

Drop-Spindling Without Dropping Your Spindle
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Throughout history, there have been almost as many methods for spinning as there have been spinners. At its most basic, spinning consists of drawing out fibers with your fingers and twisting them together for strength. This method certainly makes yarn, but would you want to use it to make enough yarn to weave a garment?

Enter the hooked stick, or twisty stick – as the name implies, a stick with a hook at one end. This hook is inserted into the fiber supply, a few fibers are caught, pulled out or “drafted,” and the stick is twisted, then the yarn wound onto the stick. This is where one learns the relationship between twist and draft – too much twist, and the fiber becomes hard to draft. Too little and the yarn falls apart. Drafting many fibers makes thicker yarn; fewer fibers, thinner yarn.

The twisty stick works, but it’s time-consuming. Enter the spindle – a weighted twisty stick that makes it easier to add twist to drafted fibers. The spindle can be used several ways: as a hand-spindle (the spindle is spun between the fingers and is never dropped), also known as double-supported or finger-supported, often used for flax, as a supported spindle, often used for silk or cotton, and as a drop-spindle, which is what we’ll be focusing on today.

A spindle consists of two main parts: the whorl, or circular weight, and the shaft, or stick. Whorls may be made out of a wide variety of substances. In ancient times they were made out of “amber, antler (elk), bone (cattle, pig), clay, coral, glass, metal (iron, lead, lead alloy), and wood. Many types of local stone were also used, such as chalk, limestone, mudstone, sandstone, schist, siltstone, slate, and soapstone.” (Priest-Dorman) Most whorls today are made out of turned hardwood, but there are whorls available that are made out of Corian, acrylic, or laminated, resin-impregnated woods. Medieval whorls could be a variety of shapes, from flat, to spherical, to bi-conical. Whorls can be flat discs, flat on one side, convex on the other, or even convex on both sides.

The shaft would generally be any straight, strong stick. Today, many spindle makers will often add decorative turnings at top and bottom, as well as marking to allow the shaft to be used as a WPI gauge. Some medieval Scandinavian spindles featured a slotted or notched shaft (Priest-Dorman), while others are smooth. Whorls could be at either end of the shaft, creating a top or bottom whorl spindle, and some Renaissance spindles had the whorl integrated with the shaft and were spun in the hand. Today, many spindles feature a metal hook at one end of the shaft or the other (more common in top-whorl spindles than bottom-whorl).

We’re going to be using top whorl spindles made out of a toy wheel, a dowel, and a brass screw eye, opened into a hook with pliers. It’s low-budget, but it’s very effective. Spindles can go for as much as \$90 or in this case, as little as \$2. Like spinning fiber, they each have their pros and cons. I chose top whorl spindles because when you get

proficient on them, using techniques we'll touch on later in the class, you can achieve speeds in the area of 2,000 RPM. Using a bottom whorl spindle and the conventional finger-spinning method, most spinners can only achieve speeds of about 400 RPM. "In other words, the top-whorl mode is four or five times as twist-efficient as the bottom whorl mode." (Amos)

Now that we have an idea of what equipment we use to spin, let's move on to the fiber. There is an immense range of fibers available for the handspinner. Each has its use, its pros and cons. Some are animal fibers, some plant, some man-made but derived from plants, and some simply don't occur in nature, like Tencel, nylon, and Mylar.

The most commonly spun animal fiber is wool. It's plentiful, relatively inexpensive, renewable, and has a great many desirable characteristics. Its very composition contributes to its suitability as a garment fiber. The crimp of wool creates a porous fabric, which enhances thermal insulation, which allows the fabric to breathe. Wool is elastic and durable. The fibers do not crease, but are springy and resilient. This is a reason why wool sweaters, properly cared for, can last 25 years or more. Wool also keeps a body warm when it is wet – chemical reactions occur within the wool fibers that release heat and help the body adjust to the change in temperature. Wool also breathes well. It is virtually fireproof, with low inflammability. It does not maintain combustion, and burns, rather than melting, if it does catch fire. This is unlike acrylic fibers, which combust easily and melt when they do. Wool is also easy to care for; unless seriously soiled, it can usually be cleaned by airing and brushing. Care must be taken in cleaning, as agitation can cause the fibers to lock together and felt.

