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Into the Shell

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Into the Shell

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Table of Contents

Introduction.............................................................................................................1
Study of shells..........................................................................................................3
  The History of Shells in Art
    Artists and Art Forms
Development and Evolution......................................................................................7
  The Shell as Inspiration
    Design and Process
Table Setting and Display.......................................................................................13
Discussion of Work.......................................................................................................15
Conclusions................................................................................................................18
Body of Work..............................................................................................................20
Bibliography...............................................................................................................32
Introduction

One major purpose of this thesis was to examine the forms and rhythms of nature. I do not always appreciate the beauty of nature. I wanted to take this opportunity to give thanks to the gifts of nature by applying nature’s beauty to new art forms. My thesis work consists of spiral forms, as they naturally are expressed in shells. Shells have long been called nature’s works of art, and many artists have long been inspired by the graceful symmetry, asymmetry and diversity of the shell, such that they have incorporated them into art pieces or architecture. I have been attracted to the symmetric and asymmetric lines, the curved lines and surfaces, and the spiral forms found in shells. This research explores these unique movements and rhythms, and these are reflected in my thesis work, as well as in my thesis paper.

The thesis work consists of tableware, including plates, a vase, a candle holder, napkin rings and chopstick rests to create four table settings. This work included not just making the tableware, but setting the table. The dinner table is like a magic place, where one can create an atmosphere of happiness for family or guests. I enjoy expressing my affection for and attention to my guest through my table settings. Hence, I completed four place settings, together consisting of four plates, four chopstick rests and four napkin rings, one of each for each guest, as well as several decorative pieces for the center of the table and around it. In doing so, I reflect the curved lines and volumetric forms that are revealed in the spiral forms of shells. I primarily used silver, because silver offers the elegant and sophisticated
color that I desire. Silver is second in malleability and ductility only to gold. It is the whitest of metals and can be polished to a luster of high reflectivity. I used walnut wood for the table, pedestals and chopsticks to add the warmth of wood to the coolness of silver and glass. I also used real flowers, leaves and branches for the table setting.

My primary challenge was to achieve elegance, while emphasizing simplicity. Using fragments in spiral form, I also applied different shapes and sizes to each piece to give my work variety. I am convinced that achieving simplicity is difficult, but it should not limit the expressivity of the work. Also, choosing traditional techniques, yet also selecting non-traditional shapes for plates and vases is challenging. I chose to study the graceful curves and volume of the spiral. The shell has been admired through the ages for its simple elegance, and has been a source of object design and architectural design in many cultures over many years.
Study of Shells

The History of Shells in Art

The shell has long been inspirational in many ways, because of its graceful symmetry and beauty. Man has used shells both as a cult symbol and as an aesthetic object. This treasure from the sea has inspired architects to incorporate shell-like designs in the bases of vaults, staircases, arches, porticoes, and niches. The Phoenicians, Greeks, and Romans applied the shell’s shape as part of their building design and decoration. Here, I direct attention to man’s attachment to shells throughout history.

1. Ancient Times

The shell was used as currency and as a decoration for the body during ancient times. The shell tribute that the ancient Aztecs paid to the Emperor Montezuma is only one example of the shell being used as money. This practice, in fact, was repeated in many countries, at many different times, and for many different purposes. Also, man has been using shells to decorate his dwelling and public meeting places since before the dawn of history. During some eras, the shell enjoyed mythological and religious symbolism. During others, it was free of religious connotations, man restricting his interest in the shell to aesthetics. Man started applying the shell’s intricate beauty, unending variety, an complex mathematical structure to generate functional and yet aesthetically-pleasing architecture. In addition, certain shells were used as musical instruments for
thousands of years in many countries. Shell music was used as a summons to prayer, to sound warnings in time of danger, and to inspire warriors marching to battle.

2. Pre-Columbian American

Pre-Columbian civilization employed shells as containers for perfumes and ointments. Additionally, artistic representations of shells were sculpted in gold, silver, clay and stone.

