

~Translucent Bowls~

Eric Lofstrom - Eric@EricLofstrom.com

Driving Question– How do I turn a translucent-wall bowl?

Outline of Process:

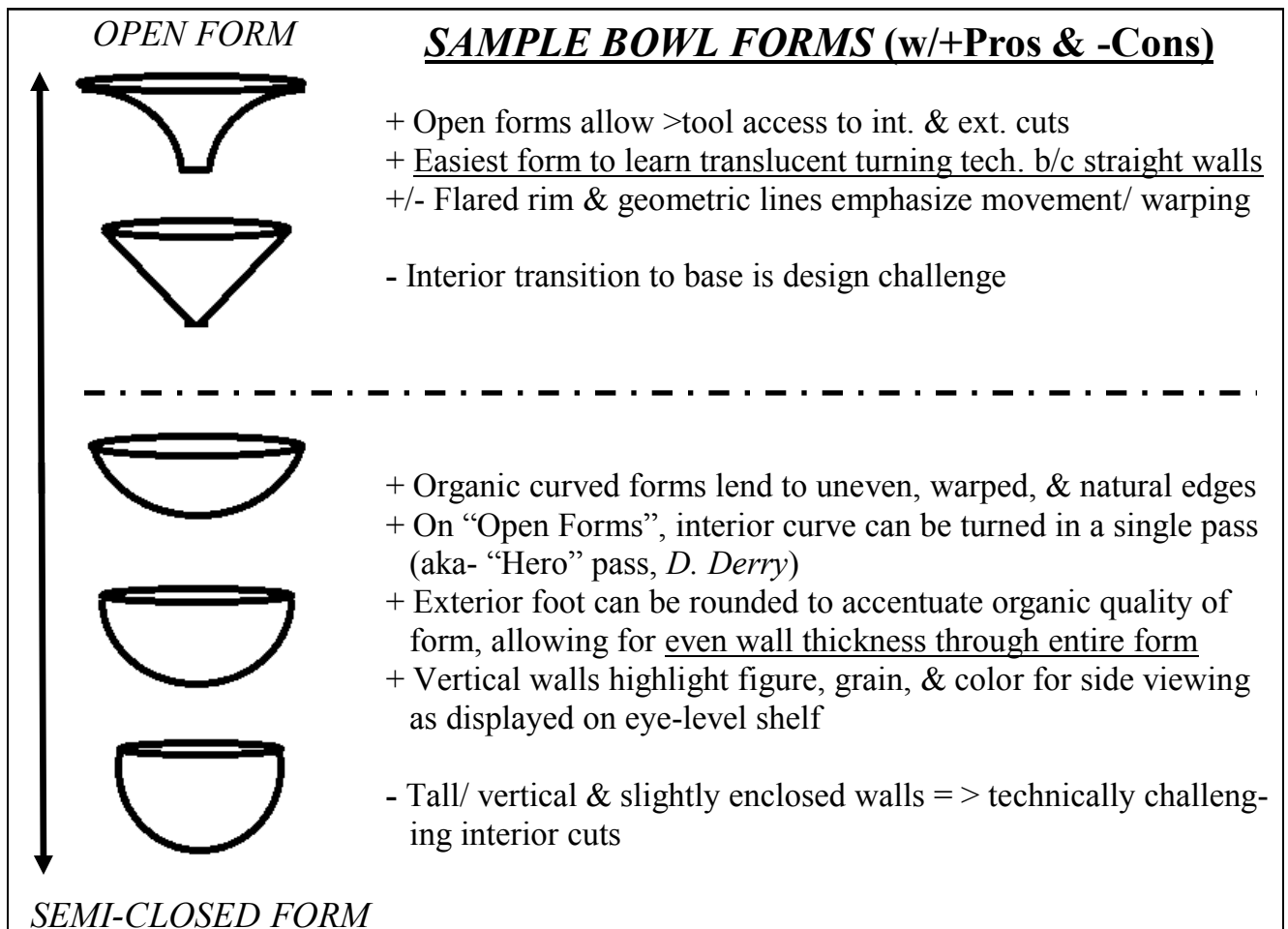
1. Understand Basic Foundational Information- (*attached*)

- a. **Lathe Maintenance**– Smooth toolrest, clean ways of bed, ensure spindle alignment, adjust speed range to suite project (var. speed allows fine tuning of vibrations).
- b. **Ancor, Bevel, Cut, Direct Attention,**
'Shavings Give Feedback (see attached)



2. Conceptualize/ Plan the FORM- (*design/ preparation, see diagram below*)

- a. **Plan the profile & proportions**– Planning solidifies your intent.
- b. **Fundamental Design Considerations** (*Concept, Process, & Media*)