Other animal fibers available to spinners include silk, llama and alpaca, qiviut (the downy under coat of the musk ox – VERY expensive), mohair (from Angora goats), cashmere (from cashmere goats), angora (from Angora rabbits), camel, and dog (I've never seen it for sale; most "chiengora" is collected by dog owners and either they spin it themselves or get a friend to do it). All of these fibers can be blended with wool to maximize the best attributes of each, to stretch a small amount of fiber, or to add a bit of luxury to the wool.

Plant fibers are spinning favorites, as well. Spinnable plant fibers include flax, hemp, cotton, and ramie. These fibers require different preparation than animal fibers; dyeing these fibers is different as well. Plant fibers react well to some chemicals that would destroy animal fibers, while dyes that work on animal fibers might not take at all on plant fibers.

There is a new class of fibers today, consisting of fibers made by man from natural substances. These fibers include soy silk, silk latte (fiber made from milk proteins), ingeo (derived from corn), and bamboo top. Most of these fibers are relatively inexpensive, though silk latte currently retails at approximately \$20/ounce – about the same as (and in some cases, more than) qiviut fiber.

Wool fleece is prepared for spinning by first skirting it to remove the stained and irretrievably dirty edges of a fleece. The remaining fleece is then washed (several times)

or scoured, to remove excess lanolin, dirt, dung tags, suint (sheep sweat) and most of the vegetable matter (VM).

Once the fleece is clean and dry, it must be prepared for spinning by one of two methods: carding or combing. Most people have heard of and/or seen wool cards. Carding arranges the wool fibers in an organized but random way, from which a fluffy woolen yarn may be spun. Carded fiber may be a rolag (fresh off the cards, a cigar shape), a batt (off of a carding machine; this looks like a fluffy blanket of wool), or a long arrangement of fiber called sliver or roving. Combs arrange the fibers in a more orderly, parallel fashion, and the wool is also presented in sliver or roving form. Combs are a little more complicated to use, and the fiber from combs spins up into smooth, tight worsted yarn.

That being said, we will be using commercially prepared roving for this class. I have neither the time nor the space to prepare raw fleece, so I bought the Medium UK Blue Faced Leicester we'll be using today from Copper Moose in Vermont. We'll also be using spindles I assembled with my delicate little hands and lovingly rubbed with Wood Beams, available for all your wood polishing needs from Goodies Unlimited. Web addresses for all vendors used (and a few I didn't) are at the back of this handout. End crass commercial advertisement. On to the practicum!

The first thing we need to do when preparing to spin is attach the leader yarn. This is a 12-18" piece of wool yarn to which we attach the fiber. You can use an acrylic blend for a leader, but wool works best. Tie or wrap the leader around the shaft, below the whorl, and wind it around several times. Bring the yarn up over the edge of the whorl and wrap it around the hook once. Halfway may do it for you; you have to experiment to see what works for you. When I started spinning I wrapped the yarn around the hook half a dozen times to keep it from slipping; now that I am more proficient, I wrap it once. It usually works best to bring the yarn up from the back of the hook, though the side works, too.

Next we're going to spin the spindle to get the hang of the motion. Let the spindle dangle from the leader yarn. Grasp the shaft between your thumb and two first fingers and give it a flick to make it spin clockwise. Conventional wisdom has it that you spin clockwise and ply counter-clockwise. It doesn't truly matter which way you spin, as long as you ply in the opposite direction, and that both singles are spun in the same direction when you do ply. It's best to pick one way or the other and stick with it. Singles spun in a clockwise direction are said to be spun with a Z-twist, while fibers spun or plied counter-clockwise have an S-twist.

Next we want to pre-draft our roving. Hold the roving in both hands, about 7-9" apart, and pull gently. This roving has a fairly long staple length, and if you hold your hands any closer together, you'll be holding both ends of the staple and won't be able to pull off a piece. Tear the piece you pull off lengthwise, and hold the end in one hand, and place the other hand 4-5" further back on the roving. Grasp the end firmly, while holding less firmly with the other hand, and gently tug on the fibers to loosen them and pull them apart a bit. You should just feel the fibers starting to slide past each other, but don't pull them too far or your roving will fall apart in your hands before you get to spin it.

