San Fernando Valley State College

BOXES: A UNION OF BEAUTY AND FUNCTION

An abstract submitted in partial satisfaction of the requirements for the degree of Master of the Arts in Art

by

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There are many who have taken an interest in my work, adding quality and enthusiasm to my study. This project would have seemed an impossible task without the special attention of a few people. With appreciation and gratitude I wish to thank: first, my parents, Bill and Eileen Menton, in whose home this all began and grew; my advisors, Fred Lauritzen and Ralph Evans, whose patience, guidance, and inspiration drove me on; my friend Bruce Reid, whose interest and creativity helped to solve many problems; and last, but most of all, my husband Jay, who listened, encouraged, suggested, and provided.
I am an artist-craftsman. I make things that are beautiful and that serve a useful purpose. In this respect I am different from the pure artist who, ideally, only wishes to communicate his experience and view of the world without concern for the utility of his work. On the other hand, I'm not satisfied to use craftsmanship merely to duplicate an existing design. Whatever I make must be an adventure, an exploration into new design as well as new technique.

My explorations into the largely ignored field of fine art boxes began with a simple assignment for an intermediate level jewelry class: Design and Fabricate a Pill Box. Interesting technical problems not encountered in jewelry design immediately appeared. The large regular surfaces opened up new possibilities for decoration.

In boxes I found the ideal medium for combining beauty and functional design. Boxes are useful and functional, requiring craftsmanship and ingenuity, yet impose few constraints on my imagination. Material, shape, access, use, and decoration provide endless possibilities of challenge and artistic expression.

Boxes as containers for prized possessions apparently have intrigued people of advanced societies down through the ages. The earliest box probably goes back to primitive man who first put two sea shells together and sealed them around the edges with tar or pitch to store his private treasures.

Boxes to me suggest mystery, bespeak an ancient heritage. I cannot resist opening one. Can anybody? Pandora couldn't, despite Zeus' strict injunction not to, and
she let out all the troubles that have plagued the world since. And the old goatherd of an ancient fairy tale lost his helper and companion when, against her express wish, he secretly opened her only personal possession—a small box which turned out to be empty.

It is the nature of a box to concern itself with contents rather than appearance. This is understandable, given the box's function to contain and conceal, to protect and guard. The box is a symbol of something that is private and personal, to be guarded from prying eyes and thieving hands. But this is only the symbolic meaning of the box. In actuality, like all man's artifacts, boxes have been graced since earliest times by pleasing shapes and decorations beyond their utilitarian purpose.

My favorite boxes are early Byzantine reliquaries—receptacles for religious relics. Like so many artists before me I am awed by the richness and brilliance of the Byzantine expression. I am fascinated by the diversity of surface treatments these inspired craftsmen mastered. With rude tools, crude materials, and none of the convenient controls of modern technology, they managed to produce exquisite examples of enameling, etching, soldering, carving, casting, and stone setting.

The work of the Byzantine artists is inspirational. It illustrates that utility and beauty can be successfully blended to produce objects having a singular effect on the beholder. Painting, sculpture, fresco, mosaic, and other graphic arts inspire with a kind of pure beauty. But chalices, jewelry, pottery, and finely wrought boxes do not so much inspire as delight. They somehow draw the hand to touch, to
retrace, to possess. The Byzantine reliquaries moved me to see if I could capture the same spirit in a modern idiom, using modern materials. I decided to focus attention on boxes of different sizes, forms, decoration, and openings. The possible variations seemed limitless, and I wanted to attempt as many as possible.

Each box I designed was constructed after careful and deliberate planning. Consideration was given to shape, function, access, and surface enrichment. The first few boxes I made had unhinged lids or tops. Then I began designs that needed hinged openings, and I started to explore this area to determine the most functional hinge type for each individual box.

Many of my designs were influenced by my desire to let the beauty of the materials create the dominant impression. In other cases I let the materials accent each other so that they lost their individuality and became an integral part of the whole design.

My first works were in metal, but they had a coldness I did not like. I modified this by lining the boxes with rare wood. I found that wood and metal produced pleasing contrasts—softness with hardness, warmth with cold, naturalness with precision. These wood-metal combinations led naturally to all wood projects.

Working in wood gives the silversmith a welcome change of pace. Wood has flexibility beyond metal. It assumes its new form more quickly and with less effort,
offering a completely different tactile experience throughout the transformation.

Metal, on the other hand, is tougher and more durable and has more lasting qualities. Time and the elements seem to change it less. The pace of working with metal is far more restrained than for wood. I find that the two materials have advantages and drawbacks that meet each other somewhere in the middle.

