bell which is unique in the world. However, the bell was not hang immediately after being finished, but saved in the Chinese Religious Text Factory as a precious Buddhist text version for the texts inscription, especially the Imperial Songs for Buddha which was written by Emperor Yongle himself. From then on, the bell had never been heard, until it was moved to the newly-established Wanshou Temple at Xizhimenwai in the 35th year during the rule of Wanli Emperor (1607A.D.). It was knocked by 6 monks each day, and</p>

批注 [m23]: “范”用 mould 更恰当。

批注 [m24]: 沈度本人并未刻经在钟上，只是他的书法被工匠刻在钟上了。

批注 [m3]: 鸣

六个和尚轮流敲钟，钟声悠扬而洪亮，当时的万寿寺也因此遐迩闻名。

传言说北京的东面为青龙方，多为官府之所，而北京的西面则为白虎方，多为庙宇之地，白虎头上钟声长鸣，是白虎方势头过旺的表现，这样一来东西方的平衡便遭到了破坏，形成了社会之动荡不安，于是便把当时社会不安的原因归咎于这口永乐大钟，无奈之余，明朝皇帝只好下令，将大钟楼撤除，从此万寿寺的这口大钟，不再鸣响，只好静静地躺在寺院之内，供人们观赏，清雍正十一年，即公元 1733 年，朝廷内外为这口大钟，引起了一番不小的争论，许多大臣根据阴阳五行之说，一致认为永乐大钟属金，而大钟寺内，中轴线北段的建筑属土，土生金，因此应该将它置于大钟寺的位置较为妥善，于是雍正皇帝最后决定，将沉睡了二十多年的永乐大钟，移至被称为风水宝地的觉生寺，也就是今天的大钟寺内，移钟工程持续到了乾隆八年，也就是公元 1743 年，才得以完成，为了悬挂这口大钟，还特地在寺院后面设计了一座两层高的钟楼，乾隆皇帝还亲自为大钟楼御笔题名“华严觉海”，今天这块牌匾，还高高悬挂在大钟楼之上，这座钟楼之设计非常奇妙，它的上层是圆形，下层为方形，喻示着古人所谓“天圆地方”的哲学思想，楼内有阶梯盘旋而上，钟钮和钟身的顶部在二楼，悬挂大钟的支架，是用粗大的木梁制成，它的四根支柱，顶部一律向内倾斜，用以分散受力，使永乐大钟合力向心，受力均匀地悬挂在八根斜

did not represent the emperor's intention, until the 35th year of Wanli Emperor (1607 A.D.), the bell was relocated to a newly-built Wanshou Temple at Xizhimenwai. It was hung there and tolled by 6 monks every day, and Wanshou Temple became famous of the bell's melodious sound.

It was said that the eastern Beijing was the Azure Dragon position for authorities, and the west was the White Tiger for Buddhism monasteries. So a ringing bell resulted in a roaring white tiger, and could break the balance between the east and the west, and in turn cause the society unrest. The Ming emperor had no way but removed the big bell tower of Wanshou Temple. Since then, the bell lay in the temple and its ring was no longer heard. In the 11th year of Yongzheng of Qing Dynasty, or 1733 A.D., a debate regarding this bell was brought up among the officials. Many ministers, based on the theory of Five Phases, asserted that since the soil nourish the metal, the metal Yongle bell should be placed at the Juesheng Temple, which had the phase of soil. Consequently, Yongzheng Emperor decided to move the bell, which had been silent for over 20 years, to the Juesheng Temple. The relocation took 8 years until the 8th year of Qianlong Emperor (1743 A.D.). A 2-floor bell tower was constructed at the backyard of the temple, in order to hang the bell. Qianlong Emperor even inscribed the "Hua Yan Jue Hai" board for the Great Bell Tower, which can still be seen today. The design of this bell tower was quite interesting. Its upper floor is round and its lower floor is square, indicating the Chinese philosophic thoughts of round heaven and square earth. A spiral stair connects the two floors. The bell's head

Wanshou Temple was thus famous with the melodious sound. Emperor Yongle's original intention was also realized then.

