



DESIGN: ITALIAN STYLE

Nancy B. Powell
Associate Professor, College of Textiles
North Carolina State University

ABSTRACT

A Spring 2003 visit to the textile and machinery manufacturers of Italy reveals insights into the aspects of customized textile products for apparel.

A traditional high end menswear supplier of wovens is contrasted with the new seamless knitting technology. The market potential for new interactions with consumers at the retail level is considered.

KEYWORDS: Italy, Fashion, Design, Seamless, Knitting

Imagine spring in the Lake Como area and most designers dream of Prada, Armani, and Gucci catwalk shows. But behind every flash of the Italian fashion world is a rich heritage of art, commerce and technology. Italy has created a brand image for “world class” designer products from automobiles to fine apparel for women’s and menswear.

Although the College of Textiles’ delegation to the Milan area came just after the Milan Summer Collection fashion shows, a virtual tour of the “MADE IN ITALY” Fashion Exhibition at Fashion Institute of Technology in New York was a stimulating reminder of the grand traditions of Italian style. This exhibition was sponsored by the Italian Trade Commission (ITC or ICE)

(For a virtual tour see: <http://www.fitnyc.edu/asp/Content.aspx?menu=FutureGlobal:Museum:ExhibitionsAndSpecialEvents:PastExhibitions>)

The viewer is introduced to the collection through the signature evening dress by Roberta De Camerino from the 1970’s. This

gray, black & white knitted jersey is the epitome of Italian sophistication and style.

Innovative Technology Yield Specialty Products

This reputation for craftsmanship and sophisticated style has been maintained in the contemporary world by the integration of innovative technology and an established system of high quality, specialized suppliers. For the first time, the ITC united with ACIMIT (Italian Association of Textile Machinery Producers) to promote Italian - made machinery to textile manufacturers in the United States. This organization for Italian textile machinery manufacturers is about 350 strong and is located in traditional textile areas of northern and central Italy. As part of this campaign, the ITC in cooperation with ACIMIT invited five professors from the North Carolina State University College of Textiles on a trade mission to Italy. (www.acimit.it), (www.italtrade.com)

J
T
A
T
M



Roberta De Camerino; Fashion Exhibition at FIT, New York, NY

ACIMIT host companies wished to communicate to textile leaders in the US their continued development of advanced equipment which has the flexibility and capability of creating quality fabrics. These communities of manufacturers are accustomed to responding to their customers in the global market with good value, versatility, and reliability.

The creativity of Italian designers has been enhanced and supported by this flexibility and willingness to collaborate on innovative yarns, fabrics and finishes to develop fashion and technical products. In local concentrations of small specialized mills, development of new products is the norm and is not considered an interruption to volume production (Conrad, 1999). Product development associates acquire specialized skills which are kept within the company as most training has been done in house apprenticeships rather than an

organized state or industry wide training program. (Odone, 2001)

Division into small specialized units in the Italian fashion system has given designers the opportunity to develop customized components at every stage of the product development process. An example of this was the visit to **Fratelli Tallia Di Delfino** in the Biella textile valley near Strona.



Mr. Francesco Cecchinato, Area Sales Manager for Sulzer Textil arranged discussions with Mr. Roberto Telandro, Manufacturing Director. A tour of this facility for woven menswear manufacturing was provided.

J
T
A
T
M



Mr. Roberto Telandro, Manufacturing Director shows the typical small run premium product for menswear.

The logo of this hundred year old company is appropriately a crest with a spider weaving a delicate web. (www.tallia-delfino.com) Fratelli controls the full development cycle from top dyeing to the spinning of yarn to weaving and finishing. Almost 30 percent of their current effort is sampling for their own collection and customer exclusive designs. Beginning with a CAD simulation, the company produces one line for the retail tailoring trade and one line for garment companies. Fratelli Tallia Di Delfino creates fabrics in fine worsted and woolen, cotton, and silk. Also the mill develops various weights and blends of inner Mongolian cashmere fabrics. The specific customer name may be integrated into the selvage of the fabric before it is shipped all over the world. Fratelli supports major customers with sales through agents all over the world and particularly in Japan, England and the US. The company has been ISO 9002 certified since 1994.

J
T
A
T
M

compromise on the refinement of an exact shade which contributes to the final resulting subtle combination. Fratelli Tallia di Delfino develops a range of colors through a mélange of top dyed colors, package dyeing of solid colors, or fabric piece dyeing.



Top dyed wool/cashmere roving at Fratelli Tallia Di Delfino.