Hold the spindle between your knees. Pull out the very end of your fiber so it looks very wispy. Place the leader on top of the fiber so that it overlaps by a couple of inches, and the wisps of fiber hang freely beyond your finger tips. Hold up the spindle and give it a spin. You should see the fibers wrapping themselves around the leader; if they don't, feel free to give them a little encouragement by gently guiding them with the fingers of your free hand. You should be able to see the twist moving up the fibers towards your fingers. The area between the fiber mass in your hand and the newly twisted yarn is called the drafting zone or drafting triangle.

Stop the spindle and tuck it between your knees again. Pinch the twist between two fingers (using the spindle hand) and untwist it just a bit. Hold the fiber gently in your other hand, as if you were holding a baby bird, and pull it away, attenuating the fibers. Release the twist, and then do it again. The farther you pull and the more you attenuate, the thinner the yarn. You must be careful, however, not to make the yarn too thin to support the weight of the spindle. This technique is called park and draft, and is very useful when spinning in a car or other forms of transportation (if you can get away with it). You should be able to draft three or four times; when you feel the twist getting less springy, it's time to add more twist. Wind on your yarn, hook it up on the spindle, and spin away again.

Once you get a couple of feet of yarn spun, you can test the plied thickness of the yarn by moving your hands together and allowing the yarn to double up on itself. This gives you a good idea of how the plied yarn will look. It will actually end up a little thicker, as plying loosens twist a bit and setting the twist causes fibers to fluff up a bit, or bloom.

Once you get comfortable drafting with a spindle that's still, you can try it with a spindle that's still spinning. Be careful not to draft too far without allowing more fibers to enter the drafting triangle, else your yarn will get too thin and snap under the weight of the spindle. Also be sure that you wind your yarn onto the spindle shaft before it gets longer than your armspan, else it gets really difficult to wind on. One last thing to be aware of is the spindle itself: Don't get so distracted by drafting that you let the spindle stop and spin backwards. If it spins backwards, it'll untwist the yarn and it will all fall apart. This method of draft is commonly called inchworm drafting.

As you wind your newly spun yarn (yay!) onto the spindle shaft, be sure to wind it up and down the spindle shaft in a criss-cross pattern. This will keep your spindle cop tidy and make it easier to wind off for plying.

This brings us to the high-speed method of spinning on a top-whorl spindle: thigh rolling. Thigh-rolling is merely a variation on the themes that we've already covered. To thigh-roll your spindle, you simply put the shaft against your leg and spin it, using the flat of your palm. The spindle will travel up the thigh if you use your right hand to spin it, and down if you use your left hand – no matter which hand you use, the spindle should turn clockwise to spin, counter-clockwise to ply. This method will put twist into your fiber very quickly, so be prepared. This method works well for adding twist quickly when

spinning using the park-and-draft method. An additional advantage of this method is that you can utilize long-draw drafting if you spin from the fold.

Spinning from the fold is quite simple. You take a bit of roving, about 4-6 inches long, fluff it out, and fold it over the forefinger of your fiber hand. Place the single or leader yarn on top of the fiber, securing it with your thumb, and spin the spindle. The twist should pick up fibers from the fold and join the fiber neatly and quickly. Drafting takes a little practice, but this method is an excellent way to spin fluffy, lofty woolen yarn. With practice, you should be able to draft a length of yarn as long as your armspan before adding a bit more twist and then winding on.

We're also going to cover two methods of plying. The first is plying from an Andean plying bracelet. Directions are found at the back of this handout.

The second method is plying from bobbins. This method is good when you want to ply two different fibers together, or if you want to ply more than two strands. Toilet paper tubes make excellent bobbins, and it's easy to make a lazy kate out of a shoebox and some dowels. Simply poke holes in the side of a shoebox, big enough to accept a dowel. Wind the singles off your spindle, onto the tube, and hang the tube on the dowel. Tie two (or more) strands together with a loop at the end, hang from the spindle hook and spin counter-clockwise. Place a finger between each of the strands to help keep the tension even on them. Uneven tension can result in unbalanced yarn. Such yarn can cause undesirable skewing in finished textiles

Finally, we move on to setting the twist, which is how you will keep from untwisting itself and disintegrating in your hands. My preferred method is steaming, others prefer to wash their yarn. I steam because I'm lazy, I admit. It also means that I don't have to hang yarn to dry it, and tempt my cat unduly.