It was said that east Beijing had many offices of local authorities, and west Beijing had more temples. The east and west kept balanced. However, continuous bell sound destroyed the balance, causing the society at chaos. The emperors of the Ming Dynasty had no way but removed the Big Bell Tower in Wanshou Temple, and the bell was no longer heard but lying in the temple silently. In the 11th year during the rule of Yongzheng Emperor of the Qing Dynasty (1733 A.D.), a big quarrel was aroused among the officials. Some of them said that the bell which was made of metal should be put at the Dazhongsi for the buildings at the north reach of the axle were mainly made of soil. Yongzheng Emperor finally decided to move the bell which had been silent for over 20 years to the Temple of Juesheng which was an ideal place. The removal took 8 years until the 8th year during the rule of Qianlong Emperor (1743 A.D.). A 2-floor big bell tower was also built at the backyard of the temple to hang the bell, and Emperor Qianlong inscribed four characters for the tower which are still seen today. The tower is specially-designed, with its upper floor roundly-shaped and lower floor squarely-shaped, indicating the traditional Chinese philosophic thoughts of round heaven and square earth. The two floors are connected by a spiral stair. The bell top and body is located at the second floor. The shelves supporting the bell are made of thick beam, and the four columns are internally-towards to well distribute the weight of the bell so that it can be hung stably. All of

批注 [m25]: 没有译出“青龙白虎”。

批注 [m26]: Quarrel 的火气重了些, debate 更合适。

批注 [m4]: 移钟之前，觉生寺尚未称“大钟寺”，大臣们也不可能未卜先知地称它为“大钟寺”，故英文最终把这个译为觉生寺，此处的汉语也应该改。

批注 [m5]: 虽然英文是按这个数字翻译的，但大钟早在明代已经不响了，到了雍正，恐怕不止 20 年吧？本人把修改此处的权力交给汉语撰稿人，并请读此注释者把英文和汉语保持一致。

