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Sandra S. Hutton
In recent years, we have become aware of the increasing importance that people place on knowing about their heritage—where they come from and who they are. According to the dictionary, the word heritage means "that which comes or belongs to one by reason of birth." To make an analogy, I am using the word heritage as that which comes or belongs to us by reason of our profession. It has been said that to know where you are going, you have to know from where you came.

Since ACPTC is taking the final steps toward reorganization, it seemed an appropriate time to look at our professional heritage. In particular, those events and activities that occurred in the Central Region organization. This heritage has been fostered and developed through leadership and professionalism. Leadership which planned for and accepted change, yet at the same time continued to develop those areas of the field which have been its strength. Thus, an underlying goal has been one of professionalism—a profession which is recognized both within the outside of our field of study.

Certainly the history of the Central Region organization is an integral part of the national association. Both the late Ruth Hovermale (1968) and Marjory Joseph (1982) wrote the history of the national organizations. As we move to reorganization as a national association, it seemed that a history of the Central Region organization should be compiled. As Historian for the Central Region, I felt that it was an appropriate undertaking. To approach this challenge, I used the Proceedings which have been printed for each of the 38 Central Region meetings, the program for this 39th meeting, and the Proceedings for six of the nine national meetings to write a paper regarding the history of Central Region (Dickey, 1988). The Proceedings not only provided a factual record of the Conferences held over the years, but also revealed the efforts of dedicated groups of professionals. Selected ideas from the history are presented here.

Leadership has been a key ingredient for the development and growth of this organization. As indicated in the history of the national organization, home economics administrators in the Land Grant College Association approved the idea for a Conference, and Beulah Coon of the U.S. Office of Education served as advisor at the meetings for many years. In the Central Region, a Planning Committee of six college teachers of textiles and clothing were appointed, and, in May 1944, the first conference of College Teachers of Textiles and Clothing—Central Region was held in Chicago. Invitations had been sent to those institutions with 125 or more home economics majors: 36 institutions in 19 states. The first conference was attended by 34 participants from 22 institutions in 14 states.

The Planning Committee for this first Conference met prior to the meeting and identified five major problems for discussion. In brief, they related to 1) what textiles and clothing has to offer students in a college curriculum, 2) the vocations students would be prepared to enter, 3) the preparation and experience college teachers needed, 4) the improvement of instruction, and 5) the kinds of leaders needed in the field of textiles and clothing, and how to get them. Three further problems were identified at that first meeting: the need for evaluation of teaching, the relation of textiles and clothing to the physical well-being of individuals of all ages, and, research. The Proceedings provide quite a detailed record of the Working Committees and the discussions which followed the reports.

I note these points from the first meeting as a basis for one part of our heritage—that of leadership. Over the years, the Conference participants have worked to improve the field of textiles and clothing, and have struggled.
to anticipate future conditions and demands to maintain effective and viable programs in the academic community. These professionals were concerned that their students be well educated and able to perform effectively in various professions. They were also concerned with the improvement of their own professional competence. Through the years, there has been a recognition of the importance of both continuity and change to move forward and strengthen the organization.

Through the leadership in our Central Region organization, there has been a commitment to striving for excellence. Three of the areas are:
1) teaching and curriculum development,
2) professional preparation of faculty, and
3) research.

Striving for excellence in teaching and in curriculum development has been approached in a variety of ways. At the first Conference in 1944, the topic of Evaluation of Teaching was identified as important; for the next five Conferences, some aspect of Evaluation was worked on and discussed. The Proceedings even included the instruments which were developed, used, and refined.

The teaching of undergraduate programs was the major focus of the meetings in the 1940s and 50s. Many questions were posed regarding the improvement of teaching and curriculum. For instance, the question was raised as to whether clothing construction should be included in university level courses; much debate and justification were evident in the Proceedings for 1949, 1952, 1953, 1955, 1957, 1959 and 1960.

In the 1960s, “improvement in teaching” continued to be an important topic, but the focus was on ways to meet the academic needs of the increasing number of students, to teaching large classes effectively, and identification of pertinent subject matter around which the curriculum is built. Regional workshops were held to identify concepts and develop generalizations for various subject matter areas in textiles and clothing.

In the 1970s and 80s, there has been continued interest in striving for excellence in teaching and curriculum development. Technological developments are evident in the computer programs which have been developed in the areas of fashion merchandising and design. Other evidences of growth and development are the special interest groups, the workshops, and since 1982, the use of peer review for the exhibits of educational resources.

From the first Conference in 1944, curriculum concerns included the professional opportunities for textiles and clothing students. One of the areas receiving attention was retailing; several universities had retailing programs in textiles and clothing at that time. Discussion at the early Conferences focused on what courses should be included, the place of internships or field work in the program, and how to communicate with the business community.

By the end of the 1960s, change had occurred in the scope of the subject matter from the areas noted in the 1944 Conference Proceedings. Change had also occurred in the approaches and techniques used in teaching. On the other hand, continuities existed—such as the interest in improving teaching, in strengthening the curriculum, and in preparing students for retailing and other professional opportunities.

A second commitment to striving for excellence has been in the concern for the professional preparation of faculty. In 1949, Dean Dye, Michigan State College, challenged the Conference members to be forward thinking regarding graduate study and research; she was concerned that more thought be given to graduate study and its quality, and to research. By 1951, the Working Committees were focusing on the direction of programs in textiles and clothing for the next 10 years, one of which was graduate education. Surveys were developed and administered to obtain needed information; results appear in the Proceedings. The need for faculty with the doctoral degree was apparent. I believe that our professional organization has played a part in the professional development of textiles and clothing faculty. The leadership in the Central Region, the content of Conference programs, and the increasing opportunities for young professionals to participate on the programs have served to encourage professional development.

A third commitment in striving for excellence has been in research. Research has been part of our professional heritage as indicated in the early Conferences. In the 1945 Proceedings are discussions regarding types of research in textiles and clothing, obstacles to research, and what can be done to expand research to all phases of textiles and clothing. Summer workshops in 1946 and 1949 on textile research, sociological aspects of clothing, and on evaluation were reported at the Conferences.

Recognition of the importance of research went beyond the discussion stage of earlier Conferences. At the 1956, 1957, and the 1961 meetings, Research Symposia were held in which members reported the results of their research or about research being conducted at their institutions. During the 1960s, an increasing number of Central Region members presented their research
as faculty members of their doctoral research, or, shared their research expertise with the group. Areas of study and investigation in textiles and clothing increased in breadth and depth during the 1960s and opened up new horizons for further research. While research presentations on the programs increased, it was not until 1976, just 12 years ago, that juried research reporting sessions were included on the program; 23 researchers participated. By the 1987 Conference, there were 33 Juried Research Reports, 14 Juried Research Posters, and 2 Dissertation Fellowship Presentations—all of these in addition to the other program presentations.

Another indication of the professional growth of the Central Region organization was the initiation of an annual Fellowship competition for doctoral students. The first award was in 1980-81, and has continued each year. The Fellowship Award has its roots in the early 1950s with the concern for quality doctoral programs; then in 1962, a savings account was opened with $1,000 to build a fund for a significant professional purpose; the Fellowship award resulted as the fund increased in size.

Recognition must also be given to aesthetics, an important component in the field of textiles and clothing. Recognition of the creative/artistic abilities of those in the field of clothing and textiles was initiated in 1982 with the first Juried Fiber Art Exhibit at a Central Region Conference. Thus, another dimension of this field of study has received recognition.

One cannot speak of research without recognizing the publication of a research journal—one measure of a professional organization. This step was taken by the national organization, ACPTC, in 1982 with the publication of the first volume of the Clothing and Textiles Research Journal. However, in the 1970 Proceedings a request from the Central Region Planning Council is recorded that the representative on the National Steering Committee recommend that the national organization consider a publication at the national level. It took the leadership and commitment of an Eastern Region member to get the idea underway.

Only a few of the many areas of leadership in the Central Region have been included here as an indication of our rich professional heritage. If we think of the past as but a beginning, then we should be aware of our professional heritage as we move forward to the new challenges of reorganization. Each step of the way by the many dedicated members of CTTC-CR/ACPTC-CR has led to the building of a strong and vital professional organization.

The late humorist, Will Rogers, said that even if you are on the right track you will get run over if you just sit there. From my review of the Proceedings for the Central Region professional organization, and from my association with it since 1956—my conclusion is that the members and their leaders are on the right track, and certainly they are not just sitting there. Dynamic leadership from the Central Region is our heritage.


Proceedings of Central Region Conferences of College Teachers of Textiles and Clothing from 1944 to 1970.

Offshore production, a process in which goods are manufactured in one country for sale in another, has gained increased momentum in recent years. Stiff price competition in the international market has fueled the spread of offshore production as manufacturers search for lower production cost options. In the United States, many manufacturers have seized the opportunity to become more competitive by pursuing production in lower-labor-cost countries through various offshore programs. Because offshore production is best suited for labor-intensive, low-technology assembly processes, apparel has been one of the primary products produced offshore. Consequently, the past decade has resulted in a boom in offshore apparel production.

Offshore production is facilitated through various types of programs; however, those most used by the apparel industry include offshore contracting, direct foreign investment, and Item 807 of the U.S. Tariff Schedule (807). Offshore contracting involves a primary firm commissioning a company to manufacture its product in another country. The company given the contract may be either domestic or foreign-owned. The primary company may also manufacture the goods or may only be involved in the marketing and distribution aspects. Direct foreign investment involves buying a plant in a foreign country for the production of goods to be exported to the home country or another foreign country. Item 807 of the U.S. Tariff Schedule is a provision within the U.S. trade laws which allows American-made components to be assembled abroad and then imported back into the United States as a finished or semi-finished product. Under this program, import taxes are paid only on the value added to the product in the host country as opposed to the total value of the product. The 807 program can be used in conjunction with contracting or direct foreign investment and the actual manufacturing plant may be either domestic or foreign-owned.

The programs listed above not only provide a less costly production option for developed countries, but more importantly, they provide jobs and facilitate technology transfers in less developed countries (LDCs). In the past, most of the U.S. offshore activity has been focused on the LDCs in the Far East. However, more recently, increased interest has shifted to offshore production in countries in the Caribbean region. In fact, several of these countries are quickly becoming major contenders with the Far East for the U.S. apparel market. The major benefits of the Caribbean region include relatively low labor costs and proximity to the U.S. market. On the other hand, the Far East represents a much farther distance and faces rising labor costs. However, the Far East has the advantage of experience, whereas industrialization is still fairly new, but quickly advancing in the Caribbean region.

Costa Rica, a country slightly smaller than West Virginia, represents a unique and amazing example of the growth and development that has occurred in the Caribbean region in the past few years. Although set in a region of civil unrest, political stability and careful planning have provided a positive climate for industrial development. Placing emphasis on the country’s infrastructure, the government has developed transportation and communication systems and energy sources necessary for industrialization. In addition, much emphasis has been placed on the quality of life in Costa Rica, which boasts the highest standard of living in the Caribbean. Costa Rican health facilities are ranked among the top in the world and the emphasis on education has resulted in a 93 percent literacy rate. These qualities are among the most important in providing an attractive investment climate. Although Costa Rica cannot claim the lowest labor costs, the productivity and quality of work balance out the slightly higher cost.

Although apparel production is not the only manufacturing industry in Costa Rica, it is among the largest in job creation and export volume. The United States is by far Costa Rica’s largest export mar-
ket. Since 1978, the value of apparel exports to the United States has grown from $27.9 million to $177.5 million in 1987. In 1987, 807 shipments accounted for $137 million of the total shipments (United States Department of Commerce, 1988). In distribution of U.S. apparel imports from the Caribbean region, Costa Rica is ranked the fourth largest supplier after the Dominican Republic, Haiti, and Jamaica (Costa Rican Coalition of Development Initiatives [CINDE], 1988). Foreign investment analysis shows that of the $21.05 million invested in Costa Rica, 83 percent was invested in textiles in 1986. In 1987, the proportion of textile investments fell to 56 percent of a total $31.4 million (CINDE, 1988). This lower proportion resulted from increased investment in electronics and agriculture and the addition of pharmaceuticals and sporting goods. While the apparel industry has been the most logical and popular choice in the past, increased interest in higher technology, higher value-added production has developed. This movement toward higher technology is a positive indication of the development of Costa Rica and of its increasing self-sufficiency.

International organizations and various trade policies both foster and regulate economic growth in LDCs, such as Costa Rica. Through international organizations such as the World Bank and the Agency for International Development (AID), loans are provided so that countries may work toward increased economic development and social benefits. Costa Rican and internationally-sponsored investment promotion offices foster these efforts as well. Recent membership in the General Agreement on Tariffs and Trade (GATT) provides Costa Rica an opportunity to participate more fully in world trade. By the same token, however, the Multi-fiber Arrangement (MFA) — under the auspices of GATT — imposes regulations on textile shipment that are perceived to cause "market disruption" in importing countries.

Offshore production in countries such as Costa Rica represents both advantages and disadvantages for many of the participating players. While many would agree that offshore programs benefit U.S. consumers and many U.S. companies, others would argue that this program promotes the loss of U.S. jobs. However, in light of the growing import levels in the U.S. apparel market, many domestic firms find it difficult to maintain apparel assembly jobs. Offshore production retains at least some production and marketing jobs in the United States. Another factor inherent to offshore production and importing is that exportation to the United States is subject to quantitative limitations. In Costa Rica, certain types of shirts have already been subject to quota (quantitative) restrictions, and men's trousers barely escaped having quotas imposed recently.

These quantitative restrictions pose a viable concern for all those involved in offshore production. Another factor that must be acknowledged is that investment in foreign countries is not limited to American companies. Already, a significant number of Asian investors are producing in Costa Rica for export to the United States. U.S. firms have been surprised to discover that the advantages gained are negated in a sense when foreign competitors are also manufacturing in countries such as Costa Rica.

In summary, the expansion in offshore apparel production in Costa Rica illustrates present growth in this sector in the Caribbean. At the same time, Costa Rica's political stability and advanced infrastructure make the country an attractive site for offshore production. Costa Rica's unique political and economic climate is expected to continue to attract increased production there.

References


Personal visits of authors with industry and government leaders in Costa Rica (1988, March).

Clothing comfort is an extremely complex phenomenon. It has been defined as a state of satisfaction indicating physiological, psychological and physical balance among the person, his/her clothing and his/her environment (Branson & Sweeney, 1987). The topic has attracted researchers from a variety of disciplines and, as a result, several approaches exist for assessing clothing comfort and/or the variables contributing to it. While both objective and subjective assessments are critical in the evaluation of clothing comfort, less attention has been focused on the methods of assessing the subjective components.

The overall purpose of this study was to explore the feasibility of using psychological methods in the subjective assessment of one component of clothing comfort, that of moisture sensation. Psychophysics, the scientific study of the relation between stimuli in the physical domain and sensations in the psychological domain, provided the theoretical framework. While psychophysics has been the theoretical foundation for research in the sensory realm (olfactory, auditory, visual, taste, tactual), only recently has it been extended to research in textiles (Elder, Fisher, Hutchison, and Beattie, 1985). In contrast to psychological scaling (the usual method employed in the subjective assessment of clothing comfort factors), psychophysical scaling involves the measurement of a single sensation in relation to its initiating physical stimulus.

One of the objectives of this investigation was to use the method of magnitude estimation to assess the relationship between moisture stimuli and moisture sensation in subjects for one body location using one fabric type. Magnitude estimation is a method of direct psychophysical scaling whereby subjects make numerical estimates of the sensory magnitudes produced by various moisture stimulus intensities.

Testing took place in a climate controlled chamber where conditions were maintained for a thermally comfortable environment for subjects lightly clothed and at rest. Thirteen college females, aged 19-23, participated. 2" x 2" fabric swatches of a 50/50 cotton and polyester blend in a plain knit fabric structure served as the stimuli. The upper back area (right and left scapular regions) was chosen as the site to be tested because it is one area of the body in which most clothing has high contact with the skin, regardless of garment design. The following amounts of moisture (in ml) were added to the fabric stimuli: .04, .06, .08, .10, .12, .14, .16. Five replications of this range of moisture stimuli, with stimuli randomized within each replication, were presented to each subject.

Findings revealed that subjects were able to discriminate between the moisture stimuli by using numbers to match the intensity of moisture sensation on their backs. The level of agreement between the subjects on the rankings of the magnitude estimates was found to be moderately high. The power function relating sensation magnitude and stimulus intensity as proposed by Stevens (1975) was found to apply to the relationship between moisture and moisture sensation. These findings suggest that a psychophysical approach to the subjective assessment of moisture sensation is feasible. It is recommended that other clothing comfort sensations be investigated using psychophysical methods.


The comfort of clothing depends upon thermal and tactile sensations, both of which are affected by fit. This presentation focuses on methods for evaluating the thermal comfort of clothing.

The average temperature of the human body depends on the balance between the heat produced by the body and heat transferred to the environment. Heat can be lost from the body due to the evaporation of sweat from the skin surface or from the dry modes of conduction, convection, and radiation. Factors that affect the heat exchange between the body and the environment include air temperature, mean radiant temperature, air velocity, relative humidity, clothing resistance to dry and evaporative heat transfer, the activity level (i.e., metabolic heat production) of the person, and the time of exposure.

The protocol for evaluating the thermal comfort of people involves several steps: 1) measuring the thermal properties of fabrics with a hot plate; 2) measuring the thermal properties of clothing systems using a manikin; 3) measuring the physiological and subjective responses of human subjects wearing the clothing under specific environmental conditions in the laboratory; and 4) measuring the responses of people wearing the clothing in the field.

Information on fabric properties can be obtained from the manufacturer, from research reported in the literature, and from laboratory testing using ASTM, AATCC, and ISO standards. The thermal insulation provided by fabrics is measured according to ASTM D 1109 with a guarded hot plate apparatus in a climatic chamber. Sweating hot plates can also be used to measure the resistance to evaporative heat transfer for fabrics. Fabric thickness is the best estimator of fabric insulation. It is measured under light pressure according to ASTM D 1777 or without pressure using a pendulum method (McCullough, Zbikowski, & Jones 1987). The relationship of 4 clo per inch of fabric thickness has been found for most conventional fabrics, but higher amounts of insulation per unit thickness have been found for multi-component fabrics constructed of hollow or microfine fibers. There is no acceptable method for estimating the evaporative resistance of fabrics at this time.

Testing clothing on a manikin provides more accurate information about the resistance to dry and evaporative heat transfer than a flat plate because the following factors are considered: the amount of body surface area covered by clothing, the looseness or tightness of fit, the increase in surface area for heat loss, and the distribution of insulation over the whole body (i.e., not all parts are covered with the same fabric layers). Manikins that can change body positions, walk, or ride a bicycle ergometer can be used to study the effect of position and movement on insulation. There are several methods for estimating the insulation and evaporative resistance of clothing systems (McCullough, Jones, & Ruck 1985; McCullough, Jones, & Tamura 1989).

There is a need for measuring the thermal comfort of people while wearing clothing ensembles in climatic chambers because 1) the thermal responses of people are variable from one individual to another and 2) the effect of activity level (i.e., mobility in the clothing and metabolic heat production) can be taken into account. Laboratory studies allow the researcher to control and measure variables very precisely.

Subjective scales measure the perceptions and feelings of people concerning their thermal comfort. Likert scales with 5, 7, and 9 response categories and semantic differential scales of different types have been used in research. Physiological responses such as heart rate, body core temperature (e.g., rectal), skin temperatures, sweat rate, and oxygen consumption should be measured in extreme environments. Physical parameters such as the relative humidity in the microclimate between the skin and the clothing, the clothing ventilation rate, and the clothing surface temperature (thermography) have been used also.

Field studies on clothing comfort provide more realistic data, but variables cannot be controlled and measured very easily.

References

McCullough, E.A., Jones, B.W., & Huck J.A.

McCullough, E.A., Jones, B.W., & Tamura, T.
There is no doubt that material culture studies within a number of fields of inquiry have increased in the last ten years. Such fields as archaeology, anthropology, art history, cultural geography, history and folk life studies have benefited from the study of artifacts to answer questions about a culture. This panel will examine how the historical study of clothing and textiles fits within the material culture perspective.

As Thomas Schlereth states in Material Culture Studies in America (1982) "material culture study...the study through artifacts of the belief systems—the values, ideas, attitudes and assumptions—of a particular community or society across time." The assumption is that objects made or modified by humans reflect the belief patterns of individuals who made or produced them and by extension the belief systems of those who purchased them. Therefore, the term material culture refers both to the subject matter of the study, material, and to its purpose, the understanding of a culture. These studies, as noted by Schlereth, have taken a perspective that artifacts are primary evidence.

In defining material culture studies Schlereth emphasizes three aspects of these studies: 1) the collection, identification, comparison and organization of artifacts; 2) their historical perspective; and 3) the increased quest for a truly interdisciplinary focus, both conceptually and methodologically. Indeed, George Kubler noted that to secure meaningful cultural, historical interpretations, the objects used as evidence can no longer be parcelled out as the special preserve of the different disciplines.

Schlereth places the history of the movements in three chronological phases: 1) the identity or classifying period (1876-1948); 2) the descriptive or historical period (1948-1965); and 3) the analytical or explanatory period (1965-1982 [the present]). Each period is named to denote a dominant attitude toward material culture, phases which easily complement studies on costumes and textiles. In the most recent phase Schlereth notes three major approaches: 1) the artifact as an identifiable object of art by an artist; 2) the artifact as a product of craftsmanship (the mental and manual process); and 3) the artifact as a significant manifestation of economic and social status of an individual in society. These approaches are generalizations for nine conceptual positions reflected in recent scholarship: art history (focus on the object), symbolist (its meaning), cultural history, environmentalist, functionalist, structuralist, behavioralistic, national character and social history approaches.

These approaches clearly relate to studies in costumes and textiles. For example, an early functionalist study quoted extensively is Petr Bogatyrev's 1937 monograph The Functions of Folk Costumes in Moravian Slovakia. Other more recent studies could be placed in other categories.

With the rise of the recognition of the material culture approach in academic institutions, what ramifications does this have for the members of our association and our academic programs? Material culture studies have opened interdisciplinary arenas not only for examining other related research, but also for publication of our research, and for pedagogical innovation. Clarita Anderson, Beverly Gordon and Laurel Wilson will address issues related to how costume and textiles can embrace the broad material culture perspective.
All of us in the field of clothing and textiles are working with material culture, for material culture is all that has been made or modified by man (Prown, 1982). However, a specialized sub-discipline concerning the study of material culture has been developed and it is this specialized view on which students focus. The sub-discipline has developed within many disciplines which are concerned with material artifacts such as archeology, art history, anthropology, folklore, history, and popular culture.

At the University of Missouri at Columbia, students in textile and apparel management read about material culture and methods for investigating it. The various points of view and cautions concerning artifact study are discussed. Additional readings about professional ethics and procedures, periodicals which feature research concerning material culture, and applications of material culture are read and discussed. Students then use the Stuart variation (Smith, 1985) of Fleming’s artifact study model (Fleming, 1973) to investigate artifacts from Cornett Farm, a site in northwest Missouri. Each student selects one textile artifact from Cornett farmhouse and performs three steps for five question categories in the analysis procedure. Because the question categories involve several kinds of inquiry, students must use a wide variety of methods to arrive at a reasonable conclusion concerning their artifacts.

Graduate students focusing on the history of textiles and dress have found that this course better prepares them for their theses than some traditional courses in research methodology. The students are doing research on a real subject which is part of an ongoing research project. They are familiarizing themselves with sources that may be useful in their own investigations and they are learning about a worthwhile research model.

References


Specific examples of material culture analysis help clarify the value of the approach. Two examples -- an accessory garment from the 18th century, and an item of Victorian fancywork -- are discussed at length in the presentation. One is briefly developed in the following abstract.

A late 18th century American woman’s “pocket” might more commonly be approached as an article of clothing that is part of a particular chronological progression of garments in the history of Western dress. It would be considered in terms of form and function, and would be classified as a woman’s accessory.

Other levels of meaning can also be gleaned from the pocket, however. Values, ideas, attitudes and assumptions of a particular culture or community are “encoded” in objects. We can see that 18th century American women valued domestically-produced cloth, especially printed cotton. On this piece, the printed fabric is reserved for the front, and the handwoven cloth serves as a backing. Fabric was scarce and/or hand looms were narrow, for insets are added to the lining fabric at the bottom corners. A variety of printed fabrics were available, and several different printing technologies were in use. Patterned fabrics were still considered special, however, and were highlighted (it is the prints that are the focus of the piecing, rather than the design itself).

Aesthetic concerns were important to the woman who made this. Effort was put into the piecing design even though the pocket was hidden when worn; it was the wearer who benefitted from the design, rather than the onlooker. Rounded shapes were considered attractive or graceful -- curved edges were worked in even though it required extra labor.

Although it was an “object of delight,” the piece was actually used. Stains indicate the one-time presence of different substances. Rust stains indicate that iron implements, such as scissors or needles, may have been stored within. The stressed and worn areas in the uppermost corners indicate that ties were present at one time, and the pocket was worn around the waist like an apron. Heavy objects weighed the pocket down and added to the stress. Because the ties were not made as an integral part of the pocket, it is likely they were not considered integral to it aesthetically. Since further research indicates that tapes were made by the yard in the 18th century, this hypothesis is supported by other evidence.
Flat textiles are popular culture. In order to make this statement, flat textiles are defined as finished textile products which have a recognizable utilitarian function, although the utilitarian function may be of secondary importance. Examples of flat textiles include coverlets, quilts, Pasha and Kashmir shawls, show towels, samplers, political handkerchiefs, and chintz.

The definition of popular culture is much more obtuse. Bruce A. Lohof provided this working definition of Popular Culture: "cultural artifacts which reach and are recognized by a significant percentage of the population." Since flat textiles are cultural artifacts recognized by a significant percentage of the population at the time of their popularity, they qualify as Popular Culture.

They do, however, differ from the typical Popular Culture subject matter in at least two ways. First, flat textiles are non-verbal artifacts which provide a way to study cultural history through the interpretation of the artifacts. Second, a larger number of these textiles are found in museums or in the hands of private collectors, and therefore are not readily available to many scholars. One cannot simply go to the library and pull several off the shelves to take home and study.

The vast majority of flat textile studies have relied on the methodology of traditional art and decorative art historians. The art historians' traditional concern for the single masterpieces of art or decorative art in pristine condition has dominated the discipline's philosophy. Some of the major problems with this approach are that the artifacts must be deemed art to be considered, the conclusions and generalizations have often been made on a very small sample, and art history scholarship has followed a "top-down diffusion theory." Art history is not static and new methodological innovations are being developed. By contrast, Popular Culture has no well-defined methodology, and it has been suggested that any approach to the study of Popular Culture almost necessarily must be eclectic. Other scholars suggest that Popular Culture needs procedures that yield conclusions which are other than aesthetic.

