

## Tool Techniques for Turning Platters & Bowls

### Introduction:

The following discussion is a review of some of the tool skills and techniques that were covered in the Sessions 5 & 6 of the curriculum that Alan Leland developed to give students a good solid foundation in Woodturning Fundamentals. The different tool techniques that were discussed in Sessions 5 and 6 are reviewed here partly to make it easy to refresh student's skills and to separate them out to be certain that they were adequately covered in the class. The following review is intended to highlight some of the finer points of tool technique when turning side grain (Faceplate turning). Alan suggests practicing these tool techniques by chucking up some waste blanks (approximately 3" x 5" x 5") and then turn them away as you practice the outside and inside cutting techniques. Maybe try practicing using a bowl gouge to turn ogees for bowl and platter rims. I hope that the information is helpful. Once again the skills & techniques that I have presented are those that I have found that make my turning easier.



*Side ground bowl gouge 50 Degree bevel*



*Traditional ground bowl gouge 70 degree bevel*



Traditional ground bowl gouge with convex relief  
and micro bevel at 40 degrees

### The Side Ground Gouge and the Traditional Ground Bowl Gouges:

I recommend the use of two bowl gouges for bowl turning. I do most of my roughing cuts with a gouge with the side grind (David Ellsworth Grind, Celtic Grind, Irish Grind etc. just

different names for essentially the same type of side grind on a Bowl Gouge). The traditional ground gouge has a 40 degree bevel and is used for my finish cuts and for minor shaping and tweaking. It also does a wonderful job when cutting the tight curve at the bottom of many bowl designs. For tight curves I grind a secondary micro bevel of 65 degrees plus or minus to match the curve that I am trying to cut. I have also ground the back of the bevel slightly convex to make it easier to get around a tight curve.

The tool techniques discussed below do not require force. The sharp edge of the tool should easily slide its way through the cut. Do not push the tool into the work; rather glide it across the surface of the wood, with the bevel pointing in the direction of the cut and with the bevel supporting the cut but without pressure onto the surface of the material being cut. This will produce a much smoother cleaner cut. When done right this cut is so much fun that many turners forget to check the thickness of their bowl and go right through the bottom. If you hear a knocking sound it sometimes signifies that you are putting too much pressure into the wood. As you are gliding along the bevel through the cut if you start to see lines forming behind the cut they could be caused by one of two things:

1. The first one would be that you are getting off the bevel and the cut edge is self feeding into and out of the work, if this happens all you need to do is push the handle back toward the lathe (if you are working on the outside of the bowl) and get in order to get back on the bevel.
2. The other problem that causes the series of lines is that the bevel may be too long for the curve that it is cutting and the heel is digging in behind the cut. Sometimes the heel of the bevel digs in because the heel is in contact with the surface not the toe or cutting edge. The solution is to pull the handle toward you (if you are working on the outside of the bowl) to get back on the bevel properly so that the bevel is supporting the cut.

### **Horizontal Power Cut Technique:**

Use a bowl gouge with a side grind. The tool handle is held in the horizontal position parallel with the ways of the lathe with the center of the cutting edge at the center of the work to be turned. Through out the following cutting action the handle remains fairly close to horizontal. With the flute in the closed position (3 o'clock position), using the bevel as a guide slowly bring the handle around until it starts to cut. Adjust the angle of the flute slightly if necessary, slowly cut in to the bowl until you have created a place for the bevel to register. Now sliding along using the bevel as a guide, open the flute to approximately 45 degrees (1 o'clock). Continue the cut on into the center of the bowl. As I near the bottom inside of the bowl I begin to rotate the flute back to the closed position. Remember to slow down the cut as you near the center so as not to cross the center and risk a possible catch. If you experience vibration it is a sign that you are not gliding along the bevel, that you may be off the bevel, or that the tool is dull. Putting too much force into the wood by pushing the tool into the work is another cause of excess vibration. As you go down through the cut gradually rotate the flute as it goes around the curve of the bowl and bring it to a closed position as it nears the bottom center of the bowl. Sometimes the sharp curve at the transition point between the side of the bowl and the bottom portion is too sharp to ride the long bevel on the side ground gouge. Sometimes changing the bevel angle on the gouge by taking to the grinder will help. At this point I sometimes switch over to using the traditional ground gouge. It has a smaller bevel that can glide through the sharp curve. Many turners resort to using a large scraper to shape the bottom curve of the bowl. I have found that by switching to

the shorter bevel of the traditional gouge and possibly grinding a micro bevel on it, I can cut this area rather than scrape it. Cut fibers are easier to sand than scraped fibers.

