



An HJS Studio Tutorial: Spinning Low-Twist Yarns



Less than a year after teaching myself to spin I came across Paula Simmons' book, Spinning for Softness and Speed. I got a lot out of that book—from random rolags leading eventually to layered drumcarded batts to weaving with singles to using as little twist as possible in singles yarns. This tutorial will bring together some of what I've learned about spinning low twist singles yarns.

Why bother?

The first question is why bother with low twist yarns? What advantage do they offer to hand-spinners, and to the people who use the yarns for knitting, weaving, etc?

Answers will vary from spinner to spinner. For me, three things come to mind when asked this question. One is **color**, one is **texture**, and one is **labor**.

Singles yarns offer a lot in the way of color. Spinning layered batts offers uniquely colored yarns. Random changes make weaving and knitting particularly exciting. Many of the projects seen in my website gallery are made with layered batts. When these yarns are plied, the colors become muted—the more plies, the more the color changes fade into the background.

Texture is usually considered the province of the 'lumpy bumpy' yarn type. But actually, texture is anything pertaining to the feel of a yarn, including a smooth yarn. My yarns are usually smooth, and I strive for the softest possible texture compatible with the end use of that yarn. The less twist the yarn has, the softer it will feel--it will be cushier and warmer and irresistible. It will also be less resistant to abrasion or ordinary wear and tear, but when it comes to a shawl or other special project, I prefer softness.



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Finally, labor. The end product should rule the decision of whether or not to use low-twist singles. Spinning, from fiber selection to finished yarn, is a time-consuming process, even if you sit down to a basket of roving. I love to spin; I also love to spin fast and efficiently. If I can get to a good yarn for the desired end product without plying, then I've saved time (allowing me to get to the next project's spinning that much faster :), as well as avoided the somewhat dull work of plying.

What "Is" a Low-Twist Singles Yarn?

I personally define a low-twist singles yarn as a yarn that, when knitted and washed without blocking, won't be slanted, and won't have slanted stitches. When woven, tracking (slanted lines due to twist energy popping to the surface of the cloth) will not be very evident, even in plain weave. A skein of low-twist singles, washed and hung to dry without blocking or weighting, will not twist back on itself more than a half turn (two-yard skein) when allowed to hang freely—my personal goal is they not twist back on themselves at all. I consider such yarns to be in the class of "balanced" yarns: Yarns with very little or no active twist.

How can you tell while you're still spinning if a yarn will be low enough twist to act balanced, yet be structurally sound? I measure soundness by whether a yard or so of the yarn will stand up to what I call the tug test. I give the yarn a gentle but steady pull, not really a tug. If the yarn drifts apart, it needs a bit more twist. If it holds well, and I want the lowest possible amount of twist in that yarn, I take some twist out and pull again, until I reach the point where I have just enough twist to keep the yarn from drifting apart. If my yarn just passes the tug test, it will be successful as warp and weft singles as well as good for knitting as singles. My daughter's coat cloth was spun to pass the tug test and there was not one broken warp end.

Once I've figured out how much twist the yarn needs, I want to record that in some way so I can reproduce the yarn later if desired. For that we need the twist angle.



This picture shows clearly the variegation of the reddish singles yarns. You can see that individual fibers slant in the finished yarn.

If a section of singles is held under just enough tension to keep the yarn straight, you can then observe the amount of slant in the individual fibers making up the yarn. The angle between the length of yarn and the slanted individual fibers is the twist angle.

The lower the angle, the lower the amount of twist in the yarn. Likewise, the higher the angle, the more twist in the yarn. I measure the twist angle to the nearest 5 degrees, and record that number for future reference. While I'm spinning, I periodically stop, observe the angle, and adjust the amount of



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twist I'm inserting as needed. Full directions for measuring twist angles are found on another tutorial, [Measuring Twist Angles](#).

Choosing and Preparing the Fiber

A wide variety of fiber types can be spun with low twist and still make a yarn that is structurally sound. Low twist yarns demand extremely well-prepared fibers for best results. Fast drafting is essential, in order to keep ahead of the twist.

