SKEW SKILLS:"Making the Cuts"

(Peeling, Planing, Paring, V, Rolling, Coving)

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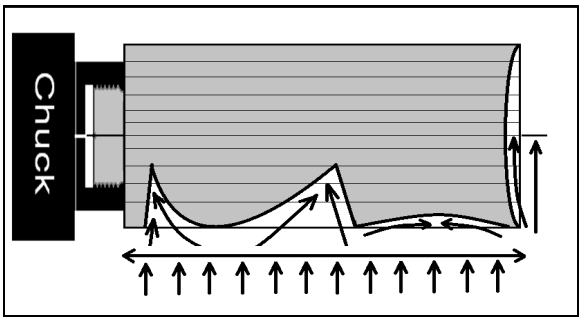
The skew is possibly the most versatile spindle turning tool, capable of creating the finest cut surface. This single tool is part of every spindle project I create on the lathe. The most challenging part of using the skew is to understand & mind the laws of physics. Unlike other tools, its simplistic design is unforgiving & will highlight your ability to present the tool's edge. ***By isolating 1/3 of edge & maintaining bevel contact you will learn to control your cuts!***

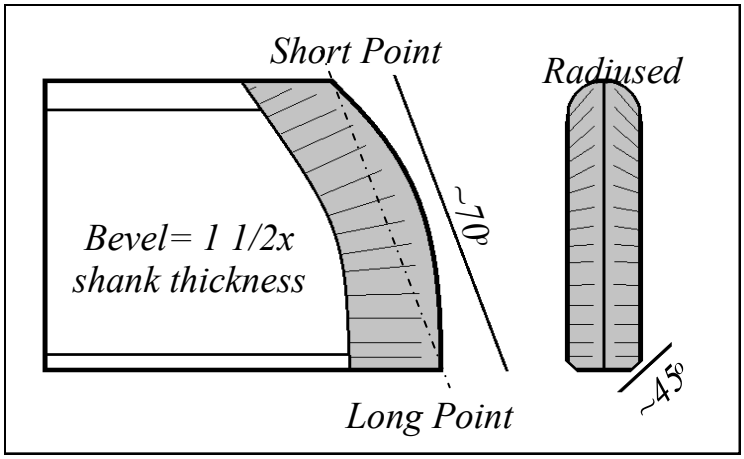


WHAT *CUTS* CAN WE PERFORM W/ THE SKEW? ***ALL cuts shown in the diagram can be done with the Radius Skew:Peeling, Planing, Paring, V, Rolling, Coving, & a few other variations on these basics!***

SHARPENING/ SHAPING- *(use a platform for max. accuracy)*

a. **Ensure your grinder is performing at its best**– true & balance grinding wheels, raise the grinder axis to meet the pivot point of your elbow (or slightly above) to match the height of your lathe axis.

b. **Determine the platform angle**– The platform angle & resulting tool angle DEPENDS ON SHANK THICKNESS. Adjust the platform so bevel is approximately 1 1/2x the thickness of the shank; for example, if your skew shank is 3/8" thick, then your tool bevel on each side should be approximately 9/16" from edge to bevel heel.



c. **When shaping the bevel, make sure to check for balance & symmetry–** A balanced & symmetrical edge which is centered on the shank will maximize tool predictability when making critical cuts.

d. **When re-dressing the edge, approach the grinder w/ the wheel stationary**– Use a dark color felt-tip pen (either permanent or dry erase) to coat the bevel. This allows you to see where the grinding wheel makes contact with the bevel. Lay the tool shank on the platform and rotate the wheel by hand, bringing the bevel into contact. Observe where the wheel makes contact & adjust as needed.

e. **Hone the edge with a diamond/CBN hone & strop for a razor sharp cutting tool!**

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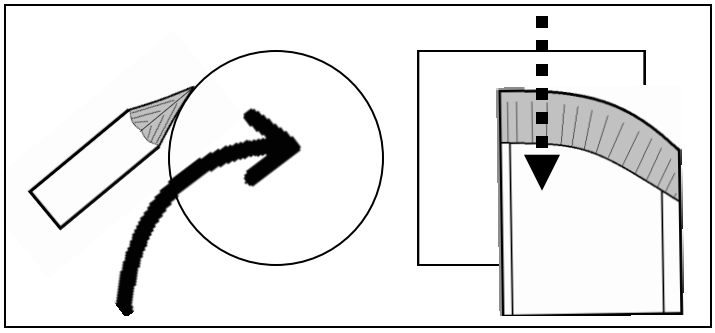
PEELING CUT- *(between centers allows for max. support)*



