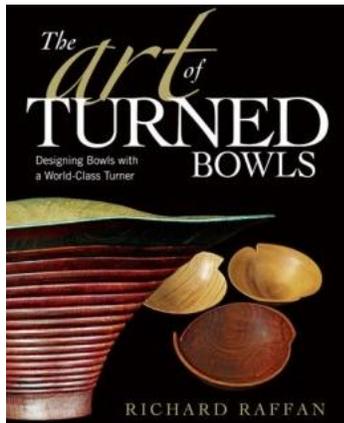


## Zumbro Valley Woodturner's Club Demo August, 2013

### An Interactive Experiment in Bowl Design – John Thorson



We'll reference Richard Raffan's excellent book "*The Art of Turned Bowls*" in the design experiment portion of this demo.

We have this book in our club library and I'm sure many of you have read it. Specifically, we'll concentrate on Chapter 3 "*Form – The Good, the Bad and the Sublime*" as we do our design experiments and actually turn some of your designs later in the demo.

We need to cover a few of the concepts presented in this chapter before we can get down to the interactive design experiment. Mr. Raffan's presentation of the information in this chapter is incredibly rich and worth a very close study. I'll use the goals of keeping this light, making it fun while honoring the 1 hour time limit for the demo period as my excuse for tripping through this chapter so quickly. We'll quickly introduce three aspects of bowl design that we apply in our exercise: Proportion, Form and Function along with a short discussion on Profiles.

### Proportion

The discussion in this chapter of the book uses 'the Golden Mean rectangle' to introduce the idea that a human instinctively knows what looks right. The fact that most bowls intended for day-to-day use do not conform exactly to this formula is beside the point. An average bowl around your home conform to a basic pattern of proportions of diameter to height shows the compromise between usability of the object as well as how it looks. A mixing bowl is designed to serve the mixer, not a human, so ignore these.

Common proportions quoted in this chapter of 2:1, 3:1, 4:1, 5:2 and 5:1 conforming to 'standard' bowl blank sizing you see offered for sale: 6 in. x 3 in., 12 in. by 4 in., 10 in. by 4 in., etc.

What is the lesson here? Look around your home and note the proportions of the bowls you use every day as well as the bowls you think look and feel great. Our goal in this exercise will be to create bowls with pleasing proportions that are also functional.



Proportion influenced by desired form and intended function brings us to the next topic...

## Form and Function

I prefer the Frank Lloyd Wright restatement of the Louis Sullivan quote and I think Richard Raffan would agree: "Form follows function – that has been misunderstood. Form and function should be one, joined in a spiritual union."

What are the intended uses of the bowl? What proportions work best for these uses? Does the bowl need a foot? If so will the foot support the bowl as food is served or is the foot only an aid in stabilizing a work of art? For a functional bowl the common guideline of 30% of the diameter for the foot is a good starting point but this will need to be adjusted based on proportions of the bowl, center of gravity when the bowl is in use, etc.

You need enough volume in the bowl to hold the contents required for the intended usage. Christmas at Grandma's house with all the leaves in the table to seat all the adults together will need a larger bowl than one destined for a quiet meal for two. A large bowl must share the available space on the table top with place settings and other serving dishes... maybe two smaller proportioned bowls would be a better idea?

The goal for our exercise today is to state the intended function of the bowl we are designing and discuss how its form 'works' for this intended purpose.



Example: Gift to a friend who enjoys 'movie night' with his wife was intended to be held in the lap and most-likely would contain popcorn. Undercut rim and beads added to keep the bowl from slippery when passed by someone with a bit of butter on their fingers.

This example brings us to the next topic where we deal with the relationship between proportion, form and function with the 'look' of the piece...

## Profiles

To a great extent our design considerations of proportion, form and function above have defined only the internal surface of our bowl. Now it is time to complete the picture and 'frame' our bowl by designing its profile. We'll keep form and function in mind here as we strive to make the bowl one that someone just loves to pick-up and hold in their hands.

