

dry unweighted to get a clear picture of the amount of plying twist you want to use.

## Cabled Yarns

Cabled fibers are everywhere in the modern world. They are the materials of construction: metal cables for bridges, steel cables that make the cords in tires, corded yarns woven into industrial mesh for indestructible carpeting. If plied yarns are the workhorses of the textile world, cables are the industrial-grade trucks.

But cables are spun for beauty's sake as well. Decorative cable yarns have been used for clothing, basket trim, and animal and human adornment. Ceremonial yarns made with everything from rabbit fur and sinew to hummingbird down and eagle feathers use cabling techniques.

When I first looked carefully at cabled yarns, I was convinced that they weren't spun at all but knitted or braided on some clever modern machine. I was in for a wonderful surprise. Cables aren't modern inventions that involve machinery; humans have been spinning cables since prehistoric times. Then as now, cables were used in construction. They lashed rafts together, they supported bridges, and they were the cordage on boats. Early fishermen made fishnets and weirs with them; hunters made traps and snowshoes.

Cables have made the modern explosion of novelty yarns possible. Bouclés, brushed wools, mohair novelties, and encasement yarns are just a few examples of designer yarns that depend on knowledge of how cables work. (For more on novelty yarns, see page 92.)

A cable is a yarn made when two or more plied yarns are spun together in the

direction opposite to the ply twist. Cables can be made from yarn with the prime singles spun either to the left or the right. Many yarns are compound cables, made by adding an unbalancing twist to two or more cabled yarns and spinning them together with a reverse twist (opposite from the way they were cabled). The formula remains the same, but the yarns will behave differently.

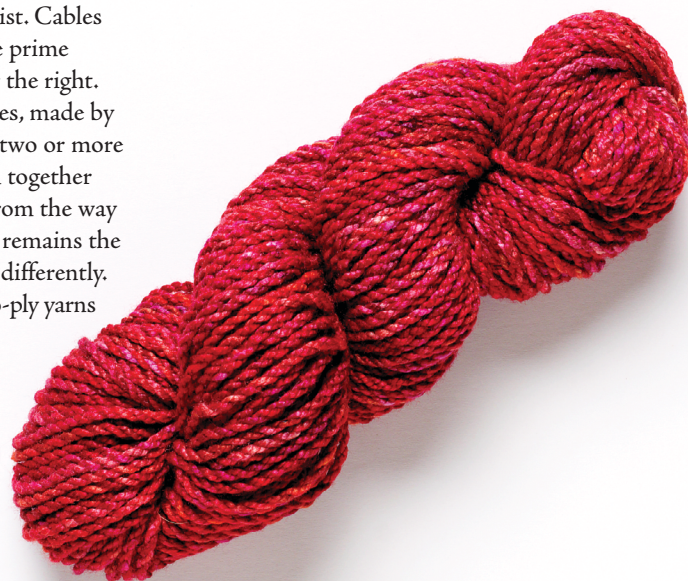
You might think that two two-ply yarns "plied" together make a four-ply because there are four singles in the yarn. But what they make is a four-strand cable, and what it can do makes it as different from a plied yarn as a plied yarn is from a single.

### WHY CABLE?

One of the most important characteristics of a cable is its strength. Just like plied yarns, cables are governed by the principle that a yarn made from many strands of fiber held together by twist energy is stronger than the set of individual fibers without twist. And just as plying increases a yarn's strength exponentially, cabling increases the strength exponentially again. Making a cable also redistributes the twist tension in different directions and in three separate layers, increasing the yarn's tensile strength.

The three layers of twist also mean that even more area of the singles is covered, protecting the fiber from both abrasion and ultraviolet damage. Some cables dramatically increase the elasticity of the yarn, giving any garment made with them more memory, which will help the garment maintain its shape and be more durable.

Cables are extremely stable yarns. The greatest amount of twist is in the middle



step, making cables balance beautifully; if they don't hang in a perfect loop, they probably need to be redone. Because the yarn is so well balanced, a cabled yarn lies still, not distorting fabric when knitted or woven in any direction. One joy of working with cables is that they rarely tangle, and when they do they're easily separated.

This hardworking yarn also has a frivolous side; cables aren't limited to just producing classic knitting and weaving yarns. By changing the weight, texture, and color of the different cable components, you can create an endless variety of yarns for knitting. Direction of twist can be mixed as well; bouclés, for instance, have one single spun to the right and one single spun to the left. When these yarns are plied together, one yarn tightens and one yarn loosens.