

Mythical Mushrooms: Hybrid Perspectives on Transcendental Matters

Xiaojing Yan
2020.12

*I am ... a mushroom
On whom the dew of heaven drops now and then.*

- John Ford, *The Broken Heart* (1633)

What I love the most about living in Canada is having a way of life that touches upon nature. I love to camp and hike in wild settings, which was hard to do when I lived in the big cities in China. In the fall, a hike in a forest to breathe in the scent of pine, with delight and awe, I see beautiful mushrooms magically appearing on the logs or ground. I feel like Alice in wonderland or the Little Red Riding Hood seeking mushrooms out of fairytales.

One of my favorite books was a gift from a friend titled "*The Woman Warrior: Memoirs of a Girlhood among Ghosts*" by Maxine Hong Kingston. Kingston mixed memoir, myth, fantasy, and fact to reflect on her childhood, mother and aunts' lives, and awakening as a writer. As soon as I started reading, I saw myself there. As a child growing up in China, I was immersed in the folktales, myths, and legends of Buddhist and Daoist immortals and fantastical realms. Like Maxine, I did what most children would do to imagine myself surrounded by the immortals, as one of them, special and unique with magical powers and profound insight.

I translate these feelings and emotions into my art. My visual vernacular is an interconnected web of symbols, which projects and reinforces themes of transience, longevity, rebirth, the illusion of the self, and reincarnation.



Figure 1. *Lingzhi*

When growing older, inevitably, one has to deal with the loss of family members and friends. Developing a different relationship with death and life, I have become more interested in the material and symbolism that carry the meaning of longevity in Chinese culture. All the childhood stories about the *lingzhi* mushroom resurged in my mind.

Called *lingzhi* in Chinese (*reishi* in Japanese), this fungus is scientifically known as *Ganoderma* (Figure 1). The distinctive fan-shaped, red varnished-looking fungus is particularly beautiful, making the search for them a delightful experience, especially since this type of mushroom is rare in nature and only grows naturally on a small percentage of fallen, decaying trees. The remarkable features of *lingzhi* have drawn the attention of people across the world throughout the ages.

In 1781, William Curtis, a British botanist and entomologist, was wonderstruck by the mushroom. He illustrated *lingzhi* and called it a "handsome fungus...shining as if varnished" and "beautifully polished

that I scarcely knew whether I had found a natural or an artificial production.”¹



Figure 2.
Lang Shining (1688–1766)

On top of its distinguished appearance, *lingzhi* is also a herb used in Chinese traditional medicine for over 2,000 years and thought to bring longevity and boost immune function. Sages and doctors also believed it to possess mystical properties. As a result, it has been dubbed "the mushroom of immortality" and is regarded as both a magical herb and an auspicious sign of good fortune and mystical power. Since ancient times, there have been numerous myths and literature mentioning people's devotion, worship, and belief in *lingzhi*.

A story in the famous "Book of Mountain and Sea" (476-221 B.C.) says Princess Yao Ji's soul clung to a *lingzhi* mushroom, turning it into a mushroom of immortality.

According to the story, *lingzhi* growing beside bamboo bushes has become a popular theme for artists (Figure 2). Everyone in China knows the "Legend of the White Snake," one of the Four Classic Folktales. In that story, White Snake achieved magical powers with thousands of years of practice. She transformed into a beautiful woman and married a human named Xu Xian. However, her violation of the boundary between human and non-human caused the death of Xu Xian. Impressed by her sincerity and her perseverance in trying to save her husband, the Kunlun Immortal granted her the *lingzhi* to bring Xu Xian back to life (Figure 3). There are too many similar stories to mention. I grew up listening to these stories, and the magical *lingzhi* has always fascinated me.



Figure 3.
Lady White Snake Stealing *lingzhi*
By Ren Shuaiying (1911~1989)

According to the story, *lingzhi* growing beside bamboo bushes has become a popular theme for artists (Figure 2). Everyone in China knows the "Legend of the White Snake," one of the Four Classic Folktales. In that story, White Snake achieved magical powers with thousands of years of practice. She transformed into a beautiful woman and married a human named Xu Xian. However, her violation of the boundary between human and non-human caused the death of Xu Xian. Impressed by her sincerity and her perseverance in trying to save her husband, the Kunlun Immortal granted her the *lingzhi* to bring Xu Xian back to life (Figure 3). There are too many similar stories to mention. I grew up listening to these stories, and the magical *lingzhi* has always fascinated me.