There are far fewer flat textile than costume studies. The end of the Second World War saw the real beginning of the systematic study of flat textiles, although some studies did predate the War. The majority of these studies derived their methodology from art history, while some did not have a discernible methodology.

The quality of the flat textile studies was found to vary considerably. While the primary research method used was that of the art historian, scholars had begun to view flat textiles as artifacts of material culture, thus looking beyond the artifact itself. Quantitative methods are also beginning to be used to study flat textiles.
Bluff shelters of the southern Ozark Mountains were utilized by prehistoric peoples for at least 10,000 years. Through the centuries, these sites served as permanent habitation sites as well as impermanent camps for specialized activities. Due to the arid conditions present in some of these shelters, organic materials, which normally are perishable, have been preserved. Beech Creek Shelter, located in Newton County, Arkansas, is such a shelter. The desiccated remains of a prehistoric burial were recovered along with fragments of basketry and textiles that accompanied the burial. This research consists of an analysis of the textile remains recovered in burial context from Beech Creek Shelter by the 1987 Archaeological Field School of the University of Arkansas.

Numerous fragments that appear to have comprised eight different textiles were recovered. Representative examples of each of these textiles from each archaeological provenience were selected for macroscopic and microscopic examination. They were analyzed for fabric structure, scale, edge treatment, yarn structure, color, and fiber type. Possible functions of the textiles in both the daily activities and burial practices of these prehistoric peoples are explored along with a comparison with textile remains from burial context in other southern Ozark bluff shelters.

Fragments of narrow three-strand braids and weft faced plain weave were recovered from proveniences at the top of the burial. Some of the three-strand braiding was irregularly interlaced in large pieces of split cane basketry, which originally covered the burial. Two different weft twined fabrics and the weft faced plain weave were recovered in direct association with the body. Three-strand braids, seven-strand oblique interlacing in a twill pattern, spaced weft twining, and both warp and weft faced plain weave were recovered from the base of the burial. Yarns ranged from combined unspun plant fibers with minimal processing to complex yarns composed of three core yarns (each of which was a two-ply, bast fiber yarn) wrapped with split quill feathers.

The research is significant because it increases the limited amount of extant data on prehistoric textiles from the southern Ozarks specifically and from the southeastern United States in general. Samples from the burial textiles, recovered from Beech Creek Shelter, have been submitted for dating using accelerator mass spectrometry. When this information is available it will give precise cultural association, which is generally lacking from this area. The majority of textiles recovered from the southern Ozarks were recovered during the 1920's and 1930's without good provenience data and have not been assigned to specific cultural periods. Based upon association with diagnostic artifacts, however, this burial is expected to date to the Mississippian period (A.D. 900 to 1500).
The patchwork quilt, traditionally considered an American art form, is found in many other countries. In Sweden, where textile handcraft history has long been dominated by weaving traditions, documentation of patchwork quilt history is limited. The focus of the research was to substantiate the exchange of a cultural art form, the patchwork quilt, between the United States and Sweden. The study examined whether documented patchwork quilts in Swedish museum collections supported the hypothesis that the period of emigration between 1830-1929 contributed to the cross-cultural exchange of patchwork quilt patterns between the United States and Sweden.

An investigation was conducted to record, interpret, and explain information regarding documented patchwork quilts housed in Swedish museum collections. A data collection form was developed to accurately tabulate patchwork quilt data and record the geographical and historical background of each quilt. The data collection form was validated by a senior textile curator affiliated with a state museum association. Forty-three patchwork quilts in Swedish museum collections, documented by decade, between 1830-1929, comprised the primary sources of the investigation. Content analysis and descriptive statistics were used to interpret data regarding quilt design characteristics, textile characteristics, quilt construction, surface embellishment, and socioeconomic environment.

Predominant patchwork quilt styles and patterns were illustrated by computer-generated graphics.

Dominant Swedish patchwork quilt patterns were identified and examined for design traits characteristic of American patchwork quilt patterns. The decades of Swedish emigration and remigration between 1830-1929 contributed to a cross-cultural exchange of the Log Cabin patchwork quilt pattern between the United States and Sweden. Contrary to American quilt patterns, Swedish quilt patterns were unnamed, with the exception of the Log Cabin or "Blockhus" pattern. Five Log Cabin variations, discernible by American names, were identified: "Light and Dark"; "Straight Furrow"; "Barn Raising"; "Courthouse Steps"; and "Pineapple" or "Windmill Blades." Two Swedish Bridal quilts, dated between 1890-1900, evidenced the cross-cultural exchange of the individually embroidered square patch, characteristic of the American Bridal Album quilt between 1840-1860. Star pattern variations, between 1840-1890, appeared to have independently evolved from American influence.

Some Swedish patchwork quilts, dated after the 1840s reflected technological advancements in quilt construction and surface embellishment. In the 1870s, patchwork quilts were influenced by a period of economic growth, opulence of the Victorian Era and the handicraft movement taking place in Sweden at the same time period. A weakened economy and declined social interest in bed adornment impacted the decreased number of embellished quilts after the 1900s.

Several questions concerning patchwork quilts in Sweden remain unanswered. Findings have implications for further investigation. Swedish patchwork quilt research should be expanded to include other data bases. Patchwork quilt characteristics in Swedish-American settlements could be compared with patchwork quilts from the Swedish provinces of remigration.
Many historic costume collections include remodeled garments; their dating challenges curators and registrars. Such garments provoke questions: what were the motives for remodeling? Did an amateur or a professional do the remodeling? The researchers analyzed published advice about remodeling to discover the motives for and methods of revamping clothing.

The objectives of this research were: 1. to record the types and frequency of remodeling advice in women's periodicals with diverse emphases in content; 2. to note stated or implied attitudes toward remodeling; and 3. to propose some reasons for and alternatives to remodeling.

The researchers reviewed editorial and advertising copy in Harper's Bazaar (1870-99, 1915-20, 1930-45); Vogue (1915-20, 1930-45); Good Housekeeping (1885-97, 1915-20, 1930-45); Peterson's Magazine (1872, 1874, 1877, 1886, 1888); Godey's Lady's Book (1871, 1875, 1877); Journal of Home Economics (1915-20, 1930-45); and Cooperative Extension publications (1915-20, 1930-45). Besides recording specific remodeling advice, the researchers noted the rationale for remodeling, the person responsible for the remodeling, and the expressed attitude toward revamping clothing. The periods chosen were eras of economic depressions (1873-78, 1893-97, 1930-39) or wars (1915-18, 1939-45) when people may have had to reuse their clothing.

All periodicals surveyed for 1870 through 1899 advised readers how to remake their garments. Harper's Bazaar provided the most extensive information, but Good Housekeeping, Peterson's Magazine, and Godey's Lady's Book also reported remodeling. Except for a few references to "dressmakers by the day," magazine copy implied that the reader would revamp clothing for herself and her family. The reasons given were to save money, to keep up with fashion, and to get full use from garments. Remodeling advice was most extensive in the mid-1870s, mid-1880s, and from 1893 to 1897, possibly in response to economic crises.

During and just after World War I (1915-20), remodeling coverage in Harper's Bazaar and Vogue was sparse. However, advertisements for remodeling services abounded. The woman who needed to do her own remaking of clothing could find detailed advice in Good Housekeeping, Journal of Home Economics, and Extension bulletins. Between 1930 and 1945, advice about remodeling dwindled to a few subtle hints in Vogue and Harper's Bazaar. Classified advertisements in Vogue continued to mention remodeling services until 1943. Fashionable women were advised to knit sweaters, dresses, and suits or to refresh their wardrobes with new collars and cuffs, scarves, belts, blouses, and jackets. In contrast, Extension bulletins, Good Housekeeping, and Journal of Home Economics gave exact advice about remaking garments.

Whereas periodicals with either fashionable or domestic emphases offered directions for remodeling between 1870 and 1899, such advice was limited to home and family publications in 1915-20 and 1930-45. Reasons for this shift might include the following: fashionable women's abandonment of domestic pursuits for volunteer work outside of the home; high fashion magazines' adoption of a sophisticated image inconsistent with homey advice; abundance of ready-to-wear clothes, which provided an affordable alternative to remodeling; difficulty of remaking ready-to-wear items; and decline in the proportion of women with sewing skills.
The purpose of the research was to investigate whether the twist direction in yarn spinning is a viable indicator for tracing ethnic relationships between prehistoric communities in the North American Woodland Traditions. Cordmarked sherds from the Water Plant Site (33-Fr-155), located south of the city of Columbus, Ohio, were used for a preliminary test of the premise. Several radiocarbon dates place the settlement of this site as A.D. 500. The pottery used for this study was from everyday usage, excavated from ground features within the habitation area, rather than those types included within burial facilities.

Textiles and their evidence left in pottery have been used since the 1880's to aid archaeologists in deciphering the technological bases, the level of social organization, and the patterns of trade for societies. Writing in the 1930's Weltfish proposed that basketry techniques were useful as a key to cultural and physical relations of native groups. Included in his list of five technical traits that would have limited distribution and be independent of mechanical factors was the "direction of work, whether to the left or right as the work is held by the basket maker" (Weltfish, 1932, p. 108-109). With this tradition of evaluating direction for twining or coiling baskets, Maslowski gathered data about twist and spin in cordage from northeastern sites. Maslowski posed the proposition that "techniques of cordage manufacture are grounded motor habits that are culturally transmitted and learned at an early age" (Maslowski, 1984, p. 59); and since these motor habits have no adaptive value, they are more resistant to change than those habits associated with other aspects of a group's culture. Dominant spin and twist patterns of cordage should remain relatively constant. Maslowski asserts that there are definable patterns for the distribution of S and Z twist cordage in the Ohio Valley and this patterning can be used to delineate various cultural groupings.

(Maslowski, 1984, p. 54). The assumption is that one type of twist will predominate for a site, with perhaps as much as 5% of the opposite twist occurring due to left-handedness of a minority of individuals in the group.

Sherds from the Water Plant site features were studied for impressions of textile attributes with special emphasis on twist directions. Data analysis consisted of simple descriptive statistics for textile attributes and student's T-tests and Analysis of Variance to determine whether individual features revealed significant differences. From the ten features, 405 sherds were cordmarked. Fifty-four percent had S twisted cordage and forty-three percent contained Z twisted yarns and four percent had both S and Z twist present on the same sherd. These results differ from what would be expected if one followed the accepted position of one twist predominating within a culture. The presence of both twist directions leads to a reevaluation of the previous position using a wider sample.

The Ethnocentric Consumer: Do They "Buy American?"  

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The influence of country-of-origin purchase decisions has yielded conflicting research findings. When consumers' attitudes toward domestic and imported products were analyzed, Wall and Heslop (1986) found that domestic products were favored. Research conducted by Sternquist and Davis (1986), however, did not find that country-of-origin was significant as an information cue in purchase decisions. Consumers often say that they prefer to buy American products yet the growing trade deficit seems to contradict this rhetoric. Previous studies have reported consumers' attitudes or perception but not their actual purchase behavior.

The focus of this study was on actual purchase behavior. This research is part of a larger mall intercept study examining various aspects of consumer price resistance. Only subjects who had completed a purchase were included in this study. Subjects responded to questions related to their purchase. A questionnaire was developed to determine the relationship among consumers' purchasing decisions and a product's price, quality, brand, and country-of-origin. Also included in the questionnaire were questions pertaining to demographics and consumer ethnocentrism.

The objectives of this study were: 1) to determine whether consumers who display strong ethnocentric tendencies tend to buy U.S. made products, 2) to examine the possible relationship between consumers' education level and the degree of importance placed on whether a product is U.S. made, 3) to determine whether certain demographics were related to the degree of consumer ethnocentricity.

The CETSCALE, developed by Shimp and Sharma (1987), was used to measure consumer ethnocentric tendency. Factor analysis with varimax rotation was used to reduce the seventeen CETSCALE statements into more general categories, resulting in three factors.

The relationship between strong consumer ethnocentric tendency and the purchase of U.S. made products was determined to be significant. Those consumers who purchased domestic products did score significantly higher on the consumer ethnocentrism scale (p < .03). No significant relationship was found between the respondents' education level and the degree of importance placed on whether a product is U.S. made. The relationship between consumer ethnocentrism and specific demographics was analyzed with regression analysis. Income level and age were not significant related to consumer ethnocentrism. Education (p < .02; R square = .26) and importance about whether a product is U.S. made or not (p < .01; R square = .35) were significant predictors of the degree of consumer ethnocentric tendencies.

The implications of the research have to do with the link between professed attitudes and actual behavior. In this study there was a significant relationship between consumers' ethnocentric tendencies and their purchases of domestic products; use of the CETSCALE can be a proxy for actual purchase behavior. Utilization of Shimp and Sharma's (1987) CETSCALE as a measurement of consumer ethnocentric tendency will prove valuable in further research pertaining to purchasing decisions and consumers' purchasing domestic versus imported products.

References


Ethnocentrism is a concept that was introduced early in this century and has since been widely used in sociology and anthropology. In the past twenty to thirty years academics also have explored the concept as one that might be useful in consumer behavior and marketing. Shimp (1984) introduced the term consumer ethnocentrism as a concept designed to explore consumer cognitions and emotions in relation to foreign-made products. Few investigators have attempted to identify correlates of the ethnocentrism concept; the purpose of this research project is to further explore and identify such correlates. More specifically, the objective is to investigate the extent to which consumer attitudes toward imports and U.S.-made apparel are associated with various demographic characteristics.

A national sample of 952 individuals who met the criterion of being the person who did most of the household shopping for apparel was drawn on the basis of a systematic probability sample of households in the U.S. Professional telephone interviewers conducted the interviews and obtained a response rate of 64 percent (604 interviews).

Variables in the study consisted of four major groupings: attitudes toward imports in general (based on Shimp’s 1984 conceptualization of consumer ethnocentrism), attitudes regarding imports and the U.S. economy, attitudes toward U.S.-made clothing specifically, and purchase attitudes and intentions. Responses were measured on five-point scales. T-tests, analysis of variance and Scheffé post-hoc comparisons were used to compare differences among consumers on the basis of geographic region, sex, income, marital status, and race.

Significant differences were found on the basis of all demographic categories, but most notably for education, sex, age, marital status, and income. In general, results indicated that consumers with a high school education or less have stronger ethnocentric tendencies than those with more education; female consumers have stronger ethnocentric tendencies than males; younger consumers (those between 20 and 25 years and 26 and 40 years) have stronger ethnocentric tendencies than older consumers (those between 41 and 64 years and 65 and older); those consumers currently or previously married have stronger ethnocentric tendencies than those who have never married; and consumers whose income is below $20,000 or between $20,000 and $39,000 have stronger ethnocentric tendencies than those whose income is $40,000 and above.

These results contribute to the growing body of country-of-origin literature, especially in the use of the consumer ethnocentrism concept and a portion of the scale which Shimp and Sharma (1987) recently formulated to test the concept. This scale, called the CETSCALE, has been tested for validity and reliability and thus provides a useful new instrument with good potential for further research. Additional research to learn more about determinants of consumer ethnocentrism would seem to be particularly useful and have implications for marketing professionals as well as scholars.


Researchers have reported women's advancement in retailing to be limited primarily to the lower managerial levels. Women presently hold 64% of the entry level positions, 27% of the mid-level positions, and only 15% of the upper level positions. The slow rise of women into the retail hierarchy is attributed to a number of factors including the limited access that women have to the mentor-protégé socialization process that has long been influential in the career development of males. An understanding of these developmental relationships is important not only for women's upward socialization and advancement but also to overcoming the existing structural and attitudinal barriers in the workplace.

Objectives in this study were to examine 1) differences in the prevalence of mentoring relationships 2) differences in job satisfaction and job motivation and 3) differences in the perceived importance of career mentoring relationships between mentored and nonmentored upper and middle level female retail executives. Questionnaires were mailed to 466 female executives employed by specialty, department or discount store retailers and 205 were returned and usable, yielding a 44% response rate.

The results revealed that upper level executives were more likely to have been mentored than mid-level executives (p < .01). The prevalence of mentoring relationships by level were further tested with logit analysis to control for the effects of years in a retail career position, educational level, and employment pattern. The results suggested that the most substantial impact on level is from mentoring status. Mentored mid-level executives also reported significantly more promotions in the last five years than their nonmentored counterparts (p < .05). Mentored upper level executives were found to have higher levels of both job satisfaction and motivation than nonmentored upper level executives (p < .05 and .01, respectively). The questionnaire items measuring job satisfaction and job motivation consisted of previously tested, reliable instruments.

Factor analysis on an original 15 item measure was conducted to identify which items loaded together and, therefore, could serve as a reliable measure of mentor importance. Data analysis on the contents of the statements showed that mentored executives placed more importance on mentoring relationships as a means of career success and advancement than did nonmentored executives.

The findings suggest that mentoring relationships can be an important force in the career development and advancement of women in retailing. Students pursuing retailing careers need not only be prepared through related coursework which helps to establish strong abilities, self-confidence, and competence on the job, but they need to be informed in the classroom settings and advising situations of how establishing mentoring relationships can be an important career development strategy leading to career advancement.
Turnover among college-recruited retail managers is relatively high with consequent costs to both employee and retail firm. Previous research has found organizational commitment to be a consistently strong predictor of turnover. Although numerous investigations have been carried out to identify factors which influence organizational commitment, few of these have been conducted in retail settings. Those studies which focused on retail positions have primarily involved lower-level positions, sales associates. Thus, retail management has been given only limited guidance from empirical research for the structuring of managerial job responsibilities and for the development of strategies to recruit and retain effective employees.

The theoretical basis for the study was Hackman and Oldham's (1976) job characteristics model, which posits employee commitment as a function of the level at which five characteristics are present in a job. Jobs perceived as having a substantial amount of variety, task identity, significance, autonomy, and feedback provide the necessary conditions for employees to develop high levels of organizational commitment. The purpose of this study was to examine the relationships among job characteristics, demographic factors, and organizational commitment for entry-level retail managers.

Response to a mailed, self-administered questionnaire represented a 73.2 percent return (N=153) from a total of 209 retail managers from two multiunit department stores. The questionnaire utilized scales previously developed and tested in a variety of organizational settings. Estimates of scale reliabilities ranged from .66 to .91.

Results of simple linear regression, testing the predictive strength of each job characteristic, indicated that task significance explained the highest proportion of variance in commitment ($R^2 = .28$). Multiple regression analysis of the five characteristics indicated that the linear combination of these variables explained approximately 40% of the variance in commitment. For entry-level managers, organizational commitment was a function of the presence of three job characteristics; skill variety, task significance, and feedback. When work is viewed as providing high levels of skill variety, task significance, and feedback; a high degree of organizational commitment is probable.

One-way ANOVA was used to test for differences among subgroups within each demographic variable. No significant differences in organizational commitment ratings were found by gender, store, marital status, job type, educational level, academic major, or salary level. However, analysis using job scope (a global measure of the degree to which specific job characteristics exist) as the dependent variable indicated significant differences by gender and by job type. Females perceived their management positions as significantly more challenging than did males ($F(1,151) = 6.52$, $p = .0117$). Scheffe's procedure indicated that assistant buyers viewed their jobs as significantly ($p < .05$) less challenging than did either department managers or managers in other functional specialties.

These findings suggest that retail executives need to focus on ways to increase the job scope of entry-level managers in order to enhance commitment and subsequently reduce turnover. Commitment may be strengthened by providing entry-level managers with effective and frequent feedback regarding the value of their work to the organization and evaluation of their job performance.

Reference

Consumers are more price- and value-conscious now than ever before when shopping for apparel and may use both extrinsic (price, store image) and intrinsic cues (fabric type, construction details) in their purchase decisions. Studies have shown differences in cue impressions can affect consumer perceptions of apparel quality and store patronage decisions. Less is known about consumer knowledge related to the use of intrinsic cues and the influence of this knowledge on store patronage. Most previous research has focused on urban consumers with little emphasis given to rural consumers; yet, rural consumers are recognized as a significant force in many retail markets.

The purpose of this study was to determine the influence of extrinsic cues (price, quality, store image), the ability to use intrinsic cues (quality knowledge), and demographics on the store patronage preferences of rural and urban consumers. A mail survey of 2,000 women, 18 years of age and older, living in rural and urban areas in Louisiana yielded 598 usable questionnaires. Respondents expressed agreement with statements designed to determine their store patronage preferences (dependent variables); attitudes toward the importance of price, quality, and store image; and perceptions of apparel quality characteristics on a five-point Likert-type scale ranging from strongly agree to strongly disagree. Respondents' residence location, race, marital status, age, education, employment, and total family income were measured. Multiple linear regression (p<.05) was used to generate three predictor models of store patronage. Requirements of the statistical analyses reduced the sample size to 341.

No differences were noted in rural and urban consumer perceptions. Respondents were aware of selected characteristics that denote quality in a garment and considered these factors when purchasing. While race, age, marital status, education, and total family income were statistically significant, demographics were low predictors of store patronage. Items reflecting price, quality, and store image attitudes were much better predictors of store patronage than apparel quality knowledge or demographic items. Young, married respondents with lower family incomes were most concerned with price, believed they could get quality apparel at discount stores, felt they got more value for their money by buying brandnames at discount, and were most likely to shop discount stores. Young, nonwhite respondents were more likely to shop many types of stores for apparel, believed that they could get top quality clothing at discount, and relied on brandnames for value. White respondents with higher education felt they could not get top quality at discount, indicated that price was less important than finding top quality when purchasing apparel, were less likely to examine a garment before purchase, and were most likely to patronize nondiscount stores. Results reinforce conclusions reached in previous research that consumer perceptions are not homogeneous and that consumers relate the quality of products to the retail outlet through which they are sold. Findings may be useful to retailers in refining their target markets and to educators in helping consumers improve their shopping skills.
Of the many papers on gift-giving published in recent years, few focus on clothing. Yet gifts are an important supplementary source of clothing for families and a major share of sales for some types of clothing stores. This research examined content of newspaper advertisements for clothing to identify relationships concerning promotion of clothing as gifts. Data were all clothing ads appearing in two newspapers during the 14 days before Mother's Day (MDay) and the 15 days before Father's Day (FDay) 1987. Both newspapers are delivered by carrier in a midwestern town of about 50,000 people. The "Town" newspaper publishes daily except Sunday; the "City" newspaper daily, in a metropolitan area of about 350,000, about 35 miles from the Town. Of 432 ads recorded, 144 (1/3) were from the Town paper, 288 (2/3) from the City paper. Content of ads was coded numerically or categorically as appropriate. Conventional statistical inference was unsuitable because the data were a population, not a sample. Data were analyzed by examining tables, correlations, and graphs. Bivariate analyses associated each variable simultaneously with mention of MDay or FDay and of price promotion.

Of 203 clothing ads during the MDay period, 46 (23%) mentioned MDay; during the FDay period 75 (33%) mentioned FDay. "Sale" or special price promotions appeared in 62.5% of all ads; those mentioning MDay or FDay were only slightly less likely to mention price promotions than were clothing ads in general. Men's clothing ads were more likely to mention FDay and less likely to mention sale; the reverse was true for women's clothing. Mall stores, either City or Town, stressed price more often; City stores, mall or not, stressed gifts more often. Few differences were found as to size of ad or store type, but shoe stores were least likely to promote gifts. Ads mentioning gift-giving occasions suggest differences in male and female gift-shopping practices. Ads for MDay appeared later, listed size, and were more likely to include drawings (not necessarily of specific merchandise). They were more likely to be for lingerie, sleepwear, and robes; to include several types of clothing and non-clothing merchandise; and to list store locations in communities outside the City or Town. This suggests that MDay givers may shop late, close to home, and possibly buy more than one item. FDay gift ads were more likely to appear in the City paper; on Thursdays; list WATS numbers; state brand, color, and material; and to feature shirts, trousers, accessories, and coats and rainwear. FDay givers may tend to order by phone, plan weekend shopping trips ahead, and to buy some major garments, possibly because men's sizes are standardized.

In addition to these ads, advertising supplements inserted in newspapers heavily promoted both gifts and sales. Supplements were tabulated for the FDay period only. Of 19 supplements, 13 appeared in the City paper; most were for mall stores, representing department stores, mass merchandisers, and off-price stores. They ranged from 13 by 18 cm to full newspaper size; 15 were in full color; all stated "Sale" on the front page, and FDay somewhere, usually on the cover (12 of 19). Of 324 total supplement pages, 104 were for men's clothing. Eleven of the supplements appeared in the week before FDay, four each on Sunday and Thursday. In several cases, identical supplements appeared in City and Town newspapers.

Differences between MDay and FDay advertising may relate to the fact that women are the chief gift-buyers, as previous research has shown. Which parent is more likely to take children along when gift-shopping? Which is more price-conscious? Further research might examine how gift advertising for clothing influences gift shoppers' practices and how it reflects practices.
Consumer perceptions of product quality have been analyzed for several decades and both extrinsic and intrinsic product cues have been found to affect quality. Only recently have consumer perceptions of clothing quality been researched. Extrinsic cues such as country of origin, brand image or name, store prestige or status and price have been found to influence perceptions of clothing quality. When given the opportunity to select objective information to assess clothing quality, consumers have been found to select intrinsic cue information concerning style, fabric, durability and fit, as well as extrinsic information such as price. Additionally, subjects have been found able to distinguish between high and low quality garments.

Researchers have considered consumer perceptions of clothing quality loosely in terms of extrinsic or intrinsic product cues or as a comparative construct. No study was found in which attempts were made to determine the meaning of clothing quality in the mind of the consumer. It has been difficult, therefore, to determine if some research results indicate perceptions of clothing quality or determinants of clothing purchases.

The purpose of this exploratory research was to investigate the meaning of clothing quality from the consumer's perspective. The specific objectives were: (1) to determine the product attributes which constitute clothing quality in the mind of the consumer; and (2) to determine when these attributes are assessed.

Two semi-structured focus group interviews were conducted as a first step in the study. The groups were composed of eleven graduate students enrolled in the college of education and seven graduate students enrolled in the college of home economics at a large Midwestern university. Questions directed to the focus groups related to three topics: (1) the meaning of quality in general; (2) the meaning of clothing quality; and (3) whether clothing quality is evaluated before and/or after purchase. Content analysis of the tape-recorded interviews was performed.