批注 [m27]: Locate 给人的感觉，是钟被锯开了，上半部搁在二楼，下半部搁在一楼，并不是一个完整的钟占据两层空间的意思。应该用 occupy。

批注 [m28]: Shelf 是搁板架，而不是支持大钟的这种木架。

<p>柱支撑的主梁上，而这一切仅靠一根长 1 米，高 14 厘米，宽约 6.5 厘米的铜穿钉来固定，却承受住了这重达 46.5 吨的大钟，近三百年之久而安然无恙，为了降低钟架的高度，使敲击大钟时声音传播得更远，在钟的下方还修造了一口深为 70 厘米，最小直径为 240 厘米，最大直径为 260 厘米的八角形“散音池”，人们可以在池里，清楚地看到大钟内壁的字迹。</p>	<p>and upper body occupy the upper floor. The supports to hang the bell are thick wooden beams, which 4 stands point inward to share the weight equally, so that the bell can be hung stably. All the poles and beams are fixed by a copper nail of 1-meter long, 14-cm thick, and 6.5-cm wide. Nevertheless, the great bell, as heavy as 46.5 tons, was well supported for nearly 3 centuries. In order to lower the height of the bell support, and to help spreading the sound, an octagon sound-spreading pool was dug underneath the bell. The pool is 70-cm deep and 240-260cm in diameter, and people standing in the</p>	<p>the columns and shelves are fixed together by a copper nail which is 1 meter long, 14cm high and about 6.5cm wide. However, the bell as heavy as 46.5t has been well supported for nearly 300 years. In order to lower the height of the shelves so that the sound can be heard in a further distance, an octangular sound spreading pool which is 70cm deep and 240-260cm wide is set up. People can view the inner side of the bell clearly in the pool.</p>
<p>永乐大钟被敲响了五百多年，至今仍然完好无损，其铸造技术之高超，堪称世界之最，是中国铸钟史上的一大奇迹，它工艺之精美被誉为佛教文化与书法艺术的完美结晶，现如今这口举世无双的大钟，被列为中国国宝级文物，大钟寺古钟博物馆也因此名声大振。</p>	<p>pool can clearly read the text engraved inside the bell.</p> <p>The Yongle bell, which has been ringing for over 500 years, stays intact today. The craft excellence was the best in the world at its era, and is one of the miracles in Chinese casting history. It is an elaborate artwork that perfectly combined Buddhist culture and calligraphic. Today, it has been listed as a national relic of China, and promotes the popularity of the Ancient Bell Museum of Dazhongsi.</p>	<p>The great bell, which has been knocked for over 500 years, is still complete today, so it is named one of the miracles in Chinese casting history and the best bell of the world. It is so delicate that it is named perfect combination of Buddhist culture and calligraphic art. Today, it has been listed as Chinese national relic, which greatly promotes the popularity of the Ancient Bell Museum of the Dazhongsi.</p>
<p>钟铃是中国古代传统文化遗物的重要表征，也是世界文化遗产当中，不可或缺的一部分，那么究竟是谁发明了钟铃呢，钟铃文化源远流长，甚至可以追溯到远古时代，传说在炎黄时代，人们就已经发明和使用钟铃，那时候的钟铃器型较小，多为陶土质地，造型古拙质朴，大多数没有纹饰，敲击时所发出的声音也很小，这是珍藏于大钟寺古钟博物馆的原始陶钟和陶铃，也许它们能够为我们揭开新石器时代原始钟铃的神秘面纱。</p>	<p>Bell is an important feature of traditional cultural relics of the ancient China, and also an indispensable part to the world's cultural treasures. Who invented bells, then? The history of bells can trace back to the far ancient times. It was said that bells have been invented and put into use in the era of Yandi and Huangdi. The bells were small, simple, and mostly made of pottery without any decoration. They rang a low sound as well. The ancient pottery bells collected in the Ancient Bell Museum of Dazhongsi may unveil the mysteries of the ancient bells of the Neolithic Age.</p>	<p>Bell, as an important feature of Chinese ancient traditional cultural relics, is also an indispensable part to the world's cultural treasures. Then, who invented bell? The history of bell can date back to the far ancient times. It is said that bell has been invented and used in the Yandi and Huangdi era. It is small and simple, most of which are made of pottery without any decoration, and it gives off lower sound. There are ancient pottery bells saved in the Ancient Bell Museum of the Dazhongsi, which may unveil the mystery of ancient bell of the Neolithic Age.</p>
<p>1955 年在中国陕西长安县斗门镇龙山文化遗址，出土了这件原始陶钟，它在造型上非常独特，呈上圆下方，上部分为原柱形，</p>		<p>The ancient pottery bell, with a history of over 4,000 years, was unearthed in the Longshan Cultural Remains</p>

批注 [m6]: 好像只被敲了三百多年？英语是按照这个数字翻译的，但译者小嘀咕一下。

批注 [m29]: Delicate 也是精美的意思，只是这个精美有点脆弱。

批注 [m7]: 圆柱

下部分为长方形，通高约 12.5 厘米，口径为 5.5 厘米至 9.7 厘米，距今约有四千多年的历史，这是 1956 年在中国河南陕县庙底沟仰韶文化遗址出土的原始陶铃，它的器形呈上小下大，铃体呈桶状，通高约 9.1 厘米，口径为 4.5 厘米，为公元前 3900 年左右，距今已有约五千九百年的历史了。它们是目前我国发现最早的原始钟铃，也是我国古代钟铃的最早雏形，可以称得上是钟铃文化之鼻祖了，但是迄今为止，原始钟铃的用途仍然是一个难以破解之谜。

今天的人们只能用猜测和想象去还原那段历史，当时的陶铃有可能是原始部落首领用以召集部落氏族的号令工具，或许是原始先民们举行庆典时，在舞蹈过程中用以节拍的乐器，或许为了使神灵与人之间相互沟通，传递信息，巫师们在做法时所使用的法器。

在中国历史上，古钟具有十分特殊的地位和作用，它的历史甚至比文字使用的历史还要古老，但是原始古钟，是一种极为简单的打击乐器，只能起到聆音欢娱的单一作用，而缺乏传递信息和审美等，多方面的功能，而随着人类社会的不段发展，古人对音阶与音律的认识，逐渐完善，到商周时期便出现了用青铜制作的 铙 铎 钟 甬钟 等演奏乐器，这是我国铸钟史上的一大进步，自周代起，对于编悬乐器的使用，就有了明确的制度，必须严格遵守礼乐制度所规定的地位等级，规定为天子宫悬即四面悬挂，诸侯轩悬即三面悬挂，卿大夫