Figure 4.
Luohan Luohan (Arhats) holding *lingzhi*.
Original paintings were done by Guan Xiu in 894.

Doctor Robert A. Blanchette, a plant pathologist from the University of Minnesota, wrote a paper about the historical treasures he saw from a visit to the Forbidden City in Beijing.² His paper centered on the Forbidden City artifacts that used *lingzhi* as a motif or a material. Among what he saw were two paintings (Figure 4) depicting *luohan* or Arhats holding *lingzhi*. *Luohan* were thought to have achieved an advanced state of spiritual development and were revered as Buddhism protectors.

Taoism played an essential role in promoting *lingzhi* for either medical purposes or spiritual associations. Taoism believes human beings can achieve immortality by following specific regimes and taking certain magical herbs, such as the best panacea *lingzhi*. By consuming *lingzhi*, it is said that one will never grow old or die. *Lingzhi* grows everywhere in the fairyland. Legend has it that God fed

on it to gain immortality.

¹ Andrew L. Loyd and Robert A. Blanchette, *Glossy with Grandeur: The Laccate Ganoderma of North America*, Spring 2019 FUNGI Volume 12:1

² Robert A. Blanchette, *Imperial Fungal Treasures of the Qianlong Emperor*, Fall 2020 FUNGI Volume 13:3

Thus, the characteristics of good fortune and longevity associated with *lingzhi* became a unique component throughout Chinese culture. Throughout ancient China, the symbolism of *linzhi* has been immortalized and embraced into a variety of art forms. But by the 17th century, *lingzhi* as an art motif was so popular that it eventually lost its earlier religious connotations, gradually becoming a motif of botanical elements appearing on artworks on its own. The curved lines on the top of the mushroom have been seminal in Chinese art and iconography and can be found in countless motifs and patterns. These motifs take the form of clouds and waves in traditional Chinese painting and drawing, textiles, crafts, and architectural design.



Figure 5.
Empress's ceremonial coat (*chaogua*)
Silk with gold thread
Qing dynasty (1723-1735)
The collection of the Palace Museum,
Beijing, China

Extravagantly made of silk with gold thread, this Empress's ceremonial coat, called *chaogua* in Chinese, from the collection of the Palace Museum, is from the Qing dynasty (1723-1735) (Figure 5). The *chaogua* was one of the most important ceremonial dresses for empresses. This dark blue silk *chaogua* was embroidered with two gold ascending dragons surrounded by *lingzhi* shaped clouds and waves.

Looking into the deep history that humans have had with mushrooms, we can find many artifacts showing how indigenous cultures across the world also revere mushrooms. This observation provides us a window into the reciprocal relationships with nature that permeated every aspect of human life.

Lingzhi wasn't only worshiped in East Asia. Historically, *lingzhi* has been associated with more magical and even supernatural properties with its use in different world regions by shamans from indigenous cultures. I found these images of extraordinary masks from Nepal formed from a large, single *lingzhi*. Another mask is from an indigenous village called Bella Coola from British Columbia, Canada. It is believed that such masks were worn during ritual events to frighten off evil spirits (Figure 6).



Figure 7.
Mushroom stones ranging around from Mesoamerica
approximately from 1000 B.C. to 500 A.D



Figure 6.
Ritual Fungus Mask
Collected before 1924
by H. I. Smith from
Bella Coola, a village
near the Dean River,
British Columbia,
Canada.
Canadian Museum of
History

These enigmatic ancient mushroom stones carved in Mesoamerica between 1000 B.C. and 500 A.D. framing humans or gods in the likeness of mushrooms (Figure 7). They can be found in Mexico,

Guatemala, and other places in America and are thought to be shamanic objects depicting *Psilocybe* psychoactive mushrooms.