Quality in general seems to relate to the fulfilling of expectations. The expectations may be physical, aesthetic, performance or psychological. Subjects described clothing quality attributes in terms of garment construction durability, fabric structure, appearance and care requirements. Brand, price and store cues seem to be used as surrogate indicators of quality, especially in the absence of other information or the inability to examine merchandise (e.g., catalogue shopping). Additionally, it is fashionable today to "show others that you know quality," therefore, some brands and prices may serve as symbols of "socially recognized quality." When clothing quality is assessed depends on the individual, the importance of the purchase, price, and the intended use of the product.

It is recognized that the generalizability of findings is restricted by the exploratory nature of the study and the limited sample size.
CUSTOMER DRESS AND FIRST IMPRESSION FORMATION AS INDICATORS OF SALES SERVICE

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Justification: Eliminating criticism levelled toward customer service in retail firms is a current merchandising issue. Identifying the exact nature of customer service criticism is a complex process due to the multi-dimensional aspects of service. As customers are considered in the retail exchange process, the view of customer service in merchandising and the service customers criticize can be narrowed. In this context, it becomes evident that sales service governs the customer's primary view of customer service. Therefore, customer satisfaction encompasses factors such as sales service and first impression.

Hypothesis: Evidence shows clothing and physical body are major influences in impression formation. Consequently, the researchers hypothesized that sales associates would differentiate sales service based on their perception of specific clothing styles. Specifically, effects of two nonverbal communication variables, clothing worn by a customer and first impression formed of a customer by the sales associate, were examined as to influence on sales service offered.

Method: A total of 101 female sales associates, assigned to women and junior apparel areas, from four "ownership group" department stores in two metropolitan cities were surveyed on a volunteer, anonymous basis. Apparel stimuli photographs were commercially produced and a questionnaire was designed by the investigators. Questionnaire and photographs were used to elicit responses regarding demographics, selling service, and first impression. Demographic information regarding sales associates included: gender, age, employment status, salary schedule, educational background, sales experience, tenure, merchandise area, and product knowledge. Selling service was measured using 13 statements representing stages of the sales process: approach, warm-up, bridge, presentation, objections, and closing service. Impression formation was measured using eight variables: social status, education, income, attractiveness, interest in buying, age, intelligence, and spending power. Selling service and first impression responses were scored on a five-point Likert scale. Using Cronbach's alpha statistic, reliabilities for sales service (alpha = 0.78) and first impression formation (alpha = 0.79) were determined.

Apparel stimuli was coded by style into three categories: career, contemporary, and casual. A three-step process involving apparel experts in business and academic verified apparel categories. One 8 X 10 inch color photograph was produced for each apparel style category. All variables in the photographs were held constant except for apparel worn by the female model. Cooperating participants viewed one randomly assigned apparel style photograph while completing the questionnaire.

Findings: Clothing Focus - Differences between sales service assessed on the 13 selling statements and style of apparel worn by a customer were investigated by controlling for selected sales associate demographic factors. An ANCOVA resulted in a highly significant relationship, F(6) = 3.58, p = .01. Factors which contributed to the significance were the main effect (apparel style, F(2) = 4.12, p = .05) and one covariate (highest education level attained, F(1) = 4.43, p = .05). First Impression Focus - The relationship between sales service assessed on the 13 selling statements and first impression formation of a customer by a sales associate was analyzed. An ANCOVA indicated all but one (age) of the eight first impression criteria were highly significant. For all significant first impression variables, the career style had higher mean scores and was significantly different from contemporary and casual apparel styles. Implications: Results suggest potential exists for apparel to influence sales associate customer evaluations. Findings underly the importance of sales service training and ongoing development. Since a questionnaire data collection method was used, demand characteristics or other factors within the experimental design may have affected the results. Future research should focus on a field experiment design.
The Effect of the Age and Sex Composition of Household Members on Seasonal Apparel Expenditures

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Recent estimates indicate that Americans spent $164.3 billion on apparel and shoes in 1986. A variety of household characteristics have been shown to affect household expenditures. However, the effect of the age and sex composition of the household has received limited attention. It is the purpose of this study to examine the effect of the age and sex composition of household members on seasonal apparel expenditures.

Data from the 1980-81 Consumer Expenditure Survey (CES) were used in the analysis. Households from four quarters, Spring 1981, Summer 1981, Fall 1981, and Winter 1981 were included. These quarters correspond to the retail selling calendar, as well as to seasonal changes. For the combined samples, the average quarterly income was $9,289.29. Average quarterly clothing expenditures were $268.26. The mean age of the household head was 45 years, while the average family size was 2.7. Seventy-three percent of the household heads had at least a high school education.

Based on economic theory, a modified Engel curve provided the theoretical framework for the analysis. An Engel curve expresses the relationship between expenditures and income. In addition to income, the following variables were included in the analysis: age and education of head, occupation of head and spouse, marital status, region, race, sewing activity, and the age/sex composition of family members. Separate variables were included in the analysis for male and female members in the following age categories: 0-4, 5-12, 13-17, 18-21, and over 21. Regression analysis was used for the estimation.

The results indicate that the age and sex composition of the household affects clothing expenditures, and there are seasonal variations. The results show that children under the age of 4 have no significant effect. Children ages 5-12 have a significant effect on household clothing expenditures only in the fall quarter. Females ages 13-17 have a significant impact in all four quarters, while males 13-17 have a significant effect in all quarters except summer. After this age, males no longer have a significant effect. However, the presence of females ages 18-21 significantly affects expenditures in summer, fall, and winter. Females over 21 have a significant effect in all four quarters. In all cases, the effect of the age/sex variable was positive. This study utilized a fairly recent set of data to analyze the effect of the age and sex of family members on seasonal apparel expenditures. The results indicate variation by season, an issue which has not been previously addressed in empirical work on clothing demand. Furthermore, the results indicate that older family members have a greater impact on expenditures on ready-to-wear clothes and shoes than younger family members, and females have a more significant effect than males. These results suggest that information on family size alone is not sufficient in understanding household clothing expenditures.
Apparel Buying Practices of Pregnant Women and Their Reported Satisfaction with Available Maternity Wear

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The purpose of this study was to investigate apparel buying practices of pregnant women and their satisfaction with available maternity wear. The sample consisted of 121 pregnant women enrolled in hospital-sponsored classes for expectant parents in six cities in north and east Texas. Most pregnant women in the study had completed college, were employed in informal professional positions and planned to work throughout pregnancy.

Data were obtained through use of a questionnaire which required participants to answer questions relative to their demographic characteristics, buying practices and satisfaction with maternity apparel. Chi-square calculations and analysis of variance statistical tests were used to analyze the data.

Women in the study were generally satisfied with available maternity apparel. When asked how satisfied they were with the selection of maternity apparel available to them, 57.8% were either satisfied or strongly satisfied. Of those women who expressed dissatisfaction, improvement was desired in fashion level, prices, and sizes of maternity apparel. All of the participants made use of new purchases as a source of maternity apparel. Over 60% of the sample utilized non-maternity and borrowed clothing to some extent. For new purchases, specialty stores and discount stores were the retail sources most often used, with over 70% of the sample purchasing clothing at these sources. The department store was used less as a place of purchase.

The largest portion of the sample, 42.1%, reported spending $249 to $499 on maternity clothing. This amount is less than the $500 to $750 estimated by industry sources. Respondents reported purchasing a wide variety of classifications of merchandise, with dresses being the most purchased classification. Least often purchased classifications of merchandise were suits, skirts, evening-wear, and hosiery.

Significant differences were found between age and income level and the purchase of maternity blouses. Small town location was found to make a significant difference in utilization of discount stores. Older subjects expressed more dissatisfaction with department stores and mail order companies.

Findings indicated the need for manufacturers and retailers to carefully analyze style, price and size offerings. Manufacturers and retailers can work together to educate newly pregnant women about the need and practicality of buying maternity clothing rather than trying to use non-maternity clothing.
USING OCCUPATIONAL STATUS TO SEGMENT

THE CAREER WOMEN'S APPAREL MARKET

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In the highly competitive women's apparel industry, market segmentation is particularly important in establishing the direction of a firm's marketing efforts. This study focuses on the use of occupational status as a market segmentation strategy for women apparel consumers. The objective was to compare the clothing interests and purchase behaviors of professional and nonprofessional women.

The sample included 200 career women randomly selected from a list purchased from National Demographic and Lifestyles (NDL) Market Consultants. Respondents were segmented into professional and nonprofessional categories using the aggregated groupings of occupations published by the U.S. Department of Commerce. Mail questionnaires were used to collect data. Clothing interest was measured using an 18 item scale adopted from Solomon and Douglas (1985). Shopping behavior was defined as frequency of purchase, use of promotional pricing, clothing attribute evaluation and sources of information employed when choosing clothing for work.

Factor analysis was used to identify important categories of clothing interest. Four categories, similar to the categories identified by Solomon and Douglas (1985), were identified. The category explaining the largest percentage of the variation was fashion leadership, followed by dress consciousness, shopping interest, and situation congruence. The mean clothing interest score for each respondent (based on the 18 item clothing interest scale) was then classified according to professional or nonprofessional occupational status. ANOVA confirmed that clothing interest of professional women did differ somewhat from clothing interest of nonprofessional women (p < .01). Both groups displayed moderate levels of clothing interest with an overall clothing interest means of 3.36 and 3.41 respectively (on a five point scale) for professional and nonprofessional respondents.

Professional and nonprofessional women were also compared with respect to specific shopping behaviors using ANOVA. Nonprofessional women were somewhat more likely than professional women to purchase clothing during sales promotion (p < .1), however the majority of respondents in both groups bought clothing at promotional prices. No other significant differences between the professional and the nonprofessional groups were found with respect to the shopping behaviors investigated. Professional and nonprofessional respondents differed with respect to the importance placed on only one clothing attribute—made in USA (p < .01). Nonprofessional women were much more likely to rate made in the USA as important in evaluating clothing.

Both groups employed similar sources of information about business clothing. Professional and nonprofessional respondents differed only in the use of friends as a source of information about business clothing (p < .1). Professional women were more likely to use friends as a source of information.

The small number of differences between professional and nonprofessional women with respect to clothing interests and shopping behavior may be due in part to the homogeneity of the sample. Although the two groups did differ with respect to personal income and education, they were similar with respect to the other demographics investigated. Also, the majority of women in both groups perceived the existence of a dress code in their place of employment.

An alternative conclusion is that occupational status may not be a particularly useful segmentation measure. Perhaps other job descriptors such as occupational field or job activities will provide more meaningful ways to segment this market. Certainly, the size and market potential of the career women's apparel market warrants further investigation to identify meaningful segmentation strategies.

AN EXPLORATORY STUDY OF BUYING BEHAVIOR OF TOURISTS

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The purpose of this study was to examine the kinds of goods tourists buy, planned and unplanned purchases, information-seeking, recipients of gifts, and expenditures. The sample consisted of 15 female participants of a twelve-day study tour to Mexico in mid-March, 1988. Purchases of goods while travelling are characterized by the buyers' pre-trip ignorance of the market and exposure to biased product information such as advice from tour guides. Such behavior violates assumptions of rationality in conventional consumer behavior models. Hence, research in tourists' buying behavior may lead to a different conceptualization of the phenomenon.

Data were collected using a pre-trip questionnaire in which information on participants' estimated gift expenditure, buying plans, and familiarity with Mexico were gathered. During the trip, in each of the three locales (1, 2, 3) visited, participants expressed purchase plans in the morning and recorded actual purchases at the end of the day. Unplanned purchases were identified by matching participants' buying plans with actual purchases. Upon returning to the U.S., they recalled expenditures, information-seeking related to belts, jewelry, and rugs, and expressed satisfaction with purchases. Data were analyzed through content analysis and descriptive statistics.

A total of 286 items was purchased and $1,850 were spent over the six data collection days. Types of purchases were: accessories such as handwoven bracelets, belts, and jewelry (35%); textile crafts such as baskets (17%); decorative flat textiles such as rugs and wall hangings (7%), ready-to-wear (7%), and household textiles such as placemats (5%). Twenty percent were non-textile crafts. Sixty-four percent of all purchases were for personal use; these were clothing and jewelry. Twenty-four percent were for relatives; nine percent were for non-relatives. Items for self accounted for 74 percent of total expenditure; purchases for relatives accounted for 18 percent. Non-relatives accounted for six percent.

Eighty-four percent of purchases in Locale 1 were unplanned. In Locale 2, unplanned purchases decreased to 63 percent. Planned purchases exceeded unplanned purchases in Locale 3. When participants expressed intentions to buy for themselves or for others, no more than half the time did their actual purchases match their intentions. For textile crafts, color and design were reasons for buying. Craftsmanship was a desirable feature for high ticket textile craft items. The number of participants who sought product information increased as mean item price increased. This supports theory of risk in consumer behavior.

In conclusion, a majority of the purchases made while travelling were for personal use. This might have been influenced by the life cycle stage of this group. Immediate family members were frequent recipients of gifts. Non-relatives received fewer gifts. Purchase behavior was increasingly deliberate as time progressed. Further research can devote attention to refining measurement of unplanned purchases. Other research questions emerged from this study include:

a) Is there a difference in gift buying strategy if the buyer had in mind a person versus an object? b) What factors contribute to reduction of unplanned purchases as travel time lengthens? c) What kinds of risks do tourists perceive when purchasing goods in their travels? d) Does life cycle affect the number and types of goods purchased for self versus for others? These research questions have important implications for craft producers and for the tourist industry.
Sproles and Kendall (1986) have defined a consumer decision-making style as a mental orientation characterizing a consumer's approach to making choices. This includes both cognitive and affective characteristics which make up a consumer's "personality," similar to the concept of personality in psychology. Sproles and Kendall have developed an eight-factor model to measure consumers' decision-making styles.

The model defines consumers in relationship to the following eight factors: high-quality conscious, brand conscious, novelty-fashion conscious, recreational, price conscious, impulsive, confused by overchoice, and habitual brand-loyal. Sproles and Kendall have recommended that the model be administered and tested with a variety of populations, particularly adults. The purpose of this study was to use the model with an adult population to determine if various store patronage groups (department store shopper, off-price store shopper, etc.) differ in their consumer decision-making styles.

In order to investigate these differences, 236 women 18 years of age or older were interviewed by telephone. Random numbers were drawn to determine which columns and lines were to be used per page from a mid-size midwestern telephone directory. Of the 548 subjects eligible for the study, 112 refused to participate, yielding a response rate of 68%. Demographic characteristics of the sample were acceptably similar to national norms.

Consumers' decision-making styles were measured according to the method recommended by Sproles and Kendall whereby 16 items were on a scale of one to five, with ratings of "strongly disagree" and "strongly agree" as end points. Store patronage groups were determined by asking respondents what one store type they were most likely to patronize for their clothing. The following six patronage groups were used for analysis in the study: department store shopper, specialty store shopper, discount store shopper, national chain store shopper, promotional store shopper, and off-price store shopper. Off-price and promotional store patronage groups were seen as a strength of the study due to the growing popularity of these store types and the lack of research in relationship to these patronage groups. Analysis of variance tests and Scheffé post-hoc comparisons were used to compare differences between patronage groups in relationship to consumer decision-making styles.

Results of the analysis of variance tests and Scheffé post-hoc comparisons revealed that patronage groups differed significantly on three of the eight factors in the model. Department and specialty store shoppers were significantly more brand conscious than off-price, national chain, or discount store shoppers. National chain shoppers were significantly less novelty-fashion conscious than department or specialty store shoppers, and discount shoppers were significantly more price conscious than department store shoppers. The patronage groups also significantly differed on their attitudes toward store brands and what they felt was a "fair" price for a dress, blouse, skirt, and suit.

Implications from these findings are that they help to extend the work of Sproles and Kendall in establishing a measure for consumers' decision-making styles. This measure can also be used to further the work toward developing a theory of consumer "personality" types. In addition, from a practical perspective, retailers can use the results to better define and serve their target markets.

Traditionally, teenage females' expenditures have accounted for a large share of the family clothing budget. Kinnaird et al. (1987) reported that scores on a Fashion Consciousness Questionnaire (FCQ) comprised of 36 statements regarding 18 behavioral descriptors adopted from studies of Sproles and King (1973) could be used to identify innovator and non-innovator or laggard cotton apparel market segments of teenage females.

The FCQ, based on behavior patterns of consumer segments, does not identify demographic characteristics. Demographic profiles of high school female marketing segments in conjunction with FCQ scores could be applied to designing effective strategies for marketing cotton apparel.

This study was conducted to determine if significant differences existed among fashion consciousness scores of female students age 15-18 in three 4-A Northwest Arkansas high schools due to selected demographic characteristics. Six hundred sophomore, junior and senior female students selected by cluster sampling from three 4-A high schools received the FCQ and a form requesting demographic data concerning age, grade classification, family income, occupation of parents, personal income, car ownership and participation in organizations. The FCQ required participants to rate each of 36 statements on a Likert-type scale of 0-4 according to its representation of their behavior toward acceptance and use of new forms of cotton dress. Low ratings indicated early acceptance (innovator) and high ratings, late acceptance (non-innovator or laggard). A return of 343 or 53.5% of the questionnaires provided data for the study. Ninety nine percent of the participants were white; the average age was 16.

The data were subjected to an analysis of variance in which the dependent variable was the FCQ score and the factors were the demographic characteristics listed previously. Students with personal income less than $25 a week had significantly higher mean FCQ scores than those with greater income. Students of fathers employed in professional, executive or managerial occupations had significantly lower FCQ scores than those with fathers in other occupations. Senior students with high participation in school related organizations had significantly higher FCQ scores than all others. Also, higher FCQ test scores were observed for sophomore and junior students with high participation in school related organizations. However, a significant difference was found only for the seniors.

An implication of the study is that demographic profiles including father's occupation, student's income, and participation in high school organizations could be of value in effectively marketing cotton apparel to female teenagers. An interesting finding was the relation of senior students' FCQ scores and their participation in organizations. Why is the senior female student with high participation in school related organizations significantly less innovative than all others? Further study is needed for additional information regarding market segmentation of female teenagers.

REFERENCE

International Trade Education: Does It Matter?

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Will opinions held by students be changed after they hear speakers with diametrically opposite viewpoints? Or, will they selectively assimilate only the information which fits with their current opinions? This paper will discuss the impact on student opinions of a seminar on the controversial issue of international trade.

Much of the printed materials and visual aids addressing international trade in apparel and textiles are prepared by those in the industry and reflect their viewpoints. Other materials, equally supportive of unrestricted trade, may fail to address legitimate concerns of apparel/textile manufacturers. However, many graduates of apparel and textile programs enter retailing where the position on international trade may differ from that of apparel producers. The issue becomes even more complex if a region or state depends on international trade for a major part of its economic base. An instructor may find it impossible to present all positions with equal enthusiasm and rational argument because of personal biases. Yet international trade is an increasingly important component of the U.S. economy and students in apparel and textiles programs should have complete information upon which to base their opinions and decisions. This dilemma led to a seminar titled International Trade: Issues and Alternatives. Speakers of varying backgrounds were selected for their ability to present opposing viewpoints in a forceful manner. Their topics included governmental policies affecting trade, unfair trade practices, textile international trade and its regulation, consumer opinions of imported apparel, research on country of origin as a criterion in buying textile products, impact of trade restrictions on the farm economy, and the effect of lobbying on governmental decisions. Panel discussions addressed alternatives to trade barriers and retailers' opinions about imported products. Questions and answer periods throughout the seminar gave students the opportunity to raise questions with each of the speakers. The format also encouraged interaction between speakers. Assignments included a list of readings to be completed prior to the seminar and a position paper written after the seminar.

All students enrolled in the concentrated weekend seminar were given a pretest and posttest to measure their opinions on international trade and to ascertain certain shopping behaviors. The pre- and posttests were matched by assigning an identification number to each syllabus which the student entered onto the score sheets. Most of the students in the class were majors in apparel and textiles although several other majors were represented. No attempt was made to analyze the responses by the student's major.

Seventy-six students completed the pretest; 66 the posttest. Data were analyzed through t-tests to determine whether the differences between the pretest and posttest means were significant. We were able to conclude that opinions of students on several statements about international trade were significantly different at the .01 level. No significant change was noted in behavior responses. Means on 7 statements differed at the .001 level. There was greater agreement after the seminar with these statements: the U.S. should follow a free trade policy; trade partners should purchase as much from us as we purchase from them; U.S. apparel producers have not been able to compete successfully; counterfeiting has been a particular problem; the U.S. shoe industry has been damaged by dumping; the federal budget deficit has a negative impact on the U.S. trade balance; and exports of textile and apparel products have decreased.

It was concluded that when presented with equally strong arguments on opposing sides of an issue students selected arguments they found valid and adjusted their opinions accordingly. Information presented in the seminar did not support some of the opinion changes; therefore a particular mind set may have influenced some of the changes.
EVALUATING THE ABILITY OF SOIL AND STAIN REPELLENT FINISHES CONTAINING ULTRAVIOLET STABILIZERS TO REDUCE FADING IN UPHOLSTERY FABRICS

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Improvement of the colorfastness properties in consumer textile products has been approached in a variety of ways including development and use of after-treatments for improving fastness properties. Most recently retailer and consumer applied soil repellent finishes containing ultraviolet stabilizers have been marketed as a means for protecting textile products from the damaging effects of light. The distributors of these multifunctional finishes claim that treated carpets and fabrics resist fading as well as soils and stains. However, there has been no published research that evaluates the ability of these multifunctional finishes to reduce fading. Therefore, the purpose of this research was to evaluate the ability of commercially available soil and stain repellent finishes containing UV stabilizers to reduce fading in upholstery fabrics.

Selected for this study were fourteen upholstery fabrics representing a range of fiber types (cotton, linen, silk, wool, polyester, rayon and nylon), dyes (natural and synthetic), fabric constructions (rep weaves, basket weaves, dobby weaves, and velvets), and lightfastness properties. The upholstery fabrics were selected from over fifty fabrics initially considered for inclusion in the study. Based on preliminary lightfastness testing of over fifty fabrics, fourteen fabrics were selected for further study because they exhibited appreciable fading after 80 AFU's of xenon light exposure. Fabrics were selected on this basis because only fabrics that appreciably faded during 80 AFU’s of light exposure would be able to exhibit a reduction in fading if the multifunctional finishes were effective.

Two commercially available soil repellent finishes were selected for evaluation. One was a fluorocarbon product containing ultraviolet stabilizers and marketed for consumer and retailer application. The second finish was a silicone product available through service companies. The selected fabrics were treated with the multifunctional finishes and exposed to xenon light for 80 AFU’s. Untreated fabrics were also exposed to light and served as controls. To evaluate the protective effect of the finishes, instrumental color difference measurements were made using a Hunter LabScan II Spectro-colorimeter. Additionally, visual evaluations were made using an AATCC Gray Scale for color change. The experimental design for this study was a completely randomized block design. A General Linear Models analysis of variance was used to evaluate the dependence of color difference readings and AATCC Gray Scale ratings on treatment. If treatment significantly affected the dependent variables, Tukey’s HSD test was used to separate the means. The level of significance was set at .01 level for all tests.

Results of both visual and instrumental evaluations showed that neither the fluorocarbon nor silicone-based soil repellent finishes containing UV stabilizers significantly reduced fading in the array of upholstery fabrics evaluated. Results of the visual evaluations show that in most instances the evaluators could see no difference between the untreated controls and the treated specimens. In some instances the treated fabrics exhibited slightly greater (although not statistically significant) color losses than their untreated controls. While it may be possible to identify some dyes that would benefit from treatment with these multifunctional finishes none were identified in the array of upholstery fabrics examined in this study. Because these stain repellent finishes containing ultraviolet stabilizers did not even modestly reduce fading in the range of commercially available fabrics to which they were applied, they do not appear to be a cost effective additive to stain repellent formulations and they cannot be recommended to consumers as a means of minimizing color losses.
Fabric drape is a subjective evaluation which is an important aesthetic property for use in garments. Objective testing for drape has involved various devices which determine fabric distortion in either two or three dimensions (Chu, Cummings, & Teixeira, 1950). This device determined drapeability by draping a circular fabric specimen over a pedestal and measuring the area of the draped image. A light over the specimen formed a shadow of the draped image which was then traced on paper. The ratio of the area of the draped image to the area of the undraped specimen was termed the drape coefficient (DC). Cusick (1968) replaced measurement of area with a ratio of paper weights to calculate the DC.

Cusick (1965) emphasized the dependence of drape on fabric bending and shear stiffness, both of which are measured as two dimensional deformations. The mechanical measurement of these two properties has been greatly advanced by the instruments designed by Kawabata (1980), which enable determination of fabric reaction to small deformations.

This work involves improvements to the Drapemeter designed by Chu et al. (1950), and the comparison of drape values measured on this instrument with shear and bending measurements. The drape tester consists of a box containing a pedestal over which a fabric specimen 10 inches in diameter was draped. A light source is placed directly over the specimen, and the amount of light blocked by the specimen is detected by photovoltaic cells on the interior base of the box. A digital voltmeter provides a direct read-out of the amount of light blocked by the specimen. The voltmeter is adjusted to zero by completely covering the photovoltaic cells with the fabric specimen, and adjusted to 1000 with no specimen on the pedestal. Any change in the amount of light reaching the photocell is therefore due to blockage by the fabric specimen. The larger the area of blockage, the lower the drape value, and the less drapeable is the fabric.

Drape values for fabrics representing a range of fiber contents, and yarn and fabric constructions were obtained. Tensile, shear, and bending behavior were determined on the Kawabata Tensile and Shear Tester and the Kawabata Pure Bending Tester. Linear and multiple regression analyses determined relationships between the drape values which represent a three dimensional distortion and the mechanical properties, measured in two dimensions. There was a significant correlation of drape values with shear stiffness and hysteresis as well as with weight and thickness. The mechanical properties which explained most of the variation in multiple regression were shear hysteresis and weight. Drape values obtained using a 3-inch diameter pedestal correlated more highly with shear properties than those from testing on a 5-inch diameter pedestal.


Today there is increased concern over the transference of deadly viruses and bacteria through body fluids from one individual to another. To effectively eliminate the risk of infection, barriers must be used to prevent this transference. This study evaluated the ability of different fabrics, as barriers, to prevent the transmission of two bacterial species through the fabric. The fabrics evaluated included two woven fabrics and six nonwoven fabrics. Fabric variables of construction, weight, surface energy, and finish were measured and compared with the ability of the fabric to prevent bacterial transmission.