Sophistication in the color combinations in a fabric is one of the hallmarks of the quality and attention to detail expected of a premium product. Designers are reluctant to

These colors are simulated in constructions on the computer, and then samples are woven in a sectional blanket for review by designers and by the customers. With up to six filling colors in a woven style the complexity of color development and s.k.u.'s is organized through an automated yarn storage system.

Automated warpers, electronic weaving machines, and CAD systems reduce production downtime when changing over to different patterns and colors for short runs. This makes the complexity of running exclusive styles more feasible.



Sectional sample blanket at Fratelli Tallia Di Delfino.

Customized Products: Influence on Fashion

In traditional thinking, a “bespoke” garment from the tailors of Saville Row in London would be considered the ultimate in customized products. Handmade to the gentleman’s specific measurements using the highest quality materials and craftsmanship has been the mark of true “class”.

However, the lifestyle and preferences of the future may demand a different style of customization. The versatility and creativity of designers are being applied to a new vision of fashion. International Textiles’ forecast for menswear styling for 2004 reinforces “society’s current obsession with

the body” showing styling cues that literally imitate the structure and sinews of the human body (“International Textiles”, Feb./March 2003).

Consumers of all ages are looking for streamlined silhouettes with youthful appearance created by garments that fit and flatter the body. The end users want fashion, easy care, ease of movement, comfort, and individualized style. Italian designers like Missoni with his colorful knits have certainly been a strong influence on the fashion market. (Black, 2003). Knitwear in particular has seen styling efforts which emphasize the silhouette with closely fitted garments. Furthermore, the introduction of micro denier yarns has contributed to the almost skin-like hand of the garment. Advanced technology including the use of DuPont’s Lycra yarns and seamless knitting has brought enhancements of products with improved fit characteristics (International Textiles, March 2003).

Innovation in knitted products goes beyond the decorative to the development of high performance fabrics. Engineering for function is critical in special technical textiles such as medical, industrial and other utility products. This technology can integrate variations in construction such as higher compression areas where an athlete or patient might need them. The technology was first applied to underwear or intimate apparel, then sportswear and now outerwear is being developed using this technology

Research must continue to service the changing markets and demand for new products in these areas. Furthermore, advances in “smart textile” technology opens up the possibility in incorporating customized electronics or other functions into the fabric of the garment itself. For example, in 2001, TIME magazine named the SensaTex SmartShirt one of the “Inventions of the Year”. The project was initially funded by the U.S. Navy in October 1996, and was developed by Georgia Tech

J
T
A
T
M

Research Corp. of Atlanta, which has licensed the idea to SensaTex of New York. (www.sensatex.com) Through electrotexiles the SmartShirt allows the comfortable measuring and/or monitoring of individual biometric data, such as heart rate, respiration rate, body temperature, caloric burn, body fat, and UV exposure (www.Chemistry.com).

Niche Market Strategies

As mass markets become fragmented into niches, manufacturers are seeking ways to reduce costs of specialized products. With the advanced technology in electronic machinery, the complexity should be in the transfer of digital information, not in the manufacturing process. (Footwear Business International, March 2003)

The use of body scanning and virtual modeling is already opening the door to personal customization as explored at Levi's Retail Store in San Francisco and at Brooks Brothers in New York City. This exploration of "digital tailoring" combines the traditional style and quality of an established brand with the functionality of new technology.

"The biggest job was to get the algorithms that took the body measurement and turn it into a tailored product," said Joe Dixon, Brooks Brothers executive vice president of manufacturing, sourcing, and alterations. "And we had obviously lots of testing to be done, running lots and lots of people through, having them scanned, making product, and fine-tuning." These customized suits delivered in about 2 weeks were costing approximately \$100 more than an "off the rack" suit. (Rappaport, 2001)

Shaped or fully fashioned knitting can provide a means to be competitive and increase profits through reducing the costs of making up, one of the most important contributions to the final cost of knitted garments. It is also suggested that shaped knitting would reduce yarn waste. The ability to respond quickly to a change in the market or customer requirements is

considered an additional advantage in the fashion world.

An example of a company who is striving to bring a "new culture through a seamless world" is the Lonati Group (www.SANTONI.com). With Lonati's financial investment, the focus of the entire group of companies has evolved over the last 15 years to a market driven enterprise. Every 10 days a member of the Group is showing product at technical shows, international sportswear shows, and various shows such as Salon de Lingerie, ITMA or Prêt a Porter. Furthermore, Santoni shows products in collaboration with their customers and retail partners such as Target, Banana Republic and The Gap. This past year introduced a collection by Emilio Cavallini which showed the styling power of the technology in the hands of a leading designer at Fashion Week in NYC.