3. The Renaissance

During the Renaissance, architects copied shell shapes to create designs in niches, facades, tombs and pedestals. This period, as we know, brought fourth great ideas developed by prolific personalities of immense talent. The religious devotion of the Middle Ages had passed. Almost all the architecture of this period was rich and decorative. No longer were shells symbolic of religion. Instead, the shell was admired and cherished as an example of superior architectural mastery. The Renaissance granted such a multitude of uses for shell forms. An endless array of great churches, sculptures, altars, porticoes, and tapestries would use the shell as a motif or model of construction.

4. The Baroque Period

Throughout the Baroque period, shells were used in extravagantly lavish pieces, and sometimes were displayed in their natural form as a cup placed on or surrounded by figures of cast or wrought gold.
5. 18th Century-Rococo

The Terms ‘Rococo’ is derived from the French word ‘rocaille’, which refers to a type of rock-and-shell decoration employed in the construction of grottoes and pleasances. Shells were an ideal example of this, and many such pieces were created by a number of great porcelain sculptors of the Rococo period. Additionally, many objects - like tableware pieces, accessories, and even boxes - were shaped like shells or erupted with shell forms. The Rococo period laughingly threw way any trace of religious sentiment regarding shells, instead viewing the shell as a joyous design element, a charming, fanciful, lively object whose aesthetic appearance embodied a whole repertoire of forms and colors that served to inspire gilded and polychrome ornaments for interior decoration.

6. The 20th and 21st Century

Even today, the small circle shell denotes beauty, shape, and artful design; and man’s love affair with the shell continues to be expressed in many of his crafts.

Artists and art forms

Leonardo da Vinci, whose genius is timeless, recognized the beauty and functional perfection of the shell’s spiral structure. He drafted the first spiral staircase plan, the design of which still is used by architects today. He derived this plan by studying the architecture found in nature itself, and made drawings utilizing the inventive construction of a certain univalve mollusk as his inspiration. Bramante’s
*Tempietto* in Rome, which was the forerunner of St. Peter’s Basilica, is decorated inside and outside with scallop-shaped niches. Verrochio used the shell in his depiction of the Cathedral of Pistooria we find in his painting (c.1480) depicting the Maddona and Child seated under a shell-shaped canopy. Botticelli’s *The Birth of Venus* (c.1480) is the most famous depiction of a scallop shell in the world. Even though not true to nature, it embodies the essence of all scallop shells, and, thus, maybe considered an ideal representation. Many artists were so inspired by the beauty, diversity and design of the shell that they incorporated them into their masterpieces at different times and in different ways.
Development and Evolution

The Shell as Inspiration

Nature is rarely as simple as we might like it to be. The shell shape, which has a logarithmic spiral, is so elegant in its simplicity and in its power to explain the concept of diversity. The shell’s logarithmic shapes, textures and colors have been a constant source of inspiration to the creative genius of man. The shell has something that is aesthetically satisfying to the human eye and mind. The proportions of shells are perfect at every stage of growth, and always look complete. There is a sense of progression, continuity, and eternity that is expressed in its ascending coil, which is comparable to no other form of nature. The logarithmic curve of the shell is one of the simplest of all known curves. I have been attracted to the graceful symmetric and asymmetric curved lines, volumes, and movements in shells. In addition, some shells lend themselves, by the very nature of their shape and substance, to a variety of practical uses. The upper valve of large scallops, which is flat, can be used as a plate, while the lower concave can be used as a little dish. Their functional shape has been copied in metal, porcelain and wood, and still is found used as containers for jams and sweets. Their shapes also are comfortable to handle as a plate or dish. Throughout the ages, their shapes and colors have inspired painters, sculptors and architects for all these reasons. The Great American architect, Frank Lloyd Wright, who applied the shell shape in his design of the Guggenheim Museum, paid tribute to shells, and what architects can learn from them, when he said: “In ... shells we see the housing of the sea. It is the housing of a lower
order of life, but it is a housing with exactly what we lack: inspired form."¹ Shells may have less appeal to the artist and designers of today. Yet, it is unlikely that the shapes which have enjoyed such a universal popularity over so many thousands of years ever can fall out of favor forever. I have gleaned some of my greatest inspiration from the shapes of shells, so that now I want to capture this inspiration in silver.

**Design and process**

To do this, I observed nature forms, sketch shapes that inspired me, and then created specific natural art forms from these sketches. I drew my inspiration from many different places, not only from books, but also from nature itself, including shells, leaves, and the wind... I repeatedly referenced the beauty, purity, simplicity and diversity of the shell form throughout my thesis work.