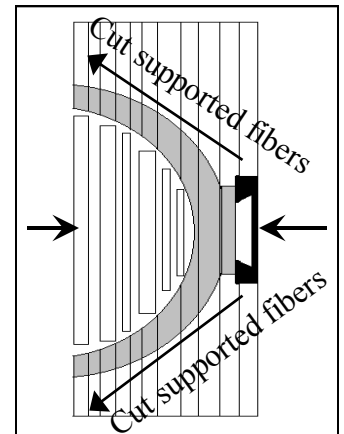


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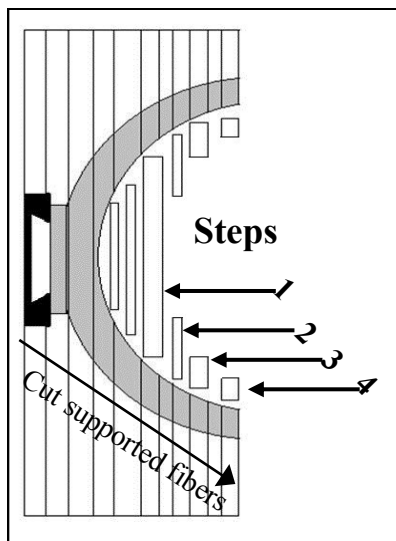
3. Rough the Exterior Profile- (*between centers allows for max. degree of adjustments*)

- Initial roughing may be done with bandsaw**; especially if blank needs balancing.
- Rough Shape**– Fingernail Grind Bowl Gouge is the most versatile cutting tool for this job, leave the shape a bit oversized to allow truing-up during exterior refining/ finish cuts.
- Spigot & Base** (*see diagram below*)- Profile/ dia. shape to match chuck jaws & register base on jaw face.



4. Hollow the Interior- (*chuck/ faceplate mounted*)

- Refine/ Finish shaping of bowl**– Create a final profile & cleanest possible surface.
- Cut the rim/ wall**– Take rim/ wall to finish thickness using step techniques.
- Step technique** (*see diagram below*)– Cutting the interior in steps allows more mass & stability for thin walls. Stop to check the profile & wall thickness frequently. Use a thickness gauge or translucence of light colored, wet wood. If turning to translucent thickness, BLEND EA. SECTION W/ THE PREVIOUS– AS YOU PROGRESS.



- Finishing the interior base**– Use gouge w/ appropriate bevel angle to allow bevel support throughout the cut. Traditional bowl gouge profile allows bevel support in deep bowls. Rehearse cuts before attempting.
- Measure & mark the finished depth of bowl.**

5. Clean-Up the Exterior Underside & Foot- (*reversed, jam chuck*)

- Reverse using a jam chuck**– Align using center mark from roughing between centers.
- Shear cut/ scrape to refine the curve**– follow exterior curve THROUGH the spigot.
- Complete the bottom profile.**

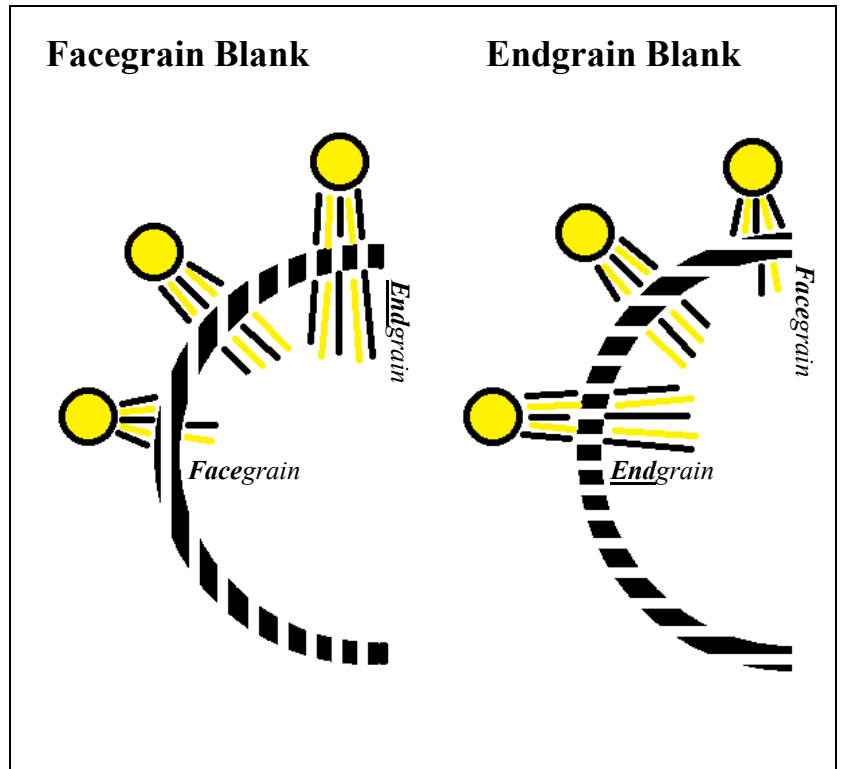
6. Finish/ Embellish as Desired- (*according to personal taste, wood, & intent*)

