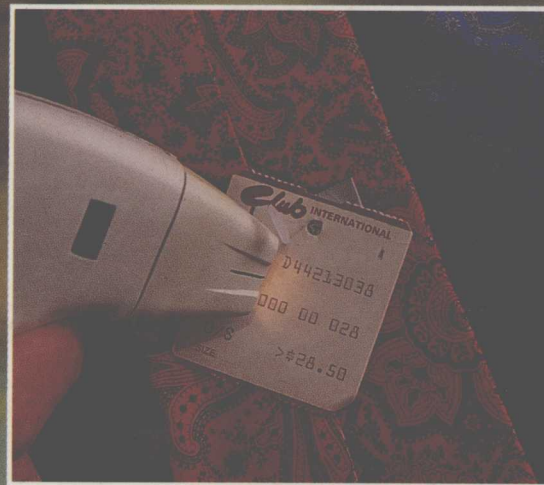


Ready-To-Wear Apparel Analysis



PATTY BROWN

Ready-To-Wear Apparel Analysis

Patty Brown

JOHNSON COUNTY COMMUNITY COLLEGE




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Preface

The purpose of this book is to provide students of textiles and apparel with a method for evaluating the quality of ready-to-wear apparel. The book takes an industry approach, integrating the study of traditional clothing construction with that of apparel production. The resulting body of knowledge and related vocabulary are important tools for anyone pursuing a career in the apparel industry. To make informed business decisions, you must understand how clothing is manufactured and appreciate the features that affect cost and quality.

A familiarity with what constitutes apparel quality and how it is achieved enhances effectiveness on every level:

- Designers, manufacturers, and retail product developers establish standards that maximize quality but balance with cost limitations.
- Suppliers of machinery, materials, and services meet the industry's needs.
- Manufacturers communicate quality expectations to contractors.
- Wholesale representatives educate retail buyers about quality features.
- Retail buyers choose garments that perform well and deliver value to the consumer.
- Advertisers and marketers promote quality features to the target market.
- Retail salespeople communicate quality features to consumers.
- Consumers make better purchase decisions.

In short, anyone can benefit from a knowledge of apparel quality.

Chapter 1 defines apparel quality and establishes a framework for examining how consumers evaluate quality and value. It also examines the quality control efforts of the apparel industry. Chapter 2 overviews the apparel industry and outlines the mass-production process, including the use of new technology. Costing and pricing are also discussed. Chapter 3 summarizes information gained from apparel labels, both required and voluntary. Sizing is discussed in depth.

Chapter 4 reviews the effect of fabric on the performance of the garment. The influence of fibers, yarns, fabric structure, and finishes is presented; readers will benefit from a previous exposure to basic textiles. Chapter 5 introduces the stitch classes and types contained in *U.S. Fed. Std. No. 751a: Stitches, Seams, and Stitchings*. The advantages and disadvantages of each stitch class are examined. Chapter 6 discusses the seam classes and types contained in *U.S. Fed. Std. No. 751a*. It also identifies seam defects and features that ensure seam integrity. Chapter 7 presents edge treatments used to finish raw edges, with emphasis on hems, facings, bindings, bands, and plackets.

Chapter 8 explains how garments are shaped by darts and dart substitutes. It also contains a discussion of underlying fabrics and other devices that lend shape and support to the garment. Chapter 9 examines style variations, with emphasis on waistbands, collars, sleeves, cuffs, and pockets. Chapter 10 presents functional and decorative details, including trims, ornamental stitchings, and pattern matching. Chapter 11 discusses methods of garment closure, including buttons and buttonholes, zippers, and miscellaneous fasteners.

Chapter 12 concentrates on the evaluation of fit and on garment alteration at the point of sale. This chapter also discusses fitting special markets.

Although the evaluation of quality as discussed in this book relies on a visual analysis of garments, Appendix A presents a list of ASTM and AATCC standards for laboratory test methods that may be used in objectively quantifying the evaluation of certain performance features. Appendix B contains schematic diagrams of all the seam and stitching types in *U.S. Fed. Std. No. 751a*. Appendix C outlines the apparel production operations for which each seam and stitching type is used and lists the appropriate stitch types to use.