1. **Form and shape**

In most nature forms, the quality of equilibrium may be difficult to recognize. However, seashells are one of the natural forms whose function is simple enough to be approximated by measurable mathematical relationships. In particular, spiral forms of shells are elegant and simple; but they also have variety, movement and rhythm. I wanted to apply these elements to my thesis work.

First of all, I chose ‘the spiral form in seashells’ as my design concept. I decided to both create tableware and set a table for my thesis and thesis show. By means of my research on shells, I have come to know that the shell has been used for plates and dishes for a long time, because their functional shapes both easily hold food and are comfortable to handle. I focused on designing simplified and minimized forms. The spiral form was enough to express this restraint, but I did not feel limited by this. I finished designing plates, a vase, and chopstick rests via several modifications. I started by designing a main dish and developed the rest of the works based upon that first work design. I designed four main plates, several center pieces, a vase and four chopstick rests. Most of the plates feature an asymmetric tetragonal shape. Traditionally, plates are round. However, tetragonal plates have become popular today, because of their practical uses and individuality. The four main plates have similar spiral and tetragonal forms, but their sizes and shapes are very different. I wanted to unify the pieces by applying the spiral and tetragonal form, but I also wanted to generate diversity by using different sizes and shapes. Each plate has a spiral form shaped with line and volume. The spiral form is very simple, but soft. It has not only a decorative effect, but also a functional effect that gives the plate height. The plate initially appears more like a 2-dimensional (2-D) form, but the spiral form in the plate reveals a more 3-D appearance. The combination of these forms reveals a balance of 2-D and 3-D characteristics. I also created two larger and two smaller plates for center pieces. Each of these center pieces has a spiral form; one larger and one smaller plate are tetragonal in shape; but one of the two larger plates is in the shape of a long leaf, and one of the smaller plates is triangular. The
vase I created has a long neck. I used spiral fragments for the four chopstick rests. When you see the chopstick rests, you cannot see the spiral form, but you can imagine that each one is a fragment in the spiral form.

2. Materials

I made every plate out of sterling silver, but the one vase from fine silver. My primary reason for choosing silver is its elegant white color. The second reason is its resistance to corrosion by foods and organic acids, which is a factor in its popularity for use in hollowware. I used sterling silver for every plate because both gold and fine silver are too soft for practical uses; but creating a sterling silver alloy with another metal, normally copper, provides additional strength. Consequently, sterling silver is more functional than fine silver.

For the vase, I needed more volume than for the plates, so I employed fine silver. In its pure form, fine silver is soft enough to be molded in such a way as to create more volume. I made the vase by means of die forming. Die forming, hammering to shape, raising a form, or stamping with dies or a dapping block all result in the eventual hardening of the metal. However, stresses from these process are created in the metal that make it difficult to work or cause cracks in the surface or structure. Sterling silver is more prone to cracks than fine silver; hence, fine silver was used.

3. Techniques and Surface

I mainly used sinking, die forming, chasing, and welding for the thesis work. First, I would like to define these techniques to allow for better understanding of the
work that went into my pieces. *Sinking* is a method by which a form is raised by
directing blows from a hammer onto the inner (concave) surface of the metal, as it
is positioned over a sandbag, block of wood or metal surface. The raised shapes
consist of variations of cylinders, cones, or free form shapes, all capable of holding
a volume. They may be shallow or deep. Sinking a form to create volume consists
of forcing the metal from the concave side into a mold or sandbag, or hammering it
directly while on a metal surface.² Sinking is the most appropriate method to make
a flat-form plate. After sinking was performed several times, and once the desired
form had been achieved, I finished the form through planishing over a stake before
starting the chasing process.

At certain periods in history, plain silver has been most fashionable; but, as a rule,
some form of decoration is added to the surface of a piece. The three principal ways
of decorating a surface are *embossing*, *chasing*, and *engraving*. *Chasing*, in general, can
be distinguished from *engraving*, in that the design can be seen on the reverse or
inner side of the piece, shaped by punch and hammer.³ I used chasing to have an
outline of the spiral pattern on the surface, to refine and define the forms of the
design, and to bring each piece to its desired height.