Although short stapled fine wools can be successfully spun with very low twist thanks to their crimp, because they are so short-stapled they are very likely to pill and abrade in use. I usually prefer to ply these yarns if they are to be used for knitting, putting a 15 degree twist angle into the singles; or, if weaving, a bit more twist, around 20 degrees, so that when used as singles the yarns will handle light wear without obvious damage.

My usual method of preparing wool at home starts with washing thoroughly. Any grease left in the wool will oxidize over time, making the fiber sticky and harder to draft. Then I use pre-carding to remove all vegetable matter, short cuts, brittle tips, and other debris. Finally, I drumcard at least three times on my Mark V drumcarder. This makes a delightful preparation, lofty and easy to spin in a wide range of yarn types, including low-twist singles.



This picture shows washed locks of Romney and Shetland, and an unwashed lock of Border Leicester x Corriedale, all very suitable wools for low-twist singles yarns.

Commercially carded roving can be used if it's top quality. Hold the roving to a light source. Does it look quite uniform and aligned, or is it very random with lots of tangled bits, debris, etc? I find rovings usually need to be carded twice at the mill, or carded once then pin-drafted, to make sure it will spin well

enough for a low-twist singles yarn. The fibers in these rovings should be strong enough to not break more than minimally when picked. I've not seen a fine-wool roving I could spin successfully into a low-twist yarn because they're usually full of broken bits of fiber, which weakens low-twist singles.

Commercially combed top is a different story entirely. In this case, the fiber has been so processed that, while the fiber is perfectly aligned and there are no tangles or debris left, all the 'life' is also removed. Apparently the fiber has been stretched for so long during processing that the crimp is essentially removed. When I pull bits of fiber out to observe it, even



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fibers from Merino tops have no apparent crimp left. A low-twist yarn needs crimp to help hold it together if the staple length is less than about five-six inches / 13-15 cm. If the crimp is somehow processed out of the fiber, even if temporarily, it's much harder to hold together without more twist than a low-twist yarn should have. Possibly carefully soaking and drying commercially combed top before attempting to spin low-twist singles will help; it seems likely, but I haven't tried it myself.

I prefer to not spin handcarded rolags into low-twist yarns. Because the fibers are not very even and parallel, the yarn won't wear very well at low twist angles. It might, however, be a great way of preparing yarn destined for a knit or woven, then heavily felted or fulled, project. If you're buying raw wool for low-twist singles, a soft Border Leicester, Romney, or similar wool is ideal for a first try; longer Shetland fleeces work well, too. Make sure the wool is a full year's growth, though, and at least six inches / 15 cm long. Sometimes medium-wool breeds are shorn twice in a year. The result may be a staple as short as three inches, with very little crimp. Such wools needs lots of twist to hold them together in a structurally sound yarn, often producing a very wiry look and feel. I avoid them, no matter what the project I have in mind.

You've prepared your fiber very well so it will draft very easily, and now it's time to spin it! It's hard to describe a spinning technique with words, but I'll give it a whirl.

For starters, set up your wheel to the slowest possible speed and lowest possible take-up. Later you will probably be able to spin faster, but for now, slow is easiest. If you're used to treadling quickly, you may even want to practice treadling as slowly as possible while keeping the wheel moving smoothly before you start to spin.

This is a good place to note that, since we're handspinners, not machines, our low-twist singles yarns will have some texture to them. Thinner areas will have a bit more twist; thicker areas less. The goal is to draft as evenly as possible, but be aware that your yarn will be slightly thick and thin. That's OK; and with practice, you will spin more and more evenly.

This picture shows some of the low-twist singles I spun for the warp and weft of my daughter's coat in a small knit sample, and the texture inevitable to such yarns.

I spin all but true worsted yarns long-draw. I find this allows me plenty of time to see that the yarn is drafting quickly and consistently. There are two main methods of long draw, and I'm never quite sure what name applies to which, so I'll just try to describe them.



