Yarns Pt 2: Filament and Novelty/Complex

Filament Yarns

The *Regenerated* and *Synthetic* Fibers Section described the basics of forming filament yarns:

1. "Mix up" a solution or "dope" that is the basic material of the fiber.
2. Push the solution through a spinneret.
3. Solidify the streams of dope as they emerge from the spinneret.

The section on *Silk* described the silkworm as the source of inspiration for spinning manufactured filaments. If the silk cocoon is carefully "unspun" or unraveled The result is a limited length filament (approximately 1000 yards long).

The section on *Nylon* and *Polyester* gave more information on variations in filament cross-sections, diameter, bright to dull variations, denier, etc.

Synthetic filaments can be smooth or textured (adding crimp). There are many methods used to texturize a synthetic filament, most relying on synthetic thermoplastic properties. The section also describes bicomponent yarns that are used to add texture.

Texturized Yarn Example
Source: Gerrit41, CC BY-SA 3.0 <https://creativecommons.org/licenses/by-sa/3.0>, via Wikimedia Commons https://commons.wikimedia.org/wiki/File:Texturized_yar

Novelty/Complex Yarns

Novelty/Complex yarns, sometimes called "Fancy Yarns", are used to add visual interest and texture to fabrics. Some are single yarns, while others are made of several yarns that are held together with various methods—Complex/Novelty Ply yarns.

Complex/Novelty Single Yarn Examples:

- Tweed/Flock/Flake—add fiber color specks to a yarn. Tweed yarns are used for tweed fabrics. The fabric pictured is a "Donegal" tweed made in Donegal, Ireland.

Donegal Tweed Herringbone fabric made with tweed yarns

Source: Toxophilus, CC BY-SA 4.0 <https://creativecommons.org/licenses/by-sa/4.0>, via Wikimedia Commons https://commons.wikimedia.org/wiki/File:Donegal_Tweed.JPG

Sleeve of wool tweed jacket. Photo courtesy of the Goldstein Museum of Design, University of Minnesota.

To see the 1924 sporting suit, jacket & knickers go to the link:

https://goldsteincollection.rediscoverysoftware.com/mDetail.aspx?rID=1993.023.005a-b&db=objects&dir=GOLDSTEIN

- Nub, Slub, or Thick-n-Thin—add an uneven diameter to the yarn using several different methods. A nub yarn is pictured below. Dupioni silk yarns are an example of a natural fiber yarn. *Dupioni silk* is produced when two or more silkworms spin their cocoons with the cocoons touching at random spaces producing a multi-strand fiber with uneven texture. Silk shantung is produced with *dupioni silk*.

Nub Yarns
Source: Ryj, Public domain, via Wikimedia Commons https://commons.wikimedia.org/wiki/File:Knopfgarn_5.jpg

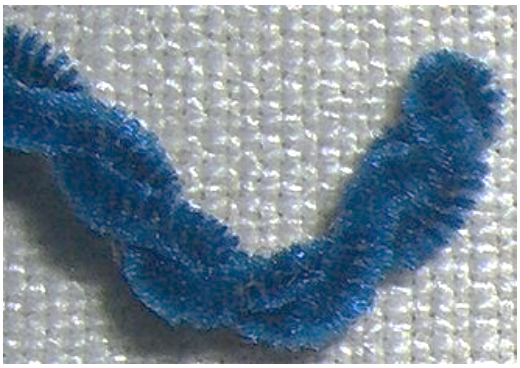
Silk Shantung Fabric
Source: Smriti tripathi, CC BY 3.0 <https://creativecommons.org/licenses/by/3.0>, via Wikimedia Commons https://commons.wikimedia.org/wiki/File:Indian-dupioni-silk-fabrics.JPG

Complex/Novelty Ply Yarns:

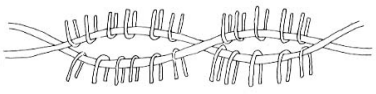
Ratine', Boucle', Knit, Loop, Snarl, Spiral, Corkscrew, Chenille

There are many examples of complex novelty ply yarn. Knit, loop, snarl, spiral, and corkscrew are descriptive. Ratine' yarn and Boucle' yarn make heavily textured fabrics often used for coats. Various colors are used to emphasize the textures. Boucle' fabric is sometimes used for interior textiles—one caution is the tendency to snag the loops on the surface. Chenille yarns look like caterpillars. They are made with an atypical yarn method—two core yarns are twisted around a yarn that is cut to make the pile of the yarn.

Boucle' Fabric
PKM, Public domain, via Wikimedia Commons
https://commons.wikimedia.org/wiki/File:Boucle



Chenille Yarn
Source:Madame, CC BY-SA 3.0 <https://creativecommons.org/licenses/by-sa/3.0>, via Wikimedia Commons
https://commons.wikimedia.org/wiki/File:Chenille_yarn.jpg



The second variable, yarn, contributes to the appearance, performance, and cost of the fabric.