Figure 8.
Petroglyphs at the Pegtymel river valley on the rocks of the Kuikule cliff, Chukotka, Russia
2'000 -1'000 BC



Figure 9.
Pre-Columbian ceramic
Moche portrait vessel from
Peru.



Figure 10.
Mushroom Shaman
ancient cave paintings in Tassili
n'Ajjer, Algeria.

Figures with mushroom heads were discovered dated 2,000-1,000 B.C. from the most northerly petroglyphs in the world in the Pegtymel river valley on the rocks of the Kuikule cliff, Chukotka Russia (Figure 8). A pre-Columbian ceramic Moche portrait vessel from Peru depicts a human wearing a headdress encoded with two amanita-looking mushrooms similar to the psychoactive fly-agaric, along with a mushroom-shaped ax (Figure 9). The Moche culture reigned on the north coast of Peru from 100-600 A.D. Another "mushroom shaman" figure is from the ancient cave paintings in Tassili n'Ajjer, Algeria (Figure 10). It is believed to show the oldest known petroglyphs of psychoactive mushrooms. The cave paintings show people holding objects that look like mushrooms, and some have mushrooms growing from their bodies.

From the ancient mushroom-related symbolism found worldwide, we know that not only did mushrooms play an important role in the lives of indigenous cultures, our identity is also deeply connected with the natural world. Each civilization has its own mythological stories with similarities between the supernatural creatures and magical plants. They are all connected to the origins of humanity and how humans exist in the world. It is noteworthy that many mammals and other animals also consume mushrooms either for their diet (they are a valuable source of proteins and oligo-elements) or for medicinal or psychoactive purposes.



Figure 11.
Lingzhi, bronze, 2014
Courtesy of the artist.

This is the mushroom of spiritual prosperity, upon which legends were built. The visual record of *lingzhi* in Chinese and indigenous art provides insight into an incredibly fascinating relationship between human, natural, and spiritual realms. This is the magic mushroom that a little girl would dream of, to obtain supernatural powers, while listening to the legends told by her grandparents.

In 2014, I bought a dozen *lingzhi* mushrooms and had them cast into bronze (Figure 11). Finished with a turquoise patina, the textures on the mushrooms are enhanced, resembling tree rings. These bronze mushrooms also mimic the bronze vessels and artifacts found in museums. The materials speak to a sense of aging and the passage of time. I arranged them onto the wall in the way that bracket mushrooms would grow in steps in nature. Against the white wall, these hoary objects appear to float in space. Bronze is often associated with monuments, images of power, or eternity and creates tension with *lingzhi's* delicate nature and mythology.

In his article, Doctor Blanchette mentioned another impressive collection he saw at the Forbidden City, which is the *lingzhi* mushroom collection by the Qianlong emperor (Figure 12, 13). There were many large *lingzhi* displayed by embedding them into cabinets or displayed on carved wooden stands, similar to how naturally occurring scholar's rocks are mounted on carved wooden bases and served for contemplation and meditation. One of the mushrooms has a poem written by the emperor on its surface in gold paint (Figure 13).

As an organism, *lingzhi* has a fragile and ephemeral life. However, the ancient Chinese collected *lingzhi*, and many of them have kept well for hundreds of years like those in the Forbidden City. It has more longevity than we usually would think; while, bronzes often get melt down and recycled. They are actually less lasting than we usually assume. I found this dichotomous nature of *lingzhi* very interesting. I wanted to further my creative experimentation to preserve the cultural marks of *lingzhi*.

A while later, in early 2015, I visited a mushroom farm in China (Figure 14). These mushrooms, rare in nature, have now become mass-produced and easy to find in the market. Contrary to wild *lingzhi*, which is irregular in shape and color, the commercially grown *lingzhi* are uniform in size, shape, and color. I was fascinated by the idea of man's control over nature and intrigued about the idea of growing my *lingzhi* sculptures. Using *lingzhi* itself as a sculptural material not only speaks to the rich history of human's relationship with nature but also allows me to explore new sculptural material.