The long-draw method traditionally taught for spinning woolen yarns involves pinching twist off near the orifice while treadling slowly, then allowing the fiber hand to draw back rapidly until the thinnest areas of fiber between the two hands are a bit thicker than the final yarn size desired. The pinch is released, allowing twist to travel into the fiber, then it's pinched off



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again. The fiber hand continues to pull back, against the twist, causing the thick, unspun areas of fiber to be drafted out to the desired thickness. This is repeated as needed until the section is fully drafted; it's then wound onto the bobbin.

This type of drafting is well suited to low-twist yarns. I find its main limitation is that it's rather slow, and if I accidentally draw out too much fiber at first, I end up having to drop the end of the partially-drafted area to work on a shorter section. With more practice, I'm sure I'd learn how to better gauge how much fiber to draft with each draw.

My preferred method of long-draw drafting involves pinching off twist with the hand near the orifice, while simultaneously drawing back with the fiber hand, against the pinch. I release and pinch rapidly, so that twist travels up the yarn at the same speed my hand draws back. At the farthest extent my arm can comfortably reach, I treadle just enough to allow the yarn to draw onto the bobbin.

This method offers me the best possible speed and control. I can do a 10-degree twist angle yarn at 400 yards per hour this way, if working with well-prepared fiber. I also find I'm much more consistent in the thickness of the finished yarn when I spin this way.

Both these methods involve a backwards drafting motion: The hand holding the fiber is moving away from the orifice. In my observation, most spinners seem more comfortable with a forward drafting motion. In that case, the hand closest to the orifice pulls fiber from the fiber

hand while allowing twist into the fiber. I find a forward draft is not very compatible with long-draw spinning. If your treadling and wheel speed is very slow, while your drafting speed is very fast, you may be able to get a good low-twist yarn with a forward draft.



Finishing Low-Twist Singles Yarns

Actually, low-twist singles need very little finishing. If you skein your yarn and take it off the niddy niddy immediately, you may be dismayed to see it twist back on itself quite a bit. This is because the twist is very fresh and active—it's trying to leap out of the yarn. Leave another skein spun the same way on the bobbin or skein winder for a few hours, then take it off, and you'll see it twist back very little; the twist in that skein is stale and tired. Wash the kinky skein, snap it out, hang to dry without weights, and you'll be surprised to see that it doesn't twist back much at all.

I skein the yarn, and tie the skein in 4 places (I don't bother with figure-eight ties). When ready to wash, I just soak the yarn for 10-15 minutes in warm to hot water with a little detergent as a wetting agent. I then rinse once or twice in cool water, and spin out the excess moisture in my washing machine, or roll the yarn in a thick towel to press out the water. I then hang the yarn—no weights. It doesn't look as smooth as if it



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were blocked, but I don't have to worry about its length being abnormally stretched, possibly causing problems in the finished project.

Using Low-Twist Singles Yarns

You now have a beautiful, soft, lofty yarn to play with! I use these singles in any project that won't receive a lot of wear and tear, such as my daughter's coat. A barn jacket may need more twist, but a shawl is lovely and drapeable with low-twist yarns. I wouldn't use it in the foot of a sock, but it would be a wonderfully warm yarn for the leg portion. A baby's sweater or blanket would be very cushy and comfy in low-twist singles yarn, while big sister or brother may need a plied yarn with more twist in the singles for better durability.

Care for projects made from these yarns just like any other. You can even wash in the washing machine, if you use cold water, mild detergent, and very gentle agitation. Support the wet item well, though—items of singles can stretch more than items made from plied or higher-twist yarns when wet.

Conclusion

I find that low-twist singles yarns help me improve my spinning skills while providing soft and exciting yarns for knit or woven projects. It's a bit of a challenge to successfully spin low-twist yarns, but one well worth mastering. The finished items are lighter in weight and warmer than projects from plied yarns. Variegated yarns show to best advantage, as well, making weaving or knitting much more fun. I find that low-twist singles show better sheen, too, when spun from fibers with some luster. They are certainly yarns to be proud of!



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