~ Translucent vs. Traditional ~

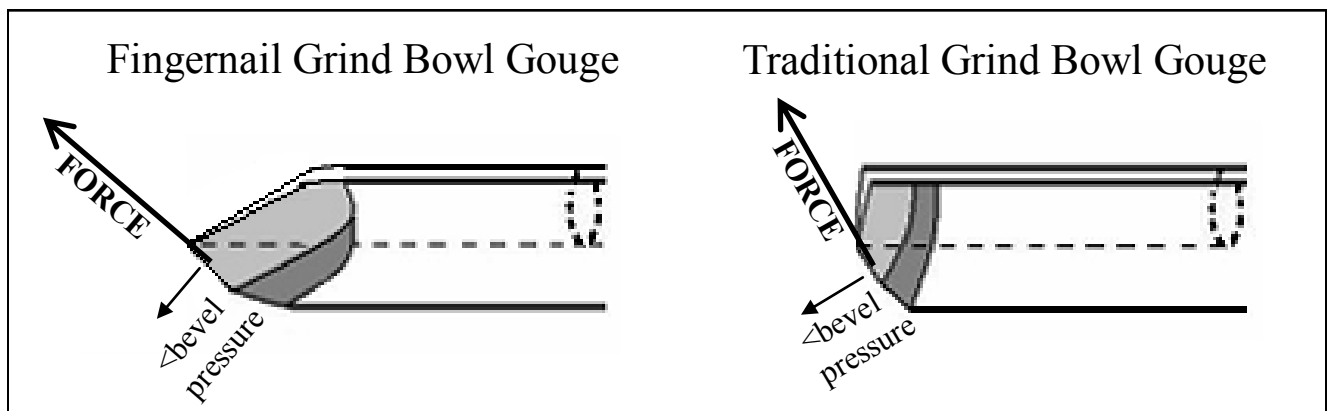
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Translucent VS. Traditional Bowl Turning– What's the difference?

1. **Using light to judge wall thickness & consistency**– wet wood (especially **endgrain**) fibers conduct light. Using a bright, concentrated light source, the consistency of wall thickness can be observed as a consistent glowing color.
2. **Endgrain conducts light MUCH better than side-grain.** Take this into account as you progress from the sides into the bottom of a face grain or end grain bowl; the color & brightness will gradually change. Endgrain conducts light like fiber optics, side-grain acts like micro-louver window blinds.



3. **TOOL CONTROL IS VITAL!!!** Ultra-thin walls require precise tool control; taking a pass 1/16" too deep will cut right through the wall & eliminate your bowl!
4. **Force must be placed only in the direction of the cut.** Bevel pressure must be minimal; think of GLIDING or steering the bevel instead of "rubbing" the bevel. Translucent walls will flex & distort with excess bevel pressure. Endgrain & sidegrain flex differently, resulting in oscillation/ vibration with each revolution of the blank. Vibration will cause uneven cuts, cracks in the sidewall... even loss of the bowl!



~Foundational Facegrain Info.~

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ABC...D'S of Controlling the Cut:

- A** = **Anchor** tool on toolrest.
- B** = **Bevel** glides across wood, directing tool.
- C** = **Cut** supported fibers when possible.
- D** = **Direct** attention ahead of the cut.
- '**S**' = **Shavings** are feedback on quality of cut.

3+ Anchor Points = Stability

Three points of contact (tripod) yields control & stability; 1)**toolrest**, 2)**body**, & 3)**bevel**.

Maintain bevel contact by steering the bevel where you want the tool to travel.

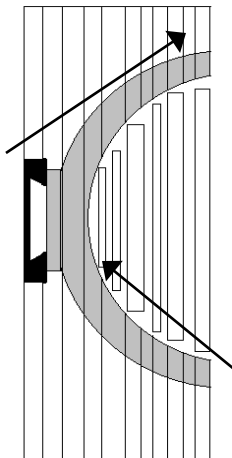
Use the tool as an extension of your body.

Cutting vs. Scraping:

- **Cutting** = Bevel glides across wood.
- **Scraping** = NO bevel/ relief contact; drawing the burr/ edge across the wood.
- **Shearing** = edge angle approaches parallel to surface movement of wood, decreases resistance to the cut.

Using a **Shearing angle** will result in the cleanest cut/ scraped fibers.

Cut when you can cut & scrape when you are unable to maintain bevel contact, or to refine the curve.



Grain Orientation Matters!

Fundamentally, wood is a bundle of straws; which flex & tear if there is no support behind them, resulting in torn grain (a.k.a. "tear-out").
Cutting "supported fibers" gives a cleaner surface & less sanding.

Face Grain Turning = fibers lay perpendicular to axis of rotation

Direction of cuts:

- **OUTSIDE** of bowl (convex curve) = cut **SMALL** dia. to **LARGE**
- **INSIDE** of bowl (concave curve) = cut **LARGE** dia. to **SMALL**
- **When turning THIN WALLS-** Cut interior in **STEPS** from rim to center- **ONCE YOU GO THIN, DON'T GO BACK!**

My Bowl Gouges:(approx. angles)

- **Irish Grind-** used to remove nearly all wood inside & out, shear cut & shear scrape exterior.
- **Traditional grind-** used to shear cut interior of deep bowls.

Irish Grind-
w/ double bevel



Traditional Grind- w/ double mini-bevel



Use profiles that work for you & be diligent in keeping your tools sharp!!!