



Wood Turners Worldwide

worldwidewoodturners.org and the art of making shavings

Newsletter

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Bob Foote



Bambi Golombiski



Howard King



Jon Moore

Clockwise from top left: Maple bowl with twine accent; Cherry cookie base, the pumpkin is poplar. The skinny ghost is unknown wood that was really gummy. The other ghost is maple with a walnut hat. The gourd/squash is peach and the tree stump is peach. I added some leaves, a broom and Spanish moss to the base; Relief carvings on cherry; Cherry burl bowl.



Doug Miller



Scott Medori



Don Francis



Matt Harber



Thomas Dresch

Clockwise from top left: Cherry, oak, and Osage orange clock beside a water-drop vase; Tamarack bowl for hand-churning butter; Hard maple bowl with segmented bloodwood rim; "Nile Daners by the Cabana" in ash; Cross-drilled Christmas ornament with pig bauble; Cherry and maple inside-out ornament.

Facing page, top left: Pecan hollowform; **Right:** "Eye of the Storm," Spalted elm hollowform with African blackwood foot and lid, carved holly finial; **Bottom left:** Pecan natural edge bowl.



Shannon Dunlap



Mark Dusek



Randy New

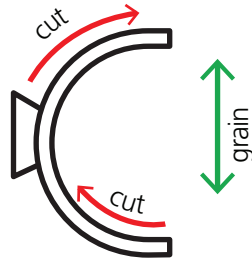


Joaquin Juatai

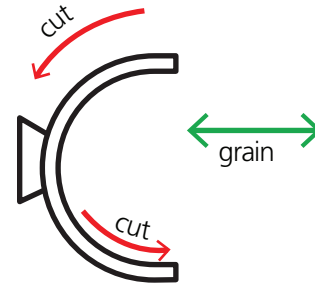
Uphill, Downhill, What's It All About?

CUT DIRECTION BASED ON GRAIN DIRECTION

Bowls

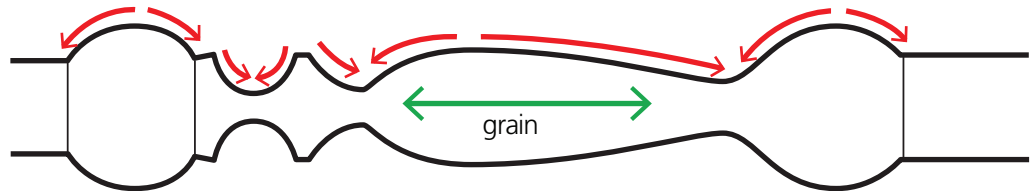


Side Grain



End Grain

Spindles *high to low



Graphic illustration by Ruby Cler

Article and graphics by Billy Burt, Sr.

We often refer to the terms cutting uphill or downhill when we discuss woodturning; what does this mean, exactly, and how does this involve another frequently used concept, the supported or unsupported cut?

It all has to do with the fibers in the wood, and whether they are being cleanly cut or torn out.

Below is an example of what we might see on the lathe:



Imagine this piece of wood held between centers with the headstock on the left, tailstock on the

right. Notice the grain direction. This is a spindle turning. The grain runs parallel to the bed ways from left to right.

In this circumstance, we would cut in the direction shown in the next image.

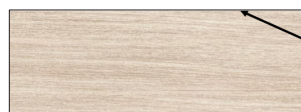


Notice the angle of the cut and observe the grain. We are cutting across the grain at a downward angle.

This is a "downhill" cut. It is also a "supported" cut, meaning that the grain being sliced is supported by the grain beneath it. A downhill cut is also referred to as cutting from "high to low."

Cutting downhill gives us a smooth cut that, if we are presenting our tools correctly, needs little or no sanding.

You should never attempt a cut like the one shown in the next image.



Cutting against the grain is an uphill, or unsupported, cut. The

wood fibers (grain) being cut are not supported by the grain above them because they are being forced up toward the surface. This causes tear out.