Meeting Market Needs

Companies such as Nike, will often send entire teams of development people to train at the Santoni School in Italy. During the visit, there were R&D persons from all over the world exploring the possibilities of knitting of seamless garments. Garment retailers also bring the technology into their own development area for exploration. Santoni understands that without training and education, customers may not maximize the capabilities of the technology. This new integration of marketing and manufacturing will require designers and merchandizing managers to develop and manage their new product offering in a different way (Knitting International, March 2003).

Santoni is creating a culture through fashion shows, designer promotion, a newsletter through the website and merchandising with special graphics, labeling and packaging Santoni marketing sees this attitude as a basic strategy for business success. (Knitting International, July, 2002)

Addressing the market in a demand driven way, new product development is pulled

from the end user at the retailer back through a shortened supply chain. This shortened supply chain may provide the advantage if quicker response to changes in the market with less systems costs.

With the use of the Santoni 3-D “Envision” (the Digraph 3 pattern preparation system plus drawing capabilities) designers can create and simulate construction, texture, garment structure and fit. Products exhibited in the showroom and in the training center reflected the dynamic creativity of the technology in color, jacquard patterning, surface dimensionality, garment fit, and innovative styling. Integrating other technology like a body scanner and performance yarns, engineered customization could be realized bringing manufacturing closer to consumer needs. Every player in the supply chain will be challenged by this new system to collaborate in servicing the end user.



Engineered seamless garment by SANTONI

Concepts by DuPont Textiles & Interiors (DTI)’s fibers and Santoni technology were actualized by the creative efforts of couturier Olivier Lapidus for the design of an Active Sportswear engineered garment which was introduced in January of 2003. This prototype is based on the research of Dr. Petrov Dafniotis, Senior Research Engineer,

at DTI who has created micro-technology to monitor pressure on muscles during exercise (www.lycra-teens.com/Lycra/news/dupont/press_releases_english/03_01_lrv_general.html). This type of performance features should be desirable in the mass swimwear and active wear markets.

Through the Lonati Fashion & Design Institute, Santoni shows its commitment to merge reality with academic training through associations with universities such as Fashion Institute of Technology in NYC and the London College of Fashion.



J
T
A
T
M

Marketing Department’s Valentina Gentilini reflects on the Santoni perspective from the headquarters in Brescia. Economics often force innovation. New product development can be an alternative strategy for a market in crisis. Describing co-marketing strategies, Ms. Gentilini noted the proactive involvement of companies like Nike and Sara Lee who have been major players in the growth of seamless technology.

Santoni sees its strength in specialization – not commodity machines. Promotion of the SM8 single jersey, the SM9 Double Jersey and the SM4 C single jersey for fully

fashioned garments remains their focus. Customization for the customer's use but with built in flexibility often demands the design of a new machine. Santoni works closely with the customers like a Benetton or a small to medium size family owned company.



Santoni's Valentina Gentilini in the Customer Sampling area.

The excitement in knitwear caused by full garment or seamless knitting for both its unique styling opportunities and its direct manufacturing to the consumer capabilities is embraced at Santoni.

The strength of typical small to medium sized Italian companies is the ability to provide tools and systems to react quickly to changes in the market (ACIMIT, 2002). Traditional textile mills such as Fratelli are in contrast to the futuristic style of the consolidation of a company like Lonati. However, each of these companies fulfill their customers specialized needs in different ways.

Retailing Seamless Knits: A New Consumer Experience

The potential for retailers to become centers of fashion and design where consumers can establish a virtual file through body

scanning and create their own personal brand of preferred color, designs and constructions that compliment each body type and lifestyle is a novel, but viable proposal. The total experience of body scan, selection of components, and watching your creation come out of the machine could be an entertaining adventure for the consumer. Seamless garments are already being produced incorporating sheer and opaque areas that can be engineered to enhance body shape, comfort and physiological performance.(Mowbray, Feb. 2002) However, at the retail level, if the garments are not packaged and presented in a highly visible and dynamic manner their attributes will lose their impact. (Knitting International, May 2002). The consumer must realize the value of the customized fit and style for their (or their children's) individual satisfaction with the products. The features of the product must be clearly and quickly understood by the consumer. Many seamless products include instructions on how to put on these garments for the best fit (www.bodywrap.ca). Moreover, the customer's perception of the benefits of the products must be balanced with the customer's willingness to pay an appropriate price.

J
T
A
T
M

Once a personal profile is established, the further opportunities for electronic commerce with assurances of quality and fit could be explored for mass customization. Many of the disadvantages of electronic commerce such as minimal personal customer service, delays in delivery, and the loss of social contact in a shared shopping experience could be overcome in a combination of new customized retail services.