Throughout the book, the focus is on the aesthetic and functional performance of garments. Each chapter concentrates on identifying the physical features that produce desirable aesthetic and functional performance. At the end of each chapter, a quality checklist, a list of new terms, review questions, and related activities allow you to practice and apply the content of that chapter. The concepts come to life when you apply them to real garments where you work, where you shop, and in your own wardrobe. Related resources are provided at the end of the text to aid in pursuing topics further. While exploring the following pages, I hope you develop a better understanding of apparel production and an increased appreciation of apparel quality that serve you well.

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CHAPTER OBJECTIVES

1. Define apparel quality.
2. Explain how consumers evaluate quality.
3. Explore the relationship between price and quality.
4. Understand the function of a quality department.

1

Apparel Quality: The Concern of Consumers and Industry

CHAPTER OBJECTIVES

1. Define apparel quality.
2. Examine how consumers evaluate quality.
3. Explore the relationship between price and quality.
4. Understand the function of a quality department.

Quality is a key factor in the production, marketing, buying, and selling of ready-to-wear apparel. To pursue a career in the fashion industry, you need a clear understanding of apparel quality. Your success in this industry will depend upon your ability both to recognize degrees of quality and to know how quality standards can be met. Everyone involved in the apparel industry is influenced by the need to achieve an ap-

propriate balance between quality and price. The goal is to provide apparel products that best meet your customers' expectations.

Ready-to-Wear apparel (RTW) is clothing that is mass-produced. Also called *ready-made* or *off the rack*, in its broadest sense this clothing includes any garment that is not custom-made for the wearer. Both RTW buyers and sellers are conscious of **apparel quality**, its degree of ex-

cellence and conformance to requirements, or the extent to which a garment meets expectations.

A quality-conscious apparel company meets the wants and needs of consumers, and its business grows as satisfied customers make repeat purchases. Therefore, everyone benefits from an emphasis on quality. Apparel companies include both **manufacturers**, who produce apparel and sell it to retailers; and **retailers**, who buy apparel from manufacturers and sell it to the consumers who wear it. Apparel quality knowledge equips you to deliver products that meet the wants and needs of your company's *target market*, the group of consumers it aims to serve. Paying attention to quality helps you turn **consumers**, the general buying public, into **customers**, consumers who buy from your company.

No one is *against* quality, though some place it on a priority level below other business concerns. These people argue that paying attention to quality increases the costs of doing business. However, the combination of returns, complaints, ill will, and lost sales caused by lack of quality really cost more in the long run.

Successful businesses offer consumers at least one of three things: *something different*, *something better*, or *something cheaper*. To generate sales, many manufacturers and retailers provide ready-to-wear that reflects the latest fashion trends (something different) or the lowest price (something cheaper), with little concern for other aspects of apparel quality and value. Although color, style, price, and fit initially "sell" a garment by attracting attention, other features determine the consumer's ultimate satisfaction. This phenomenon calls for a focus on the overall quality and value of the garment (something better).

Quality Features

Apparel quality has two dimensions: (1) physical features, or what the garment *is*; and (2) performance features, or what the garment *does* (Solinger 1980). *The physical features of a garment determine its performance* (Figure 1-1). Therefore, consumers purchase garments with specific physical features that they believe will fulfill their performance expectations. For example, a consumer chooses a blouse made of

silk (a physical feature) because silk typically produces desirable performance (e.g., lustrous beauty and comfort).

PHYSICAL FEATURES

A garment's **physical features** provide its tangible form and composition. Physical features include the garment's design, materials, and construction. **Design** provides the plan for the garment's style. For example, is the skirt slim or full? **Materials** include the fabrics and other components used to produce the garment. For instance, are the overalls made of denim or corduroy? **Construction** refers to the methods used to assemble the garment. For example, what types of stitches are used?

A garment's physical features are *intrinsic attributes*; they cannot be altered without changing the garment itself. This text concentrates on intrinsic cues that can be used to evaluate quality.

PERFORMANCE FEATURES

A garment's **performance features** determine the standards it meets and how it benefits the consumer. Performance features include the garment's aesthetic performance and functional performance.