Figure 14. Lingzhi Farm in China



Figure 12.
Lingzhi collection by Qianlong emperor (1711–1799)
Collection of the Palace Museum, Beijing, China



Figure 13.
Lingzhi collection by Qianlong emperor (1711–1799)
Collection of the Palace Museum, Beijing, China

Then, I started researching on how to grow *lingzhi* mushrooms. It's important to first explain the growing cycle of a mushroom in a very basic and simple way before introducing my mushroom sculptures. Mushrooms are fungi, but only a small percent of fungi produce mushrooms. Mushrooms are just the "fruit" or "flower" of fungi. When we typically think of a mushroom, most of us are only aware of the stem and cap that appear above the ground or the wood surface.



Figure 15. Mushroom mycelium
Courtesy of the artist.

Upon maturity, mushrooms release millions of spores into the air. These spores are so small that you won't even see them, and they are the fungi equivalent of the seeds of a plant. If conditions are suitable, the spores are able to germinate. When germinated, they produce mycelium (Figure 15). Mycelia are networks of cells that appear similar to a plant root system. The mycelium penetrates the wood or other medium, breaking down those materials to extract nutrients for growth. The complex network of mycelium is often much larger than the mushrooms you see on the surface. Once the mycelium has grown enough to break through the surface and the specific settings of temperature and the light exposure are achieved, pinheads will form. These small bumps will eventually become mushrooms, which are known as the fruiting body. When mature, this fruit body will drop spores, and the whole cycle begins again.

Now we know how the mushroom grows. This is where my experimentations of collaborating with nature began. I wanted to use *lingzhi* to grow a body of sculptural works that show nature as the manifestation of uncontrollable phenomena supporting a cycle of life that is dynamic and inexplicable. I aimed to show *lingzhi's* characteristics of growth, aging, death, decay, regeneration, and immortality in my processes and forms.

After about two years of experimentation with countless failures, I finally successfully cultivated my first *lingzhi* bust. There are many steps to prepare these spores for growth, and everything needs to be sterilized to prevent unwanted mould from growing. The substrate is mainly made of woodchips, and has to be sterilized in a pressure cooker for hours. I packed a mixture of sterilized woodchips and prepared *lingzhi* spores into the mould I created. The light, temperature, and humidity are controlled to ensure the germination of the spores. The spores then start to produce mycelium. Appearing as a series of feathery webs, mycelium fills up the gaps between the woodchips, and it binds them together, acting as a binding agent. I then remove the mould, and the sculpture is now structurally intact, thanks to the activities of the mycelium. This image here shows the stage when the mycelium completely covers the woodchips, turning it into a white paper mâché like sculpture (Figure 19). I then place it in a small greenhouse with a controlled growth environment. At this point, I step back and let the sculpture sculpt itself. The sculpture continues to evolve as the mycelium develops under the surface, and in a few weeks, the pinheads of the *lingzhi* pop up, slowly fruiting into



Figure 16. Artist working in a sculpture factory in China.
Courtesy of the artist.



Figure 17. Putting prepared woodchips into the mould.
Courtesy of the artist.



Figure 18. *Lingzhi* grow mould made of fiberglass resin.
Courtesy of the artist.

lingzhi fruit bodies. After about 3-4 months, the mushrooms mature and produce a coco-powder-like dusting of spores on the surface of the sculpture. This hybrid bio-art experiment, which relies as much on science as it does on fate, seems to restore some kind of balance, with science and chance playing equal parts and with the hand of the artist, for the most part, at the sidelines. For me, it is important that each side of this equation has a chance to shine.



Figure 19. *Lingzhi Girl* in different growing stages. Courtesy of the artist.

Not every attempt was successful. Often black or green mould grew before the mushroom. Especially with bigger forms, it's much harder to control. So far, I have successfully cultivated 16 busts from the same mould, with each bust taking on its own unique form. I titled them "Lingzhi Girl." These are the girls in the stories, and the girls I imagine myself among, as one of them. Many people think they look like warriors from the terracotta army.

