

Design a Project as You Turn: No Plans - Really!!!

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In the September/October 2008 (pages 27 - 28) issue I wrote about six ways that you can design a project. One of those ways was: determine project and design as you go. By its very nature this design method creates the biggest challenge and the greatest opportunities for both creativity and problem-solving. Let me quote the paragraph from the last article as a starting point to better illustrate what this method of design offers.

“Design as you go is the simplest but also the most unpredictable. Oftentimes, I will use this when I have a piece of wood (i.e. burl or a crotch) that I have no idea what I will find until I start revealing what’s inside by turning away the layers. It basically entails you selecting a piece of wood, looking it over, deciding to make a ___? ___ (i.e. bowl, goblet, whatever), mounting it onto your lathe, and starting to turn. Why is this so unpredictable? Since you do not have any sketch or dimensions or idea of a shape, each cut should be evaluated before the next cut is made. With this method you have to have a good eye for form and balance in order for the final project shape to be both appealing and have the proper dimensions. It takes practice and may even require years of training.”

Several questions may run through your mind before you actually start, as well as during the turning of the project.

- What wood should you use for this project?
- What will the finished piece look like? (Anticipation)
- What will you find as each cut

is made? (Curiosity)

- Where will the shape change from your initial thoughts? (Destination)
- Will you find something in the wood that will drastically alter the project’s outcome? (Discovery)
- Will you allow the wood to change the design as you proceed? (Flexibility)
- How will the shape change? What will cause those changes? (Fear of the unknown)

As you can see there are several different emotions involved in this style of designing. Each project has different expectations based on the project itself. We all start with the first question of what wood to use? Ultimately, it comes down to several options and more questions.

- Do you have the wood or will you have to buy it?
- If you are buying the wood, what species?
- Will you use dried or wet wood?
- If it is wet, will you turn the piece in two steps or go from wet to the finished project?
- If you decide on wet wood, where will you get what you want? Is it going to come from a friend, arborist, the community government, retail outlet, woodturning club, etc.?
- Do you anticipate this project to be usable or artwork? This question may answer most of the other questions.

As you decide on the wood-related questions, your answers may be tied into the “Anticipation” question. For example, if the anticipated outcome is a project that will have a

lid then you narrow your answer to dried wood or wet wood in a two-step turning process. This decision may be made because of the time required to turn wet wood, let it dry, and then finish the project. This step in the process is the most challenging and requires you to answer another question. Will you allow the wood to change the design as you proceed? Being “Flexible” is a hurdle that challenges your design and you personally. I have often found that I will not change when the wood indicates a change is needed and often the result is, shall we say, less than desirable and/or one for the fireplace. This ties directly to what will you find as you make each cut. For instance, you may find a small burl type growth hidden within the wood (Discovery). Once exposed it provides character to the piece you had not anticipated. What do you do? Do you keep cutting or do you stop to preserve this new feature and alter the design path? You can now see how closely tied together “Anticipation,” “Curiosity,” “Destination,” “Discovery,” and “Flexibility” are because the answer to each question leads to another aspect of your design.

Finally, the “Fear of the Unknown” is something that we deal with in our personal and work lives on a regular basis, which often increases our stress levels. Of course, the first thoughts you may have when designing as you go is bringing “Fear and/or Stress” into your woodturning and this can be quite frightening. Especially since one reason we turn wood, besides being

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creative, is to get away from what we deal with in the other aspects of our life. However, there is one major difference and that is that the results will, in most cases, bring you pleasure. You cannot always say that about your personal and work lives.



Figure 1. First Project.

So let's see how I apply this process of design as I go. Over the last few weeks I have created two projects: the first is a wedding gift for my cousin who met her future husband as a result of Hurricane Katrina and second, I selected a piece of wood to create an art piece which lead to three pieces of wood. I will discuss project number two in detail. But let me just give you a summary of the process for the wedding gift. After Katrina my wife's school sponsored a school in Louisiana. A relative of hers lived in Louisiana and was involved in cleaning up the downed trees. My wife brought home some ash, red cedar, and black

cherry logs. I started with a design in mind of taking one (12" diameter x 18" long) of the remaining black cherry logs and turning a pedestal and vessel piece from the selected log. As I got deeper into the wood it revealed itself to be heavily spalted. I had three quarters of the vessel hollowed out when the top half split open. I have not figured out why the top half split, since I was working in the lower portion of the vessel. As a result, the design changed. I parted off the top half and was going to finish up with a pedestal bowl. The project was not meant to be, because the spalting increased as I went deeper into the piece. As I was finishing the inside bottom of the bowl, I did not notice the change in the density of the wood. It became so punkie that the tool was pulled right through the bottom. Scratch one log. Log number two was also spalted and heavily checked. I was unable to turn a piece out of it but I was able to cut some rectangular blocks from it for future use. Log number three had split straight down the side and down to the pith. I finished the split by cutting the remainder of the way through the log on the bandsaw. I turned a rimmed platter with a raised, partial finial in the center. I took the remaining log of red cedar that I had and turned a base which I filed in spirals. Once finished I joined it to the bottom of the black cherry platter and used brass shavings to create a ring at the joint. To finish the finial, I used one of the blocks of spalted black cherry and joined it to the black cherry and completed turning the finial. I feel that the woods compliment each other and worked well together. As you can see the finished piece is well integrated and is very unique. This just illustrates the challenges of

working with wet wood. See Figure 1 for the finished piece.

Figure 1. The finished piece made from the spalted black cherry.