Aesthetic performance refers to *attractiveness*. Do the design, materials, and construction of the garment fulfill appearance expectations? Do the design elements (color, line, shape, form, and texture) of the garment reflect good design principles (balance, proportion, emphasis, rhythm, and unity)? Does the garment possess classic or current fashion trends desired by consumers? And does the garment meet the consumer's personal preferences regarding appearance? These questions are important to ask when evaluating ready-to-wear because design impacts the visual appeal of clothing and therefore consumer acceptance of it. However, a thorough discussion on evaluating design aesthetics is outside the focus of this text (see Related Resources: Design and Style).

Functional performance includes performance features other than appearance, namely the garment's utility and durability. *Utility* refers to usefulness. For example, does the garment fit? Is it comfortable? Is it easy to care for? Does it function appropriately for the intended use? *Durability* or *serviceability* refers to how well the garment retains its structure and ap-

PHYSICAL FEATURES

PERFORMANCE FEATURES

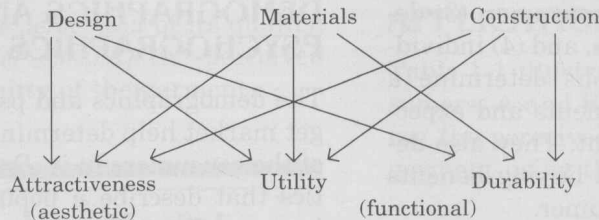


Figure 1-1 The physical features of a garment determine its performance.

pearance after wear and care. Does it resist shrinking? Do the seams remain intact? Does the zipper continue to zip?

Aesthetic and functional performance occasionally overlap. For example, fit may be an aesthetic feature (attractive fit versus unattractive fit) or a functional feature (comfortable fit versus uncomfortable fit).

SELLING POINTS AND BUYING BENEFITS

Emphasizing a garment's quality by enumerating its benefits to the consumer is a valuable sales and marketing technique. Today's increasingly well-educated shoppers appreciate information about the quality of the apparel products they buy, preferring to make purchase decisions based on facts.

Selling points are the physical features of a garment that make it desirable. However, effectively promoting a garment involves more than merely citing a list of selling points. Ideally, you interpret those selling points to the consumer in terms of buying benefits. **Buying benefits** are the performance advantages that result from the garment's physical features. They explain how each feature fulfills the consumer's wants and needs. For example, the statement, "This shirt is 100% cotton," is a selling point, but not nearly as meaningful to consumers as the statement of an associated buying benefit, for example, "Because this shirt is 100% cotton, it is cool and comfortable." The more technical the selling point, the more important to translate it into buying benefits for the consumer.

Knowing the selling points of the merchandise and understanding the buying benefits the consumer is seeking enhance business success on every level, from personal selling to marketing and manufacturing. Lands' End catalogs use this technique effectively. Note the use of selling points and the associated buying benefits to promote the quality of a man's tie in Figure 1-2. And be alert to selling points and buying benefits as you read this text.

Variations in Quality Perceptions

Consumers use a variety of criteria to evaluate quality (see Related Resources: Variations in Consumer Quality Perceptions). The unique combination of performance factors used by a particular consumer depends on a number of conditions: (1) the intended use of the garment,

At Lands' End, the back of a tie is every bit as important as the front.

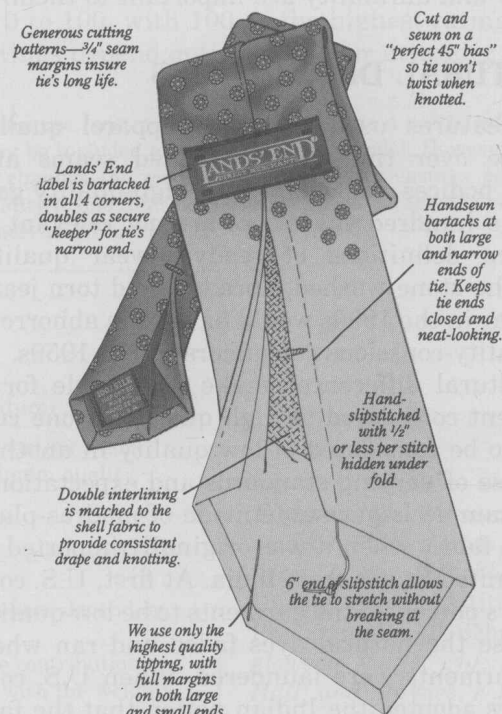


Figure 1-2 Use of selling points and buying benefits to promote the quality of a man's tie. (Reprinted courtesy of Lands' End Catalog. © Lands' End, Inc.)