I produced a 30-second time-lapse video of the four-month process whereby the spores slowly transformed from the white mycelium stage into fruiting bodies and eventually covered with the brown powder of the spores. In Chinese mythology, it is believed that all things have spirit and are capable of acquiring human forms, magical powers, and immortality when they absorb the nimbus of the universe and the prime of the sun and moon. When there is a lack of energy during the transformation, they may still keep some of their animal or plant traits. These busts can be seen as *lingzhi* in the process of acquiring the human form as the woodchips are bonded by mycelium to create a human form. However, the video shows the reverse process by presenting the mycelium sculpture of a human form transforming into a hybrid *lingzhi* and human form. This is a deeper view of the symbiotic relationship between humans and nature. Plants and animals provide food for humans and have been tended and bred by humans for thousands of years. Humans' increasingly parasitic symbiosis with nature may lead us to the destruction of nature that gives us sustenance. This raises a question on how we can steer our world towards better outcomes.

When I was satisfied with the growth, I halted the cycle of *samsara* (birth and death) by slowly baking the sculptures in an oven, depriving them of their moisture and allowing the *lingzhi* to dry out and harden. Mushrooms play a crucial part in the decomposition process by breaking down dead organisms in an ecosystem to help to release minerals, carbon and other organic molecules back into the soil to provide food for plants, and contribute significantly to carbon turnover in both air and soil. This feature of mushrooms enhances the *samsara* concept.

A lot of people are afraid of mushrooms. People associate fungi and moulds with death and decay, but in fact, that is the value of life in mushrooms - fungi participate in the cycle of life. They decompose dead and dying organisms and move all these nutrients back into the cycle. And there are many poison mushrooms that can kill people. We are in awe of enigmatic mushrooms. The uncanny appearance of

these busts seems frightening for many viewers. But a Chinese viewer would recognize the *lingzhi* and immediately become delighted by the discovery.

Through the process of growing the *lingzhi* busts, I found out that the same mushroom can actually take on different forms according to the carbon dioxide level, humidity, and light conditions, from the typical shelf-like fungus of the Chinese apothecary to the prototypical toadstool with a long stem, to antler-shaped, horn-like forms. Viewers can see these 16 busts have all kinds of *lingzhi* shapes. *Lingzhi* grows differently based on environmental conditions, age, and other factors. As it turns out, *lingzhi*, like humans are shaped by culture and environment; they assume different forms and behaviors based on their habitat. The human body readily responds in a variety of biological and cultural ways to changing environmental stresses. We can acclimatize to a wide range of temperatures and humidity levels, not only by sweating through our skin; we also developed different clothes to wear and different houses to live in different climates. Our cognitive ability helps us to adapt to a novel environment by making different shelters, clothing, tools, speaking different languages, and adapting to different social habits.



Figure 20. Details of *Lingzhi Girl*.
Courtesy of the artist.

Beyond the realm of Buddhist metaphysics, the *lingzhi* has a personal significance for me, as a daughter facing the difficulty of being far away from my aging parents, struggling with the challenge of fulfilling filial duties, a common problem for children living overseas. And also, as a daughter and a mother, I see the relationship of parent to child sharing many parallels to that of the *lingzhi* and the woodchips, one drawing sustenance from another. The woodchips are bonded by mycelium to create the sculpture form of a young girl, while this bust of a young girl is also providing the nutrition for the mushrooms.



Figure 21. *Far from where you divined*, 2016-2017
Courtesy of the artist.

Through *lingzhi*, we can catch a glimpse into how nature played an important role in Chinese mythology. In the Chinese immortalized landscape, the rare *lingzhi* mushroom can be found, venerated and coveted, for thousands of years. Eating a mushroom that grew in the deep mountains provided one of the closest connections. Inspired by the utopian scenes depicted in traditional Chinese landscape (or *Shanshui*) paintings, I assembled a contemplative landscape charged with symbolism, where my *lingzhi* sculptures can dwell. Accompanying them were the rabbits, deer, and other animals that often appear in both Western and Eastern mythologies, and folklores. Hovering between worlds in a place that can only exist in the imagination; this fantasy world exists in-

between the real and the fictional, the west and the east, the human and the animal, the heavenly and the earthly. I blend these elements together to create an ephemeral floating world to explore and encounter mystical figures that are becoming one with this utopian landscape.