In 1955, this ancient pottery bell was unearthed at the Longshan Cultural Remains of Doumen town, Chang'an county of Shaanxi. It has a very unique shape of combining a cylindrical top and a cuboidal bottom. The bell is 12.5cm tall and 5.5cm to 9.7cm wide, and has a history of around 4000 years. This pottery bell, unearthed at the Yangshao Cultural Remains of Miaodigou, Shaan county of He'nan, is small at the top and large at the bottom. It looks like a barrel, and is 9.1cm tall and 4.5cm in diameter. It was made in 3900 B.C., and is over 5,900 years from now. The two bells are the oldest discovered in China so far, and represent the earliest shapes of ancient bells, so they can be called the origin of Chinese bell culture. However, the exact usage of ancient bells is yet unknown.

People of today have to use imagination to put the history pieces together. Possibly, the pottery bells were used by ancient tribal leaders to convene their members, or they were musical instruments to conduct the dancing rhythm at ceremonies, or instruments used by wizards to connect the mortals and the gods in religious services.

The ancient bells played a very special role in Chinese history. They have longer history even than that of words. However, the ancient bells, as a simple musical instrument, can only be used for entertainment rather than more functions like information exchange or art. The ancient people mastered better knowledge of music as the human society developed. By the era of Shang and Zhou, bronze instruments like Bo bell and Yong bell

of Doumen Town, Changan County of Shaanxi in 1955. We can see that it is so special, with a round top and a square bottom. It is **column-shaped** at the upper part and **rectangle-shaped** at the lower part. The bell is as high as about 12.5cm and 5.5-9.7cm wide. This bell, unearthed in the Yangshao Cultural Remains of Miaodigou, **Shan** County of Henan, is small at the top and large at the bottom. It looks like a barrel, which is as high as about 9.1cm and 4.5cm wide. It was made in 3900 B.C., which had over 5,900 years history. The two bells are the oldest in China, and also the earliest shape, which can be called the origin of Chinese bell culture. However, it is still unknown what the ancient bells are used for.

It is guessed or imagined that the bells are probably used as military order for ancient tribal leaders to convene their tribal members, or as musical instruments during dancing at ancient ceremonies, or as instruments used in religious services by the wizards to communicate with the gods.

Ancient bell has a very special role and important function in Chinese history. Its history is even longer than that of word. However, the ancient bell, as a kind of simple musical instrument, can only be used for entertainment rather than information transmission and other functions. With the development of human society, the ancient people **recognized** music more and more deeply, so Bo bell and Yong bell made of bronze were then invented. It was a big step forward in Chinese bell making history. From the Zhou Dynasty, clear systems were worked out for the application of hanging

批注 [m30]: 圆柱用 cylindrical 合适。

批注 [m31]: Rectangle 是平面几何的概念，而立方体是 cuboidal。

批注 [m32]: “陕”的通用翻法是 Shaan。

批注 [m33]: Recognize 是辨认出的意思，不是了解的意思。

判悬即两面悬挂，士特悬即一面悬挂，在当时，严格的礼乐制度，已经成为统治阶级，安邦治国的头等大事。

这是曾侯乙墓出土的战国编钟，它的出土充分证明了，中国在战国时期就已经掌握了完整的十二乐律体系，这套编钟的音色非常奇妙，它的每个钟体都能发出两个呈三度音程的乐音，音阶结构与现今国际通用的C大调七声音阶属同音列，音域十分宽广，跨越五个八度，可以旋宫转调，演奏中外乐曲，它独特而奇妙的乐音堪称一绝，在中国古钟史上和音乐史上，都占据着无可取代的地位，它的出土举世瞩目，震惊世界，引起历史考古界，音乐艺术界以及冶金铸造界的广泛关注。

秦朝统一中国后，出现了代表中央集权制的巨型铜钟 朝钟，到后来，随着印度佛教文化传入中国，中国的佛教僧人们又创造了具有中国特色的法器 佛钟，往后历朝历代都竞相铸造各种类型的朝钟、佛钟、道钟、乐钟，使中国钟铃文化不断向前发展，步入了一个个鼎盛时期。

钟在过去曾经是重要的乐器、礼器和法器，以及报时使用的鸣器，有着许多种功能，钟在中国历史上，是一种特殊的文化符号，它蕴含着丰富而深厚的文化内涵。

这就是留传至今非常精美的万善寺铜钟，这口钟铸造于公元1702年，钟通体高是110厘米，口径约为78.7厘米，重228千克，

came into being, and moved a big step forward in the Chinese bell-making history. From Zhou dynasty, clear systems were established for the application of hanging instruments, and bell usage at that time had to follow strict rules defined for various classes: for emperor, for vassals, for ministers, and for literati and scholar officials. The strict ritual system was a top priority to govern their country at that time.