My exploration of boxes developed around four main technical areas: soldering, hinging, enameling, and hopper jointing. The most common joining technique in jewelry making, soldering, required different procedures when applied to larger pieces. Warping became more of a problem when I constructed larger boxes. Heavier metal, adequate support, and slow coolings provided more consistent (but not always perfect) results when fabricating larger pieces.

The proper assembly sequence proved to be a second important factor in soldering a box together if the body and lid were to fit properly. It was found the fewer number of pieces you start with, the truer a box you end up with. It is feasible to construct a box from one piece of metal, but this produces such waste of costly materials that some compromises must be made.

My second major area of study developed around hinges. They present quite a challenge to any craftsman. Hinges are so widely used, they tend to be taken for granted. My problem was to find out how they worked, what kinds worked best for different applications, and then fabricate hand-made versions on my boxes.
Fabricating these hinges was probably the most exacting task I encountered in all my creations. A relatively safe method I developed is to cut the tubing used in most hinges on a tube-cutting jig. This ensures a perfect fit. The tubing, with the hinge pin inserted, is then positioned so that it fits into a shallow groove filed into the plates of the box. The hinge assembly is next tack-soldered with medium solder so that the solder slumps and adheres to the hinge plates and the box, but does not flow. The hinge pin is now removed, the two parts of the box separated, and the soldering completed with easy solder. The box is then reassembled and the hinge pin replaced. This procedure reduces the possibility of soldering the top and bottom of the box together, misaligning the hinge components, or freezing the hinge pin.

The hinge's position on the box is a significant design factor. First, the placement of the pivot points and method of articulation must be such that it permits the kind of opening action desired. Secondly, the orientation of the one or more hinges must be accurate to the point of providing a perfect fit.

Since so much of my inspiration was grounded in the creations of the Byzantines, a major part of my work developed around enameling. I experimented with all forms of enameling and found two problem areas were common to all techniques: warping and soldering.

Warping is best controlled by counter-enameling. Other methods found to reduce warp on larger panels are: a reduced number of firings (three or less); application
of the thinnest, even layer of enamel possible; balanced design; slow cooling; and weight applied to the piece immediately after its removal from the kiln.

It is difficult to use both silver solder and enamel together because the melting points are so close. Boxes that require strength should be soldered first with hard or medium solder, the joints painted with yellow ochre to retard melting of the solder, and then all enameling completed. The Byzantine artists had the best method for very large boxes that are too big to be fired as one unit. They riveted the panels of the box to a wooden frame, a simple and permanent technique.

Wooden joints, and especially hopper jointing, was my final area of exploration. Hopper joints require a most interesting and little known joinery technique, which I happened across by accident. Hopper joints are compound angles, formed by three or more sloping sides with mitered corners.

I encountered this problem in the piece shown in Plate IX. I tried doing the fitting by eye after discovering that the normal 45 degree miter angle did not work. When, after careful study, I was still unable to determine the proper angle for the corners, I decided to construct the section by trial and error. Patterns were cut and the edges to be mitered were sanded. By progressively tilting the table on the sander I could determine the degree of bevel needed to fit the panels together to form a right angle. My measurements showed that the actual angle for a slope of 30 degrees was 27-1/2 degrees. This required a setting of 63-1/2 degrees of the
table saw. A trial run produced a perfect fit. This same technique was used for the eight-day clock case in Plate XVII.

Having solved to my satisfaction the major technical problems involved in making boxes, a remaining question was that of effort expended. Because people insisted on asking me to set a price on my work, I decided to keep a detailed account of time and materials. The tabernacle shown in Plate XVIII was completed in five weeks and took 135 hours of work. It contains 73 feet of fine silver cloisonne' wire and weighs 7-1/2 pounds. The 16-gauge copper-enameled panels are riveted to a teakwood frame. The teakwood was salvaged from the decking taken from the decommissioned USS Vicksburg, an old gun boat from the Spanish-American war. Each joint in the frame is doweled and glued for strength. The copper not covered by enamel is leafed with 24 karat gold and fine silver. The enclosure is completely lined with gold velvet. In all, the piece cost me $57.00 for materials. This is the value of the tabernacle in purely quantitative terms - a somewhat meaningless analysis except from the incompatible point of view of economics.