Forward thinking companies foresee the value of collaboration between fiber, yarn, designers, machinery manufacturers and retailers in reaching the consumer with value added features (Gross, 2003). Addressing the market in a demand driven way, new product development is pulled from the end user at the retailer back through a shortened

supply chain. The ability to quickly move from concept to industrialization with no compromise in quality is the goal of mass customization in any product. Raymond R. Burke, of Indiana University, in speaking about the advantages of digital receipts points out:

“If you look around today, we are literally surrounded by technologies that promise to redefine the way that manufacturers and retailers interact with consumers. Electronic commerce is perhaps the most visible, but we also have web-enabled kiosks, electronic shelf labels, body scanning, hand-held shopping assistants, self checkout, and virtual reality displays, among others.”
(www.NCR.com)

Customer relationship management will be critical not only for the retailer, but from the vendor to the consumer. A longer term, repeated contact will be required to establish customer loyalty, especially to targeted niche markets. Moreover, if a consumer is to continue to buy additional products from the retailer in this manner, the brand character and the quality of customer service must be maintained.

Companies Meeting Global Competitive Challenges

These Italian companies are continuing to succeed despite the limitations and risks associated with the current world markets. These companies are using the Italian reputation for style and quality to pull through to market their technically advanced machinery (Davis, 2003). Linking this established recognition of Italian products to the machinery that creates them can be a strategic advantage in the global market

The Italian Trade Mission's Machines Italia's campaign slogan is "Turning Innovation into Productivity". This phrase reflects the strategy for each of the companies visited.

The integration of advanced technology into high end designer and mass market has enabled the Italian fashion system to remain

leaders in the world for design & quality. As the conditions in the world change, the Italian system will need to be flexible in how they continue to serve the global market. These companies are committed to maintaining the "Made in Italy" brand as consistent in quality, innovative and competitive in the minds of the consumer (Bemporad, 2003).

REFERENCES:

- Bemporad, Nino. "Centuries of Creativity", *Knitting International*, February, 2003.
- Black, Sandy, "Style and Substance", *Knitting International*, February 2003, p. 30.
- Burke, Raymond R., "The Digital Receipt: Bringing Together Online and In-store Shopping", www.NCR.com.
- Conrad, Andree, "the industrialization of "couture" in Italy, *Apparel Industry Magazine*, Atlanta; Jan 1999.
- Davis, Haydn, "The Future According to Stoll", Italian Knitwear Special Issue, *Knitting International*, Feb. 2003.
- The FBI focus on mass customization, "Getting designs on the customer", *Footwear Business International*, March 2003.
- Gross, David. "Knitwear Routes to Survival", *Knit Americas*, Spring 2003. p. 57-59.
- "Knitwear Technology Transfer", Italian Knitwear Special, *Knitting International*, Feb. 2003.
- Mowbray, John, "A Quest for Ultimate Knitwear", *Knitting International*, Feb. 2002, p. 22
- Odone, Cristina, Special Issue: The Organizational Texture of Inter-firm Relations, April 2, 2001.
- "Onward to Seamless Outerwear", *Knitting International*, March 2003, p. 44-47.
- Rappaport, Jessica. "Scanning Better Suits", www.techtv.com/news/culture/story/0,2419,5,3363011,00, posted Nov. 30, 2001.
- Seamless Apparel Special, "Mapping the Seamless Future", *Knitting International*, May 2002, p. 36.
- "Seamless for All Seasons", *Knitting International*, July 2002.

J
T
A
T
M

“Stretching the Imagination: Lycra Rendezvous”, *International Textiles*, Feb/March 2003, p. 10.

“Skinned” Menswear Styling, *International Textiles*, Feb. /March 2003.

“2001 Inventions of the Year”,
www.time.com/time/2001/inventions/health/insensor
www.sensatex.com

“Clothing that connects New electrotexiles can transmit signals”,
www.chemistry.org, posted Feb. 7, 2003
www.SANTONI.com
www.tallia-delfino.com

“DuPont Textiles & Interiors launches engineered sportswear garments designed by Olivier Lapidus at LYCRA® Rendez-Vous”,
www.lycra-teens.com/Lycra/news/dupont/press_release_s_english/03_01_lrv_general.html, January 13, 2003

www.bodywrap.ca/collectionmain.html,

“Fitting Room”.

www.acimit.it, Italian Association of Textile Machinery Producers

www.italtrade.com, Italian Trade Commission

J
T
A
T
M