So how does this translate to bowl turning? The next image illustrates a bowl blank on the lathe in what we refer to as straight or cross grain configuration.



Notice that the grain direction runs perpendicular to the lathe bed (forward and back). Think about the uphill, downhill discussion above. Again, imagine the headstock on the left and the tailstock on the right.

We want to cut the outside downhill so that we have supported fibers as depicted to the left.



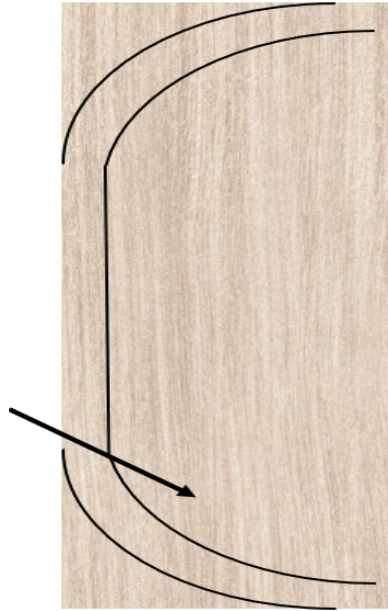
Notice that the fibers will become unsupported as we near the left side, or top of the bowl. This is why you often see turners make a cleaning cut on that side as we are "roughing" out the shape. All of our cuts on the outside of the bowl should be downhill.

What about the inside of a bowl? Why are the inside cuts sometimes referred to as uphill? Examine the image to the left.



I have heard turners refer to this as cutting uphill. Maybe because it is cutting in the opposite direction of the outside cut. Call it what you will, it is still a supported cut, because the fibers below are supporting the cut. A supported cut will always give you a better finish, IF

your tools are sharp and your technique is good.



There are always exceptions; soft, punky wood can be very problematic. Burls and highly figured woods can also be problematic. This is why sharp tools and light cuts are important.

On the other hand, I have seen turners cut in the direction shown here on the left, especially once the inside is mostly gone.

What is wrong with this picture? If you said the cut is unsupported by the grain above the direction of the cut, you are correct. In my mind, this is a true uphill cut. And yes, when scraping, many, including this author, may "cut" this direction when doing a final scrape to try and smooth tear out.

With the exception of the problematic woods mentioned earlier, tear out is a result of the fibers being "torn" rather than sliced. One of the most common reasons we get tear out is unsupported cuts, cutting "uphill," or cutting against the grain.

Being aware of grain direction is absolutely critical in ALL forms of woodworking. If you try to use a plane on a board where the grain direction is angled even slightly up against the direction of the plane, you will get torn grain - this would be an unsupported cut.

The same holds true for our woodturning tools. And yes, when turning bowls in traditional straight grain mode, we are dealing with four different directions of grain. Two running perpendicular to the bed ways, and two that are end grain. The end grain sides of the bowl are usually the most difficult to cut cleanly.

Remember the grain direction of your piece, keep your tools sharp, and you should be able to reduce and even eliminate tear out in your turning.



Ron Kisko



David Swain



Gonzalo DeLa Cruz



Jayson Cote

Clockwise from top left: Basket illusion bowl; White cedar vase, carved and painted; Sapele platter; A variety of pens turned for the artist's PT team; Elm bowl. **Facing page, top:** Bowls turned for charity by the Alamo Woodturners; **Bottom left:** Red oak live edge bowl; **Bottom right:** Various works by a new turner.



Robert Cox



Alamo Woodturners

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Ray Apodaca



David Lindley



Stephen McTaggart

Above: Carved Hollowform - body/stem is Tasmanian blackwood, lid is Chinese tallow, finial is brushbox, the base is NSW rosewood; **Top right:** Mesquite and Texas ebony multi-axis Christmas trees; **Bottom:** Fog wood triple crotch vase.



Waukeene Vinson

Wood Turners Worldwide

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Patrick Hoggard