In this study eight different fabrics were tested to evaluate their ability to prevent the transmission of bacteria. The fabrics included three nonwoven fabrics and two plain woven fabrics, all untreated and treated with a repellent finish. The nonwovens consisted of two composite fabrics containing three layers; spunbonded, meltblown, and spunbonded at high and low weights and a meltblown fabric. The repellent finish on the nonwoven fabrics was factory applied and the exact formulation is unknown. The woven fabric was a 100% cotton plain weave, The sample was treated with a temporary fluorocarbon based repellent finish that is commercially available. The fabrics were randomly cut into circular specimens of 8 cm diameter and then sterilized. The methods of sterilization did not alter the fabric properties. The fabric samples were placed on agar filled petri dishes. Two bacteria species, staphylococcus aureus and enterobacter aerogenes, were used in this study. The bacteria was prepared in broth to contain a minimum of $10^6$ cells per milliliter. Each fabric sample was inoculated with 100 ml of the prepared broth and covered. The plates were evaluated for the presence of bacterial growth at one, three, five, and seven hours. The presence of bacterial growth on the agar indicated transmission of the bacteria through the fabric. Results were statistically analyzed using ANOVA and t-test procedures.

The fabrics treated with the repellent finish prevented bacterial transmission significantly more than the untreated fabrics. Bacteria transmission through the untreated nonwovens occurred for all replications in the first hour. The untreated woven fabric showed 60% of the samples to have allowed transmission by the first hour and all fabric samples had allowed transmission by the third hour. The treated woven fabric showed 20% of the samples allowed transmission at one hour, 40% allowed transmission at three hours, and all of the samples allowed transmission at the end of seven hours. There was a significant difference between measured surface energies of the fabrics and transmission. As the surface energy ratings decrease, transmission occurred. This supports theories of surface chemistry that as the difference in surface tension of the liquid and the surface energy of the fabrics increases, transmission will not occur because absorption does not take place. There was no significant difference between weight, thickness, and transmission.

To determine if penetration would occur if carriers other than the bacterial broth were present to transport the bacteria, water, a physiological saline solution, and blood plasma were evaluated. None of these liquids transmitted the nonwoven treated fabrics.

The results of this study indicate that repellent treatments which alter the surface energy, significantly improve the barrier effectiveness of a fabric in the prevention of bacterial transmission for nonwoven fabrics. The treated nonwoven fabrics evaluated provided better protection than the treated woven fabric. These findings are beneficial to the development of a universal protective clothing system for the reduction of bacterial transmission.
As leather becomes a more important fashion look, problems in caring for leather become more evident. Problems frequently cited by leather cleaners and the International Fabricare Institute include dimensional stability and fusible interlining delamination and pilling ("1988 Garment", 1988).

An experimental randomized block design was used to evaluate the effect of two drycleaning solvents after one and five drycleaning cycles on the performance properties of two colors of pigskin suede backed with two fusible fiberweb interlinings. The selection of interlinings was based on preliminary bond tests and experts' recommendations relative to hand, weight, and suppleness. One interlining had lengthwise oriented fibers with a sintered adhesive (Type 1). The second interlining had random oriented fibers with a dot adhesive (Type 2). Interlinings were commercially fused to the back of the suede and professionally leather cleaned. A two-inch strip of each suede specimen was not bonded. Analysis of variance was used to evaluate performance properties including dimensional stability, pilling, glue bleed, and interlining bond permanence using AATCC and ASTM standard test methods whenever possible.

In general, blue specimens shrunk more than brown specimens cleaned in petroleum shrink more than those cleaned in perchloroethylene. The greatest determinant of shrinkage in bonded areas was interlining. Type 1 interlining distorted the shape of the specimens because of lower lengthwise than crosswise shrinkage. Crosswise shrinkage for bonded areas of both interlinings was higher than the crosswise shrinkage of unbonded areas. As compared to unbonded controls, interlined specimens had less variation in shrinkage. Glue bleed was not a problem with either interlining. Pilling was objectionable for both interlinings. In comparing Type 1 and Type 2, pilling was significantly greater for Type 1. For both interlinings, pilling was more severe after the fifth cleaning cycle.

During the strength of bond tests, three pulling patterns were identified. In two patterns, the adhesive bonding the interlining to the pigskin was stronger than the cohesiveness of the interlining fiber web. In one case, rather than peeling off as a separate layer, the interlining fibers separated from each other and a thin portion of the interlining remained fused to the pigskin. In the second pattern, the pull tab tore away because the bond strength exceeded the strength of the fiber web and occurred more often with Type 2 interlining. In the third pattern, the interlining separated from the pigskin with little trace of adhesive remaining. Type 2 interlining was clearly superior in bond strength than Type 1 interlining. Solvent had no effect on bond strength.

This research provided the beginning of a data base on selected performance characteristics of pigskin leathers and explored issues related to product performance. Additional research is needed on the performance of other types of interlinings, other dry cleaning processes, as well as comparisons with other types of leathers and leather products.

Factors Affecting Comfort of Fit of Cotton and Cotton Blend Blouses

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Functional finishes have provided cotton and cotton blend fabrics with characteristics of low maintenance, improved durability, biological resistance and improved safety. Much less research information has been reported concerning the effect of functional finishes on comfort of fit of garments constructed of these same fabric types.

This wear study was designed to determine the effects of a functional finish (dimethylol-dihydroxyethyleneurea - DMDHEU), fiber content, environmental temperature and activity level on the comfort of fit of shirt-style blouses. Twenty-four long sleeve, size 12, blouses were constructed and randomly assigned to eight college-age women. One half of these blouses (12) were 100% cotton with six being DMDHEU finished and six left unfinished. The remaining 12 blouses consisted of 65/35 cotton-polyester with half being DMDHEU finished and half being unfinished.

These blouse types were worn during two activity levels. Half of the participants performed aerobic exercises for 30 minutes inside an environmental chamber at 55°F, 70°F and 85°F, respectively, while the other participants read or studied with no activity at these same respective temperatures. Immediately following the 30 minute wear period, with and without activity, and prior to removal of the blouse, each participant rated comfort of fit using an instrument developed by Regional Research S-163 committee members. Ratings ranged from 1 (extremely uncomfortable) to 10 (extremely comfortable). Comfort of fit was determined by participants' ratings of eight selected blouse areas (neck, armhole, shoulder blade, sleeve length, sleeve girth, sleeve cuff, center front, button placement) as to how the fit of each blouse area influenced their sense of well-being. Participants repeated their performances and answered the questionnaire following 5, 15 and 25 times of laundering.

Data were subjected to an analysis of variance followed by LSD test. The dependent variable was comfort of fit and the factors were fiber content, DMDHEU finish, laundering, environmental temperatures and activity level of participants.

Laundering had the greatest influence on the subjective ratings of comfort of fit for both the 100% cotton and 65/35 cotton-polyester blouses. Comfort scores for all blouse types indicated that the garments decreased in comfort as number of times laundered increased. The comfort score for the 65/35 cotton-polyester blouses was higher than for the 100% cotton garments. The DMDHEU finished 100% cotton types were rated as a more comfortable fit than the unfinished ones; whereas, the unfinished 65/35 cotton-polyester garments received higher comfort ratings than those finished with DMDHEU. The comfort of the unfinished 65/35 cotton-polyester blouse was least affected by laundering, followed by the DMDHEU finished 100% cotton, unfinished 100% cotton, and DMDHEU finished 65/35 cotton-polyester type.

Implications of the study are that (1) manufacturers of 100% cotton blouses may enhance the comfort of fit with a DMDHEU finish; whereas, this finish is not desirable for cotton-polyester; (2) individuals working in a comfortably controlled environment are more critical of comfort of fit than those in an uncontrolled environment regardless of whether or not they are performing an active task.

Research conducted under Regional Project S-163, "Effects of Functional Textile Finishes on Comfort and Protection of Consumers"
The garment designs of Madeleine Vionnet, French couturière, are legendary for their complexity and for their ability to mold to the body contours. Vionnet is considered a master sculptress, using fabric as the sculpting medium. Yet little information is available to the costume historian or apparel designer regarding Vionnet's famous "cut."

Thirty-eight extant garments attributed to Vionnet were examined using costume collections at The Costume Institute of the Metropolitan Museum of Art, the Fashion Institute of Technology, and the Brooklyn Museum in New York City; Union Française des Arts du Costume in Paris; and the Victoria and Albert Museum in London. Each of the Vionnet garments studied was sketched, photographed (if allowed), and pattern pieces drawn to scale.

From this sample of 38 garments, 2 blouses and 5 dresses were selected that illustrate Vionnet's creative genius with the use of fagoting and the bias cut. Vionnet's use of decorative fagoting and its interrelationship to each garment's structural design was analyzed.

The term "fagoting" is used to denote several different types of decorative effects. In some of Vionnet's garments, the fagoting is a type of drawn thread work. Lengthwise and crosswise yarns, or "threads," are withdrawn from the fabric at intervals, leavings only a skeletal, decorative structure of fabric remaining. Since the drawn thread work must be executed on the lengthwise and crosswise grain of the fabric, the cut of the garment is made obvious to the viewer by the decorative fagoting.

Two blouses studied at the Fashion Institute of Technology Design Laboratory use fagoting in another way. One blouse uses fagoting as an insertion to join edges of garment parts instead of using traditional seaming. The fagoting provides more flexibility to the structural joinings than would be possible if traditional seams had been used. The other blouse from the Fashion Institute of Technology collection also uses fagoting instead of traditional seams. This blouse incorporates the fagoting with hem stitching, providing another decorative effect.

The four dresses studied at the Victoria and Albert Museum and one dress from the Costume Institute of the Metropolitan Museum of Art utilize the technique of drawn thread work. All but one of these dresses incorporate a structural seamlne at the edge of a row of fagoting. In three of these dresses, a structural horizontal seamlne hidden by the fagoting is also used to introduce flare in the skirt.

In summary, the complexity of the thread drawn work, the intricacy and body-sculpting qualities of the cut (4 of the dresses and 1 blouse are bias cut), and the marriage of decorative and structural design produce garments that stand as works of art. These are masterpieces in every sense and serve as an inspiration for contemporary garment designers. This study extends historic costume research by analyzing design characteristics of one of the greatest twentieth century fashion creators.
ASSESSING FACTORS IN DESIGNING ACCEPTABLE WORK APPAREL FOR FARMERS EXPOSED TO FOLIAR PESTICIDE RESIDUE TRANSFER

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The hazards associated with exposure of farm workers to pesticides during application activities is well documented, and some attention has been given to the design of protective clothing for these situations. Less attention has been given to protecting farmers and other farm workers from foliar residue transfer. Although the hazard from a single exposure to foliar residue is much less than may occur with a single exposure to a forceful spray during application, the accumulation of small exposure amounts has been known to create serious health problems. Little research has been conducted on the design of work garments which will provide an appropriate level of protection from foliar residue transfer while maintaining acceptable style and functional features.

Cotton and soybean farmers in a southern state were surveyed to determine their potential for exposure to foliar pesticide residue transfer, the types of garments currently worn into pesticide-treated fields, and their preferences for fiber/fabric parameters, garment design features, and functional aspects of work apparel. Data were analyzed using descriptive statistics and chi-square analyses.

Respondents indicated that they frequently walk through treated fields shortly after spraying. This activity was reported to occur once or twice a week and accounts for 2-20 hours/week for the majority of the respondents, suggesting great potential for exposure to foliar residue transfer. The typical garments worn into pesticide-treated fields are short-sleeved, woven or knit sports shirts and long pants. Few respondents wear disposable protective work clothing.

Fiber content of work apparel was important to respondents with strong preference given to garments of high cotton content. Feel of the garment and wrinkle resistance were also important factors. Garment design features which were important to respondents were front and back pants pockets, shirt pocket, separate top and bottom, zipper closures on pants, and front button closures on shirts. Some respondents indicated a preference for one-piece garments and elasticized waistlines.

The most important functional feature of work apparel was thermal comfort, which is not unexpected since the spraying season occurs during the hottest months of the year. Discomfort of current protective clothing has been one of the major drawbacks to worker acceptance. Other functional features of importance to respondents were non-binding fit, durability, and ease of dressing.

Results of the study suggest several challenges for the designer of work apparel for protection from foliar residue transfer. In order to be acceptable for wear, the garment should provide comfort and functional properties similar to currently worn garments. Features of importance to farmers should be tested in prototype garments to determine how to adapt such features for protective apparel without increasing the hazard of foliar residue absorption or penetration.
Durable press has been an industrial response to consumer demands for ease of care cotton apparel. Durable press fabric (American Society for Testing and Materials, ASTM, 1988) is defined as having the ability to retain substantially the initial unwrinkled appearance during use and after laundering or dry cleaning. Standards for performance specify that fabric appearance shall not decrease more than one-half of a durable press rating from that of the fabric prior to use and laundering or dry cleaning.

Durable press ratings are visual evaluations by trained observers of appearance performance based on a comparison of the apparel fabric with that of three dimensional plastic durable press (DP) replicas available from the American Association of Textile Chemists and Colorists (AATCC), and representing intervals of fabric surface smoothness as follows:

- DP-1 rating - crumpled, creased and severely wrinkled
- DP-2 rating - rumpled, obviously wrinkled
- DP-3 rating - mussed, nonpressed appearance
- DP-3.5 rating - fairly smooth, but nonpressed appearance
- DP-4 rating - smooth, finished appearance
- DP-5 rating - very smooth, pressed, finished appearance

The AATCC test procedure provides a voluntary standard for evaluation of performance of DP fabrics but it does not address the appearance necessary for consumer satisfaction. The objective of this study was to determine if any significant differences existed among consumer responses of satisfaction with a blouse or shirt fabric of comparable appearance to each AATCC Replica DP 1-5 due to age or sex.

A set of durable press replicas were mounted in random order, according to viewing recommendation of AATCC Test Method 124-1984. Five hundred and ten males and 1,114 females, from five selected locations in Arkansas, viewed the DP replicas. Participants completed a written questionnaire regarding their sex, age range and a yes or no response based on whether or not they would be satisfied with a shirt or blouse with an appearance comparable to each DP replica. Age ranges included: below 20, 21-35, 36-50, 51-64 and over 65 years.

Data were subjected to a Pearson chi-square test. The dependent variable was the DP appearance satisfaction responses and the factors were age and sex. Also, frequency and percentage of satisfaction responses were calculated. Ninety-four percent of the participants indicated satisfaction with a fabric appearance comparable to a DP-5 rating, followed by 84% for DP-4, 74% for DP-3.5, 31% for DP-3, and 8% for each of DP-2 and DP-1. Age was found to have a greater influence than sex on the satisfaction responses to fabric appearance. Smoother fabric surfaces were required for a satisfactory appearance by both males and females ages 21-64 years than all others, except for males over 65 years of age (p<.05). Males under 20 years of age were the most accepting of wrinkles; however, they did not differ significantly from females of the same age.

This study has implications for producers of DP cotton shirts and blouses especially in regard to marketing segments of different sex and ages. Further study in other geographical locations could provide additional information regarding performance levels expected by consumers for satisfaction with durable press items. Also, the fashion trend of the wrinkled look may have influenced some participant's responses.
Off-price retailing has expanded recently in terms of number of stores and market share. Productivity of these stores and average turnover rate are higher than that of average department stores. What is it about this store type that has so attracted consumers? Store patronage research has been oriented toward the discovery and classification of aspects of retail institutions which function as "choice criteria"—for example, merchandise, service, convenience, personnel, atmosphere, and promotion. Few studies have attempted to demonstrate causal relationships between store attributes and patronage preference. The objectives of this research are to (1) investigate the extent to which nine attributes of apparel carried by off-price stores have satisfied consumers and the extent to which consumers prefer to shop in off-price stores compared to other apparel stores, (2) identify relationships between attributes and preferences, and (3) identify the determinant apparel attributes of off-price store patronage preference. An integrated patronage preference theory is used to explain relationships between consumer perceptions of the merchandise dimension of off-price stores and patronage preference. This theory explains the formation of consumers' shopping predispositions in terms of four determinants interacting with one another in the mechanism of three constructs: shopping motives, shopping options, and choice calculus.

In order to investigate these relationships, 162 adult female residents of a medium-size midwestern city were interviewed by telephone. Using a five-point Likert scale, the questionnaire was designed to distinguish between those respondents who have shopped in off-price stores for women's apparel and those who have not, measure the degree of consumer satisfaction with regard to apparel merchandise attributes and the degree of patronage preference for off-price stores compared to other apparel stores, and to assess each respondent's demographic profile. Pearson product-moment correlations between independent variables were used to test multicollinearity and measure the bivariate linear relationship between dependent variable and each independent variable. Multiple regression analysis was used to analyze data. Results indicated that apparel carried is the major characteristic of off-price stores that determines consumer patronage preference. Multiple regression coefficients and correlation coefficients revealed the existence of a positive linear relationship between apparel attributes and patronage preference. As the attributes were measured in terms of consumer satisfaction, it was inferred that higher satisfaction results in stronger preference. The positive linear relationship is consistent with the theoretical framework in that satisfaction provides a positive reinforcement for future behavior intention, and thus is indispensable to repeated behavior. Four apparel attributes—category of the product, timeliness of fashion, brand, and value for money spent—were found to be significantly important determinants of the off-price store patronage preference of respondents. A prediction equation for off-price store patronage preference was formulated and tested. Results indicated that the determinacy of "value for money spent" was very prominent compared to other variables. These findings indicate that satisfaction does indeed demonstrate a causal effect on patronage preference. The high explanatory power of merchandise attributes on patronage preference of off-price stores has significant managerial implications for retailers as well as implications for consumer behavior researchers and theorists.
From both a demographic and economic perspective, mature consumers represent the growth segment for the next decade and beyond. Consumers over 50 control over 50% of all discretionary income accounting for 40% of total consumer demand (Linden, 1986). This segment is expected to grow by 23% by the year 2000 and will comprise more than 28% of the U.S. population. With such tremendous purchasing power, it is surprising that few retailers target the mature consumer, yet the majority of retail stores have not developed any merchandising programs for the 50+ consumer.

A potential communication source for retailers desiring to reach this market is the fashion opinion leader. Opinion leaders influence the attitudes and behavior of others through verbal and nonverbal communication. Diffusion of innovations served as the conceptual model for the study. Fashion opinion leadership, a component of this model, is a communication channel; it is a form of interpersonal communication that facilitates the spread of an innovation.

The purposes of this study were to: (1) to identify important retail store attributes of mature consumers and (2) to determine if fashion opinion leadership was a predictor of importance of retail store attributes.

The survey research method was used with a random sample of 2,003 consumers being drawn from a subscriber list to a national magazine targeting this group. A 35% response rate (n=711) resulted.

Fashion opinion leadership was measured by using 20 Likert statements adapted from Shrank and Gilmore's (1973) fashion opinion leadership index. Degree of importance of twenty retail patronage characteristics were evaluated using 5 point Likert scale questions. Mean scores were computed and it was found that ability to return unsatisfactory products and product quality were the two most important store characteristics to the mature consumer.

The 20 fashion opinion leadership items and the 20 retail attributes were factor analyzed and composite factors computed. Fashion opinion leadership composite factors (fashion opinion leadership, fashion opinion negativism, baby boom influencer) were used as the independent variables; retail attribute factors (convenience, age-driven, quality/reputation, price, credit) were used as the independent variables in stepwise regression analysis. Fashion opinion leadership was a significant predictor for age-driven attributes. Baby boom influencer dimension was a significant predictor of convenience attributes. The low R^2 (<.05) suggests that other variables are more sensitive predictors of importance of retail attributes to mature fashion opinion leaders.

These findings suggest that mature fashion opinion leaders do not seem to differ from mature consumers as a whole on the importance placed on retail attributes. For retailers, this may indicate that special promotional mixes targeting mature fashion opinion leaders are not needed. Focusing on quality products and services in the promotional mix might be a more effective strategy in targeting the mature consumer.

References

Despite the volume of research directed toward catalog shopping, little is known regarding mail order catalog shopping and specific product categories. Hence, the purpose of the study was to examine credit card use and brand preference regarding catalog patronage for clothing purchases. Given the recent proliferation of catalog retailers, credit and brand use is a critical managerial concern.

A questionnaire was developed to assess credit card use, brand preference, and catalog use. Six hundred residents from two metropolitan areas located in a southwestern state were randomly selected from current telephone directories. A 30 percent response rate resulted from two mailings. Over half of the respondents were female and over half were married with no children living at home. One third of the respondents were 60 years or older and three-fourths had some college or vocational training. Approximately half of the respondents reported incomes between $20,000 to $49,999. Almost half of the respondents were employed fulltime and half in semi-professional positions. Over half of the respondents used credit cards and nearly half used catalogs for clothing purchases in the past year. In comparison with the general population of the two cities, the median age was higher; however, regarding income and education, respondents were consistent with census data available. The researchers hypothesized that significant differences would exist among nonusers, users, and heavy users regarding credit card use and that brand preference would be a function of shopping preference for catalogs. Results of chi square analysis yielded support for the hypotheses (p .01).

Eighty-five percent of the heavy users of catalogs and 74 percent of the users, but only 52 percent of the non-users used credit cards for clothing purchases. Respondents with strong brand preferences also considered catalogs acceptable for clothing purchases. Results support findings prevalent in literature and suggest that catalog users are brand conscious consumers and are more likely to use credit cards to purchase clothing than nonusers. Catalog marketers might consider implementing a credit program that allows optimal credit use for clothing purchases such as establishing their own credit cards in addition to bank cards. Furthermore, catalog houses may consider carrying national brands of clothing in catalogs as well as increasing awareness of private label branding via effective copy in catalogs. In addition, advertising strategies that focus on brands carried may encourage prospective shoppers to buy through catalogs.
The purpose of this study was to determine how adult females' clothing interest influences their perceptions of stores and the store chosen for apparel purchases. A survey, joining Smith's (1976) scale of clothing interest and Ring's (1978) measure of perceptions of store image, was used to collect data. The survey was administered in a shopping mall for data collection. A total of 265 usable questionnaires were collected from females between the ages of 18 and 64.

It was found that age influences the level of clothing interest, and females between the ages of 18 and 24 were most interested in clothing. The level of clothing interest is related to the store that is perceived as having the best value. Females in the high clothing interest group and the low interest group perceived specialty stores as having the best value. However, females in the medium interest group believed that discount stores, followed closely by department stores had the best value.

The findings revealed that clothing interest influences the store shopped most for apparel. Females with a high interest shop most at specialty stores, while those with a medium and low level of interest in clothing shop most often at department stores.

It was found that the following store image dimensions influence the store shopped most often for clothing: the store 1) that is easiest to get to; 2) with the most knowledgeable/helpful salesclerks; 3) with the highest quality women's fashions; 4) that gives the best value for the money; 5) with the largest overall merchandise assortment/selection; 6) with the best conservative everyday women's wear; 7) with the best current, up-to-date women's wear; and 8) with the most exciting display of women's fashions.

Low prices did not directly influence customers' choice of an apparel store. It appears that females do not shop at stores because of low prices, but instead are influenced by value, or the trade-off between price and quality.

This information can help retailers understand the dynamics and trade-offs involved in store choice. Retailers may want to investigate the preferences of females between the ages of 18 and 24, since they have a high interest in clothing and are more likely to purchase larger amounts of clothing and spend more per item than the general public (Crask & Reynolds, 1978). Females with a high interest in clothing help retailers predict fashion trends, since this group is more likely to purchase items early in the fashion cycle. Merchandising and human resource students may find this information beneficial as they prepare to understand their future customers.

Future research with a larger sample of females in the 18 to 24 age group could provide valuable market segmentation information.


The Relationship of Appearance Satisfaction on Post-Mastectomy Women's Self-Esteem

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Quality of life for breast cancer patients can be enhanced by a supportive environment. There is a consensus in the health care field that social support does make a difference in health practices and recovery from illness. A model is suggested to explain the relationships among social support, attitudes toward mastectomy, and self-esteem of post-mastectomy women. A symbolic interaction perspective was utilized as a theoretical approach.

The objectives of this study were: to identify demographic and medical variables that significantly impact on social support; to examine relationships of the significant social support variables on mastectomy attitudes; and to ascertain the relationships among the previously identified significant variables on post-mastectomy women's self-esteem.

A mailed questionnaire was sent to 2,000 post-mastectomy women who had received a Reach to Recovery visit within the past 24 months. Fifty-three percent responded. Instruments selected for the study were: The Norbeck Social Support Questionnaire (1981), Rosenberg's Self-Esteem Scale (1965), and a modified version of Heyl's Mastectomy Attitude Scale, MAS (1977). The MAS was factor analyzed using principal components analysis; other methods were: Pearson correlations, multiple regression, and path analysis. Regression models were tested at p < .10 to ensure terms that were only marginally significant would be retained for all portions of the path analysis.

Results revealed that emotional support was a function of age, educational status, and time since surgery; aid and network size were functions of age and marital status. The independent variables in step two included the significant variables from step one—age, education, time, and marital status—in addition to emotional support, aid, and network size as the independent variables, and the dependent variables were the seven MAS factors. Age had an effect on all MAS factors; emotional support affected attitudes toward appearance, emotion, openness, and necessity; network size affected appearance and emotion attitudes. In the final stage, self-esteem was the dependent variable, with the previous significant variables as the independent variables. Self-esteem was a function of appearance and concealment at p < .001; sexuality at p < .01; emotional support at p < .05. These variables accounted for 30.85% of the variance. A positive attitude toward one's appearance, outlook, and emotional support had a positive effect on self-esteem, whereas fewer inhibitions toward sexuality, fewer attempts towards concealment, and emotional concerns were predictors of positive self-esteem.

Implications from these findings indicate the importance of appearance to the post-mastectomy woman's physical and psychological recovery. Addressing women's concerns related to post-surgery appearance is an important subject in social support groups, therapy counseling, and Reach to Recovery visits.

References


CONSUMER PERCEPTIONS OF APPAREL CATEGORIES

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Apparel research on categorization has been related to the product or tangible effects of dress and has included single product schemas such as those related to sweaters (DeLong, Minshall, & Larntz, 1986) and to whole ensembles related to appearance (Buckley, 1985). In this study the focus was on consumers' response to perception of the category itself and their description of products that completed each category.

This research was designed to explore how consumers define pre-determined categories of apparel. It was hypothesized that a successful purchase is one that has been incorporated into the self and situational aspects of dress more than an unsuccessful purchase, which would be described at the level of product concept.

A questionnaire was distributed to 260 females including college students and members of the Minnesota Home Economics Association. Respondents who completed the questionnaire totaled 151; they ranged in age from 20-85. Subjects were asked to describe an apparel purchase which they considered to be successful, unsuccessful, and favored in their wardrobes. First, clothing was described to complete these categories and then justified based upon subject's perceptions. Also included were questions concerning personal experiences with shopping, especially clothing which was incongruent with respondent's image of self. Content analysis assigned the categorical justifications into three sub-categories: product, self, and situation. These sub-categories were used to quantify the open-ended responses and compare the subjects based upon age groupings. Age groupings were 20-24 (31), 25-44 (57), 45-64 (32), and 65-85 (31). Data were also correlated using chi-square and analysis of variance.