### **Traditional Technique for Turning the Outside of a Bowl:**

The tool handle is resting against your hip and in the horizontal position, the flute is sandwiched between your thumb and fingers of your left hand (do not cover the flute with your fingers so that the shavings have a clear passage) and is open at roughly a 45 degree angle (11 o'clock). Once again this is a gentle cut, with the only force used going down to the tool rest and from the thumb to the fingers to slightly adjust the flute angle as necessary for optimum control of the cut. As with most woodturning it is the movement of your body through the cut that enables you to have the flowing curves of a well turned bowl. The cut is started with the body in an uncomfortable position and ending in a comfortable position. The knees are flexed and your body movement aids in controlling the quality of the cut. The bevel of the gouge always points in the direction of the cut and very little pressure is used to push the tool through the cut. Most of your force should be directed onto the tool rest and in the direction of the cut not into the work itself. Once again, the bevel is gliding along the surface with very little pressure onto the surface. Both the side ground gouge and the traditional ground gouge are used. The side ground gouge is for the roughing cuts and removal of large quantities of material. The traditional ground gouge is used for the tight curves and for the finishing cuts.



*Pull cut in horizontal scraping position*



*Pull cut in shear scraping position  
handle at 45 degrees*

*Safety Note: It is unsafe to wear a watch or any other jewelry or loose clothing for that matter anything that can be caught up in the lathe or the spinning work on the lathe. Long hair should be tied back and pigs tails/braids should be kept behind your shoulders and possibly tied up in a bun so as not to make contact with the lathe when your back is turned to the lathe.*

## **Shear Scraping the Pull Cut Using the Side Ground Gouge:**

The side ground gouge is used by many bowl turners to scrape and shear scrape using a pulling cut. This method only works when pulling the tool across the work, as it tends to be uncontrollable and has a tendency to catch when pushed into the piece.

**Scraping Cut:** This cut is very useful in the rough shaping of a bowl or platter. The cut can be controlled, to easily to remove high spots or to modify the curve of the work. Use a bowl gouge with the side grind. Hold the tool handle horizontal (parallel to the ways of the lathe). The flute is in the closed position with the bottom edge of the flute touching the work and the top edge of the flute **NO MORE THAN 1/8" FROM THE SUFACE OF THE WOOD**. This is strictly a pulling cut. Start at or near the center and pull the cut to the outside of the blank. You do not need to apply a lot of force. All these cuts require minimal pressure into the wood. This cut does not produce shavings; rather it will produce fine particles.

**Shear Scraping:** (I prefer to refer to it as a slicing cut): The shear scraping is achieved by simply dropping the tool handle to approximately a 45 degree angle and pulling the tool across the work as in the scraping method described above. This cut should produce fine shavings and is an excellent finish cut.

**Note:** Opening the flute beyond 1/8" increases the risk of getting a nasty catch, as the tool is no longer cutting on a supported edge and will therefore roll to the fully open position engaging the whole length of the side of the tool, causing a nasty nerve splitting catch. This causes you to lift up on the tool handle, thereby increasing the depth of cut and making the catch even worse. The other effect is a tendency to grip the tool tighter on the next cut, once again setting you up for a catch.

## **Using the Side Bevel of Side Ground/David Ellsworth Ground Gouge to Shape the Outside of a Bowl or Platter:**

I personally do not like to teach this cut to beginning students do to the fact that if bevel contact is not properly maintained the result is a nasty catch in which the side edge imbeds itself in the wood. The two major consequences of this catch are one fear and heart palpitations for the turner and two a major creative opportunity as the piece will have to be redesigned. One other reaction is that an attentive instructor will no doubt jump to attention as his heart rate increases do to the sound of the catch reverberating across the shop. Once students have understood bevel contact and are comfortable and competent in using bowl gouges and in turning bowls, then I feel it is appropriate to teach them the full use of the side ground gouge.

To execute this cut, the heal of the side of the gouge makes contact with the surface of the blank and then the side of the gouge is carefully rolled into the cut stopping immediately when the edge begins to cut. Rolling the side of the gouge past the cutting point will result in losing bevel contact and a major catch in which the whole side edge of the gouge is rolled into the wood biting off more material than the gouge/the wood and the lathe can handle something has to give and occasionally the blank goes air borne. When using the side of the side ground gouge most often referred to as the finger nail ground gouge bevel contact must always be maintained to prevent losing control of the cut. **The term finger nail gouge is not really correct when referring to the side ground gouge, as the finger nail description, refers to the shape of the front or tip of the gouge not to the side of the gouge but all the catalogs and references now use the term finger nail gouge to describe the side ground/David Ellsworth style gouge as a finger nail grind)**