This is the bell set unearthed at the Tomb of Marquis Yi of Zeng, of the Warring States Period. These sets of chime bells demonstrate that the ancient Chinese had mastered the 12 pitches by the Warring States Period. The bell set has wonderful timbres. Each bell can make 2 musical tones with an interval of third. The scale structure is in the same band with today's C major. The bell set has a broad musical range that covers 5 intervals of perfect octave, and it can shift pitches and play music of various countries. This bell set is irreplaceable in the history of Chinese ancient bells and music. Its unearthing won the world's great attentions in the wide areas of archaeology, music, metallurgy and foundries.

The great bronze morning bell, standing for centralized feudal monarchy, came into being in the Qin Dynasty after this kingdom united the country. Later on, following the introduction of Buddhism from India, the Chinese monks created Buddhist bells. Various types of morning bells, Taoist bells, and Buddhist bells emerged in the later dynasties, pushed the Chinese bell culture forward to its prosperous periods.

Bells used to be important instruments, used for various

instruments, and bells at that moment should be used according to different classes, including emperor class, duke class, high official and literati class and officialdom class. At that moment, strict ritual system had been the top priority for the officials to manage their country.

It is a classical Chinese serial bell of the Warring States Period earthed from the Zenghoyi grave, which fully demonstrates that ancient Chinese have fully understood the 12 melodies in the Warring States Period. The serial bell has excellent melodies, with each bell giving off 2 musical tones with 3 degrees of intervals, and its scale structure is in the same band with the current C major. The bell also has a broad musical range which covers 5 to 8 degrees. Generally speaking, the series bell, with its unique and amazing tones, is irreplaceable in the history of Chinese ancient bell and music, winning wide attentions in the archaeological circle, musical art circle and casting circle.

Great bronze morning bell, standing for centralized feudal monarchy, emerged in the Qin Dynasty which united the country of ancient China, and with the introduction of Buddhist culture from India, Buddhist bell was created by the monks. With the consistent development of bell culture, Taoist bell and music bell were also invented, and bell culture just met a prosperous period.

Bell used to be important instrument for music, religion, ceremony and timing. It is a special token for rich and diversified culture in Chinese history.

批注 [m34]: 虽然很多地方只能用拼音来表达，“曾侯乙”却得翻成“叫乙的这位曾国的侯”，不能三个音节了事。

批注 [m35]: 十二律应该译为 pitches.

批注 [m36]: 三度音程是一个专有音乐名词，不是 3 degrees，而是 third，这儿，third 是个名词，专指三度音程。

批注 [m37]: 见“三度音程”的注释。原译也不对，译成了五度到八度，而汉语原文是五个八度。八度音程的音乐术语是 perfect octave。

我们看到，在这口钟上铸有一部《阿弥陀经》，与其它钟不同的是，在经文的字里行间我们还能看到蝌蚪文、万字符、双鱼等特殊符号，这些特殊的符号不仅代表的是经文的内容，还具有极为特殊的文化内涵和象征意义。