The results indicated that subjects varied in the use of the categories of successful, unsuccessful, and favored according to mention of product, self, and situation. The unsuccessful category was defined more by single criterion while a successful or favored product was defined by many interactive criteria. While the desire to purchase experimental clothing was similar across age categories, the older consumer was less satisfied with the purchase in retrospect. As the age of the subjects increased, the women shopped less and the pleasure in the activity of shopping decreased. Though definition within categories was similar for all age groups, interaction with the marketplace did change. The results suggest the marketplace will be influenced as the majority of consumers become older.

References


Categorization in First Impressions

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Categorization refers to the notion that it is impossible to perceive an object without identifying it. Instead of treating each perceived object as different from every other perceived object, we tend to group them into categories to reduce the complexity of the stimulus world. For example, personality traits are used by people to categorize others (Cantor & Mischel, 1977). In fact, most clothing studies which ask respondents to form first impressions are, in effect, requiring them to categorize stimulus persons as a function of their dress using researcher-selected characteristics (category exemplars). Thus the characteristics attributed to the stimulus person are those suggested by the researcher which (1) may leave out some categories that are meaningful to respondents, (2) may include categories that would otherwise not have been used by the respondents, and (3) may or may not be used by people in real-life situations. The purpose of this research was to determine the extent to which category usage differs in first impressions when (1) researcher-provided category exemplars were used, (2) when respondents were asked to indicate the extent to which they used the categories, and (3) when respondents wrote verbal descriptions so that actual category usage could be determined.

University students (N = 108) participated in three studies. In study 1, 33 people viewed one of three slides of a female model dressed in different fashionable clothing and indicated their perceptions of the model on a 15-statement Likert-type dependent measure. The statements consisted of five categories (Park, 1986): character traits, behaviors, attitudes, demographic traits, and appearance or physiological traits. In study 2, 30 people viewed one of the same three slides used in study 1 and were asked to estimate the percentage of their impression which was based on each of the five categories. In study 3, 39 people viewed one of the same three slides and were asked to write at least three sentences about the person in the slide. Responses were content analyzed in terms of the five categories. For study 1 and study 3 category usage was determined by computing a percentage of the subject's total impression for each category. Results indicated that with researcher-provided categories, 21% of the impressions were character traits, 19% were behaviors, 22% were attitudes, 18% were demographic traits, and 20% were appearance or physiological traits. When asked to estimate their category usage, subjects estimated 22% of the impressions were character traits, 22% were behaviors, 17% were attitudes, 14% were demographic traits, and 25% were appearance or physiological traits. In actual category usage, 32% of impressions were character traits, 11% were behaviors, 9% were attitudes, 14% were demographic traits, and 35% were appearance or physiological traits. Thus although category usage for researcher-provided categories is very similar to subjects' estimates of the use of those categories, both are very different from actual category usage. Researchers should (1) be aware of potential bias if using researcher-provided category exemplars, (2) interpret with caution previous first impression research, and (3) strive to use more content analysis of open-ended measures for a realistic assessment of first impressions.

REFERENCES

In 1981, Eicher elaborated upon Stone's (1962) work on appearance and the self and proposed three domains of dress based on three aspects of the self: the public self, the private self, and the secret self. Using Eicher's typology, child psychiatrist Michelman (S. Michelman and J. Michelman, 1986) explored these domains of dress and self in a preliminary clinical study of adolescent psychiatric patients. This study highlighted the need for comparative data on dress of adolescents not under psychiatric treatment. Using Eicher's typology, child psychiatrist Michelman (S. Michelman and J. Michelman, 1986) explored these domains of dress and self in a preliminary clinical study of adolescent psychiatric patients. This study highlighted the need for comparative data on dress of adolescents not under psychiatric treatment. Our collaborative research was devised 1) to explore the three domains of dress and the self and 2) to explore more fully the social context of adolescent dress from the perspective of the adolescent.

In most previous studies of adolescent dress, survey research methods, using conceptual models developed by researchers have been used to study relatively large numbers of individuals and have focussed on dress and the public self, that self which pertains to formal social roles. Our research expands the focus from the public self to include the private and secret selves. The appearance of the private self relates to relationships with close friends and family in informal settings. That of the secret self appears in secluded or in intimate settings and fantasy. These aspects of self exist within a large social domain, governed by cultural systems of meaning shared by participants. An understanding of these systems of meaning would lead to greater understanding of how an individual uses dress in expressing the self and in communicating identity.

Methodology: Qualitative research methods of 1) observation of students in a large, suburban high school in the upper midwest and 2) in-depth interviews with a non-random sample of eleven students from the tenth grade in this school. Interviews were conducted in students' homes; students were approached as research collaborators. The interview questions were based in part on Michelman's clinical study.

Results: Observation and interviews indicate that the three dimensions of self are evident with the secret self less prominent (at least in an interview context with an adult). In ascendance in adolescence is the public self. The school is an arena of high social intensity where both public and private self are shown to others. In this context, shared meaning systems were revealed most clearly in student classifications of dress of social types at school into categories such as "jocks," "freaks," and "punkers." Adolescents' perceptions revealed the blurry nature of the boundaries surrounding designated categories for the school. The adolescents in our sample do not see the categories as mutually exclusive as data from quantitative studies imply. For some social types there was a greater core of similarity in descriptions. For other social types there was little overlap in descriptions. Further, students emphasized the way in which individuals change membership from category to category, indicating that both forms of dress and dress categories were ephemeral and constantly in flux.

A fluctuating modal form of dress appears to exist within a hierarchy of fluctuating dress categories. These categories seem to serve as temporary anchor or reference points for the adolescent in development of identity, with the extreme forms of dress providing contrasts to modal forms.

Implications: A clearer understanding of the relevance of dress categories for adolescents including the meaning of dress hierarchy within the context of a given school have implications for teachers and others working with adolescents in youth agencies and clinical settings.


This study was undertaken to examine body-cathexis cross-culturally. Body-cathexis, "the degree of feelings of satisfaction or dissatisfaction with various parts or processes of the body" (Secord & Jourard, 1953, p. 343), has psychological, social, and cultural dimensions. The relative importance of determinants of body-cathexis for an individual are a function of the interaction of perceptions of one's own bodily reality in a cultural system, a cultural system with its own relative valuation of attributes of perceived bodily reality (Douglas, 1973).

Data were collected using questionnaires and in-depth interviews. The questionnaire was adapted from Secord and Jourard's (1953) Body-Cathexis Scale. The final sample consisted of 60 small-town women, 30 from Scotland and 30 American. A repeated measures analysis of variance reflected a highly significant interaction effect on the relative evaluation of the various body parts by location. The resultant analysis of least squares means, however, indicated that of the 28 body parts evaluated, the Scottish and American women differed significantly (.05) on mean scores for only six items (hair, hands, voice, breasts, general body performance, and neck), the American women indicating more satisfaction in each case. Interestingly, within-location comparisons indicated that while the lowest absolute mean scores for both populations were nearly identical, the American women's rate of acceleration was much faster than that of the Scottish women rendering much higher satisfaction scores on the high (more satisfied) end.

The interviews suggested interesting difference regarding the source(s) of feelings of body satisfaction. The Scottish women indicated high reliance on husbands and social institutions (church and school) and little reliance on media sources. By contrast, the American women named media sources, followed by a variety of personal-social relationships; social institutions were not mentioned by any of the American respondents.

Difference in responses to the instrument, the hesitant manner in which the Scottish women responded to the interview questions compared to the quick and certain responses of the American women, the Scottish women's reported reluctance to modify their bodies, and the difference between the two groups in perceptions of sources of feelings about the body, all suggest that cultural differences in world view and values provide significant shaping to feelings about the body.

The results of this study suggest that a comparison of mean scores of body parts between different cultural populations contribute little to an understanding of body-satisfaction cross-culturally. Rather, one's body cathexis is a complex but subtle social/psychological construction, one significantly influenced by one's cultural system (Berger & Luckmann, 1967). Larger samples, a more diverse breadth of populations, more attention to gender variation, increased awareness of the influence of cultural context, and the adoption of multi-methodological approaches will all contribute to a better understanding of body-cathexis across human populations and as an integral part of the individual's cultural system.

References
Demographers have been predicting important changes in the configuration of the age groups of the U.S. population. Specifically, the elderly population is expected to increase from 11% currently to 20% by the year 2030. The greying of the population has significant implications for interpersonal understanding and communication between the elderly and the young who are purported to have little tolerance for or sympathy with the aged.

In general, considerable research has been reported relative to the elderly, such as self-concept and perceived social and behavioral problems. Clothing researchers have focused on bodily changes of the elderly, clothing acquisition, clothing preferences, and problems related to availability, such as limited selection particularly of fashionable items.

Hoffman and Bader (1974) examined clothing as a common denominator between the young and the elderly. Their subjects were 167 undergraduate students in Textiles and Clothing from 1971-73. In the present study the focus was on the assessment of college students' attitudes in regard to the personality characteristics and clothing of the elderly (from 1979-1987). Six open-ended questions were adapted from Hoffman and Bader's study and used to obtain data from 1,055 students enrolled in a course entitled, "Clothing and Humanity." Approximately 10 minutes were allowed to complete the questionnaire.

Data were placed into categories and coded: descriptive statistics, including central tendency and correlation, were utilized. Approximately 95% of the students responded that they enjoyed the elderly, versus 79% in Hoffman and Bader's study. The increase could be attributed to youth's heightened awareness of the elderly as a result of increased media attention and personal exposure to the elderly. Students were asked to respond to two additional questions, "Have you ever thought about what elderly people were like at age 20?", and "Have you thought about what you will be like when you are elderly? List characteristics." Responses revealed many positive traits (e.g., active, happy, hard working), followed by body and health characteristics, as most typical of the elderly at age 20. As to the type of older person they would be, students again listed many positive traits (e.g., contented, patient), followed by body and health characteristics, values and attitude descriptors, and family situations.

Questions concerning appropriateness of clothing for the elderly revealed responses in categories of style, fashion, and design features; grooming; fit and comfort; physical accommodation; social/psychological accommodation; care; and economics. The majority of responses fell in the style category. Many specific style features were listed as appropriate (e.g., conservative styles) or inappropriate (youthful styling). A greater range of styles was considered suitable for the elderly than in the Hoffman and Bader study. This finding suggests wider style tolerance by young people today which may be the result of greater variety in styles marketed to the elderly segment.

In summary, findings over the 8-year period indicated that students held more positive attitudes and perceptions than was true in Hoffman and Bader's study. There was variation in response over time; somewhat unexpected was the effect of season on responses. For example, responses during fall quarter generally were more positive and indicated a greater tolerance of styles. The author has found this longitudinal study to be an effective device in teaching clothing needs of the elderly. A particular attention-getter has been a comparison of the data from current classes with those of previous classes.

The complaint is often heard that students have poor writing and thinking skills. Many classes are taught in large lecture halls in which students listen, take notes, memorize information, then take objective tests. This is a fairly good method of exposing large numbers of students to a great quantity of information, but it doesn't usually actively involve students in the learning process.

A new program at this University has been instituted to involve students actively in learning through writing within their subject-matter courses.

In a designated "writing intensive" course, students must produce about 2000 words of writing throughout the semester. At least half the writing must undergo a revision process. It is usually divided into: (1) informal writing, which is not revised, and (2) formal papers, which go through a three-step revision process. Students are required to use the computer for the formal papers, and are encouraged to seek help from the campus writing lab, which was created to aid students taking writing intensive courses. One instructor or graduate teaching assistant is assigned for each twenty students.

This is the second year that the survey of historic costume has been taught as a writing-intensive course. In the first year, history of costume was a regular lecture course with writing assigned each week. While these assignments exposed the students to more writing, many of the papers were "formula" abstracts which could be mastered after one successful try. They involved little thinking, just research and writing in the appropriate format. Changes were needed to improve the course for both instructor and students.

The first revision was to make the course more interactive between the instructor and the students. Lecture about costume history is still done two days each week. Then one day each week, students meet in discussion sessions to exchange ideas about theories of clothing change. Paper assignments link the material covered in lecture to theories discussed in the smaller group sessions.

The writing-intensive method of teaching costume history has worked very well. Students have learned the difference between fact and theory of clothing change, and have also become better writers. Students often get higher grades on the objective portions of tests because they have shared oral and written discourse relating to dress and can, therefore, better assimilate material.

There are, however, some negative effects of having a course designed "writing intensive." Enrollment may drop. Even with graduate assistant help, writing courses take additional faculty time for both preparation and grading papers.

In conclusion, the positive aspects of teaching thinking through writing in a costume history course already far outweigh the negative. Students are better prepared for their careers having actively involved themselves in the learning process through exploration, discovery, and enhancement of writing skills.
Wholesale Suppliers Data Base

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As the Cooperative Extension Service increased its efforts with owners and operators of sewing businesses (small apparel manufacturers, custom sewing and alteration operators, drapery work room owners, upholsterers, fabric retailers, etc.), it became apparent that these individuals had little information for locating suppliers and communicating with wholesale companies. Typical questions and comments from clientele were:

"I have an order to make baseball uniforms. Where can I buy nylon and/or polyester jersey and braided elastic?"

"I'm interested in starting a bridal sewing business, how do I make contact with wholesalers of lace, satin, etc."

"I contacted the local fabric store to find out where I can buy shoulder pads wholesale, but they wouldn't give me any information."

"I contacted some wholesalers and several didn't answer. Others said they couldn't sell directly to me, but that I must buy through a retailer."

While some directories of resources exist, none of them indicated whether the vendors sold in small quantities, how they charged, or how they shipped merchandise. Since every directory listed and categorized the vendors differently, each request needed to be individually researched and typed. A computerized data base was needed that could be easily accessed. In addition, some business owners needed information on credentials required to purchase from wholesalers and how to communicate with them.

Thus, two major goals were established. (1.) Create a data base of suppliers with additional information on their products, minimum orders, methods of payment, shipping, etc. that could be easily accessed by name of company or by desired product. (2.) Supply business owners with information on trade and shipping terms and how to communicate with vendors.

Currently a Wholesale Suppliers Data Base for small businesses and manufacturers has been developed that contains information on fabric, notion, accessory, pattern and equipment suppliers. The data base contains 7,599 listings of information from 323 companies in 38 states. It is easily accessible and gives name, address, and telephone number of contact persons for ordering, lists of products carried, selling methods (wholesale, retail, or both), and information on shipping, ordering, payment, and other services. The data base can be accessed either by company name or type of product--gingham, Venice lace, braided elastic, hemstitch machines, etc. Thus, when a business owner or manufacturer requests information, a student assistant can quickly access the data.

In order to meet the second goal a leaflet is being developed that helps business owners and manufacturers communicate with suppliers. The leaflet contains in-depth information on the following:

* when wholesale identification numbers and retail merchants certificates are needed and where they can be obtained
* information on shipping terms
* payment terms and what first time customers can expect
* general information on determining the quantity of products to order.

Plans for keeping the data base current include mailing a questionnaire to half of the vendors yearly so that information is never more than two years old. This decision depends on future Extension funding; however, future plans also include making it accessible to textile and clothing specialists and business owners in other states.

To date the data base has been tested with Indiana business owners and manufacturers. Future plans include making it accessible to textile and clothing specialists and business owners in other states.
As the apparel industry becomes heavily involved in computerization for design, pattern development, marker making and grading, it increasingly expects employees to have computer experience for entry level positions. Educators are simulating industry activities by using microcomputers and computer-aided design (CAD) software to provide students with meaningful hands-on experiences. A CAD software package commonly used by apparel educators is AutoCAD by Autodesk, Inc. AutoCAD was originally designed for engineering and architectural applications. Manuals and books teaching AutoCAD concepts are sometimes difficult to understand, while vocabulary, examples, exercises and problems deal with machine parts, architectural structures, and electrical circuits. After teaching AutoCAD with the available materials for one semester, it became obvious that a teaching tool tailored to the apparel industry was essential to maintain the interest and excitement of apparel students.

Objectives guiding tutorial development were: (1) to help students learn basic AutoCAD commands quickly and efficiently within an apparel context; and (2) to capture the student's curiosity and excitement for CAD by creating tutorials that are both fun and interesting. Apparel-related tutorials were developed for any course in which meaningful apparel production tasks could be simulated using AutoCAD.

Single and multiple command tutorials were developed. Single command tutorials were designed to introduce students to one command and to help them gain confidence with the software. Examples include the LINE, ARC, COPY, DONUT, HATCH, FILLET, and CHAMFER commands. Apparel-related exercises were designed for each command to give students an opportunity to practice the concept and observe how it applies to apparel design and development. For example, the DONUT command is used to design fabric for a kimono-style garment, the HATCH command to vary the look of a bomber style jacket, and the LINE command to create a basic T-shirt.

Multiple command tutorials incorporate several commands into one tutorial to create a completed drawing. A simple example utilizing the ZOOM, INSERT, TEXT, BLOCK and WBLOCK commands directs the student to design a line of dresses from stored garment components (skirts, sleeves, bodices, collars). As ability increases, more complex multiple command tutorials require the student to start with a basic skirt sloper and create yoke and godet style variations. A total of sixteen tutorials have been completed and can be executed in 10-40 minutes depending on the tutorial and the speed of the individual student.

When apparel, instead of engineering related, tutorials were used, students learned AutoCAD commands quickly with less frustration and gained confidence to experiment with AutoCAD commands not in the lessons. As a result, students had time to undertake individual projects in addition to class requirements. Benefits of apparel-related tutorials might be attributed to students observing the suitability of CAD to apparel design and development while learning the basics, rather than struggling with unfamiliar vocabulary and irrelevant exercises while trying to make a connection. A shorter learning time might also have resulted because students were having fun and were more interested in and curious about the concepts because examples, exercises, and problems were apparel-related.

Additional tutorials developed to teach other relevant AutoCAD commands, hopefully will result in an AutoCAD manual for apparel students. The manual could enhance the integration of CAD into apparel curriculum, provide a basis for short courses or workshops, and simplify the learning process for the person wanting to learn AutoCAD on their own.
An elective course in the Retailing option at The University of Texas at Austin gives students the opportunity to design and execute a marketing study for a local retail store. This hands-on experience helps students integrate the material learned in several courses and apply it to real-life situations. This better prepares students for future management positions in retailing, where the ability to evaluate and instigate research projects is often part of the job.

The lecture content begins with a section on evaluating research studies. Each student is asked to find and evaluate a poor-quality research study. Surveys in popular magazines are common choices for this analysis.

The second section of the lecture is a presentation of the research process including how to define the problem, how to state a hypothesis, how to design a survey instrument, how to select methods of sampling and data collection, how to select data analysis techniques, and concluding with how to present research findings in both written and oral reports. The assignment for this section is the designing of a research project for a small retailer in the community. The class divides into groups of 2 to 4 students for this project. Students are responsible for contacting a retailer, defining a problem, stating the hypothesis, writing and presenting a short proposal, designing a survey instrument and sampling method, and carrying out the study. Students then analyze the results using a statistics program, "Exploring Statistics with IBM PC" by Sloane, using the IBM PC's acquired through a competitive grant from IBM Project Quest for the development of innovative teaching through the use of computers. Finally, the students write a report, not to exceed 10 pages in length, appropriate to the needs of the retailer. Reports are made professional in appearance by using a program such as Microsoft Chart on the Apple Macintosh to produce charts. In addition, each group gives an oral report of their study to the rest of the class.

Statistical analysis is kept simple because some of the members of the class have not had a statistics course and because the emphasis of the course is research design, not statistical analysis. Most groups use descriptive statistics, percentages and selected cross tabs. Sample sizes are usually greater than 50, but survey length is kept relatively short. Groups have been involved in a wide variety of problems, and have used a wide variety of survey and sampling methods.

After two semesters about a dozen studies have been completed with some studies being of very high quality and of great interest to the stores. Retailers are requesting continuations of previous studies or are inquiring about the possibility of having a study done. The last portion of the course involves reports by students on term papers (8 page maximum length) about current topics in retailing. Students are responsible for teaching class for 25 minutes on their paper topic. Current topics have included: Takeovers in Retailing, Ethical Conduct of Retail Managers, Point-of-Sale, Telemarketing and In-Home Shopping: Is there a Future?, Creating the Fashionable Image, AIDS in the Workplace, Shoplifting, Counterfeit Products, Site Selection Models, Private Labels, Penney's Big Move, Shopper Typologies, Store Location Research, Hypermarkets, and An Analysis of Customer Services.

The Research in Retailing course seems to be meeting some of the unique needs of students and offers a definite retailing view of the research process. It should prepare students to evaluate research which crosses their desks in the future, to define and help formulate studies to be done by research departments, to carry out simple studies of their own should the need arise, and to be more informed about a variety of current retailing topics as they begin their careers in the exciting field of retailing.
In 1979, graduate students enrolled in a seminar which focused on the nature, significance and development of scientific concepts in textiles and clothing. After several offerings, this course eventually evolved into two -- one focused on theoretical orientations, the other on methodological orientations and both are concerned with human behavior with respect to clothing (HBtC). Each is four credits, sequentially offered for the first time in 1986-87 and again in Spring and Fall quarters of 1988. Research methods and a comprehensive knowledge of the field are prerequisites. The intent of this paper is to highlight the nature and organization of the first of these courses.

There are two major teaching goals. The first is substantive -- to contribute to the student's knowledge of theory and the development of explanatory systems for a scientific and practical field of study. The second is twofold: (a) to develop the critical and analytic abilities of students, and (b) to engage each in the integration of a knowledge area and the explication of the issues/problems inherent in systematizing that knowledge segment.

Instructional methods include lecture, discussion, question-answer sessions, and student-teacher conferences. The materials of instruction include a syllabus in which the course is outlined, required and supplementary readings indicated, and student expectations. Questions as guides for readings, for analysis and for oral and written presentations are presented informally.

There are ten sessions, approximately 3½ hours each during the quarter. Three major substantive areas are involved. In the first 2 weeks, a general overview and orientation are presented. Substantively this includes (1) major intellectual developments/key concepts/themes that are part of the history of thought of the field, which is both scientific and practical in its aims, and (2) current meta-scientific approaches and the specific views of the relations between theory, research and practice. Theory (from the positivistic mode of inquiry) and its construction are explored in the next 5 weeks. Theory must first be differentiated from metatheory, paradigm, model and conceptual frameworks. Next, the components of theory are studied -- noting the meaning, nature and ways of clarifying and structuring concepts and statements into theoretical structures of different forms. For the next 1½ weeks, the nature of cumulative knowledge is studied along with ways of integrating theories into more comprehensive knowledge structures. Requirements for establishing theoretical research programs are elucidated. The last session includes oral presentations which highlight individual studies and the issues/problems inherent in that knowledge segment along with potential solutions for further development of the specific explanatory schema.

A wealth of reading materials may be found in other disciplines: philosophy, the social/behavioral sciences, marketing, consumer behavior, education and women's studies. Material for analysis comes from the field of HBtC. Currently, final grades are based on attendance, class participation and preparation for student-teacher conferences (10%), final oral presentation (20%), two analysis papers (40%), and the final paper (30%). Student and teacher self-evaluation suggestions include: (1) the need for more structure and written guidelines for analysis and other expectations, and (2) ways of assessing and incorporating the diversity of student backgrounds and subject matter interests. Learning about theory, establishing criteria for assessing knowledge components and structures in one's own field of study is difficult, time-consuming, and frustrating, anxiety-producing, abstract and somewhat intangible.
Describing the place of retailing in home economics has been a chronic problem for retailing faculty who teach in home economics units. For those units that are accredited by AHEA evidence of student exposure to the integrative nature of home economics must be documented. The framework presented here was developed to provide a conceptual base for describing the "fit" between retailing and home economics and the unique attributes of the home economics trained retailer. This approach could be useful in an introduction to retailing course or in a home economics core course.

The framework has been developed using the Bubolz, Eicher and Sontag (1979) human ecosystem model. In applying the model to retailing, the retail establishment has been designated as the human environed unit. (Figure 1) The individual consumer, embedded in the family and in society, is described as a critical element of the human behavioral environment. Other elements of the behavioral environment include manufacturers, competitors, the domestic and global economies and the government. The human constructed environment includes the store itself, its physical location and the physical aspects of the community. The natural environment is the source for the raw materials and the energy that composes the products sold in retail establishments and receives the wastes generated through consumption.

From a home economics perspective, the consumer as a part of the family and society is a particularly important part of the human behavioral environment. (Figure 2) An understanding of both consumer and family characteristics is important to successfully meet consumer needs. Other important elements of this framework are the family interactions that occur as a result of a purchase decision and the impact of purchasing decisions (especially in the aggregate) on social norms and values. Because human ecosystems are dynamic in nature, any change in one element of the system is felt by other elements.

In presenting this model to students, integrative thinking is emphasized. Home economics trained retailers have a holistic perspective of the relationship between consumer needs and the marketplace, creating a sensitivity to the impact of business decisions on consumers and society. In addition, home economics retailers have a knowledge of individuals and families which provides the foundation for a better interpretation of consumer needs.

Definitions of home economics emphasize the interplay between families and social institutions. The consumption of goods and services constitutes a practical problem faced by families in everyday life. The framework provides a mechanism for describing how retailers can contribute to the quality of life of individuals, families, and society.

People engage daily in many actions concerning their own and other people's appearance. These actions, which in this research included physical activities such as dressing or observing an appearance, as well as cognitive processes such as evaluating an appearance or planning what to wear, range greatly. And although the actions themselves are interesting from a taxonomical viewpoint, it is the meaning of the actions for the actors that is of primary importance. Human actions in general must be understood in relation to the meaning the actions have for the individual actors (Carr & Kemmis, 1986), and appearance related actions in specific also reflect this requirement.

The purpose of this study was to investigate the meaning that daily actions concerning appearance have for those performing the actions. A qualitative research strategy was employed which relied on the use of personal documents. Personal documents (diaries, letters, etc.) have been used by many researchers interested in a variety of phenomena (Allport, 1942), however, although they have been used by scholars studying historic dress, they have not been used to investigate the meaning of daily, appearance actions.

A solicited journal was selected as the research tool. Five men and five women who were known to the researchers and who expressed willingness to be involved with the study were selected as participants. All of the participants were white with incomes ranging from below $25,000 a year to over $50,000. Ages ranged from twenty-two to forty-two, and education levels varied from some college to the completion of an M.D.. Some of the participants were single, some were married, some were divorced, and some had children and some did not.