I enjoy watching people at the ZVW table during our time at the county fair. Even though they know not to touch there are some of our works on the table that they are compelled to hold and sometimes are reluctant to put back down.

As in framing a picture we can detract from the overall impression of the piece as easily as enhance its perceived value. How much adornment is correct? How complex of a shape to the rim or foot should we have? Etc. The majority of Richard Raffan's discussion in this chapter is focused on the profile and the best way I can see to proceed on this topic is to put it into action and do some actual design.

Important points:

1. Don't be afraid to have some asymmetry between the outside surface of your bowl and its inside surface; especially in the areas of the rim and the foot.
2. Put some 'lift' in the outer surface in the area of the transition from the foot to the side of the bowl.
3. If you put an adornment on the foot, the rim or the outer surface of the bowl think in terms of 'thirds' or other seemingly natural placement.

We will apply our designs to three different proportions of bowl blanks. We'll start with a design for a 12 inch diameter by 4 inch tall blank and then work to apply this design to a smaller 12 x 3 blank and then up to a larger 12 x 5 blank. The second and third designs should be adaptations of the first. The intent is to show how you've thought through this design challenge on proportion, form, function all wrapped up in an eye-pleasing package profile.

The hardest part of this effort will be in working as a collaborative team BUT this is also where the conversation and education lies... so talk to one another, debate, justify your design input and most importantly of all have fun with the exercise!

You'll design the left half of the bowl in profile. You can hold your design up to a mirror to see the whole picture. It is far easier to get comfortable with your designs if you don't have to draw the whole thing and then decide which half of your drawing 'has it right'.

Now on to the interactive exercise in design... time limit 15 minutes.

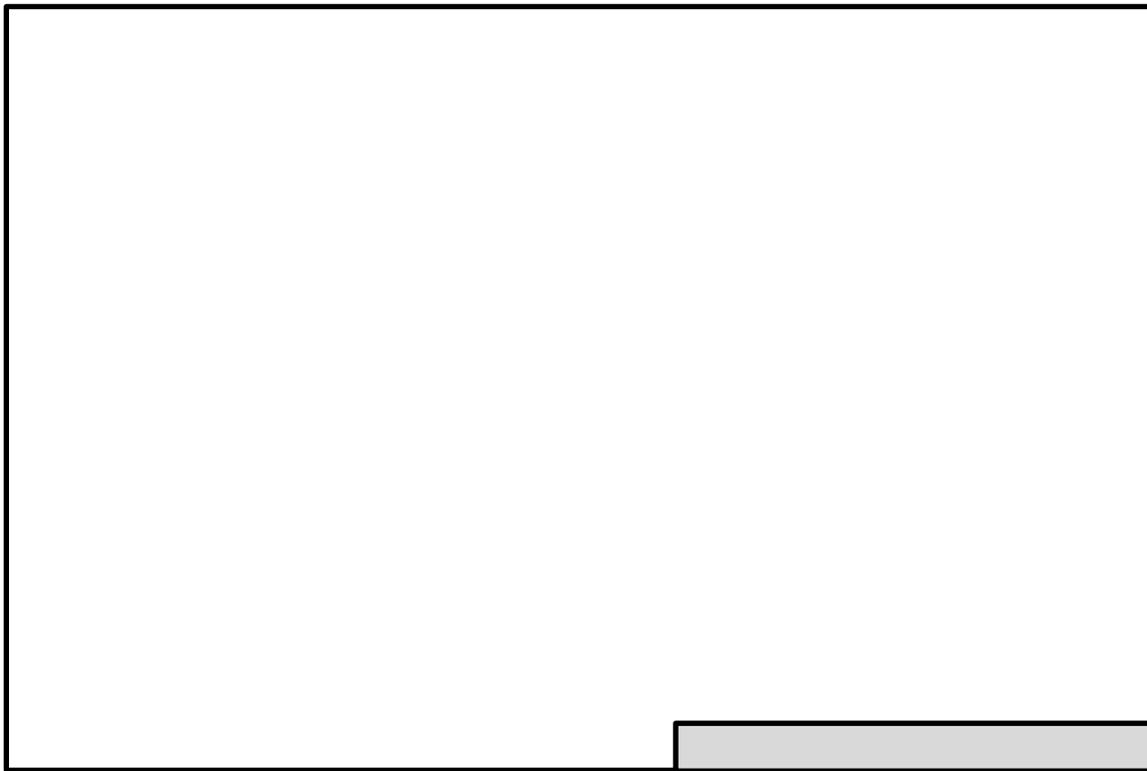
Design for a 12 inch wide, 4 inch high bowl.