Figure 23.
Dreamland
solo exhibition at Hermes Masion, Shanghai,
China
Courtesy of the artist.



Figure 22.
In Suspended Silence
solo exhibition at Richmond Art Gallery, BC, Canada
Lingzhi Girl and *Mountain of Pines*, pine needle and silk organza, 2018
Courtesy of the artist.

While standing in the exhibitions, I felt like my animals and plants could communicate with viewers in this utopian fantasy world. Evidently, this wasn't just my fantasy. Scientists have discovered that plants and trees can use mycelium's underground networks as a sort of biological internet to impart and sound the alert when something perilous is drawing closer. At the point when a plant is attacked by insects, it radiates an admonition signal that permits plants nearby to trigger their chemical defense systems before the bugs arrive. The fungal network that communicates within the ecosystem may

provide an approach to comprehend the language of nature.³



Figure 24.
Out from among the tranquil woods
solo exhibition at Varley Art Gallery, ON, Canada
Front: *Far from where you divined*, cultivated *lingzhi*, 2016-2017
Back: *Star Mountain II*, star anise and pin, 2017
Courtesy of the artist.

In 2019, I used electrodes to collect data from *lingzhi* mycelium. Then the bio-electrical recordings were saturated by an amplifier and turned into music through an algorithm. According to scientists, plants display emotional sensitivity in languages of their own. Electrical signals in plants respond to environmental stimulations, hence through sound, audiences can experience how patterns and melodies change in relation to fluctuations in the environment where the *lingzhi* sculptures were cultivated.

I am not alone in experimenting with

³ Y.Y. Song, S.W. Simard, A.Carroll, W.W. Mohn, and R.S. Zheng, "Defoliation of Interior Douglas-Fir Elicits Carbon Transfer and Defense Signalling to Ponderosa Pine Neighbors through Ectomycorrhizal Networks," *Nature, Scientific Reports* 5 (2015): art. 8495.

mushrooms as materials. As a sustainable material, the mushroom mycelium has been used by many designers to create furniture and even used as building materials by architects, or as fashion products such as this shoe made of mycelium by the Belgian shoe designer Kristel Peters (Figure 25). A California-based green burial company developed a mushroom suit for burial. Made from organic cotton and prepared mushroom spores, the suit will grow mushrooms after it is buried into the ground with a body inside.

Mushrooms represent rebirth, rejuvenation, and regeneration. They have been used in China and indigenous cultures as a powerful symbol for protection and good health. During a time when the collective experience of illness, death, and loss have been brought to the forefront due to the COVID-19, I started self-reflections on the relationship between life and death again. I can resonate greatly with how people must feel during ancient times. When the cause of a certain disease was not understood, the cures had to rely on traditional methods; *lingzhi* and other thought-to-be-magical mushrooms, part of traditional medicine and regarded as symbols of protection providing reassurance, were believed to prevent illness and bring longevity. When we feel so powerless in the face of natural disturbance, looking back to our ancestors and their relationship to nature can help us to reflect upon and build resilience using natural means.

Mushrooms have become a window for me to understand the inner workings of nature in a more profound way. I am working on another series of experimental *lingzhi* sculptures. I am trying to grow *lingzhi* on found furniture (figure 26). It's quite challenging, in that the wood of the furniture and the way it has previously been treated is totally out of my control. I do hope that with enough experimentation, there will be a few that become showcases for the wonder of nature's creation. I hope by doing this, I can give the furniture a new life and purpose, drawing awareness toward a deeper understanding of human-nature relationships, which I believe is of critical importance in the face of exacerbating environmental problems.



Figure 26. Concept sketches by the artist.

Yet, in this age of the Anthropocene, we can no longer afford to live in the realms of eternity and mystery that brought such comfort to our ancestors. Natural systems that have existed for centuries are now under direct threat from human actions. I am both horrified and fascinated by the way technological advancement gives humans the "illusion" of power over nature. My investigations with *lingzhi* mushroom delve into the meaning of spirituality and metamorphoses, as well as other questions about being and becoming, art and nature, art and science, nature and existence. I hope my work can create experiences and facilitate the actualization of interconnectedness and deepen feelings of unity with the natural world.