Preliminary interviews were undertaken with each participant during which they were provided with blank journals and instructions as to what was required. Each participant was asked to record their appearance related actions over a seven day period. Appearance was defined in terms of Hillestad's (1980) taxonomy, and actions were defined as any physical or cognitive behavior concerning their own or other people's appearance. The journal format was open-ended allowing the participants to record as much or as little of their appearance action as they chose. Following the journal keeping period the journals were collected and reviewed by the researchers. Follow-up interviews were then conducted with each participant to clarify and elaborate on journal entries. Following this, an in depth analysis of the journals was performed. The method of analysis entailed repeated readings of each journal with an eye for isolating and categorizing appearance actions and the meaning of the actions for the actors. While reading the researchers attempted to remove, or bracket, their own presuppositions in order to allow the meaning of the actions for the actors to stand out. What resulted from this analytical process was that appearance actions, clusters of appearance actions and themes of meaning emerged both within individual journals and across journals. Actions clustered around such things as the perception of others, the perception of self, clothing acquisition and the socialization of children. Themes of meaning emerged reflecting such things as social competence, personal expression and satisfaction or dissatisfaction with the body.

The implications of this study are that solicited journals are valuable tools for obtaining data regarding the meaning of daily, appearance related actions. And that the analytical technique employed is valuable for revealing categories of actions and themes of meaning.


Research has emphasized that children establish a sense of masculinity and femininity at a very young age. The process of sex typing relates to a child's ability to conceptualize attitudes, behaviors, and artifacts as appropriate for males or females. Research consistently supports the finding that very young children can identify themselves and others as male or female, and can soon associate masculinity and femininity to toys, objects, and work. For young children, clothing appears to be one important cue in discriminating between the sexes. The purpose of this study was to examine preschool girls sex role stereotyping in relation to their choices of masculine or feminine clothing style.

Thirty-one preschool females, ranging in age from 36 to 62 months (x=54 months) were subjects. The subjects attended a university affiliated day care center and a Head Start Center in a university community. Trained researchers administered two instruments related to sex typing. An adapted version of the Measures of Attitudes Toward Clothing for Play (Kaiser, Rudy, & Byfield, 1985) was administered in an individual interview format. This adapted measure consisted of line drawings of four clothing styles ranging from a continuum from more masculine (overalls and a t-shirt) to more feminine (ruffled dress). An adaptation was used in order to control for details (e.g., styling, pockets, collars, etc.). Each subject was asked to select the clothing style that she would most like to wear in eleven sex stereotypical play activities. Based on previous research, activities were determined to be traditionally masculine or feminine. The four clothing styles were displayed on separate cards and presented in a random order.

Gender role attitudes and degree of sex typing were individually measured with the Sex Role Learning Index (SERLI) (Edelbrock & Sugawara, 1978). This index allows children to identify line drawings of culturally stereotyped objects and activities as more appropriate for male or female children or adults.

Statistical analyses of data included a t-test to compute difference between masculine and feminine clothing choices and Pearson product-moment correlations to determine the relationship between sex typing and clothing preferences. Results of the analyses indicated that polar opposite activity items discriminated for gender stereotyping of clothing styles. A significant difference between clothing choices for masculine activities and clothing choices for feminine activities were found. Subjects' mean score for feminine items correlated with other feminine items indicating consistency in gender labeling of clothing for stereotypical female activities. Stereotyped clothing preferences for masculine activities correlated with the SERLI sex role confirmation score. Younger subjects showed more stereotyped clothing preferences for feminine activity items; older subjects had higher confirmation scores on the SERLI indicating greater willingness to select activities according to personal perceptions rather than sex role stereotypes.

The preschool age subjects could discriminate gender appropriate clothing as indicated by selections for polar opposite activities. According to Edelbrock and Sugawara (1978), children will adhere rigidly to sex role stereotyped symbol until a sex role identity is established. The subjects did select the more feminine garments as their personal favorites. It appears that these young girls can discriminate and identify clothing as gender appropriate, and that they prefer feminine clothing styles. Clothing preferences do seem to be an important component of female children's gender role identity.

References


PERCEIVED COMPETENCE AS A FUNCTION OF CLOTHING ATTRACTIVENESS

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Much has been written on the effects of physical attractiveness on person perception and social interaction. However, in many such studies it is clothing and other appearance variables which are manipulated, not actual physical beauty, in order to vary physical attractiveness. While it is clear that physical attractiveness has important social consequences, it is also possible that clothing and other appearance variables (e.g., makeup and hairstyle) not only contribute to judgments of attractiveness, but also may themselves play an analogous role. Thus clothing attractiveness may function analogously to physical attractiveness in eliciting positive judgments. The purpose of this research was to investigate the possible analogy between physical attractiveness and clothing attractiveness.

Attractive and unattractive clothing ensembles were selected from local retail stores and were photographed on volunteer models. In the unattractive condition models wore garments and accessories which were mismatched in terms of color and pattern, but none were bizarre, extreme, or out of fashion. Attractiveness of clothing was established by rating each slide with the model's head screened out in a pretest (N = 44). Slides of six different models in business attire, three wearing attractive clothing (mean = 4.11) and three wearing unattractive clothing (mean = 0.89), were used in the final analysis. Participants (N = 57) were told that they would see and hear a perfume marketing brainstorming session, a task which might be considered a feminine one. A pre-recorded audio tape was played consisting of 30 suggestions relative to marketing a perfume. As a comment was heard a slide of the woman purported to have made the comment was projected. The comments did not differ from one another in terms of pre-rated usefulness. The dependent measure consisted of five items which tapped competence and were found to load together in a factor analysis. The items were summed for a composite competence score.

Since physically attractive women are often judged as more competent than unattractive women for typically feminine jobs (Cash, Gillen, & Burns, 1977), it was predicted that the women dressed attractively would be judged as more competent than unattractively dressed women in the context of the perfume marketing session. Data were analyzed using a correlated groups t-test. As expected models dressed in attractive clothing were perceived as more competent than models dressed in unattractive clothing, \( t(56) = 5.21, p = .000 \). These results provide evidence for an analogy between physical attractiveness and clothing attractiveness. More pragmatically they imply that individuals who are not physically attractive can still accrue some of the benefits of being physically attractive by a simple process of wardrobe selection and coordination. It is known that physical attractiveness, a variable over which one has no control, exerts a potent influence in social interactions. These results imply that clothing attractiveness, a variable over which one has potential control, might exert a similar influence.

REFERENCES

Image consultants suggest how one could improve appearance and/or mannerisms to make a favorable impression. The recent unregulated proliferation of image consultants and the popularity of related literature have raised concerns among the academic, image consulting and consumer protection communities as to the legitimacy of some professionals and their programs. Standards must be set for the image consulting profession, to judge the quality of consultants and their services.

Summarizing from image consulting books and interviews with consultants, one finds that most image consultants would agree that their services make the client feel good about themselves as a result of making them look good. A major objective of this study was to test the assumption that an image consulting program could affect self feelings, defined as self esteem.

An image consulting program was designed to elevate self esteem while enhancing appearance. The program incorporated research based knowledge on appropriate modes of dress for conveying personal characteristics such as professionalism. Analysis of body shape, color and texture was performed to determine modes of dress to enhance attractiveness. Counseling procedures and social psychological techniques were utilized in the consulting process to facilitate internal and external change. The program also encouraged clients to realize positive feedback in social interactions.

The program, consisting of three interactive (group) lessons, was offered to clients of a non-profit career assessment and placement agency. Psychological differences were measured for 25 subjects who chose to participate and 20 subjects who did not want to participate. The influence of individual psychological differences of the clients on the program's effectiveness at elevating self esteem was examined. The psychological variables, public self consciousness and self monitoring, measured the level of importance in making a good (socially approved) impression.

The image consulting program acted as the treatment in a pretest-posttest experiment. Changes in general self esteem (GSE) and physical self esteem (PSE) were determined using an established instrument and other quantitative measures devised for this study. Psychological differences were measured using established instruments.

Paired T-tests revealed significant increases in GSE, PSE, and appearance satisfaction. Sign tests showed a significant positive change in perceived ability to control impressions made on others and in confidence in clothing selection. A likelihood ratio test identified an association between psychological variables and participatory status. Pearson correlation and likelihood ratio tests suggested that the psychological variables had modest associations with level of change in GSE and PSE. However, a significant positive correlation existed between public self consciousness and change in appearance satisfaction.

It was concluded that the psychological makeup of clients of an image consulting program has implications for program composition. Also, the ability to ameliorate self esteem has consequences for consultant training and program development. Therefore, knowledge created by textile and clothing professionals can be employed to affect positive change in "real world" situations.
This study examined the development of retailing strategies purposefully designed and implemented between 1946-1986 to influence customers' behavior when purchasing apparel. The retailer is an important economic link between the development and ultimate use of apparel. However, retailing is not only an economic activity, but also a social activity that shapes human behavior. This is significant because retailers act as change agents within a society, influencing not only what customers buy, but also their fashion consciousness, expenditures, decision-making processes and use of time. For example, retailing strategies may influence behavior by motivating consumers to buy so that they can achieve a specific image. Little attention has been given to retailing as a social activity that aims at modifying consumer behavior in an effort to increase consumer spending for apparel items. In particular, research is lacking that examines apparel retailing strategies from a historical perspective.

Publications in which retailers advertise, such as Vogue, were studied to gain insight into retailing strategies during the period here considered. The research goals were to: 1) Classify the strategies according to whether they address store image and marketing position, merchandise content and price, store ambience, customer image or store services; 2) analyze and compare strategies with regard to human behavior characteristics; 3) analyze how these strategies have changed within the last forty years.

The analysis consisted of three phases: 1) A literature search of all retailing trade publications that may have influenced apparel retail strategies in the last forty years; 2) development of an instrument to record specific themes that represent strategies; 3) categorization and analysis of strategies using qualitative and quantitative procedures.

A content analysis was conducted. The sample consisted of advertisements that were published by retailers in Vogue magazine from 1946 - 1986. Only advertisements that focused on apparel items were included in the sample; however, cosmetics and jewelry were classified as apparel items. A statistical method using cross-tabulations was implemented to determine retailing strategies most often associated with apparel advertisements.

The findings indicate that retailers that advertise in Vogue magazine, most often focus their advertising toward the consumers' image of themselves. This focus did not change significantly over the years of 1946 to 1986. In about half of the advertisements, price was included in the advertisement. Strategies that emphasized store image, store ambience, and store services were seldom included in the advertisements included in this study. The implications are that retailers that advertise in a magazine aimed at women, such as Vogue, cater to women's need for a positive self-image. Thus, the need for social acceptance of one's self-image appears to be a pertinent part of the apparel retailer's strategy.
Permanent care labels on leather garments frequently read "professional leather clean only." This directs the owner to seek a leather cleaning specialist for renovation of the product rather than attempting self-cleaning or using the services of local dry cleaners where non-leather garments are cleaned. Dry cleaning of leather garments commonly costs 3 to 6 times more than dry cleaning textile garments. Why is dry cleaning of leather comparatively expensive? How does dry cleaning of leather differ from dry cleaning of textiles? What are the similarities and differences among leather cleaning services? What factors determine leather performance in dry cleaning? As a part of a larger project examining potential for economic development in pigskin markets, a review of literature relative to dry cleaning leather revealed very little substantive research regarding leather cleaning or related cleaning services. Based on a systems theory approach, case studies were conducted of the five leather cleaning services who are the major suppliers of leather cleaning in the upper midwest outside the city of Chicago. Data were collected by taped personal and telephone interviews with leather cleaning plant owner/operators and personal tours of dry cleaning plants.

Each leather cleaner provided both retail and wholesale services and had a fleet of trucks that picked up leather products from local dry cleaners in a multi-state area surrounding each plant. However, the business practices, professional experience, pretreatment practices, dry cleaning solvents and equipment, and finishing techniques varied widely. Leather cleaners frequently contradicted each other relative to appropriate cleaning methods and solutions to cleaning problems. Leather cleaners were dependent primarily on their suppliers and the International Fabricare Institute for new information about leather care.

The primary difference between dry cleaning leather and dry cleaning other materials is the oil content in the cleaning solution. Variables that were observed to influence appropriate dry cleaning treatment include species, tanning method, finishes, color, other materials in the product, and product assembly methods. Common performance problems reported by dry cleaners included shrinkage, color loss or change, non-compatible materials in a product, failure of fused interlinings, and glue bleed. The leather cleaner's ability to deal with these problems was dependent primarily on experience and analytical skills. Causes of performance problems were commonly related to the tanning or finishing of the leather, inappropriate combination of materials in a product, inappropriate garment assembly methods, attempts at self cleaning by the consumer, and inappropriate choice of cleaning techniques by the dry cleaner.

The dry cleaners reported that since retailers seldom give refunds on garments that have been worn, dry cleaners are usually held accountable for the performance of leather products in dry cleaning even when the problem is not the dry cleaner's fault. More research is needed relative to the performance of leather products in dry cleaning. There is also a great need for improved communication and cooperation among leather cleaners, retailers, and manufacturers.
Midwestern craftpersons are eager to expand income from their home-based businesses. In one midwestern state, over 5,000 individuals have attended craft marketing programs presented by the Extension Service during the past five years. Little research is available on characteristics that distinguish successful from struggling craft entrepreneurs. What is known is anecdotal in nature and not comparative. Craftpersons lack models of entrepreneurial success upon which to base business decisions.

The objective of the research was to develop profiles of successful and struggling craftpersons as related to their business practices, employees, products, sources for supplies and ideas, marketing, pricing, promotions, and services. The research was inductive; a broad range of factors was investigated for potential contributions to the profiles of craft entrepreneurs. Existing models were used to identify economic, personal, and social factors associated with entrepreneurial success in non-craft businesses; however, the research was not limited to investigation of these factors. The profiles serve as hypotheses for future research on craft entrepreneurs.

Seventy craftpersons, equally divided among weavers, quilters, knitters and crocheters, fabric crafters, potters, woodworkers, and wood crafters, participated in in-depth telephone interviews. Names for the purposive sample were obtained from craft organizations, managers of craft sales outlets, and Extension program registration lists. Participants had sold crafts for a minimum of three years. Data were collected using forced-choice scaled items and open-ended questions in which participants were asked to describe successful and struggling craftpersons, originality in design, reasons for starting home-based businesses, and pricing and selling strategies. Level of sales and self-rating of success were used to assign craftpersons to the successful (n=34) or struggling (n=36) categories. Data were submitted to content analysis and descriptive statistics.

The profile of the successful craft entrepreneur was dominated by business-related characteristics. The initiation of the successful craftperson's business was driven by a strong financial need and the desire to work in the home. Successful entrepreneurs work an average of 13 hours per week more than their struggling counterparts. Plans for future sales are ambitious. Successful entrepreneurs have written business plans, carry business insurance separate from a home owner's policy, and maintain a business bank account separate from a personal account. Original products characterize the successful craftperson's product line. Sales for medium and high priced items, rather than high volume sales of low-priced items, contribute to the entrepreneur's success. Paid advertisements, participation in wholesale trade shows, and offering crafts through mail-order catalogs are part of the successful craftperson's sales strategy. Sales in tourist towns and in the western and southern parts of the United States have been used to expand markets outside of the midwest.

The profile of the struggling entrepreneur was highlighted by personal characteristics and a localized conceptualization of the business. "Enjoyment" and "fun" were important for initiating the craft business. Rather than pricing with a financial formula, pricing decisions are made in relation to what other craftpersons charge or what the market would bear. Struggling craftpersons use leftover products from family and friends for their craft supplies. Personal sales are conducted out of the home. "Originality" in design was described as successfully adapting other's ideas into the craftperson's work.

Future research will focus on refinement and expansion of the profiles for successful and struggling craftpersons. Researchers' attention to craftpersons' strategies for regional expansion of sales, participation in wholesale trade shows, and entrance to the catalog market is recommended.
EXCHANGE OF CLOTHING GIFTS IN FAMILIES - A PILOT STUDY

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To develop theories of a particular phenomenon where empirical facts are scanty, basic understanding of the phenomenon can be gained by collecting qualitative data. Clothing gifts are an unexplored topic that can benefit from this approach. An initial interview, record keeping, and closing interview were techniques used to collect data on the types of clothing purchased as gifts, frequency of giving them, givers and recipients, and decision-making processes. Information from this pilot study serves as a base for further research.

Eight midwestern city families representing various stages of the life cycle were purposefully chosen to be interviewed shortly after Thanksgiving, 1987. All household members were encouraged to be present. Researchers asked the female spouse questions about family members, their gift-giving practices, and number of automobiles owned. Then she was asked to recall all Christmas gifts that had been purchased to date. A record book was used for recording the family’s daily shopping activities and all Christmas gift purchases made by all family members. The female spouse was solely responsible for recording gift purchases. The record-keeping period lasted from mid-December to end of December. All record books were collected in January, 1988. A final interview explored decision-making underlying purchase of clothing gifts and ways in which clothing gifts were evaluated.

Age categories of spouses ranged from 20-29 to 50-59. Husbands and wives were similar in age. In three families, both spouses were employed full-time; the majority of the wives were part-time workers. Seven families had children; the number ranged from one to four; ages ranged from six to 29. A socioeconomic level (SES) was assigned to each family by taking into account family life cycle stage, employment status of both spouses, characteristics of dwelling unit, and automobiles owned. Three families were rated high, three medium, and two low on the SES scale.

A total of 123 clothing, accessories, and footwear (CAF) gifts and 224 non-clothing gifts were purchased; 113 were received. Total expenditure for CAF gifts given was $2,300, 46 percent of total gift expenditure. Types of CAF gifts most frequently purchased and their proportions to total number of CAF gifts were: sport-shirts (33%), sweaters (16%), scarves, gloves, and hats (11%), and socks (11%). Categories accounting for less than 10 percent of CAF gifts were: shirts and blouses, jeans, neckties, loungewear and sleepwear, footwear, suspenders, underwear, jackets, scarves, and pants. All CAF gifts, excepting a few scarves, were intended for family members or relatives. Men received a higher number of CAF gifts than women did. Expenditure for CAF gifts ranged from four to 75 percent of total expenditure on gifts; half of the families spent at least 50 percent of total gift expenditure on CAF gifts. Strategies that families used to determine what recipients want varied from exchanging gift lists to embarking on a shopping trip with the recipient. Important clothing features that were often considered in a gift included style, care instructions, color, fiber content, cost, and ease of getting into. Recipients of clothing gifts expressed their satisfaction either orally or by wearing the gift frequently. Clothing gifts were exchanged almost exclusively among family members. The record-keeping method was effective in showing timing of purchases. The data showed potential for identifying typologies of family gift-giving behavior.
A COMPARATIVE ANALYSIS OF THE U.S. AND INDIAN TEXTILE AND APPAREL INDUSTRIES

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The United States provides the nation of India its largest export market for textile and apparel products. Indian apparel exports to the U.S. account for almost one-third of India's total worldwide exports; in 1987 this export level increased by 54 percent. This phenomenal growth was attributed primarily to the favorable bilateral trade agreement signed by the two countries on February 6, 1987. This agreement also is expected to make textiles a stronger component of Indo-U.S. trade.

While closely tied in terms of trade, many socioeconomic and political differences exist between India and the U.S. The textile and apparel industries in these two countries differ in structure and stage of development; each exists within its own environment and encounters a specific set of problems and opportunities. The purpose of this study is to compare textile and apparel manufacturers in the U.S. and India in terms of perceptions of industry opportunities, problems and business practices. The study uses systems theory to conceptualize the research questions and analyze results. Questionnaires were mailed to presidents of textile and apparel manufacturing firms throughout the U.S. and India. In the U.S., Standard Industrial Codes 22 (textile mill products) and 23 (apparel and other products) were used to distinguish the two industry groups. Approximately 3 percent of all manufacturing firms listed under these codes in the Colt Microfiche Library of State Directories were randomly sampled for inclusion in the project. Returned questionnaires totaled 171, yielding a 33 percent response rate. A modified version of the same questionnaire was mailed to 360 presidents of Indian textile and apparel manufacturing firms randomly selected from a list of Indian Textile Mills and the Indian Apparel Exporters' Directory. The response rate was 42 percent.

Business practices and opinions were measured by using a series of Likert-type scales in which respondents were asked to indicate their degree of agreement or disagreement on 10-point scales. They also were asked to rank in order of importance a list of what they viewed as major problems and opportunities confronting their companies within the next five to ten years. T-tests were used to determine significant differences in business perceptions and marketing practices between manufacturers in the two countries.

Results indicated that Indian manufacturers were more likely than U.S. manufacturers to perceive government policies and actions and expanded growth in foreign markets as opportunities and technology as a problem. U.S. manufacturers were more likely to perceive added product lines and improved flexibility in production as opportunities and to view foreign competition as a problem. Indian apparel manufacturers were more likely to agree that they are placing more emphasis on short-run production and marketing. Differences between industries in the two countries are discussed, as are differences within the Indian industry. Viewed from a systems theory approach, the industries in both countries are open systems that engage in information exchanges with their environments. They vary in terms of inputs, interactions, and outputs, however, and this, in turn, influences their behavior and the behavior of their subsystems.

Research results will aid in understanding and analyzing current international trade problems and policies because they indicate certain perceptual and behavioral similarities and differences between the two countries. They provide a number of implications for bilateral trade negotiations and an excellent basis for strategic planning in relation to the international environment.
Career mentoring relationships have been explored in studies which have focused on a wide range of occupational areas including business, industry, and education. An important occupational area which has yet to be explored is the retail sector which, in terms of employment, is one of the fastest growing industries in the United States. The need for exploration into mentoring relationships of women in retailing is particularly important in view of the slow advancement of women into the top organizational echelons.

In this study, the researcher attempted to add to the existing literature on mentoring relationships by investigating and examining how characteristics of mentoring relationships differ for female retail executives at the upper managerial level and female retail executives at the middle managerial level. A total of 466 survey questionnaires were mailed to middle and upper level women employed in department, specialty, and discount store retailing with a 44% usable return rate. Both composite and chronological profiles of mentor(s) by level were reported.

Data analysis revealed that upper level executives were significantly more likely to have been mentored by someone of the male gender, were more likely to have been mentored by an older individual, placed more importance on the mentor characteristic "Ability to take risks" when selecting a mentor, were more often "Assigned responsibility to help develop relationships with key figures in the organization", and were mentored longer during their second mentoring relationship than were the mid-level executives. Women in upper level managerial positions were also significantly more likely to be mentoring others in the organization than were the mid-level executives. No differences between levels were found in the number of mentors, in the time periods when the relationships first emerged, in mentor and protege career level, in who initiated the relationships, in the functions performed, in the benefits derived, in the problems which emerged or in the terminating characteristics and resulting feelings toward the mentor. The similarities in the characteristics and functions performed for the two managerial levels could be attributed to a filtering down process of the mentoring relationships. It appears that the mentoring process which has been instrumental in enabling the upper level participants to advance were being passed on to other subordinates in the organization.

Students pursuing careers in retailing need to recognize these strategies as important career development and advancement forces. Faculty concerned with the slow advancement of women into the middle and upper organizational levels of the retail hierarchy need to promote mentoring relationships as an aid to enable women to move beyond lower level positions.
Factors Influencing the Store Patronage of
Women Employed in Managerial and Professional Occupations

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In order for retailers to capitalize on the market segment of career women, an understanding of patronage motives is needed. Patronage motives may be rational or emotional and explain why a consumer purchases products from one retail store rather than from another.

The purpose of this study was to examine the clothing store patronage motives of career women employed in managerial and professional occupations. Specific objectives of the study were to: 1) determine the type of retail clothing source most often shopped by career women, 2) identify which store attributes are most important to career women when patronizing a clothing store, 3) investigate the factors used most often by career women when purchasing clothing and, 4) identify the store inventory factor ranked most important to career women when patronizing a clothing store.

A sample of 232 career women completed a questionnaire developed by the researchers. Data were collected by a mail questionnaire. The questionnaire consisted of 20 questions pertaining to shopping behaviors, store preferences, and demographics. Null hypotheses were tested using the Kendall's coefficient of concordance W.

The clothing source shopped most often was the department store (65%), followed by the specialty store/boutique (38%) and mail order catalog (23%). No significant difference was found in the clothing source shopped most often among the career women. The career women specified the return policy of a store was the most important store attribute. The factors used most often when making a decision to purchase clothing were how flattering the garment was on them, followed by how well the garment fit. The most important choice of store inventory was the selection of merchandise in the career woman's size. Data revealed highly significant differences existed in the most important store attribute, the factor used most often when making a decision to purchase clothing, the most important choice of store inventory and shopping in a department store.

A majority of the career women (68%) shopped for personal clothing either once a month (29%) or once every three months (39%). Most of their shopping was done on Saturday or Sunday (57%), and 28% shopped most often after work or evenings. The price of the merchandise was considered to be an important factor in the decision to purchase clothing. More than half (53%) purchased the majority of their clothing at sale prices. Clothing purchases were usually paid for by credit card (64%). Store credit was used by 39% and national or bank credit cards by 25%.

The results of this study have important implications for retailers. In today's overstored and highly competitive retail market it is particularly important that retailers understand their customers' wants and needs.

Retailers should examine what they offer the career woman concerning service, selection of merchandise and value. This study found that most career women used comparison shopping and were not loyal to one store. Retailers should work toward developing store loyalty by offering what career women want in a clothing store.
The Influence of Demographic Variables on the Quality Perception of Imported Clothing from Four Countries of Origin

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With the increasing growth of apparel imports from countries around the globe, it is of paramount importance that the quality (as perceived by the consumer) of these imported apparel products be investigated. Perceived quality has been defined by Zeithaml (1987) as an abstract evaluation or judgment of a product that is formed from intrinsic attributes of the product (e.g., physical characteristics) and extrinsic attributes that are not part of the actual physical product (e.g., price). Theoretically, Holbrook and Corfman (1985) place quality perceptions within the realm of value theory and state that perceived quality is a global value judgment.

The purpose of the study was to investigate how demographic characteristics of consumers influence quality perceptions of imported apparel. Clothing from four countries of origin representing different levels of industrialization (Italy, Korea, China, and Costa Rica) were used. In order to accomplish the purpose of the study, 153 men and women 18 years of age or older throughout the U.S. were interviewed by telephone. Systematic random sampling procedures were used to obtain a sample that represented a proportional geographic allocation to the population. The response rate for the study was 77%.