钟是古代人类共同创造的文化财富，钟连接着不同民族不同国度的历史文化与社会发展。

大钟寺古钟博物馆还收藏了许多精美的外国钟铃，它们是中国与世界各国人民传统友谊与文化交流的历史见证，这些不同寻常的西洋钟，都承载着各自不同的经历和文化蕴含，从它们身上我们不难看出西洋钟与东方钟的区别，又在哪里。西洋钟的形制绝大部分呈上小下大的喇叭形状，其造型优美，工艺精湛，它与东方钟最本质的区别是发声原理不同，西洋钟无论大小，都是以钟体摇摆使内悬的舌体与钟内壁碰撞发出声响，大多数西洋教堂钟的发声原理，与中国的铃相同，西洋钟的声音悠扬清脆，婉转嘹亮，而东方钟则是从外部使用木槌敲击而发出声音，东方钟的声音雄宏厚重。日本和韩国也保留着自己独特的铸钟技术及风格特征，在中国佛钟传入日本后，日本的钟铃技术有了很大发展，而日本钟在造型与风格上，相对而言保持稳定，韩国钟吸收了中国古钟的许多特点，但是韩国古钟在造型上，却更富于装饰性，图案纹饰细腻而富于变化，线条流畅而精美，人物造型更加生动逼真，具有很强的

functions like music, ceremony, religion, and timing. Bells represent a special token for rich and diversified culture in Chinese history.

This is the elaborate bronze bell in Wanshan Temple, which was built in 1702 A.D. It is 110cm tall, 78.7cm in diameter, and 228kg in weight. The Amitabha Sutra is inscribed on the bell. The symbols among the texts, like hornless dragon characters, clockwise swastika, and double fish, make this bell special. The symbols carry special cultural connotations besides representing the sutra content.

Bells, as one of the cultural treasures contributed by our ancestors, bridge the different histories, cultures, and social development on the globe.

What's more, the Ancient Bell Museum of Dazhongsi collects various delicate foreign bells, which witnessed the friendship and cultural communications between China and other countries. From the foreign bells that bear different cultures, we can tell the occidental bells from the oriental ones. An occidental bell typically has a trumpet shape of small head but wide body, and is well-made with excellent technique. Its primary difference from an oriental bell is how the sound is made. Big or small, the occidental bell rings by swinging the bell body so that the clapper hits the inner side. Most occidental church bells ring in this way, and are similar to Chinese Ling bells. The occidental bells are melodious, loud and clear. An oriental bell, however, rings by knocking its outer side with wood, and the sound is typically resonant. Japan and Korea also

This is the bronze bell in Wanshan Temple. The beautiful bell was built in 1702 A.D. It is 110cm high, about 78.7cm wide and 228kg heavy. Amitabha Sutra is inscribed in the bell together with some special signs of hornless dragon characters, 卍 and double fish between the lines, which is a special token for characteristic cultures.

Bell, as the cultural treasure contributed by our ancestors, is the connection to different history, culture and social development between different nations and countries.

What's more, the Ancient Bell Museum of the Dazhongsi also collects various delicate foreign bells, which are witnesses for the friendship and cultural communication between people of China and other countries. From these foreign bells which carry different cultures, we can tell the differences between oriental bells and occidental bells. The later ones are small at the top but large at the bottom, which look like horns; they are well-made with incredible techniques. However, the most important difference lies on sound. The occidental bell is heard by knocking the inner side with the tongue through swinging the pendulum, except for the bell in churches, which share the same sound system with oriental bell. The occidental bell is melodious, loud but clear, while the oriental bell, which is knocked by wood hammer from outside, is vigorous. Japan and South Korea also develop their own characters on bell art. After introducing Chinese bell culture, Japan's bell making technology developed greatly, but they maintained their style and shape. South Korea, while

批注 [m38]: Horn 虽然也有喇叭的意思，但原文是在借用喇叭的形状，这里，本意牛角的 horn 就不对了。

批注 [m39]: 钟舌是 clapper。

批注 [m40]: 这是自鸣钟的钟摆，用错了。

批注 [m41]: 原文的教堂用钟不是例外，所以不能用 except for。

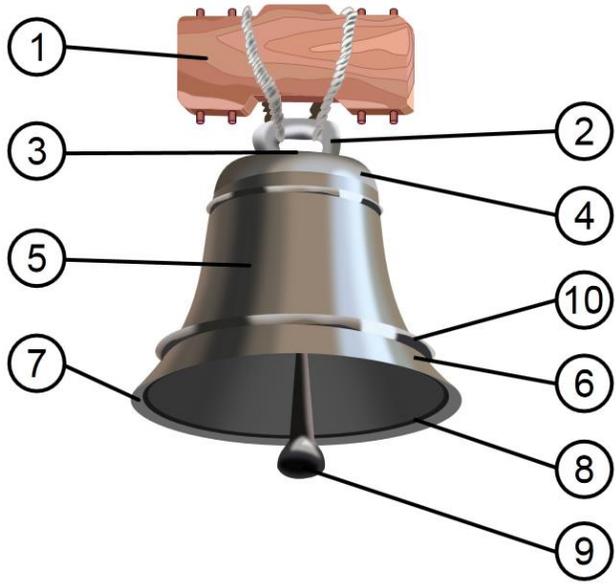
批注 [m42]: 没有把“铃”的意思表达出来，新译写为 Chinese Ling bell。