For the vase, I employed die-forming and welding. I cut the same size of silver
sheet, hammered silver on the die, and welded both sides together. Die-forming is

1975) 480, 240.
³ Richard Came, *Silver*. (Octopus Books, 1975) 7
one effective way to generate two similar volumes of the same shape. I used welding instead of soldering to fuse the halves. If I had used soldering, I would have been able to see the soldering seam. Also, after repeatedly hammering and planishing, it is easy to obtain cracks on the surface. With welding, these risks need not be considered.

To enhance the final products’ appearance after coloring and finishing, the texturing produced by the hammer was left on each surface to generate a more natural appearance. Thereafter, each piece was heated, washed by hand in a 50 percent solution of nitric acid, rinsed thoroughly in water seven times or more to bring out the pure silver’s white color, and left unpolished. The spiral seam was touched up with a burnisher to create a shiny line for final finishing. This distinguishes the spiral form from the rest of the surface, and refines each plate’s edge beautifully. It, thereby, gives each plate an air of simplicity and color contrast, adding to its elegance.
Table Setting and Display

I sculpted eight plates, one vase, four chopstick rests, and four napkin rings. Using these, I planned and designed a dinner table and three pedestals throughout the thesis year, for purposes of the thesis work and thesis show. The thesis show was a presentation of the work I had finished that preceding thesis year. Both making and displaying the work is very important, especially for tableware. I chose to use a table setting for the thesis show, rather than a pedestal, because I wanted to show visitors an effective and artistic way to use the tableware in a table setting, thereby demonstrating my affection and appreciation for my guests.

Eating is, perhaps, the most critical part of our social existence, even more important than how we clothe or house ourselves. How we eat is influenced by many factors, including our personal wealth and tastes, but also our culture and setting. I came from South Korea, an eastern culture. I lived there for more than twenty five years. Consequently, I feel more comfortable with eastern than western culture. However, I subsequently have been studying about jewelry and metals in the United States, during which time I have been learning about western culture. One goal in this thesis was to fuse the eastern and western styles together, in the context of a table setting, thereby expressing my thanks to both cultures in which I have lived and studied. As you can see in Figures 1, 2 and 3, I adopted the low table, bottom rug and chopsticks that are characteristic of the eastern culture, and the silver plates from the west. Koreans traditionally use silver chopsticks and spoons; the Japanese and Chinese use wood chopsticks and spoons; but none of the three
cultures uses silver plates; instead, ceramic plates and bowls generally are preferred. I elected to change all of this, both for convenience and for individuality. This certainly seems reasonable. The division between eastern and western cultures is closing rapidly in our global world. More and more eastern ways are being adopted by the west, and vice versa, because of increasing travel between the east and west. I feel that it is very important for everyone to learn about other cultures, as the world strives for peace and global, mutual understanding. Maintaining and displaying traditions proudly are important components of this, as I have done. Being resistant to change, on the other hand, defeats these efforts. I feel that the table setting I displayed in my thesis work is an excellent balance of proudly displaying tradition, while willingly accepting change.

I chose walnut for both the table and the pedestals to unify the theme. I chose a green tone for the walls, and for a runner and placemats, because the color green is internationally recognized as the color of life and growth. Also, I used real leaves and flowers to harmonize with the walnut table and the green colors, adding to the natural, decorative effect. I pursued simplicity in my display, but also sought to tie in the theme of nature.
Discussion of Work

1. Four main plates (Figures 4, 5, 6 and 7)

When I walk along the beach, I see various kinds of seashells and sometimes see the fragments of seashells that have been broken by natural phenomena or humans. I have been attracted to the fragments more than the undamaged seashells. I designed the four main plates with these images in mind.

I tried to create a sense of unity in the main plates by making them all a similar size. When I designed them, I prepared limited size papers, A4 papers, and I developed shapes within the confines of these papers, thereby limiting the size. They plates have different shapes. All use a spiral form, but two (Figures 4 and 6) have two folding forms and the other two (Figures 5 and 7) have one folding form. The spiral and folding form appear not to have a connection; but, when you follow the spiral line, you arrive at the folding line. The folding line also is a fragment of the spiral line. I designed each piece’s spiral volume such that one can encompass it with one hand, so it is comfortable to hold.