Before using either method, you must first wind off the plied yarn, either onto a niddy noddy or by wrapping it around a book. Tie the hank in three or four places and slide the hank off of the item you wrapped on.

To set the twist using steam, you need a tea towel and a microwave. Wet the tea towel and wring it out well, it should be very damp, but not sopping wet. Place the hank between the folds of the tea towel, and place in the microwave. Cook on high for 3 to 4 minutes, depending on the power of your oven. (Mine seems to be sort of midrange, and three minutes is usually sufficient.) Remove from the oven carefully – the towel will be HOT! – and allow the skein to cool and dry (it'll get a little dampish from the steam) before releasing the ties.

To set the twist by washing, fill a basin with warm water and add a bit of dishwashing liquid. Place your skein in the water and push it under the surface. Let it sit for a little while, then remove from the soapy water and rinse in clean water using the same technique. Roll the skein a towel to squeeze out excess water (don't rub!) and hang to dry.

What you do with your yarn is up to you. You could work out as trade with a knitter – they get handspun yarn in exchange for making you something out of some of it. Or you could do what I did, and learn to knit in self-defense. You can weave it, you can braid it, you can make cat toys out of it. Or you can put it away in a drawer or display it fashionably in a basket, and fondle it when no one's looking. Personally, I don't care if anyone's looking.

Your first yarn will probably be lumpy and bumpy. Remind yourself that this is designer yarn, and they charge more for it in yarn shops. Love your lumps. Any yarn you make is good yarn, and time spent spinning is time spent enriching your soul.

Bibliography

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Recommended Vendors

These are vendors with whom I have personally done business. There are many more vendors out there, about whom I have heard good things, but I have personal experience with those listed here, and without exception I can say that they give excellent service.

The Bellwether – <http://www.thebellwether.com>

PO Box 2078

Sequim, WA 98382

(360) 582-0697

Spinning fibers, dyestuffs, spinning and fiber equipment, needle felting equipment, patterns, instructions, kits, books and videos.

Copper Moose Productions, Inc. – <http://www.coppermoose.com>

43 Maple Lane

East Burke, VT 05832

1-866-443-4237

Spinning fibers, yarn, dyes, looms, wheels, spindles, carders, tools, video/DVD, crafts, soap, Ott lights.

The Fiber Studio – <http://www.fiberstudio.com/>

9 Foster Hill Rd / P.O. Box 637

Henniker, NH 03242-0637

603-428-7830

Knitting, weaving, spinning, and feltmaking instruction and equipment, fibers, yarn

French Hill Farm – <http://www.frenchhillsheepandwool.com/fh/>

Diane Trussell

PO Box 82

Solon, ME 04979

207-643-2540

Coopwoorth fleece and prepared fiber, Forrester spindles

Goodies Unlimited – <http://www.goodiesunlimited.com>

809 Timber Ridge Road

Edmond, OK 73034

405-359-7375

Soap, skin and lip balm, body polish and lotion bar, Wood Beams wood food

Grafton Fibers – <http://www.graftonfibers.com>

Linda Diak

60 Gib Lockerby Rd.

Grafton, VT 05146

1-866-636-6462

Spinning and weaving equipment, fibers

Hatchtown Farm – <http://www.hatchtownfarm.com>

82 Sproul Hill Road

Bristol, ME 04539-3211 USA

Spindles, nostepindes, niddy noddies, WPI gauges, marudai, orifice hooks

Halcyon Yarn – <http://www.halcyonyarn.com>

12 School Street

Bath, Maine 04530

1-800-341-0282

207-442-7909

Yarn, fibers, felting, books & videos, kits, patterns, equipment, classes.

I ordered silk thread from their website for a project, and they called me personally when they had a problem with the order, to get it straightened out. My order was in my hands two days later. Their catalogs are amazing.

Mind's Eye Yarns

<http://www.mindseyeyarns.com/>

Lucy Lee

22 White Street

Cambridge, MA 02140

Fibers, yarns, spinning wheels and instruction, knitting supplies and instruction, and a big slobbery dog who loves attention. The website has a great links page.