To me, the tabernacle's value can not be measured in dollars and cents but rather in the symbolic beauty of the design and the story it tells. The tabernacle is the symbolic representation of the story of the lift of Christ. Saints Matthew, Mark, Luke, and John are located in the four corners, for they are known as the guardians of the Christian Church. Christ's title is on the top, center, front panel: Jesus of Nazareth, King of the Jews. His story begins with the Judaic-Christian tree, symbol of the birth of Christianity from the roots of Judaism. To the right is
the heavenly host, present at the annunciation, the birth of Christ, his baptism, crucifixion, resurrection, and to come, the last judgement. Next are the peacocks and chalice, which together represent eternal life, a gift offered to all by Jesus. The doves are symbolic of paradise, another of Christ's gifts to believers. The palm branch, Christ's triumphal entry into Jerusalem, the chalice and host, the last supper, the olive branch, and peace, together symbolize Christ's last days on earth. The cock crowing stands for Christ's foretelling of his denial by Peter. The pelican, which was believed to pluck her breast in order to feed her young, is the symbol for the crucifixion. The phoenix represents the resurrection because it was believed that it immolated itself every hundred years on a pyre of branches to reemerge as a worm that crawled out of the ashes and grew into another bird. Last is the tree of life representing the continuity of all living things and hope for mankind. Most interesting of all is the minor miracle that appears in the upper right-hand corner of the front panel: it is the face of Saint Luke, and it appeared after firing.

Because so much of my work is related to religious services, many people take it for granted that I am devoutly religious. However, that is not my reason for doing church-oriented work.

First and foremost, the Catholic Church is one of the major institutions that venerates sacred relics and uses a tangible symbol — the Eucharist — in its rituals. Both require boxes to contain them: Reliquaries, pyxes, and tabernacles. Since these containers are used in the religious services, they must reflect a beauty and reverence
appropriate to the ritual. Few if any items intended for personal use can offer the artist a comparable challenge.

Another reason is the strong appeal to the senses that Catholicism has, so unlike the deliberate soberness of Protestantism or Judaism. Traditionally, the church has been inspiration and patron of the artist—painters, sculptors, builders, stonecutters, and artisans. The richness and elegance of the tradition remain a potent force that continues to inspire me.

A final reason is the respect for permanence that is symbolized by the Church. Our modern world puts a premium on things that are disposable, "biodegradable", subject to obsolescence, requiring frequent replacement. I value things that last. I want them to endure beyond my own time and give pleasure to succeeding generations.

I want to leave behind something I made that will be treasured.
PLATE I

Reliquaries; etched bronze, lined with Brazilian rosewood.

Each 3 by 1-3/4 by 1 inches.
PLATE II

Pill box; etched sterling silver on Goncalo Alves wood base.

2-1/2 by 2-1/2 inches.
PLATE III

Trinket cases; etched bronze, lined with rare hardwoods.

(Top to bottom): 5 by 3 by 1 inches.

4-1/2 by 2-3/4 by 1 inches.

2-1/2 by 2 by 1-1/2 inches.
PLATE IV

Cigarette case; etched bronze, lined with African rosewood.
4 by 2 by 1-1/2 inches.

Cigarette case; bronze with inlaid rosewood.
4 by 2 by 2 inches.
PLATE V

Tea canister; sterling silver with turquoise inlay.
3-1/2 by 2-1/2 inches.

Pill box; sterling silver with cloissoné.
1 by 2 inches.
PLATE VI

Seed box; etched bronze with amethysts, lined with rosewood.

3 by 5 by 1-3/4 inches.
PLATE VII

Diary cover; sterling silver with turquoise.

6 by 4-1/2 inches.
PLATE VIII

Music box; Laurel Prieto wood with wooden self hinge.
5 by 2-1/2 by 2-1/2 inches.

Ring box; Brazilian rosewood.
4 by 4 by 3 inches.

Ring box; rosewood with basse-taille relief.
3 by 2 by 1-1/2 inches.
PLATE IX

Spider box; rosewood and ebony with cloisonné panels.
6-1/2 by 2-1/4 by 2-1/4 inches.
PLATE X

Pencil boxes; laminated hardwoods.

(Top to bottom): 5 by 2-1/2 inches.

8 by 3-1/2 inches.
PLATE XI

Herb box; Burmese Padauk with bronze panel.

5 by 2-1/2 by 2 inches.
PLATE XII

Pyx; Burmese Padauk with bronze.

10 by 5 inches.
PLATE XIII

Jewel case; English walnut and Brazilian rosewood.

10 by 8 by 3 inches.
PLATE XIV

Ship's compass case; zebrwood with bronze fittings.
6 by 6 by 6 inches.
PLATE XV

Monstrance; rosewood, sterling silver, and plique-à-jour enamel.

10-1/2 by 3-1/2 by 1-1/2 inches.
PLATE XVI

Mantel clock; English walnut with sterling silver.
12 by 7-1/2 by 4-1/2 inches.
PLATE XVII

Eight-day clock case; rosewood and Laurel Prieto with silver fittings.
12 by 7 by 7 inches.
PLATE XVIII

Tabernacle; cloisonné panels over teakwood frame (front view).

12 by 10 by 5-1/2 inches.
PLATE XIX

Rear view of tabernacle on Plate XVIII.