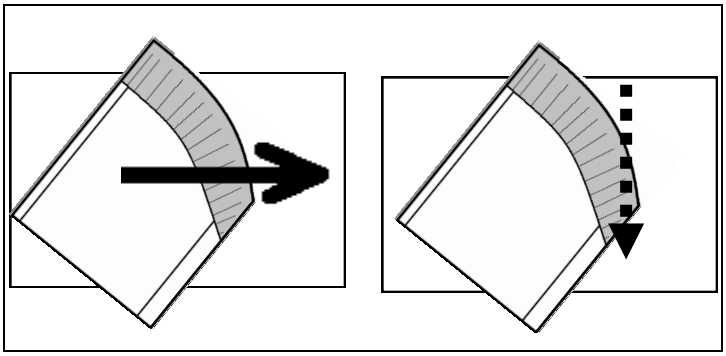
a. **Used to rough the blank into a cylinder-** Allows for FAST wood removal on the lathe. Can also be used by skimming the bevel & feathering the cut to refine a surface.

b. **Much like peeling an apple–** Present the flat edge section near the long point so it goes under the skin, then arc forward to keep the same edge presentation as the diameter decreases.

c. **Start w/ the HANDLE LOW–** Glide the bevel behind the edge & drop the handle at end to maintain control.

PLANING CUT- *(a "smoothing" cut, often shines the wood from bevel burnishing)*

a. **Used to refine a flat/tapered section**– this is a finishing cut. Cut is along lathe axis.



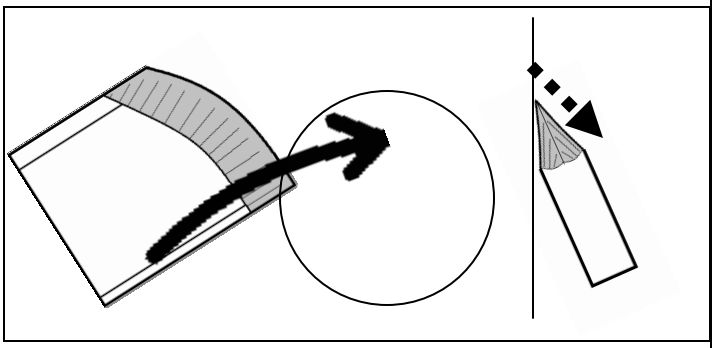
b. **Can also be used to knock corners off of a square block**– lower angle of inclination prevents chipping of corners.

c. **Very forgiving cut**, provided you maintain bevel contact behind the cutting edge & isolate lower 1/3 of edge.

d. **Short point down is my preferred method**, although it can also be performed w/ long point down.

PARING CUT- *(finishing style cut)*

a. **Used to clean-up the end of blank**– Allows for ultra-smooth cut endgrain. This is a refining cut, make small passes.



b. **Steer the bevel in the direction you are cutting, allow for** *~5° CLEARANCE ANGLE- DO NOT ATTEMPT TO GLIDE THE ENTIRE BEVEL AS A "SKATE" & "CATCH" OF MAGNITUDE WILL OCCUR!!!!!!!*

c. Like the peeling cut, **use an arcing motion toward center axis** as the diameter decreases.

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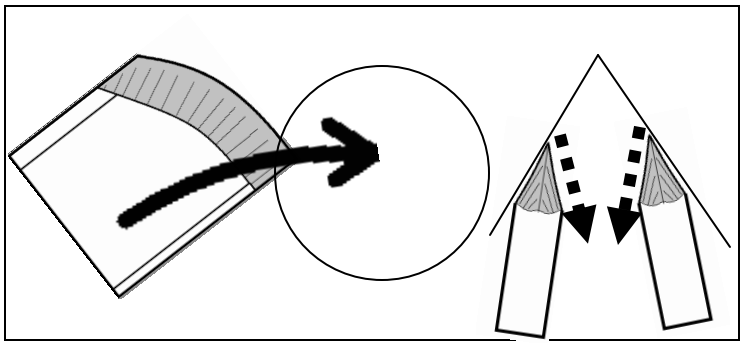
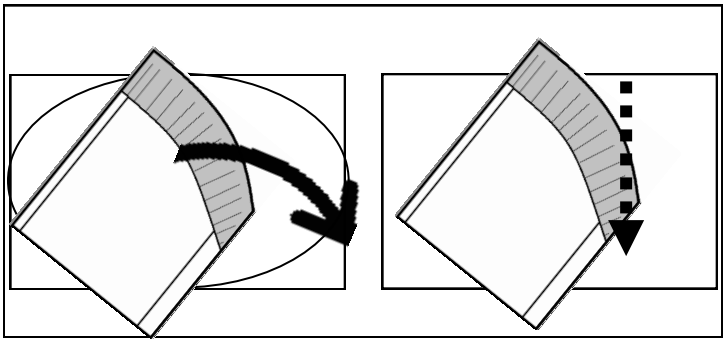


V-Cut- *(essentially a pair of angled Paring Cuts)*

a. **Used to layout critical features on a spindle**– Creates a very clean cut using the long point to score fibers. **Arc into the cut**, as w/ a Peel Cut.

b. **A DEEP V-Cut can be used to cleanly part the blank in two**– alternate sides working one side then the other to relieve shaving & allow ejection during the cut. Repeat until approx. 1/8" diameter. Then, sneak up on a clean part SLOWLY to avoid plucking fibers at smallest diameter.

c. **Maintain a clearance angle** of **~5°**as in the Paring Cut.



