Phil Holtan's Ten Commandments of Turning

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- 1. Above all, be safe, and have fun!
- 2. Tune up your lathe.
- 3. Keep your tools sharp and accurately ground.
- 4. Ride the bevel, but with little pressure.
- 5. For power cutting, push right up the handle of the tool.
- 6. Use your whole body.

- 7. Swing the tool and your body.
- 8. Use a shearing cut.
- 9. Move from larger chips to smaller for a fine finish.
- 10. Take your time to refine the shape. Above all, **be safe**, and **have fun!**

The curve is "the Thing"

- Keep the curve to stay "alive," always moving in one direction or another and not flattening out. An asymmetrical curve usually has more "life" and interest in it.
- Many turners end up with an awkward design because they begin turning the bowl with the tool rest parallel to the axis of the lathe. Better, start with the tool rest at a right angle to the axis and cut uphill with the grain. You naturally remove more mass from the bowl so you have a better chance of a fair curve, as if the curve started from the lip of the bowl and flowed through the foot and back up to the other lip.

Bigger to smaller chips, louder to softer cutting

• There are two patches on the outside (and inside) of the bowl where you will be cutting against the grain, "sharpening the pencil" backward. To get a better cut there, you need to cut smaller chips that have less "beam strength" to break off into the wood. Good bowl-turning shows in your chips beneath the lathebig chips to quickly remove mass, medium chips to refine the finish and finally, very fine shavings don't tear out grain in those difficult patches.

For a finer cut, make smaller and smaller chips by:

- 1. increasing the spindle speed
- 2. moving the tool more slowly across the bowl as you cut.
- 3. making sure your gouge is very sharp (sharpen at this point or reserve a finishing gouge)
- 4. using a lighter touch on the tool, backing off the pressure on the bevel
- 5. paying attention to quieting your cut
- 6. using a smaller tool, perhaps the 3/8- or 1/4-inch gouge
- 7. presenting a more strongly skewed cutting angle (dropping the handle on the outside)
- 8. using a push or shearing (not a pull) cut (the near-vertical position, see below)
- 9. keeping your body rigid with elbows tucked in and the tool against your side. If you're turning over the bed, brace the tool against your forearm,
- 10. carefully use a "back cut," or a square cut gouge for a shearing cut.

Three Cuts with the Bowl Gouge

- There are three basic gouge cuts for bowls: push cut, pull cut and shearing cut.
- For beginning turners, because of safety and ease of sharpening with only the simplest of jigs, I recommend the traditional grind. That is a fingernail grind, with wings swept back about 5/8 inch from the end. From the side, it shows a symmetrical point, with the sharpened bevel and the swept back wings approximately equal lengths and angle, about 45 degrees. I like those lines to be quite straight. Sharpen that tool adjusting the Wolverine or home-made arm to match the tool's bevel angle. As you roll the tool out toward the edges, slide the tool forward and up the grinding stone. If you don't slide the tool forward, you will get a virtually unusable edge.
- As turners become more comfortable with the tools, I suggest they progressively grind back the wings. That makes for a more versatile tool that can also do a pull cut and a better shearing cut.
- I start my students on the <u>push cut</u>, also called the "near-horizontal position." Hold the tool rather horizontal and push the tool into the wood, with the front hand on the tool rest <u>just holding the tool down and not pushing into the wood or pulling the tool up the slope</u>. This is not easy, and it's very easy to lose

the correct bevel angle, swing the tool out further and scrape and not cut the wood. You'll know you've done that because the surface immediately gets rough. Return the tool close in to the tailstock to begin each cut and be aware of your bevel.

- This push cut is a great cut to trace a fair curve from top to bottom because the "tiller" of the handle is very accurate in tracing that curve.
- The <u>shearing cut</u> is a variation of the push cut in which you drop the handle to present a more shearing angle to the cut. It works with the traditional grind but even better with the longer or Irish grinds. **This** "near-vertical position" is not so natural but the more strongly skewed cutting edge will allow you to cut more cleanly and help you avoid much sanding. I often return to the push cut for refining the curve near the top, "above the tree line."
- For this **shearing cut**, position yourself close to the tail stock of the lathe, drop the handle of the gouge till the bevel rubs (hence "near-vertical"). Now push or pull the gouge uphill, swinging your body to keep the bevel rubbing and the gouge following the shape of the bowl.
- The <u>pull cut</u> can only be done with the longer grinds. With the tool position at about 1:30 o'clock, pull the gouge toward you up the slope of the bowl. If you see the end of the gouge as a clock, you are cutting in the 10-11 o'clock position. Switch this to a shearing cut by just dropping the handle further and moving the cutting position to 9 o'clock on the edge.

Shear Scraping

- Use a skew scraper sharpened to about a 45-degree bevel and perhaps with a slight hook from an upside-down swipe with a medium honing stone.
 - 1. Angle the cutting edge of the scraper down slightly to avoid catches
 - 2. Tilt the tool to about a 45-degree angle to the rest, with the leading, shorter edge of the scraper down on the rest and the trailing, longer edge up off the rest.
 - 3. Be very careful to swing the tool to avoid touching the toe to the bowl.

Phil's sequence for turning a natural edged bowl.

- 1. Mount the round blank centered on a driving center with bark to the left. Level the top edges.
- 2. Use aggressive pull cuts to roughly shape the outside of the bowl.
- 3. Switch to shear cutting to refine the surface with smaller chips. I often use a push cut up to the top. Take all the time you need to get the curve right and the surface immaculate.
- 4. Shear scrape the outside and use same tool to form the dovetail for the bowl chuck.
- 5. Remount the bowl on the chuck and optionally use tailstock, depending on chuck diameter.
- 6. Take a few cuts inside, starting from the center, cutting toward the center. Remove tailstock.
- 7. Plan A- hollow out cone towards the bottom, finishing each cut to avoid an "ambush," working at good bevel-rubbing cuts. Go no deeper than about an inch from bottom.
- 8. Switch to Plan B- Finish the top 1/3 of the bowl to final thickness, matching your bevel angle to the outside of the bowl. Improve finish with smaller chips and perhaps a back cut. Push yourself to turn a thinner bowl, depending on what the bark needs to hang on.
- 9. Move to next third of the bowl, carefully blending the transition by starting your final cuts with bevel rubbing but not cutting and then feathering into your final thickness.
- 10. As you move to the last third of the bowl, measure thickness carefully so you hold the curve in your mind. You may need to switch to a more steeply angled gouge (55-60 degrees) or a scraper for your last cuts. Measure thickness after nearly every cut.
- 11. Sand inside and outside with a 3" sanding pad on an electric drill. I usually start with 150 and go to 220, first sanding as the bowl spins, then stopping the lathe, touching up problem areas, and then restarting the lathe to blend in the touch-up sanding marks.
- 12. Chamfer the rough top edges with 150 grit paper, careful not to touch the already-sanded sides. Then oil, usually Watco Teak Oil, hand sand with 400 grit wet-or-dry paper and oil again.
- 13. When the bowl is dry, I mount the bowl on a cushioned faceplate and trim off and level the bottom, usually cutting grooves to prove I didn't sand the bottom.