The project that I will discuss in detail started out in concept only with two parameters: first, it would represent art and not function and second, it would be an off-center turned piece. The picture represents the wood blanks that I ended up using for the complete project. As you can see I decided on dry wood for this project instead of wet wood as I did for the other project. These pieces were purchased at various Carolina Mountain Woodturning meetings over the last year or so. My original idea was to turn an off-centered plate which would only require the curly maple blank. I started by squaring up the curly maple on the band saw. I then measured and cut out the circle blank. I marked the center and determined where the off-center hole would be drilled, and then drilled both locations. The off-centered hole was 1-1/4" from the center hole and set within the feature, which is perpendicular to the grain. With curly maple the feature is seen as a series of wavy lines that run perpendicular to the grain. See Figure 2.



Figure 2. Curly Maple, Maple, and Mahogany Blanks.

After mounting the blank on the screw chuck using the center hole, I started by truing up the blank. Once it was trued up I looked at the grain and the feature and felt that both flat surfaces should come to meet each other at the approximate center line, giving the features the appearance of wrapping around the edges. I started to true up the surface and thought about other off-center turnings I have seen where the off-center was turned into the piece similar to a small bowl. I decided that I wanted the off-center for this piece to have a raised dome. I cut in the dome with a wide taper that meets the dome at its base. I thought it would look interesting to have several beads radiating out from the dome and tapered slope, so I started to cut in a half bead. As I completed the cut in from the right, the half bead created a straight side on the left which formed a crescent moon shape. This defined the straight edge and I cut in a shallow half cove (right side) and a faint half bead (left side) beyond it to create a shadow line. To create the illusion of the moon's craters I used flared end steel gas line in 3/16", 5/16", 1/4", and 3/8" diameters and heated them with a propane torch. (See Figure 4.0) I decided that the moon has more smaller craters than large ones, so I placed in the 3/8" craters first and then added each smaller size with more impressions for each size over the previous size. I varied the pressure and angles to increase the perception of intensity of strike, age of crater, etc. See Figure 3.



Figure 3. The off-center moon.



Figure 4. Steel gas lines in various diameter used for burning the craters.

The back of the once plate now disc was another story. I had to decide how I was going to handle the two holes for the screw chuck, especially the off-centered one. Because the piece is 1-1/2" thick and the holes were 3/4" deep I could not hollow the back that deep because of the depth of cut to create the dome. I also wanted the back to have a finished look. I also did not want the piece to be placed flat on a table or in a holder. Placing the piece on the table would hide whatever I designed for the back. If it was placed in a stand the orientation that I wanted to define the piece would become a variable, meaning the position would change each time it was moved. Because of these two concerns the question and/or challenge is how will it be displayed? As I looked at the piece the features ran across the face of the sun and created a heat wave effect. At this point the final image of the piece came together. I

decided that by using a post protruding from the off-centered hole and being mounted into a vertical base and post configuration I could orient the sun and moon to create my illusion of the rising sun. With the outside couple of inches of the disc being tapered toward the edge, I created a bead to create a transition point. To mirror the outer taper, I tapered from the transition bead into the center until the screw chuck hole disappeared. To increase the illusion of depth I added grooves at the center and beads about half way between the rings and the transition bead. It also gives the illusion that the feature is vanishing into the center of the piece.



Figure 5

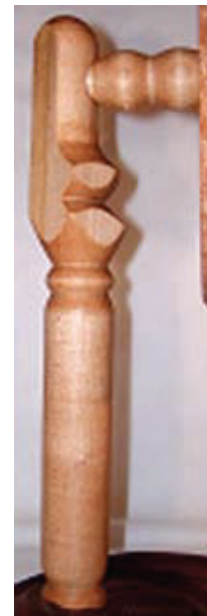


Figure 6

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Since I decided to use a base and post design I felt that it had to compliment the piece. As a result, an off-centered top would accomplish that goal and also balance the weight of the disc better. Using a 1-1/4" square piece of maple I turned the top portion 1/4" off-center. This resulted in a 3" diameter off-centered top which allowed for a 5/8" hole to be drilled for the connecting post.



Figure 7



Figure 8

The final piece was the base itself. As I mentioned, the two objectives for the stand were to compliment and carry the weight of the disc. This had to include the base. To turn the base off-centered I cut two grooves in the bottom to allow the chuck jaws to hold the piece on-center and off-center. I turned the on-center first to draw the eye into the off-centered area where the post would be mounted. I also wanted

to create visual interest which I believe the series of centered rings accomplish. I reversed the base and mounted it into mini-cole jaws on my Nova chuck. This allowed me to turn and decorate the base. As a complimentary and/or mirror to the top of the base I included two sets of rings that taper into a valley and into the center. This again draws the eye to the center of the base.



Figure 9

What I have tried to illustrate with this piece is that at no time did I draw any of the components out on paper or utilize a computer CAD program. Each cut led to the next and each cut lead to a decision. This type of design turning requires

concentration with no distractions, an eye for proportions, the ability to see what each cut will produce in orientation to the last and future cuts, and ultimately during the process you will see the final piece come together in your mind. As stated previously, your questions and answer to Anticipation, Curiosity, Destination, Discovery, and Flexibility will be both challenging and rewarding. The final part of the questions and answers is the "Fear of the Unknown," and that is often replaced with wonder and accomplishment at two points. The first is when you finalize the piece in your mind, and second, when you complete the piece with the final cut. Of course, we do have to understand what the wood will do and which tools to use, so the basics of woodturning always apply. I will end with two challenges. First: continue to develop your skills through attending woodturning demonstrations and participate in workshops. Second: consider trying this type of design. Yes, it is challenging. It can be frustrating, but it is also rewarding. Peace of mind in turning!

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