ROLLING CUT- *(essentially a <u>convex</u> V-Cut)*

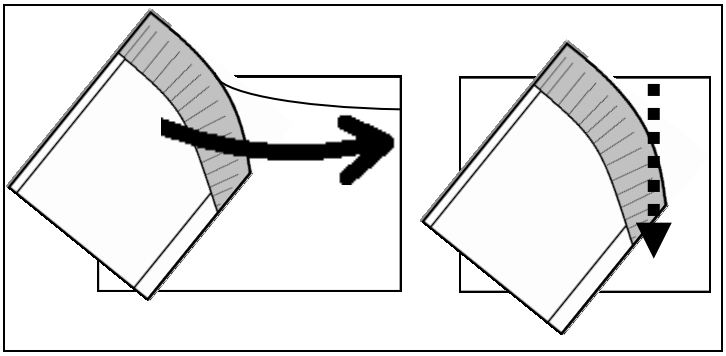
a. **Used to create a 1/2 Bead or convex curve**– combined with an equal cut on the opposite side creates a bead.

b. **Performed as in a Planing Cut w/ a roll of the tool on its axis.** Begin w/ tool on its side, presenting the bevel then the short point to the wood.

c. **End w/ edge vertical** & handle perpendicular to lathe axis for max. control.

d. For small/ detailed rolling cuts, use the long point to maintain sight of engaged edge.

COVING CUT- *(essentially a <u>concave</u> V-Cut using the short point, best results w/ mini or convex-beveled skew)*



a. **Used to create a <u>shallow</u> 1/2 Cove or concave curve**– combined with an equal cut on the opposite side creates a cove.

b. **Performed as in a Planing Cut w/ a roll ("scoop") of the tool on its axis.** Begin w/ tool resting on edge (in-line w/ short point) steering the short point in a "scooping" motion to the lowest point of the curve.

c. **End w/ edge horizontal**, w/ handle angled slightly to lathe axis to keep long point above the blank.

At the TOP of Your Game!

(Peeling, Planing, Paring, V, Rolling, Coving)

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Foundational Information- *(see 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. **A***nchor*, **B***evel*, **C***ut, Direct Attention Ahead of the Cut, 'Shavings Give Feedback (see attached)*. "*GLIDE the BEVEL"* to direct the cut VS. "RUB" the bevel.

Roughing a CYLINDER- *(between centers allows for max. adjustment)*

a. **Dimension the Blank using Bandsaw/Hand Saw**– Allows for greater safety.

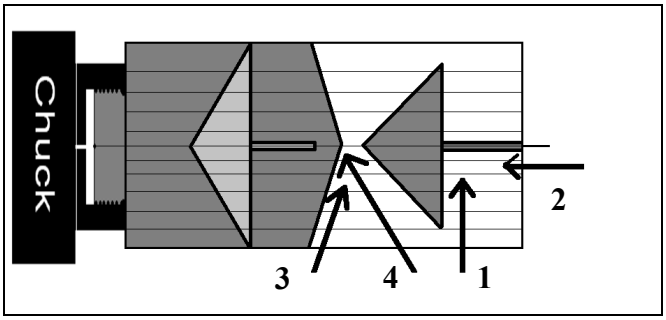
b. **Rough Shape to Cylinder**– Use SRG, Fingernail Bowl Gouge, or **Skew** (the most versatile cutting tool for this job), leave a bit oversized to truing-up during final shaping.

c. **Spigot– Using *Peeling*, *Paring*, & *Planing Cuts*,** profile/ dia. & shape to match chuck jaws & register shoulder on face of jaws. This step is a ***VERY IMPORTANT!***

d. **Mount in Chuck**– Use the tailstock for extra support when needed; for longer blanks/ when making aggressive cuts! **True the cylinder w/ a *Planing Cut***. ***Paring*** the end of blank using the tip of tool (skew or spindle gouge), present cutting edge in-line w/ wood movement for maximum shear action & cleanest surface.

Stay at the *TOP* of your Game! *(chuck mounted) Aim for the cleanest possible surface off the tool to minimize sanding!*

Sanding removes wood unevenly, creating unbalance.