(2) cultural influences on the consumer, (3) demographics and psychographics, and (4) individual standards. These conditions determine a particular consumer's requirements and expectations for a particular garment. They also determine the selling points and buying benefits that are important to the consumer.

END USE

The **end use**, or intended use, of a garment affects how the consumer assesses quality. For example, a high-quality wedding gown possesses aesthetic characteristics—it is beautiful and flattering to the wearer. A functional characteristic, such as ease of care, has little or no importance to a bride who wears the dress only one time. On the other hand, ease of care is a major quality indicator for children's play clothing and is important to most parents. In another example, young teenage consumers typically want the latest fashion (an aesthetic characteristic). Durability (a functional characteristic) is relatively unimportant to them because fashion will probably make their wardrobe obsolete before it physically wears out. In contrast, adults tend to be interested in *investment dressing*, the purchase of classic apparel such as coats and suits that can be worn several seasons; thus, utility and durability are important to them.

CULTURAL DIFFERENCES

The features used to define apparel quality change over time. Hand-stitched seams and boned bodices, important in a high-quality garment a hundred years ago, are not relevant to modern definitions of ready-to-wear quality. And the stone washed, abraded, and torn jeans popular in the 1990s would have been abhorrent to quality-conscious consumers in the 1950s.

Cultural differences make it possible for a garment considered of high quality in one culture to be considered of low quality in another because of varying standards and expectations. An example is garments made of madras-plaid cotton fabric when it was originally imported to the United States from India. At first, U.S. consumers perceived the garments to be low quality because the natural dyes faded and ran when the garments were laundered. When U.S. consumers adopted the Indian notion that the fading of madras is a desirable part of its natural beauty and character, madras-plaid garments were perceived to be of high quality.

DEMOGRAPHICS AND PSYCHOGRAPHICS

The demographics and psychographics of a target market help determine the wants and needs of the consumers in it. *Demographics* are statistics that describe a population, including age, income, education, occupation, and other factors that affect a consumer's product preferences. For example, statistics on the aging of the U.S. population led Levi's to develop their popular Dockers brand pants for men. The loose fit of Dockers is more comfortable and more flattering to the expanding waistline of a person approaching middle age than are tight pants. Another demographic influence on the apparel industry is the increase in families having few children but earning high incomes. This creates a demand for luxury children's clothing, such as leather jackets instead of cloth coats for toddlers.

Demographics are most useful when considered along with psychographics. *Psychographics* characterize people according to their lifestyle values—interests, attitudes, and opinions. Understanding these things about consumers helps predict what they expect and desire of a garment because their values influence their clothing behavior. For example, a consumer interested in aesthetics considers features such as color and design as most important in judging quality. Another consumer assessing the same garment, but with the attitude that clothing should be comfortable, makes a quality judgment based on features such as the roominess or weight of the garment.

INDIVIDUAL STANDARDS

Individual standards affect the perception of quality. Consumers with high standards are dissatisfied when a garment does not meet their expectations; others with lower expectations might be relatively pleased and satisfied with the performance of the same garment. For example, if one consumer expects to wear a pair of shorts four years, but they last three, the consumer is dissatisfied. But if another consumer expects to wear the shorts only two years, and they last three, the consumer is satisfied.

Many consumers lack the ability to objectively evaluate quality. Although everyone has experience in wearing clothing, the average consumer is not trained to evaluate it. However, consumers do not necessarily base their quality judgment on the *inherent* quality of a garment,

but instead upon their *perception* of its quality. Thus, *in the consumer's mind*, the perceived quality *is* the real quality of the garment.

Perceived Quality Model

A consumer's main question when making a purchase decision is, "How will the garment perform for me when I wear it?" Before shopping for clothing, consumers establish the aesthetic and functional performance standards they think the garment should meet. While shopping, they compare possible purchases to these standards. However, because these processes usually happen informally and subconsciously, many consumers are unaware of *how* they decide what to buy.

Figure 1-3 features the **perceived quality model**, which illustrates the process consumers use to evaluate the overall quality of a garment. The perceived quality model quantifies a consumer's evaluation of the *desirability*, or overall quality, of a garment. Although the actual process is not formal and conscious, the model shows how consumers form perceptions about apparel quality.