批注 [m43]: 古代的韩国没有现在的南韩北韩之分，新译中把 South 去掉了。。

<p>写实性。</p> <p>而今天珍藏于大钟寺古钟博物馆的这口永乐大钟，可以说是集中国古代铸钟艺术之大成的巨型铜钟，在清代，每逢各种庆典活动，特别是在辞旧迎新之际，大钟寺的僧人们都要举行盛大的敲钟仪式，敲钟一百零八下，是其延续至今的惯例，一百零八这个数字又代表着什么样的特殊的含义呢，这里有两种不同的说法，一是因为一年有十二个月，二十四个节气，七十二个候，加起来总共是一百零八，敲击大钟一百零八下喻示着旧的一年即将过去，新的一年将要来临，第二种说法是因为佛教认为，人有一百零八种烦恼，击钟一百零八响，人们听了钟声之后，便可以消愁解忧，清心励志。钟声是神圣的，钟声是吉祥的，钟声给人以召唤，催人奋进，凝聚着团结与力量，钟声给人以警示，示人戒律与启示，钟声预示着期盼，昭示着幸福与平安，钟声传递着信息，象征着美好与未来，钟声报晓，预示着光明与希望，钟声贺岁，辞旧迎新。</p>	<p>developed their own casting techniques and art styles. The Japanese bell-casting technology developed greatly since the Chinese Buddhist bells were introduced, while their shape and style were retained. The Korean bells absorbed many features of Chinese ancient bells, but are more decorative on the shape. The ornaments are full of variety, the lines are smooth, and the human images are vivid, lifelike and realistic.</p> <p>The Great Bell of Yongle is a great artwork integrating the best bell making crafts of ancient China. In the Qing Dynasty, it was rung by the monks for many ceremonies, the New Year especially. The bell usually rang for 108 times, and this has descended to our day. The number 108 is interpreted in two ways. One explanation says that it is the sum of 12 months, 24 solar terms, and 72 pentads, so the 108 rings mean bidding adieu to the past year and greeting the new year. The other version quotes the Buddhism to say that all beings have 108 sufferings, and the 108 rings can remove them all. The bells convey holiness, happiness, strength, vigilance, and inspiration. The bells indicate hope, peace and safety. The bells pass information, show the promising future, light, and best wishes. May the bell be with us to embrace the new year and new hope!</p>	<p>taking advantages of Chinese bell features, added more decorations to their bell, which made their work with beautiful ornaments, fluent lines, vivid images and strong realism.</p> <p>The great bell of Yongle, as a huge bronze bell integrating ancient Chinese best bell making crafts, was knocked in every ceremony by the monks of the temple in the Qing Dynasty, especially at the New Year day. The bell was usually knocked by 108 times, which is still done today. Why should it be knocked by 108 times? There are mainly two explanations. Firstly, there are 12 months, 24 solar terms and 72 pentads, and 108 knocks mean farewell to the past year and hello to the new year. Secondly, according to the Buddhist texts, there are 108 unhappiness for each human being, and 108 knocks are able to remove all of these unhappiness. To sum up, bell conveys holiness, happiness, power, warning and inspiration, and indicates hope, peace and safety; it carries information, stands for promising future, light and best wishes. May the bell be with us to embrace the new year and new hope!</p>
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批注 [m44]: 佛教术语的“苦”是 suffering。

批注 [m45]: 原文的警示意思是警醒、警惕，而不是警告。



Parts of a typical bell:

1. yoke, 2. crown, 3. head, 4. shoulder, 5. waist, 6. sound ring,
7. lip, 8. mouth, 9. clapper, 10. bead line