Perceived quality was measured on a four-point Likert scale wherein four was equivalent to excellent quality and one, poor quality. Perceived apparel quality was measured in relationship to each of the four foreign countries of origin plus the United States. Perceived quality for each of the countries of origin was also measured in combination with three store types (apparel sold in department, discount, and off-price stores) and three brand types (name, store, and designer brands). The influence of seven demographic variables (age, sex, education, employment status, region of residence, subregion of residence, and town of residence population) on perceived quality was studied.

Results of t-tests, analysis of variance tests, and post-hoc comparisons revealed that age was the major demographic variable influencing differences in the quality perception of imported clothing. Sex was also influential, with females rating significantly higher than males the quality of department store Costa Rican-made clothing, discount store Korean-made clothing, discount store China-made clothing, and store brand China-made clothing. Those with higher levels of education were significantly more likely to give higher quality ratings to Italian-made clothing, department store Italian-made clothing, and designer brand Italian-made clothing. The demographic variables of employment status, region of residence, subregion of residence, and town of residence population were also found to influence quality perceptions but to a lesser extent than age, sex, and educational level. Implications from the study are that, as a result of increasing competition in the retail marketplace, manufacturers and retailers can be more keenly attuned to consumer wants and perceptions. The present study is both unique and important in that it provides information to manufacturers, retailers, and consumer behavior researchers about quality perceptions of apparel from specific countries of origin representing different levels of industrial development.


A BASE LINE STUDY OF THE HOME-BASED BUSINESSES IN NORTH DAKOTA

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JUSTIFICATION: Few studies have attempted to examine in detail the phenomenon of home-based businesses. However, these businesses are increasing in number and importance and they are seen as a means to a more competitive economy through increased output and reduced prices. Those businesses bring about a new perspective in the delivery of goods and services as well as serve new and smaller markets which are uninteresting and unprofitable for larger companies. Much programming is being done by the Extension Service, the SBA and EDC with little research being used to back up programming needs.

OBJECTIVE: The objective of this research effort was to collect baseline data concerning the increased activity of home-based business in North Dakota.

METHODOLOGY: Surveys were distributed to participants at home-based business workshops held throughout North Dakota. Over 275 surveys were distributed, and 156 were returned for a response rate of 57%. Of these, 124 either were considering starting a home-based business or were already in business. These groups formed the data base for this analysis.

Eight aspects of business and personal characteristics were contained in the survey: (1) demographic characteristics, (2) reasons for involvement in a home-based business, (3) business financial characteristics, (4) utilization of professional services, (5) current and previous work experience, (6) structural components of the business, (7) advertising and marketing procedures, and (8) perception of personal and financial risk.

RESULTS AND DISCUSSION: The results indicate that the typical respondent was a well-educated, married female between the ages of 30 and 39 with children living at home. Most had become involved in their business because their hobby had become profitable. Supplementing farm income and staying home with small children were also strong motivating forces for establishing a business. Most had been involved in business less than four years and had invested an average of about $6,000 during the first three years of operation. Over 60% stated that their business contributed less than 24% to their total family income. Over 90% of the respondents already in business stated they did not pay for legal advice, only 4% used an accountant to keep business records, but 61% did hire an accountant to complete their income tax returns. Over half of those already in business and about 40% of those contemplating a business did not hold another job in addition to their home-based business. Almost all had, however, worked for pay at some time in their life. Approximately 60% of the respondents were involved in producing a product and the remainder were providing a service. The most common marketing methods for products were selling from the home, fairs and shows, and through consignment sales. Word-of-mouth and business cards were the most common means of advertising the home-based business. Generally, those already in business perceived the financial and personal risks to be less than those still considering a business. After cross-tabulating their perception by various characteristics of the respondents (age, gender, previous management or ownership experience, and length of time in business), no statistical relationship was found.

IMPLICATIONS: Those involved in home-based businesses appear to desire more freedom in their work and/or increased financial security. Little financial investment is made by these proprietors. Underfinancing for some types of businesses may indicate a lack of long-range planning and building or a lack of commitment to the business. Professional services, especially lawyers, appear to be underutilized. A number of laws affect home-based businesses, and a qualified lawyer may save the home-based business owner a great deal of time and money later on. Assistance in marketing and advertising could benefit many proprietors. Although these items are expensive, they are absolutely essential to a successful business.
Sheth (1983) hypothesized that personal values influenced the salience given to the underlying motivations for outlets. The purpose of this research was to investigate the relationship between the underlying motivations for shopping and personal values regarding clothing purchases. A questionnaire was developed to assess the salience given to selected shopping motives and personal values. Shopping motives selected were based on the extensive literature prevalent in the area of patronage behavior and Sheth's model of shopping preference. In addition, Rokeach's (1973) value survey was used to operationalize personal values. Six hundred residents from two metropolitan areas in a southwestern state were randomly selected from current telephone directories. A 30 percent response rate resulted from two mailings.

Over half of the respondents were female and over half were married with no children living at home. One third of the respondents were 60 years or older and three-fourths had some college or vocational training. Approximately half of the respondents reported incomes between $20,000 to $49,999 dollars. In comparison with the general population for the two cities the respondents median age was somewhat higher; however, regarding income and education, respondents were consistent with census data available. Respondents considered value for the price, quality of merchandise, and price of the merchandise most important shopping motives. In addition, self-respect and freedom were personal values rated most important by respondents.

The researchers hypothesized that a significant relationship existed between shopping motives and personal values. Initially, factor analysis with a varimax rotation was used to investigate the underlying dimensions proposed in Sheth's model regarding shopping motives. Three factors emerged: Nonfunctional motives were intrinsic to consumers and used to evaluate outlet preferences; Functional motives were extrinsic to consumers and reflected attributes controlled by outlets to enhance store patronage; Economic motives were intrinsic to consumers and emphasized the value of the purchase regarding money, time, and energy saved. These factors were used in subsequent analysis and testing of the hypothesis. Results of Multivariate Analysis of Variance (MANOVA) procedures yielded support for the hypothesis (p < .01). Respondents that considered the value sense of accomplishment very unimportant also considered the salience of economic motives less important while those that considered the value pleasure unimportant regarded functional motives significantly less important than other groups tested. Findings imply that values are influential in the salience given to shopping motives and may ultimately influence outlet preferences for clothing purchases.


Since 1980, millions of ramie/cotton blend sweaters have been imported into the U.S. These sweaters often compete directly with domestically produced 100% cotton sweaters for consumer dollars. Ramie is new to U.S. consumers who have little experience with it or reliable information upon which to base a purchase decision. An exploration of consumer satisfaction with ramie/cotton blend sweaters is imperative before the long-range effects of these imports on the U.S. textile industry can be determined. More information about ramie blend sweaters would also benefit apparel industry professionals and consumers helping them make more informed buying decisions.

Consumer wear testing has been used to study the relationship between consumer satisfaction and the physical aspects of clothing. In order to determine the performance of and consumer satisfaction with these sweaters an incomplete block design was used for a wear study. Two groups of 25 female college students wore imported sweaters of 55% ramie/45% cotton and domestic 100% cotton sweaters. Twenty-one ramie/cotton wearers and 23 cotton wearers completed the study. Diary entry sheets and open-ended responses on the final questionnaire provided descriptive verbal feedback concerning the wearer's perception of the sweaters. The final questionnaire also used a nine-point Likert scale to measure satisfaction related to 33 care, performance, comfort, aesthetics and general sweater characteristics.

Wearer satisfaction with sweaters was generally high. T-tests were used to determine differences in means of overall satisfaction and the 33 individual characteristics. No significant differences in overall satisfaction were found. However, strengths and weaknesses emerged for each sweater type. Satisfaction with the performance and comfort attributes of the cotton sweater was very high. Personal preferences for styling and color were illustrated by wide variances in scores for aesthetic characteristics. Versatility was the lowest-ranked cotton characteristic. Cotton sweater wearers also disliked the hand washing and flat drying recommended on the care label.

Performance attributes of the ramie sweater were generally high with four exceptions: resistance to pilling, snagging, fading, and dimensional stability. Concerns over dimensional stability were also illustrated by lower ratings for related characteristics such as sweater drape, bagging, and amount of stretch. Poor dimensional stability and negative texture changes were noted when the sweater was dried flat as directed on the care label. Personal preferences were once again reflected by wide variances between ratings for the sweater's aesthetic characteristics.

Sweater appearance was the best predictor of the overall satisfaction rating as shown by regression analysis. Comfort, fading, and dimensional stability were also significant factors at the .05 level. These four characteristics accounted for 80% of the variability in the overall satisfaction ratings.

This research identifies differences in consumer satisfaction with ramie/cotton and cotton sweaters. It also establishes performance expectations for ramie/cotton sweaters and broadens the knowledge base for ramie/cotton blends. Product characteristics related to consumer satisfaction were identified. Research on the appropriateness of recommended care procedures is being conducted.
Sodium Hypochlorite Degradation of New and Aged Cotton Fabrics

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As individuals are becoming more concerned with their cultural heritage, community historical societies are being formed and local museums established. These museums often include textile items whose appearance the museum staff would like to improve as they prepare the items for display. Discolored white cotton fabrics fall into this category, and volunteers are likely to use the products with which they are most familiar (commercial bleaching products) to whiten these materials. However, bleaching in general, and sodium hypochlorite bleaching in particular, is not recommended to improve the appearance of naturally aged fabrics. Aging is, however, a gradual process, and all fabrics do not have the same physical history (have not been exposed to the same chemical and mechanical degradation throughout their lifetimes).

Speculation can thus be made about when NaOCl can be safely used and under what treatment conditions. A limited amount of research on changes in mechanical properties of aged cotton fabrics due to bleaching has been done (Annis & Reagan, 1979; Cowan, Hurwitz, & Gahagan, 1982; Cowan, Wilson, & Wilson, 1986). These studies focused on historic fabrics and did not compare treatment effects to those of new fabrics with relatively limited physical histories.

This study was designed to compare the effects of NaOCl bleaching on the mechanical properties of new and naturally aged cotton fabrics. A naturally aged white cotton fabric (ca. 1900) was donated to the project by a historic costume collection. New white cotton fabric of comparable weight, weave structure and thread count was purchased from Testfabrics, Inc. The fabrics were treated in solutions with varied concentrations of NaOCl (0.02, 0.04, 0.06% available chlorine) with hydrogen ion concentrations adjusted to pH 9.5. The general procedure described by Annis and Reagan (1979) was used. Samples were treated for 0.5, 1, and 1.5 hours. Control samples were soaked only in distilled water.

Two types of mechanical tests were carried out on fabric samples. The breaking strength of fabric samples was determined according to ASTM D1682-64. The tear resistance of fabric samples was determined according to ASTM D261-63. Additionally, ruptures in fibers resulting from the NaOCl treatments and mechanical tests were examined in a scanning electron microscope.

Basic statistical methods were used to compute the average values and corresponding standard deviations of each parameter. Analysis of variance was used to analyze the sources of variation, and comparisons between levels of a given source of variation were made by pairwise comparisons. Good whitening of the aged samples was achieved with all concentrations of bleach solution. Longer exposure times were required when the .02% bleach solution was used, while comparable whitening could be achieved with shorter exposures when the .04% and .06% solutions were used. None of the bleaching treatments had any effect on the tensile strength and tear strength of the new fabric. The treatments also had little effect on the tensile strength of the aged fabric. However, higher concentrations of bleach and longer exposure times did cause significant reductions in tear strength of the aged samples. Additionally, the fibers of the aged fabric exhibited fractography different from those of the new fabric.

References
Pilling presents serious defects in some apparel and textile products. It detracts from appearance and hand and, in some cases, affects the service life of products. Earlier studies indicated that pilling process developed in three stages, (1) fuzz formation, (2) tight entanglements of the fiber fuzz into pills, and (3) fiber pull-out due to anchor rupture or fiber pull-out (Cooke, 1982, 1983, 1985; Gintis and Mead, 1959). Pilling process was also reported to be initiated by the presence of fibrillation and fiber fractures within pill structure.

Open-end (OE) spun yarns were developed to meet the requirements of new knitting and weaving technology. Several researchers investigated the effect of yarn structure on the strength, soiling, and wear properties of fabrics woven from OE and RS yarns (Barella, 1983; McKinney and Broome, 1977; Mohamed and Lord, 1973; Morris and Prato, 1978). However, pilling and related properties of fabrics woven from these yarns warrant a further investigation.

This study was initiated (1) to study the pilling mechanism of the test fabrics woven from OE and RS yarns by scanning electron micrographs, (2) to compare abrasion and stress-strain measurements of test fabrics woven from two types of yarns, and (3) to study the association between pill ratings and abrasion and stress-strain measurements at five specified test intervals.

The four test fabrics investigated in this study were woven from size 16 counts OE and RS yarns spun from 65/35% polyester/cotton. The propensity of test fabrics to pilling was evaluated after 1, 2, 3, 6 and 8 30-minute test intervals by Random Tumble Pilling Tester Method (ASTM Test Method D3512-92) and after 300, 600, 900, 1200, and 1500 test strokes by Elastomeric Pad Method (ASTM Test Method D3514-81). Pilled specimens were examined in an International Scientific Instrument DS-130 dual stage SEM.

Flex abrasion and stress-strain properties were determined according to ASTM Test Methods D3885-80 and D1682-64 respectively. The difference between mean pilling, abrasion, and stress-strain measurements of three sets of test fabrics woven from comparable OE and RS yarns were computed by t-tests.

SEM examinations revealed that yarn type and pill test influenced the degree of pilling and fiber fracture the test samples underwent at various test intervals. After 30-minutes RTP, a few fiber pull-out (looping) but no evidence of fiber fracture normally associated with abrasive damage was observed. This result indicates that test fabrics included in this study would present little pilling problem according to this ASTM test method. However, all test fabrics started to reveal the flaking and transverse cracking of fiber and fuzz assemblies after 60-minutes RTP and 600 EPM test strokes. After six and eight 30-minute test intervals, the test samples woven with RS yarns displayed more extensive fiber breakdown and pill development in RTP.

The test fabrics exposed to EPM pilling test developed less degree of fiber fracture but more severe fiber entanglements than their counterparts. A possible explanation is that the structure of RS yarns is well aligned with axis and compact, therefore, did not readily promote fiber fracture and wear-off. In EPM pilling test, fuzz assemblies which did not wear-off in earlier test intervals started to entangle and formed pills later.

The mean performance measurements of the test samples woven from two types of yarns were compared by t-tests. In all three groups compared, the test sample with RS yarns for both warp and filling directions outperformed in abrasion and filling tensile strength. For break elongation, same sample displayed significantly lower measurements. The association between pill ratings and other performance measurements investigated indicated that the result was affected by pilling method and test interval.
EFFECT OF DRY CLEANING ON STAIN RELEASE AND COLOR OF PIGSKIN SUEDE

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In 1987, leather consumption rose 44.8% ("U.S. Industrial", 1988). Increased consumption brings with it an increase in the need for proper leather care. Surveys of literature and practices of leather cleaning professionals were conducted as a part of a larger project examining the potential for market development of pigskin leather. Results yielded conflicting reports on the performance of leathers, particularly pigskin, during professional cleaning processes. Variables affecting the cleanability of leather include the condition and species of the hide, degree of soiling, amount and type of stains, tanning and finishing processes, and materials and processes used in product assembly. Color fading, color migration, and hue shifts often occur during the leather cleaning process. Cleaning both dark and light colors often results in noticeable color change. In addition, scars and flaws inherent in a hide may appear after cleaning.

An experimental randomized block research design was used to examine the variables related to stain release and color change of pigskin suedcs. Dark brown and light blue pigskin suede specimens were stained with grenadine, salad dressing, or left unstained. A professional leather cleaner pretreated the stains and cleaned half the specimens in perchloroethylene and half in petroleum solvent. Raters evaluated colorfastness and stain release after one and five dry-cleaning cycles using the AATCC gray scale for color change and the soil release replicas. Raters also identified scars, flaws, color migration, uneven coloration or hue shift within the samples. Data were evaluated using analysis of variance.

Hue shift, color migration and color removal occurred. Brown specimens always gained color whereas blue specimens both gained color and lost color. For both colors, evidence of color migration to the edge had disappeared after the fifth cleaning. After the first cleaning, there was no significant difference in color gain by solvent. However, by the end of the fifth cycle, differences in color by solvent were significant with perchloroethylene specimens being darker and petroleum specimens being lighter. Color loss related to pretreatment was greater in petroleum than in perchloroethylene. Pretreatment resulted in greater color loss on blue specimens with water-based stains and brown specimens with oil-based stains. Stain release was significantly better on blue specimens than on brown specimens after the fifth cycle. Perchloroethylene-cleaned specimens had significantly better stain release than petroleum-cleaned specimens. Water-based stains were more completely removed than oil-based stains.

While some leather cleaners can re-dye suedcs to camouflage color loss and irregularities, the potential for consumer dissatisfaction with professionally cleaned pigskin suede seems great. Further research is necessary to identify sources of problems and offer solutions for improving leather cleaning processes. A comparison study with different leather finishes and different species of leather is necessary before it can be determined whether the changes observed in pigskin suede were more problematic than for other leathers.

Conservation of the Cartonnage of an Egyptian Mummy from the Ptolemaic Period, 332 B.C. to A.D. 330

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The University of Missouri-Columbia received on a long-term loan from Washington University in Saint Louis an Egyptian mummy from the Ptolemaic period. This mummy had been exhibited in Saint Louis for several decades where it suffered damage due to changes in relative humidity and temperature. The conservator at the Museum of Art and Archaeology offered to do the conservation on this mummy in exchange for the long-term loan.

The mummy became the focal point of a multidisciplinary project in which the Museum of Art and Archaeology and the following departments of the University participated: Art History and Archaeology, Anthropology, Biochemistry, Forestry, Geology, Textile and Apparel Management, and the School of Medicine. Several analyses were carried out without unwrapping the mummy, in keeping with the loan agreement. This project culminated with the opening of the exhibition “Egyptian Art under the Greeks and Romans, 332 B.C. to A.D. 330” on September 26, 1987 at the Museum of Art and Archaeology, UMC.

The conservation project was divided in two phases: (a) Coffin: analysis of the wood, cleaning and consolidation of the surface paint of the coffin; (b) Mummy: cleaning and consolidation of the surface paint of the cartonnage. Backing of the broken areas of the cartonnage with linen, and repair of the mask, the pectoral, and the legs and feet cover.

The cartonnage is a decorative cover that was placed over the wrapped body. It is made of a very thin layer of gesso placed on a layer of linen. After the gesso hardened the entire surface was profusely decorated with paintings of floral and geometric forms and deities and was inscribed with hieroglyphs and writings from the Book of the Dead. All of the materials in the cartonnage are water soluble: the gesso, the mineral pigments and the base in which they were mixed. The cartonnage consists of a face mask that has anthropomorphic features, a pectoral plate, a covering for the legs and a covering for the feet. The first three sections were originally joined. Some areas of the face mask are gilded in addition to being painted. The cartonnage had fractured in numerous pieces and the facial features (nose, cheek bones, ears, mouth) of the mask had been crushed. Because of extreme light exposure of the undecorated parts, the linen had become very friable to the point where it would not support its own weight. It was decided that reversible adhesives and consolidants were needed to repair the surface paint and support the linen. After testing adhesives and consolidants, methyl cellulose and B-72 were chosen for characteristics desirable in this type of work.

To support the cartonnage while doing the repair work, it was necessary to build a paper mache form to the exact shape of the mummy. This was done by casting a plaster mold of the mummy and building the paper mache form from the inner side of the plaster mold. A light-weight 100% linen fabric was obtained and dyed to match the color of the ancient linen of the mummy wrappings and of the cartonnage. This fabric was applied to the cartonnage linen with methyl cellulose, which upon drying, stiffened and supported the original fabric. Detached areas of gesso were also attached to original linen with methyl cellulose, which permitted a slight softening and reshaping of the gesso to fit the original body conformation. The reshaping of some of the areas of the cartonnage and the face mask was done by slightly dampening the inside with a very fine mist of deionized water. This softening allowed the conservator to reshape the curved sections of the pectoral and to gently re-form the facial features of the mask. Afterwards small patches of the prepared linen were applied to the underside of the cartonnage with the adhesive. The loose areas of the pigment on the surface were reattached with B-72.

The success of this treatment using the reversible resin B-72 in toluene and the adhesive methyl cellulose in water will be of use to textile conservators faced with similar problems.
Concern about the quality, value, and nature of ready-to-wear garments has been reflected in studies about consumer definitions of quality and value, quality of garments in retail assortments, relationships between price and quality, and quality of garments relative to country of origin. The addition of courses to curricula that deal with analysis of ready-to-wear garments is another indication of academic interest. These studies and courses have tended to deal with single perspectives or individual purposes without recognizing the underlying theory and assumptions that are implicit in the analysis of ready-to-wear apparel.

Systems theory provides a robust basis for study of the apparel business and apparel products (Jolly, 1988). The assumptions of systems theory, such as a hierarchical manner of organization, adaptive nature, and interdependence of system components, are useful in explaining decision making in the apparel business. Ready-to-wear garments are products of an international system known as the apparel industry. Embodied in garments are hundreds of interdependent professional decisions relative to the merchandising, production, and marketing of the products. Recognition of the power of systems theory to explain the nature of mass production processes, priorities, and standards provides support for the usefulness of garment analysis research and linkages among concepts taught in garment analysis courses.

To facilitate the use of systems theory in garment analysis, we propose an integrated system of ready-to-wear analysis based on systems theory. This garment analysis system includes a comprehensive, five stage process: a) product positioning strategy b) materials selection c) components assembly d) final assembly and finishing and e) product presentation. A garment analysis instrument has also been developed to provide a sequential, systematic method for collection of data. To begin evaluation of the effectiveness of the garment analysis system and the instrument, a group of six garments representing a variety of garment types, quality levels, and price lines were selected. These garments were randomly assigned for analysis to university students at the sophomore level. The garment analysis system was also used on a variety of garments by a graduate level class.

The effectiveness of the system and the instrument was analyzed after each administration and modified as indicated by teacher observation and student evaluations. The process and the instrument are proving to be understandable after some effort on the part of student analysts to comprehend concepts, terminology, and organization. The analysis system and the instrument were effective for different garment types although more complex garments require more time and effort on the part of analysts. Students reported increased insight into the types of decisions that apparel professionals have to make in the planning, development, and presentation of product lines. Understanding was also gained in what constitutes quality in ready-to-wear.

Further development and refinement of the garment analysis system and instrument are underway. Potential uses of the instrument beyond the classroom include product development research related to apparel production, merchandising, and marketing; matching of product characteristics to the preferences of target markets; and perhaps even analysis, dating, and restoration of historic costumes.

The purposes of this study were: 1) to explore the relationship between the self-images of women undergoing chemotherapy and chemically-induced alopecia (hair loss), and 2) to consider the part that fashionable headdress plays in the maintenance of a positive self-image. Research objectives were: 1) to assess the headdress needs of women experiencing alopecia due to chemotherapy treatments, 2) to investigate what alternatives are most acceptable in order to maintain a positive image and attitude about themselves during treatment, and 3) to identify areas in which patient awareness needs to be increased related to headdress alternatives in order to ultimately improve the quality of life of these patients.

Every year more than 300,000 Americans are treated by chemotherapy. As survival rates for these patients increase so does the interest in the quality of their lives. One of the most traumatic side effects of these treatments is that of alopecia. The threat of alopecia, particularly for women, may create an altered self-concept due to the external cues such as the distortion of the patient's body-image. Such body changes are often more difficult for patients to accept than the fact of their disease. At this time a patient may need close personal ties the most; however, they may be very difficult to achieve due to the negative reactions on the part of others due to external cues such as appearance (Mulready, Lamb, 1985).

In order to assess the needs and acceptable alternatives, a questionnaire was developed patterned from the one used by Meacham et al. in their 1985 survey of clothing for mastectomy patients. Oncology professionals were interviewed to evaluate the validity of the questionnaire's content. A case study approach was used in this pilot study; 20 female chemotherapy patients experiencing alopecia were interviewed through hospitals and private oncology offices. Patients reported length, kind, and frequency of chemotherapy treatments, as well as onset and extent of hair loss and other factors associated with treatments. Patients described reaction to hair loss and headdress by themselves and others, rated selection criteria they considered important in choosing headwear, and indicated preferences for and problems with various types of headwear they used.

Seventy-percent of the subjects participating received treatments at the time of this study. Hair loss of 50% or more was experienced by 80% of the women. Subjects' reactions to their hair loss varied considerably; however, 50% of the subjects viewed this side effect as a negative one that made them feel self-conscious. Ninety-five percent of the women stated that headwear helped in their adjustment to their hair loss. In most cases, the subjects' headwear improved their self-image in respect to social interaction. The most acceptable alternative used by the subjects was found to be wigs, although some interest was expressed in the use of scarves, turbans, and hats. Findings also indicated a need for self-help materials concerning headdress, as 75% of the patients interviewed were given no suggestions as to alternatives available. The findings of this pilot study strongly suggest that alopecia in chemotherapy patients needs further investigation. Specific topics to be addressed include improved headdress alternatives that help patients maintain a positive image and the dissemination of self-help materials through avenues other than support groups.


Many universities across the country are introducing courses to teach ready-to-wear product knowledge to retail merchandising students without having the students actually construct garments. If this approach is taken, what goals should we as educators provide in such a course?

One primary goal is to help students internalize the characteristics of quality such that these qualities are readily available for use in the field. Quality is a subjective thing which involves not only the degree of excellence in the execution of a technique itself, but also the consumer's impressions about the relative cost of the technique. A common way to teach such quality perceptions is with a "knock-off" project in which students are sent into stores to evaluate the quality of similar designs executed at different price points.

A second goal of a sewn products analysis course should be to familiarize students with methods of manufacturing used in the construction of garments. Methods of manufacturing have much to say about the relative costs and prestige of garments, so students need to be informed about the economics of the industry. Only when a student makes the connection between piece work and mass production methods with most ready-to-wear, the task system and skilled handwork with fine tailored garments and custom work with couture will he or she truly appreciate the full range of meanings of quality. The instructor can assign a short paper on an apparel company, give credit for an on-site visit to an apparel factory, or help students examine couture garments in class.

A third goal of an apparel analysis course is to encompass as many kinds of sewn products as possible in the course. In their first jobs, many of our graduates are placed in departments which do not handle fashion items but "make them merchandising." The student better able to merchandise all the sewn products stocked by major department stores, the quality of items other than apparel should be studied.

A fourth goal of an apparel analysis course is to develop an understanding of the differences between the men's and women's apparel industries. Women buy clothing for color, design, fit, and finally quality of construction and fabric. Men, by contrast, value construction and fabric quality more than the innovativeness of the design. Students need to understand not only the big differences between women's fashion apparel and men's tailored clothing but also between the manufacturers of both.