2. Center plates (Figures 8 - 11)

The center pieces include two large and two smaller plates. I made these bigger than the four dinner plates to give the table stability. I designed these for decorative effect as well as function. These plates can be used not only for food, but for flowers.
One of the larger center plates (Figure 8) I designed in the shape of a long leaf, including one spiral form and two folding forms, like two the main plates (Figures 4 and 6). The other large center plate (Figure 9) I gave a rectangular shape with two spiral forms; but one spiral form is concave on the front, while the other is concave on the back. I shaped two spiral forms to give it space application for a larger size plate and show both negative and positive volume effects on each side.

The two smaller center plates are shown in Figures 10 and 11. As with the four main dinner plates, I used images of fragments of shells in my design.

3. Vase (Figure 12)

All the plates largely look two-dimensional. The vase, however, is much more of a three-dimensional shape, though it is designed to be a good match with all the other pieces. It has a long neck with a spiral form, and has a teardrop-shaped mouth. With the other pieces, I touched up the spiral line with a burnisher to generate a shiny surface, but I only touched up the mouth of this piece.

Vases usually have a narrower top and a broader bottom to give them stability. I gave all my works stability, but I broke the rule for this vase, so that it would have a unique shape. I also wanted the vase’s non-traditional shape to be a focus of the thesis work.
4. Chopstick Rests

I designed the chopstick rests by imagining that I had cut a seashell up in various ways. I drew spiral lines, cut out the lines and modeled several shapes by paper. I obtained the shapes I used here via this process. The rests all have simple shapes, but they can stand by themselves, and the chopsticks sit very well on them. As with all the pieces, they are very simple, but functional.
Conclusions

Over the years, man has created various kinds of tableware, using different materials and shapes. In recent times, some artists have become inspired by other cultures, while others have tried to stay true to local tradition. Both considerations are very important. In this thesis, I strove to combine these two objectives, combining other cultures with traditional local ones.

To make dinnerware interesting, one must be willing to develop new materials, techniques, and designs, albeit in line with a sense of the times. Shells are a perfect form to emulate, because they appeal to man at so many levels; their geometric design nonetheless is beautiful; their artistry is melded with function.

Shells have withstood the test of time, having been used in almost all forms of design, throughout virtually all eras dating back to ancient times. I incorporated the spiral form, and the sense of movement and rhythm in shells, into all facets of the dinnerware I created.

I used sterling silver and fine silver as materials, because silver is the whitest of metals. However, silver has the flaw of being easily tarnished and requiring frequent cleaning, in order to prevent color changes. Also, the pieces I created have unpolished and matt surfaces, that inherently are easier to scratch than polished or coated surfaces. Admittedly, some other material or materials might have been more practical.

My inspiration was the seashell, in particular, the spiral form of the seashell.
Consequently, I focused on the spiral form, avoiding more diverse designs. Some may see this as having limited the work. I also missed applying any natural surface texture or adding the various colors that can be found in seashells. On the other hand, the all-white coloring creates tremendous contrast with the surroundings in the room, drawing one’s eye to the pieces themselves. Like abstract art, it also allows the viewer to add the details themselves, in their own mind’s eye.

Throughout the preparation and completion of this thesis and thesis work, I have learned what I need to do for future designs and works. Art does not happen in isolation. It invariably reflects its environment, including its history. To optimize my effect as an artist, I need to study not just art, but everything from history to architecture. Also, it will be necessary for me to study and strive to understand the multitude of materials and techniques that are available, and how to integrate them into my future work. Only by doing this, can I truly realize my potential as an artist.
Figure 1

Table Setting
Figure 2

Table Setting
Table Setting
Figure 4

Plate, Sterling Silver, 8.5x11 inches
Plate, Sterling Silver, 8.5x11 inches
Plate, Sterling silver, 11x8 inches
Figure 8

Plate, Sterling Silver, 6x28 inches
Plate, Sterling Silver, 8x18 inches
Figure 10

Plate, Fine silver, 8.5x11
Plate, Sterling Silver, 6x6 inches
Figure 12

Vase, Fine Silver, 4x18 inches
Figure 13

Chopstick Rest, Sterling Silver, 2x3 inches
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