Pacific Wool & Fiber

<http://www.pacificwoolandfiber.com>

Spinning wheels, fleece prep equipment, spindles, fibers, books, accessories, looms.

I purchased my spinning wheel from Pacific Wool and Fiber. Their customer service was phenomenal – I even changed my order and they didn't miss a beat.

Internet Resources

Yahoo! Groups has several lists devoted to spinning, including a couple specifically for spindles.

Spin-List – <http://groups.yahoo.com/group/Spin-List>

A clean list for hand spinners to share their love of all types of fiber. Although we all have handspinning, either on a wheel or a spindle, in common, we also talk about knitting, crochet, weaving, tating, dyeing, raising and grooming fiber animals and many

other fiber related topics. Whether for a hobby or if you are a teacher or a vendor, if you enjoy spinning or fiber, you will feel welcome on our large chatty list. Despite their self-assessment as a chatty list, I have found this list to stay fairly securely on-topic, though some users need to learn how to clip their posts.

SCA-Spinning – <http://groups.yahoo.com/group/SCA-Spinning/>

This is the SCA Spinning list, for discussion of accurately reproducing historic handspun yarn and thread, handspindles, spinning wheels and other spinning tools. Also discussion of documentation, and historically accurate projects of handspun, including but not limited to weaving, knitting, nalbinding, embroidery, or lacemaking. Emphasis is on the time before 1600 and the Society of Creative Anachronism, but anyone with an interest in historic spinning is welcome.

This list is fairly low traffic, with a good signal to noise ratio.

spinfree – <http://groups.yahoo.com/group/spinfree/>

This list is intended mainly for handspinners, whether you use a wheel or a spindle. Knitters, crocheters, and other fiber-lovers are invited to join us. On an approximately monthly basis, spinfree will host an online lesson; in the past, these have included handknitted socks, mittens, sweaters, and afghans.

I have yet to see one of these online lessons, but this list is very helpful and the moderators are fairly hands-off (in a good way).

spinningNE – <http://groups.yahoo.com/group/spinningNE//>

To provide email connection for New England's handspinning community. Let's all get to know one another. Share information in reference to local events and resources. Chatting is encouraged! Please note: AD day is Thursday.

This list is great for finding out what's going on in the New England fiber community!

spindlers – <http://groups.yahoo.com/group/spindlers/>

Spindlers is a chatty group for all hand spinners, mainly concentrating on those who use and collect spindles.

I found this list too off-topic and chatty. YMMV.

Fiber Arts Bloggers

<http://www.ringsurf.com/netring?ring=fiberblogs:action=info>

You'd be amazed what you can learn by reading someone else's writing about spinning and fiber arts.

LiveJournal Communities

Fiber Arts

<http://www.livejournal.com/community/fiberarts/>

Spinning Fiber

<http://www.livejournal.com/community/spinningfiber/>

Instructional Websites

www.joyofhandspinning.com

www.icanspin.com/toc.html (Requires Quicktime)

www.graftonfibers.com/instructions.html

www.hatchtown.com/strait.html – instructions for tweaking a spindle hook

www.hatchtown.com/nostdir.html – winding a center-pull ball of yarn using a nostepinde

www.hatchtown.com.niddy.html – using a niddy noddy

Andean Plying Bracelet

based on the instructions found at <http://users.mindex.com/~sharon/andean/>

re-written to work for either hand

1. Secure the end of the yarn out of the way. I usually wrap the yarn around my thumb three or four times. Start the wrap by coming up to the near side of the middle finger (next to the thumb), around behind it and down the other side.
2. Wrap the yarn around the back of the wrist, from the thumb side to the pinky side.
3. Bring the yarn around to the palm of the hand, up along the pinky side of the middle finger, around behind, and to the front, along the thumb side of the finger.
4. Wrap the yarn around the back of the wrist, from the pinkie side to the thumb side. Be careful how tightly you wind the yarn onto your hand – it's easy to cut off the circulation.
5. Pull the yarn off the middle finger and down to the wrist, forming a bracelet.
6. Find both ends, the end and the one secured at the beginning, and begin to pull them together over your hand.
7. Tie the two ends together in a slip knot, hook to the spindle, and ply.