1. **Mark the distance for top handle & use a *Peeling Cut*** to remove wood
2. **Smooth the handle with a *Planing or Cove Cut*.** Detail the transition between handle & top of the body. **Refine/ finish shaping of body**– Create a final profile & cleanest possible surface w/ a ***Paring*** or ***Rolling Cut***. **Embellish as desired-**chatterwork, colors, paint, texture, grooves, etc.
3. **Cut the underside using *V-Cuts***– alternate sides (3 & 4 in diagram) working one side then the other to relieve shaving & allow ejection during the cut. Repeat until approx. 1/8" diameter.
4. **Sneak Up on the Point**– final cuts for parting w/ a sharp point should be carried out VERY SLOWLY to avoid plucking/breaking of grain. Remember– surface speed goes to 0 mph at center axis…slow down & take it easy!!!

***Create a SOFT LANDING** for your finished top– have someone use both hands or lay a towel or padded box on the lathe bed. **If needed, soften or true the point** using 400+ grit sandpaper, work carefully to maintain a balanced point for best possible spinning.

Foundational Info.– ***Turning Spindles***

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ABC...*D'S* of *Making the Cut*:

A = ***Anchor*** *tool w/ toolrest & body support.*
B = ***Bevel*** *awareness, directs tool movement.*
C = ***Cut*** *supported fibers when possible.*
D = *Direct attention ahead of the cut.*
'S = *Shavings give feedback on quality of cut.*

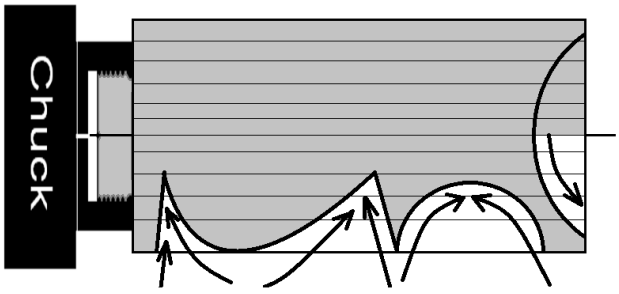
3 points of contact increases tool control & stability; **toolrest**, **bevel**, & **hand/body.**

Move as a UNIT to create flowing CURVES.

Cut, Shear, & Scrape:

- **Cut** = Bevel glides across wood.
- ***Shear* Cut** = Cutting edge aligns ≥45° w/ direction of wood surface movement.
- **Scrape** = NO bevel/ relief contact; drawing the burr/ edge across the wood.
- ***Shear* Scrape** = scraping at ≥45°.

Shearing fibers decreases stress introduced to the wood & results in the ***cleanest surface.***



Grain Orientation Matters!

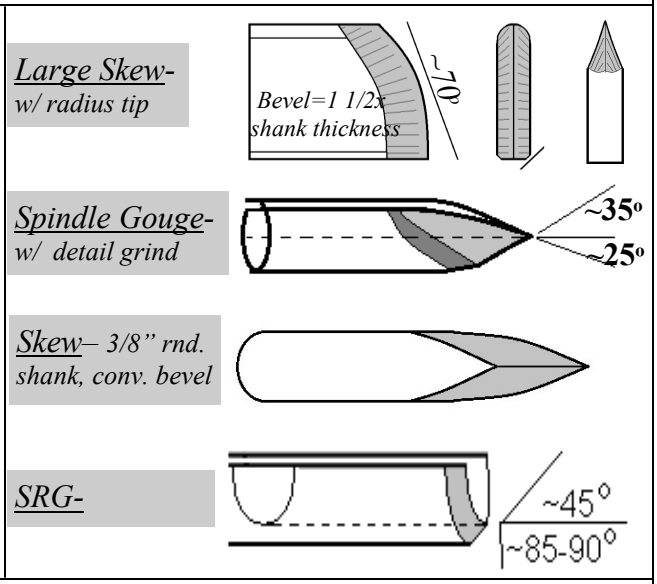
wood is a bundle of straws which flex & tear if there is no support behind them, resulting in torn grain (a.k.a. "tear-out").

Cutting "supported fibers" gives a cleaner surface & requires less sanding.

SPINDLE & ENDGRAIN Turning = fibers lay PARALLEL TO AXIS of rotation

My Preferred Tools:(*approx. profiles*)

- ***SKEW* (large rectangular shank)**- *used to rough & refine. On LARGE dia.,* ***fingernail bowl gouge*** *is more forgiving.*
- ***SPINDLE GOUGE* (detail grind)**- *used for fine details; coves/beads/chuck spigot.*
- ***SKEW* (round shank, convex bevel)**- *used to rough & refine. 3/8 " tool is choice for sm.-med. dia. pieces. Combination of round shank, convex bevel & straight edge.*
- ***SRG* (Spindle Roughing Gouge)**– *Used to rough-cut spindle to desired shape & for sweeping coves.*



Explore different tools, use what works for you, & keep the edges sharp!!!