

Takeaways from David Ellsworth School

I recently attended a turning seminar at the Ellsworth School in Quakerstown, PA. Listed below are some of the more important takeaways. All of these in one form or another are discussed in his book, which is in our library. The reason for highlighting these in particular is they relate to problems I had been experiencing before going and I wanted to address:

- **Exercise:** Before you start, do the knee / back related exercises discussed in his book. Laying in bed or on the floor simply pull each knee up with your hands toward your chin to stretch your hamstrings. After that series go to the leg crossover exercise, again laying on your back and crossing your leg over the other to affect stretching of the lower back, knees and gluttonous muscles. Hold each position for 30 seconds and repeat 10 times. Finally several times a day it is helpful to hang from a pull up bar for up to a minute or longer. If it is easier touching your toes, that is fine; just maintain as little weight on your toes as you can get away with.
- **Muscles:** The tool rest is your fulcrum and an excellent muscle substitute. If you find you are starting to use a little to a lot more muscle, it is time to sharpen the tool. One of the very subtle things is as the tool dulls, you increase the amount of muscle and simultaneously change your position. At this point you are most probably bending your spine, bending your knees and / or craining your neck, which stresses the muscular system and starts the “aches of turning.” This was one of the most important lessons I turned in on.
- **Sharpening:** David convinced me of the value of not sharpening tools freehand. As good as I thought freehand can be, it does not replicate the consistent grind of the jig. The few extra seconds required to set up your jig is more than offset by the extra turning time you gain from the better sharpening of the jig. Further the all important burrs that do the cutting are best raised with a wheel in the 36-46 grit range. Use the higher grit wheel if need be on the final skew cuts. I have not found his jig superior to the Wolverine and perhaps your own homemade one, as most operate on the same principal of a set point from which a sweeping arc grind can be made.
- **Stance:** David spent a lot of his time improving my stance / posture. The reason my back ached so much is my continued bending to the right, caused by dulling gouges and improper tool rest height. Spread your feet fairly wide, at least shoulder width. This will reinforce the need to stand up and not bend your spine, as it is more difficult to bend from this stance. Next he moved my feet back to properly hold and position the gouge, gaining more leverage / safety. At this position unless using a large tool your hand should be near the end of the tool and your elbow at a perpendicular to that tool. Looking at yourself in plan / from above you have formed a triangle with your shoulders and arms relative to the contact point of the piece you are turning.

- Tool grips: Apparently man is better designed to hold an oval handle, rather than a round one. So we made several tool handles with the butt end oval shaped. This was easily done after spindle turning the stock down to a tapered round and then offsetting the tailstock a little to make the oval turned butt end. David tends to use what seem very large handles for the job at hand so as to reduce fatigue through more leverage and better control of the fine turning moments. The details of this are again in his book.
- Alignment: It is imperative all elements of the lathe, headstock and tailstock be in alignment. Occasionally check by bringing the tailstock up to the headstock and check with the lathe running at low speed to ascertain if the alignment is correct. If not check each component. If you work with heavy materials as I do the spindle adapter can and does on occasion get bent with some exterior factor like too much pounding or being dropped during a changeover. If you use any kind of plastic or Teflon product between the adapter and chuck so that breaking them apart is easier, check to see if the material has compressed. Even a little compressed spot can, over the course of 10-15", create a slight wobble, thus creating issues with the finished piece.
- Nibs: For those of you who do hollow turning and are not experienced like me, the appearance of nibs or conical shapes at the center of your turning are hard to deal with since in many cases you cannot actually view them; only feel them. The exercise he offered was to create a nib on the outside of a block of wood and then practice turning it off with your eyes closed to in effect create the feeling of hollow turning. It takes practice but after a while your senses increase a lot. Some people simply bore out a hole to depth of the piece they are going to turn. For ease and perhaps production turning this is useful. But if you are a glutton for punishment or enjoy doing things "the old fashioned way" this is an excellent exercise.
Those are the highlights of the class from my standpoint. Many of the things covered in the book that seems obvious are not necessarily so; therefore, do not just assume that makes sense and go on reading without making yourself a note to indeed practice that tidbit.

Happy Turning,

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