**This is your primary bowl design; we'll go through two adaptations of this design in our next steps so try to get really happy with this one!**

Draw 'one half' of the profile in this 6 inch wide rectangle, hold up to a mirror on centerline to check of complete profile.

Intended Use:

**Reminder** - plan your foot and the spigot used to hold the piece on the lathe.



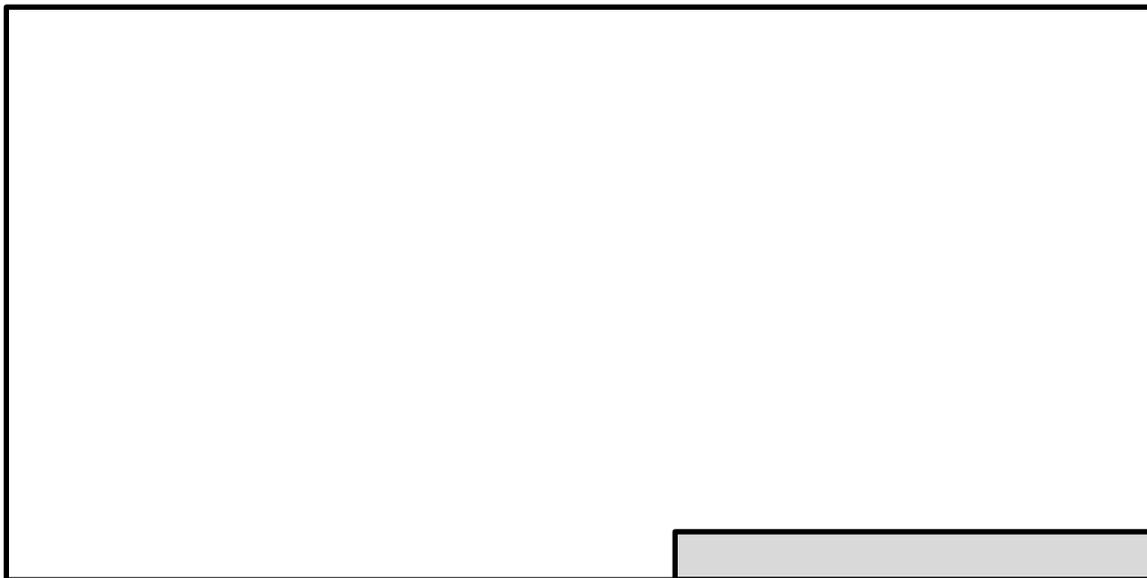
Design for a 12 inch wide, 3 inch high bowl.

Common bowl blanks go down to 2 inches which is a very shallow bowl but a 3 inch depth has good functionality. Try to adapt your original design to these dimensions. What modifications did you have to do to get things to look right?

Draw 'one half' of the profile in this 6 inch wide rectangle, hold up to a mirror on centerline to check of complete profile.

Intended Use:

**Reminder** - plan your foot and the spigot used to hold the piece on the lathe.



Design for a 12 inch wide, 5 inch high bowl.

It is hard to purchase a bowl blank this deep economically but blanks of this dimension are easily obtained if you harvest your own wood. Try to adapt your original design to these dimensions. What modifications did you have to do to get things to look right? Would this bowl design have a different functionality than the original? Etc.

Draw 'one half' of the profile in this 6 inch wide rectangle, hold up to a mirror on centerline to check of complete profile.

Intended Use:

**Reminder** - plan your foot and the spigot used to hold the piece on the lathe.