The model demonstrates that no two purchase decisions are made in exactly the same way. It contrasts how different consumers evaluate the same garment, and how the same consumer evaluates two different garments or types of garments. You may find the model useful in examining your own purchase motivations and those of others.

APPLICATION OF THE MODEL

Table 1-1 illustrates how two hypothetical consumers, A and B, evaluate the same T-shirt using the perceived quality model. To evaluate a garment using the model, follow these steps:

1. *Select* the features that affect the quality of the garment you are evaluating. Consumers consider different things to assess quality, so the features vary from person to person and depend on the type of garment being evaluated. Any number and combination of factors may be used. Note in Table 1-1 that Consumer A considers more features than does Consumer B when evaluating a T-shirt.*

2. *Weight* each performance feature to reflect its *importance* in determining quality. The weights represent the percentage of the feature's influence on your quality evaluation. Adding the weights should total 100 percent, illustrating that, together, the features account for the overall quality evaluation of the garment. Different consumers value some things more than others, so the weights vary from person to person and with the type of garment. Note the different weights assigned to various performance features by Consumer A and Consumer B.

3. *Rate* how well the garment meets expectations for each performance feature on a scale of 0 to 100, with 100 as the highest rating. The ratings depend entirely on your attitudes about

* Because most consumers use price as a cue to quality, it may be included as a feature in the model. However, doing so changes the model from one that measures perceived quality to one that measures perceived value (see discussion concerning Figure 1-5).

$$Q = \sum_{f=1}^n w_f r_f$$

Overall quality score =
Sum of (weight of each feature × rating of each feature)

Q = overall quality score; a number ranging from 0 to 100 representing a consumer's evaluation of a garment's quality, with 100 as maximum quality and 0 as absence of quality

Σ = sum

n = number of features used in the evaluation; varies depending on consumer and garment

f = feature used in evaluating a garment's quality; the features used depend on the consumer and the garment

w = weight; a percentage ranging from 0 to 100 representing the contribution or importance of the feature to the overall quality evaluation, with the weights of all features totaling 100%

r = rating; a number ranging from 0 to 100 representing how well the garment performs on that feature, with 100 as maximum performance and 0 as absence of performance

Figure 1-3 Perceived quality model. (Adapted from models in Ajzen, I., and J. Fishbein, 1980, *Understanding Attitudes and Predicting Social Behavior* Englewood Cliffs, NJ: Prentice-Hall; and Maynes, E.S. (1976), *Decision-Making for Consumers: An Introduction to Consumer Economics*, New York: Macmillan.

TABLE 1-1

Comparison of two consumers' evaluations of a T-shirt using the perceived quality model

Consumer A's Perceived Quality Evaluation:					
Feature	Weight (Importance)		Rating		Contribution to Quality
Brand name	10%	×	70	=	7
Color	10%	×	60	=	6
Comfort	5%	×	20	=	1
Country of origin	5%	×	70	=	3.5
Durability	2.5%	×	10	=	.25
Ease of care	2.5%	×	10	=	.25
Fabric	5%	×	40	=	2
Fit	10%	×	60	=	6
General appearance	30%	×	60	=	18
Shrinkage	5%	×	60	=	3
Style/fashion	15%	×	80	=	12
TOTAL	100%				59
					OVERALL QUALITY SCORE
Consumer B's Perceived Quality Evaluation:					
Feature	Weight (Importance)		Rating		Contribution to Quality
Color	50%	×	70	=	35
Fit	10%	×	90	=	9
General appearance	15%	×	60	=	9
Style/fashion	25%	×	80	=	20
TOTAL	100%				73
					OVERALL QUALITY SCORE

the garment's performance. Thus, ratings vary from person to person. Note the different ratings assigned to the T-shirt by Consumer A and Consumer B.

4. *Multiply* the weight, or importance, of each feature by its rating to determine the contribution of the feature to the quality evaluation.

5. *Add* the contribution of all the features to calculate the *overall quality score* for the garment. There is no "minimum" quality score, above which all consumers think a garment is high quality and below which all consumers agree that a garment is low quality. The overall quality score that constitutes an acceptable level depends upon the individual consumer. However, if we establish an overall quality score of 70 as average, Consumer A finds the T-shirt unacceptable (overall quality score 59) and Consumer B finds it acceptable (overall quality score 73). A consumer who likes the T-shirt very much would have an even higher quality score for it.

DETERMINANT ATTRIBUTES

A consumer's overall satisfaction with the quality of a garment may be measured: (1) at the point of sale, (2) later, when the garment is in use, or (3) when the garment is discarded. The features that have the greatest effect on the consumer's satisfaction at any of these times are called *determinant attributes*. At the point of sale, the aesthetic features of the garment are typically determinant. However, if functional features are unsatisfactory when the garment is worn, they eventually replace aesthetics as determinants of the consumer's satisfaction (or more accurately, at that point, dissatisfaction). The following sections illustrate the differences in quality perception at the point of sale and when the garment is in use. The examples of the perceived quality model, for the sake of brevity, include only the broad categories of "aesthetic performance" and "functional perfor-

mance.” These features represent the multiple aesthetic and functional features that a real consumer would evaluate separately.

Point of Sale. Consumers easily judge a garment’s aesthetic performance at the point of sale just by looking at it. The attractiveness of a garment affects consumers emotionally and psychologically; a consumer is unlikely to purchase a garment that does not meet his or her aesthetic standards. Aesthetic features of a garment, such as color, style, and fit, initially attract or repel consumers. *In fact, color, style, and fit, all aesthetic features, are three of the four* most common determinants of consumers’ clothing purchase decision* (Galbraith 1981). Yet evaluation of these dimensions is subjective; beauty cannot be quantified. Aesthetic judgments are largely influenced by personal tastes and current fashions. Also, the wearer’s height, weight, figure type, and coloring interact with the appearance of the garment, making it more eye-pleasing or less so.

Consumers cannot accurately evaluate a garment’s functional performance at the point of sale. They may estimate some aspects of functional performance, such as comfort or freedom of movement, by trying on the garment. Or they may try to predict functional performance, based on the design, materials, or construction of the garment. However, most aspects of functional performance are *latent*, or hidden until the consumer wears and cares for the garment. Galbraith (1981) determined that most consumer dissatisfaction with apparel results from problems involving size/fit, seams that pucker and burst, buttons that fall off, improper choice and application of interfacings, uncomfortable

* Price is the other determinant factor in purchase decision making (see pages 9–12).

and inaccurate care labels, fabric shrinkage, color change, pilling, snagging, edge wear, holes in pockets, and stain/soil retention. Consumers can see and accurately predict few, if any, of these functional defects at the point of sale. They buy a garment *assuming* that it will function adequately in use, without really knowing whether it will or not. Therefore, because functional performance is largely unknown at the point of sale, it does not greatly influence most consumers’ purchase decisions.

In the example in Table 1-2, the hypothetical consumer bases most of his decision about suit quality on aesthetics, assigning it a weight of 70%. He bases the remaining 30 percent of the quality judgment on functional performance. The consumer rates aesthetics low (10) for a hypothetical gray suit and high (90) for a hypothetical blue suit. Because aesthetics is visually determined at the point of sale, he rates the suits so differently because of differences in their appearances. However, the consumer cannot visually determine the functional performance of the two suits at the point of sale, so he assumes both will function adequately and gives each suit a rating of 70.

When the ratings are totaled, the blue suit achieves a higher overall quality score at the point of sale than does the gray suit. If we establish a score of 70 as average, or acceptable, we conclude that the consumer views the gray suit as being of “low quality” and the blue suit as being of “high quality.” As in most cases, *aesthetic features determine the apparel purchase decision*. In some cases, functional performance rather than aesthetics is determinant at the point of sale. For instance, a serious runner is more concerned about comfortable exercise clothes than attractive ones. However, in most cases, aesthetics is usually predominate.

TABLE 1-2

Point-of-sale quality of two suits, as evaluated by a hypothetical consumer

Feature	Weight	Gray Suit Point-of-Sale Rating	Blue Suit Point-of-Sale Rating
Aesthetics	70%	$\times 10 = 7$	$\times 90 = 63$
Function	30%	$\times 70 = 21$	$\times 70 = 21$
	100%	28	84
		OVERALL POINT-OF-SALE QUALITY SCORE	OVERALL POINT-OF-SALE QUALITY SCORE