No course on any aspect of apparel products would be complete without some discussion of imports. An understanding of the differences in apparel construction found in imports as well as some appreciation of the problems created for the U.S. apparel industry by the great influx of imports should be another goal of this type of course. Often it is possible to have students do a "knock-off" project in which an imported garment and U.S. made garment at the same price point are compared.

The last goal of a course in evaluating apparel quality is the development of appropriate vocabulary. It is not enough for a student to know how to use appropriate terms or how a French seam looks or even what quality characteristics should be present in such a seam. He or she should also know that consumers perceive such a seam to be a sign of quality and that such a seam is often found in quality garments imported from the Orient.

The above mentioned goals have been implemented in a course that has been offered for two semesters to classes of 25 students each semester. The course has been more successful in meeting the needs of retail merchandising students than the clothing construction course previously required and is quickly becoming an accepted part of the retail merchandising course of study.
A senior level apparel design class was developed as part of a curriculum revision package for the newly created apparel design option at Oklahoma State University. The basic belief that prompted development of this course was that design students must know and understand the basics of apparel production and should have increased exposure to the practical problems encountered by practicing designers. Yet, the department had limited industrial equipment, the location of the university imposed limited access to apparel manufacturers, and no formal internship opportunity was available to these students.

An innovative educational approach was developed whereby student design teams worked on a professional-level design/manufacturing problem identified by participating Oklahoma apparel manufacturers. The objectives of the course included:

1. To provide a design experience resembling that experienced by practicing, entry-level assistant designers.
2. To expose students to the realities of apparel mass production, including industrial equipment and mass production processes.
3. To understand the constraints that mass production and niche impose on design.
4. To gain experience in costing out a garment.
5. To emphasize the interdependence between the design, the textile, and component parts, the production process, and the ultimate garment characteristics.

Cooperation was readily obtained from four Oklahoma apparel manufacturers who each specified an industrial problem of interest to them. Company characteristics such as size, location, product lines, and level of manufacturing technology were different with each manufacturer. The instructor and student team made an initial visit to each client site to review the manufacturer's problem and to acquaint the students with personnel and facilities. Each team was given a unique problem and was responsible for planning and implementing a strategy to solve the client's request.

The first portion of the semester was devoted to lecture and discussion on two key topics, the interdependence between design, manufacturing, merchandising, and the consumer, and apparel design and mass production. The remainder of the semester, each team worked independently toward developing alternate approaches for satisfying the client's request. Teams visited with clients as needed. Some teams worked in the mass production facility. Periodically, teams presented progress reports to the class. This enabled students to learn about manufacturers that they were not working with. An oral and written project report, documenting student team progress and the final solution, was presented by each team to the class and to their client company.

Course and peer evaluation instruments were developed and administered. Although refinement of the instruments will continue, the overall success of this educational approach was readily apparent. The course was very well received by the students who felt that they had a glimpse of real world problems. The manufacturers felt that they had assistance with a problem of their choosing and that the department desired to graduate well prepared students. It also provided an opportunity for the Clothing, Textiles and Merchandising Department to interact with Oklahoma manufacturers to facilitate awareness, interest, and cooperation between the university and the Oklahoma apparel industry.
Numerous trends in retailing have emerged during the decade of the 1980s including a renewed interest in the quality of customer services. Merchandising faculty at a major midwestern university are working with merchandising students and local retailers to improve the effectiveness of sales personnel as a means of gaining the competitive edge in the retailing environment.

The primary purpose of the Retail Selling Success Project was to give merchandising students an opportunity to observe, analyze, constructively criticize, and improve the effectiveness of selling techniques used by retail sales personnel. The secondary purpose of the project was to assist local retailers in improving their selling performance, thus strengthening the relationship among faculty, students, and local retailers.

A detailed assignment including the objectives, steps in completing the project, additional resources, and evaluation criteria were presented to sixty-five students enrolled in a junior level merchandising course. In a lecture/discussion setting, students analyzed the basic selling concepts, how to handle and recognize various types of customers, and the steps in the selling process. Students practiced the selling process in mock customer-salesperson interaction through small group role playing; evaluations of the selling process exhibited during the role playing session was provided through third party observer analysis. Students also viewed a film on selling techniques in retailing following the role playing session.

During the same time period, the mall manager at a regional shopping mall selected specialty store sales personnel and store managers to be trained in the selling techniques in a seminar sponsored by mall management and conducted on a consulting basis by the merchandising faculty. Sales training was then relayed to store personnel by the individuals attending the seminar.

A sales evaluation instrument, including both objective and subjective criteria, was developed by the merchandising faculty in cooperation with mall management. The instrument was pretested by the store manager and sales personnel who attended the seminar. Using the sales evaluation instrument, merchandising students secretly shopped the retailers an average of three times to evaluate the performance of the salespeople. Some students were allocated funds by the mall manager to make actual purchases so that all phases of the selling process could be evaluated. Students were instructed to evaluate the effectiveness of sales personnel from the viewpoint of management and to suggest steps for improvement in sales personnel performance. Students' secret shopping evaluations were discussed in the classroom, evaluated by the merchandising faculty, and forwarded to the respective store managers for feedback to employees.

Mall management, faculty, students, and retail participants evaluated the effectiveness and perceived value of the project. Continued periodic secret shopping of the stores and training of managers and salespeople was determined to be an ongoing need.

The Retail Selling Success Project is an effective means of orienting students to the selling process and to management's role in the training and development of the sales people. Other benefits of this project are that 1) students are given the opportunity to apply course content to the retail environment and take an active role in overcoming existing performance problems; 2) students become more aware of the variations in salespeople performance and the resulting impact on customers' perception of the stores; and 3) the project facilitates the interaction between faculty, students, and area retailers.

The increasingly competitive environment in business has prompted many retailers to reevaluate their merchandising strategies including the attention given to customer services. Merchandising faculty and students can help retailers achieve their customer service objectives through support and aid in the development of effective salespeople.
Apparel students need to be able to recognize and evaluate industrially produced stitches and seams in order to effectively design, manufacture, buy and sell ready-to-wear. The evaluation of stitches and seams, two of a garment's fundamental components, is critical to the evaluation of apparel quality. Educators must provide apparel students with information and experiences that reflect the apparel industry's use of a wide variety of stitches and seams. The lockstitch and plain seam, produced by most home sewing machines and most home sewers, account for merely a fraction of the myriad of stitches and seams being used in the apparel industry today.

Fed. Std. No. 751a, entitled Stitches, Seams, and Stitchings (1) was developed by the U.S. government to achieve standardization of stitches and seams used in apparel produced for government contracts. It has tremendous potential for communicating stitch and seam standards within the apparel industry, especially in specification buying and contract manufacturing, both nationally and internationally (2). It has also proven to be an excellent resource for organizing and teaching the concepts of stitches and seams to apparel students.

Fed. Std. No. 751a was used in an apparel analysis course to organize the teaching of stitches and seams. The objectives were for students to: (a) differentiate between various stitch and seam types; (b) understand the end-use performance of stitches and seams in the areas of aesthetics, utility (comfort), durability (strength, extensibility, abrasion resistance) and cost; and (c) become familiar with industry rather than home sewing terms.

The stitch specifications contained in Fed. Std. No. 751a enabled students to categorize stitches into the broad classifications provided as follows: 100 class (simple chainstitches); 200 class (hand stitches and their machine simulations), 300 class (lockstitches), 400 class (multi-thread chainstitches), 500 class (overedge stitches) and 600 class (cover stitches).

The seam specifications in Fed. Std. No. 751a were used similarly. The classifications of SS class (superimposed seam), LS class (lapped seam), BS class (bound seam) and FS class (flat seam) were used by students to understand the general ways in which fabric plies can be joined.

Federal Standard No. 751a, Stitches, Seams, and Stitchings, will continue to be useful as a framework for teaching apparel students about the conformation, performance and cost of stitches and seams. Apparel students who are familiar with the advantages of using the Federal Standard will be equipped to use it in achieving meaningful and effective communication about stitches and seams, both of which are significant aspects of apparel quality.

(1) Federal Standard No. 751a: Stitches, Seams, and Stitchings (1965) can be purchased from General Services Administration, Rm. 6662, 7th and D Sts., S.W., Washington, D.C. 20407.


(3) Garment Construction Guide (1983) and stitch formation publications can be purchased from: Union Special Corporation, Technical Training Center, Huntley, IL 60142.
Incorporating Research into the Classroom Learning Experience

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One departmental course our students may elect to take is The Clothing/Textile Consumer. This upper-level course provides students with an understanding of changing demographic and consumption trends, factors affecting apparel consumption, and the interaction between the consumer and the retail market. The framework used in this course is an integration of the Geitel Winakor model of clothing consumption, the consumer behavior model used in marketing, and economic models of consumer demand. Critical thinking and writing skills are stressed. The course requirements include readings from both academic and trade journals, small group and class discussions, individual and group writing assignments, and a major class research project. The research project is the main feature of this course that provides a unique learning experience for the students.

The research project consists of seven components: (1) selection of a research topic, (2) selection of a research approach, (3) instrument design, (4) sample selection, (5) feedback on the data collection process, (6) data analysis, and (7) conclusions, implications, and recommendations. The students are given assignments in which they must think about and answer questions related to each of these components. Their thoughts must be expressed in a one-page single-spaced paper that is graded. On the day their papers are due, the students are randomly assigned to groups of four in which they further discuss the issue at hand, and come to a group consensus regarding how the class should approach that aspect of the research project. A group paper reflecting their combined thoughts on the topic is also turned in and graded. Based on these papers, the instructor makes decisions regarding what should be done with the class project each step along the way.

In completing these assignments, students are expected to draw upon and apply information from the course readings. For example, the choice of a consumer group on which to base the research is based on readings regarding changing demographic trends. The selection of variables to obtain information on in the questionnaire relied upon knowledge gained from articles on factors affecting clothing consumption. The project culminates in an abstract that each student writes following the AHEA guidelines for research abstracts. This abstract requires the student to integrate all that has been done on the project. Although a longer final paper could be required, many students find it more difficult to write an abstract since it forces them to really think about which aspects of the project should be addressed. Although the students are given a general outline for the abstract, they must decide what specific information is appropriate to include. Their class participation assignments, as well as examples of research abstracts they have encountered in their reading assignments, provide them with guidance.

I have taught the course in this manner twice now: 55 students were enrolled one semester and 35 students were enrolled the second semester. Based on their responses on course evaluations, and verbal feedback they have given to me, they are very enthusiastic about this project. In the past two years the students have studied the apparel shopping behavior of both the elderly consumer and the children's wear consumer. This project has given them hands-on experience in conducting research, and has provided a context within which they can apply information learned in the classroom.

References
In the undergraduate visual merchandising class, the "Visual Merchandising Store Layout Project" is a final project that incorporates the application of principles and practical experience in planning, arranging, and displaying merchandise for a specific type of department or small specialty store. Visual merchandising reflects a store’s image and is a way of educating the customer in their selections of merchandise. Many customers choose the stores in which they shop by the ambiance, physical layout and sales message of the store.

The project incorporates various resources developed to prepare students for designing a floor layout presentation. The project packet includes instructional materials, a written questionnaire concerning decisions in layout planning, a point-of-purchase (POP) design problem, an oral presentation format, and an evaluation instrument. A slide presentation developed for the project shows innovative examples of mannequins, fixtures, clothing classifications, color selections, interior and exterior displays, props, store signage, and layout presentations of retail stores in Oklahoma. This slide presentation, entitled "Store Planning for Fashion Retailing Through Visual Merchandising," is also appropriate for extension programs and presentations for local retailers.

For this store layout project, students select one of five types of departments or small specialty shops which include: children's (girls), children's (boys), juniors, misses, or men's. To complete the project students are required to present the following information and materials:

1. Typed plans for the project
2. Lighting plan
3. Floor layout design
4. Traffic pattern
5. Point-of-purchase fixture design
6. Wall elevations
7. Merchandise classifications key
8. Fixture key
9. Color scheme presentation

The project helps the students to understand how the basic visual merchandising principles are integrated to present merchandise in an attractive and functional manner for the customer. Visual merchandising is a practical approach to selling more merchandise to more people faster and less expensively. Students seem to look forward to this project as it is a method of expressing their unique ideas and sharing innovative designs with each other.

This type of visual merchandising project could be utilized for promotion classes as well as visual merchandising classes. Graduate classes could adapt the project as a case study using actual apparel retail establishments.

References


Displays that sizzle. (1987). Center for Apparel Marketing and Merchandising, Oklahoma State University (Teleconference Video).
The incorporation of computers into class assignments in textiles and clothing classes can be a time-consuming, expensive and rewarding undertaking. At The University of Texas at Austin we acquired 2 IBM PCs through Project Quest. This program provides the hardware to be used in the development of innovative teaching with computers. In our grant, we proposed using the computers in Advanced Textiles.

A data base using Lotus 1-2-3 is being developed for use in this class. At the present time, this data base includes the textile testing results from two semester's worth of class projects on fabric performance end-use analyses. While we realize that two semesters worth of data is a major limitation, we acknowledge that the data base will grow in depth in time and thus the value of the computer analysis will increase. Students in future classes will be able to add to the data base and use it to manipulate performance properties and actually design the optimum parameters to achieve a quality fabric for a specific end-use while testing and evaluating their own class project. Our goal is to have students understand the relationship between fiber, yarn and fabric properties and performance. For example, what variables are most important in predicting tear strength or pilling? Ultimately the students will be able to develop and analyze multiple regression equations to help them to address such questions. Multiple regression equations are being developed to show which factors are important predictors for properties such as strength and pilling. For example, yarn size, thread count, and fabric weight were the predictors for tear strength, while fiber content, tensile strength, thread count, weave, and yarn size were predictors for pilling. The regression equation for tear strength was as follows:

$$\text{Tear Strength} = -1076.186 + 73.236 \text{ yarn size} + 1.445 \text{ thread count (warp)} + 14.297 \text{ thread count (fill)} + 381.912 \text{ fabric weight}.$$ 

An R square of 0.848 was obtained with fourteen observations and nine degrees of freedom. The regression equation for pilling was as follows:

$$\text{Pilling} = -3.612 - 0.052 \text{ fiber content} - 0.046 \text{ tensile strength (warp)} + 0.056 \text{ tensile strength (fill)} + 0.052 \text{ thread count (warp)} + 0.053 \text{ thread count (fill)} - 1.36 \text{ weave} + 0.086 \text{ yarn size}.$$ 

An R square of 0.745 was obtained with fourteen observations and six degrees of freedom. Even with the limitation stated above, the students are able to see the impact the predictors have on tear strength and pilling. The next step is for the students to "plug in" their values for the predictor variables and see how close the estimate comes to their own observed value. These equations were achieved by using the regression command on Lotus 1-2-3 which uses Markoff series to do regression analysis. This method requires that the student use judgment in deciding which variables to add to the equation in finding the optimum regression equation. The student can look at each variable independently and then build the model using the R square to help finalize the list of predictors.

Additional interesting analyses will be explored with the data base. Cross tabulations between fiber content and tensile strength or abrasion resistance will illustrate the importance of fiber content in these two variables. Cross tabulation could also be done between type of weave and tensile strength or between thread count and tensile strength. Summary statistics over several semesters could be developed to show the typical fabrics chosen by students for the ASTM standards studied in class.

Although we realize that our data is built upon the test results of inexperienced testers and cannot be used to achieve scientifically valid results, we do believe it will have great benefit in making concrete to students the theory presented in class. We are just beginning to explore the many relationships which can be illustrated by the use of our continually growing data base.
As competition stiffens, apparel manufacturers are finding it necessary to computerize their operations. Educational institutions are also striving to provide students with skills in computer aided apparel applications. Because of its low cost, the microcomputer has potential as an alternative to apparel-oriented computer systems like Gerber and Lectra, which often cost 20 times more. Yet there is little or no software available for apparel design and production.

Existing CAD (computer-aided design) software can be customized for apparel, performing such functions as fashion illustration, pattern making, alterations, grading, and marker making. An apparel applications package was incorporated into AutoCAD software, which was originally designed for engineers and architects. All of AutoCAD's usual functions are still present, making the package ideal for laboratories that are shared by several disciplines.

Decisions about the package's content resulted from three years of experimentation with illustration, pattern making, grading, and marker making techniques by microcomputer. Approximately 112 designers, students, and faculty members were observed and queried as they performed apparel applications with standard AutoCAD software. Representatives from Gerber and Lectra also provided information about apparel systems. The desired features included access to basic slopers and croquis figures; menus of frequently used commands; simplified operations; and on-line instructions.

The apparel prototype drawing, upon which all new drawings are based, contains special settings for apparel. Several screen and pull-down screen menus were added to the existing ones. The menu items contain macros that perform complex processes in one step. Some menus instantly insert and scale slopers and pattern markings. Other menus contain commands and other items that designers and pattern makers frequently use. The tutorial menus display instructions for operations like pivoting darts and altering patterns. Icon menus allow users to display, select, and insert objects, such as croquis figures and motifs, in one operation. These new functions can also be activated from a digitizer tablet menu.

Development of the apparel package will continue, with the help of the software manufacturer and apparel manufacturers. Workshops to explain the customization process are also planned, giving designers the freedom and capability to personalize their systems.
A Senior Level Capstone Experience in Textiles and Clothing Curricula

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Many colleges and universities nationwide believe it is beneficial to offer a capstone experience for senior level undergraduates. This experience provides an opportunity for students to integrate learnings from earlier undergraduate courses in their major and minor fields, to apply those learnings to a "real life" situation, and to assume responsibility for critical information-seeking, leadership, and decision-making. Departments of Textiles and Clothing nationwide have concurred with this philosophy and have traditionally offered such senior level capstone experiences as internships and research projects.

Internships (or fieldwork) have existed in some programs for 40 or more years, and have focused almost exclusively on fashion merchandising experiences, since this area has accounted for the majority of Textiles and Clothing majors for years (Rudd, 1985; Garner and Buckley, 1988). Internships have been held in design, manufacturing, and product development to a lesser degree. Senior level research projects are much less prevalent as capstone experiences, often because they are offered only to honors students or because the faculty expenditure of time requires limiting the option to a few students.

In programs of Textiles and Clothing with high enrollments, it is often difficult to provide internships or research projects to all senior students due to faculty time constraints and other student variables. An alternative that our program has provided as a capstone experience to qualified students is a hands-on fashion production. This capstone experience serves many of the same purposes as fieldwork or a research project, and provides our students with still another choice in planning their programs of study. It is a year-long practicum that combines research, creativity, organization, promotion, decision making, and time management. The objectives of this activity are 1) to present a public showing of original student fashion designs in a multi-media educational production to the campus and local community, and 2) to provide upper level undergraduates an opportunity to function as professionals in a real-life situation and assume responsibility for various areas of production (research, media, publicity, art, physical arrangements, stage design, choreography, fund raising, program design, ticket sales, and accounting/correspondence). Each year a few outstanding senior fashion design students are chosen as the design talent to be showcased; a production crew of approximately 20 students is also selected to create an educational format for showing these designs to the public. The educational component is achieved through a thoroughly researched lecture, an extensive slide presentation, and the student designs.

Over six years, this capstone experience has involved 31 student designers and approximately 80 production crew members. Visibility for our department and college is an added bonus; we have reached some 4850 people who have viewed about 150 original garments and about 3000 slides in various educational productions. Student evaluations indicate that a hands-on fashion production is a viable capstone experience which contributes significantly to subject matter integration, decision making, and working cooperatively with peers and professionals.

The reputation of this capstone experience has grown to the point that applications far exceed openings each year. This is seen as a move forward in keeping our program flexible, relevant, and responsive to the curriculum and life-experience needs of our undergraduates.


The purpose for the design of the woman's vest was to create a fashionable garment inspired by an Indian museum piece with phulkari embroidery which originated in Punjab among Jat. The bodice of the Indian piece was covered by phulkari embroidery which is in actuality a false satin stitch where all the threads appear on the upper surface of the fabric. The original Indian technique requires that threads be counted as in counted cross stitch in order to achieve the pattern regularity. The design of the museum piece was very reminiscent of a patchwork pattern and the idea was conceived for a garment incorporating patchwork with the phulkari embroidery.

A visit to local fabric stores turned up an ikat cotton fabric in rust and blue with touches of light green and gold. It was purchased for accompanying trousers for the intended phulkari patchwork vest and the color scheme was born. A simple pattern was drafted for the vest with shoulder seams only so that the design of the embroidery would be shown to best advantage. The patchwork pieces were drawn on the pattern draft so that the blocks would fit perfectly. The embroidery on the vest was not done as it was on the original inspirational bodice because the cotton printcloth was too fine to count threads. Instead, the distance between thread crossings was simply estimated.

As the patchwork and embroidery vest grew, it became apparent that the garments worn with it would be extremely important. The vest, with clear, solid colors and geometric patchwork pattern, immediately became the focal point for the ensemble so the other garments needed to be able to support it without competing. The artist felt that the Indian theme should be carried out in both the trousers and bodice. The trousers were draped on a dress form with waist pleats for fullness and narrowed at the hem with pleats and ankle ties. The Indian choli, a short cropped top with cap sleeves normally worn with the sari, was chosen for the bodice style. The fabric selection for the choli presented somewhat of a problem. The vest made a strong graphic statement with intense colors while the trousers were rather low key and muted due to the ikat construction. A solid color bodice would have drawn attention away from the vest and made the ensemble appear top heavy. A patterned fabric which repeated the colors of the trousers was most desirable. This was achieved by tie-dyeing a pale green cotton with marine blue dye. The garment pieces were cut and then accordion pleated to repeat some of the ikat patterning in the trousers.

The garments were completed in April, 1988 with the vest taking a good two months of embroidery work.
"Urn on Stilts" is a statement of structure and contrasts achieved through the manipulation of textiles. The contrasting visual effects occur in the relationship of the tightly structured body of the vessel to the free-form crown of the vessel. The process incorporates a half-hitch knot of waxed cotton cord on a flax cord foundation utilizing alternating techniques to allow various chromas in cotton to be exposed.

The overall feeling and inspiration of the pieces is derived from a long time interest in American art pottery and classical ceramics. Various forms were studied along with an exploration of materials to identify those that upon manipulation would evolve into and maintain a sculptural form. Various traditional basketry techniques were experimented with to identify the needed firmness and texture.

The use of stilts adds importance to the structure. Stilts will serve as the basis for a future series that will explore the relationship of how manipulation of the stilts will influence form.

"Urn with Flare" is another study of contrasts that emerged from a series of fiber pieces using basketry techniques. The contrast is achieved through the merging of a primitive form with contemporary materials.

The basis for the structure is flax cord used with knotting techniques. The purpose is to explore the "opening up" of a simple form with emphasis on sharply contrasting materials. The free flowing materials give the illusion of something spilling from the urn. The encircling movement of the flare serves to redefine the inherent spiral structure of the urn. Color contrasts are achieved with silk cord and are purposely subtle.

The piece is designed to be presented on a pedestal. It can also be used as a wall piece.
I am from Puerto Rico, and currently am enrolled as a junior at Oklahoma State University, majoring in Apparel Design and Industrial Engineering. My entry is called "Flowers on Fire." I was inspired by the national flower of Puerto Rico, the hibiscus. This tropical flower grows wild on the country side of the island. The purples and greens represent the different shades found on the oceans around my country, the oranges and reds the tropical weather and the warmth of the people, all of them coming alive, "On Fire," under the yellow sun.

I used the batik technique and combined it with procion dyes and cotton fabric. I feel comfortable with these techniques and materials. They allow me to be creative. Combining batik with free-style painting with dyes, I mixed the colors on the fabric and achieved a great variety of shades.

Normally, when using the batik technique each color is applied individually and then covered with wax. Instead of following this procedure, I used free style painting and put on all the colors at the same time, thus allowing them to flow together. Another reason why I used the freestyle technique was because on regular batik a white line often separates each color, caused by the wax. Incorporating freestyle painting into the technique allowed me to minimize the presence of white lines.

In conclusion, I used the batik technique to create my "Flowers on Fire" because it allowed me to create a feeling of motion, while using freestyle enabled me to mix the colors with more fluidity. This fluidity reminds me of the movement of the hibiscus in the ocean breeze, receiving the sun light on a Sunday morning on my island of Puerto Rico.
I am a senior at Oklahoma State University majoring in apparel design. I used the patchwork technique to create my geometric design "Sunrise in the Garden." The straight edged shapes of the patchwork technique divide the space into patches of flowers creating the appearance of a garden. These shapes also lead the eye to see the rays of morning light piercing the dawn.

I chose this technique because I saw it as a challenge to create the straight lines, to match corners and points, and to maintain a flat fabric. "Sunrise in the Garden" is made of 100% cotton in shades of red, blue, orange, purple, green, brown, and black. The place measures approximately 22"x14" and is intended for a wall hanging. In creating my design I was inspired by the colors and patterns of the fabric, using the lighter pastel colors for the morning light as it reveals the glistening dew-covered garden. Darker colors with floral prints show the garden as it comes to life under the morning sky. The shape of the sun, in the upper right hand corner, was inspired by the traditional blazing star pattern which uses diamond shapes to create the appearance of bursts of light. Here I have used these diamond shapes to form rays of pastels glistening on the flora below.

In conclusion I have enjoyed the challenge of working with the patchwork technique and the challenge of expressing realism through an abstract design. I appreciate being given the opportunity to share my work.
"Knotted Squares" is the theme for my current work in fiber art/wearable art. These efforts stemmed from an interest in fiber manipulation through knotting techniques. Previous work focused on knotting techniques using yarn. The most predominant features of the current series are knots made from beige, 100% cotton fabric. Surface enrichment was achieved through knotting a small piece of fabric, placing the knot on a square and then sewing the squares together (see Photograph 1). Variation in each project was achieved by sewing the squares horizontally, vertically or alternating the knots as in a patchwork (see Photograph 2).

These designs were created based on visual qualities associated with the elements and principles of design. Line, texture and repetition are most noticeable. Knotting, the theme for these pieces, has not only served as a basis for inspiration, but has provided consistency throughout my work. Future projects may involve using colored fabric for the knots and/or painting the knots before sewing to a background.
Knitting with rib and stockinette stitches and color change with the use of bobbins were techniques employed to create this 100% acrylic child's sweater. The piece is a child's size 8, measuring 27 inches wide and 18½ inches long, with a sleeve length of 14½ inches. One inch alternating stripes and 4½ inch pine trees visually enhance both front and back.

The inspiration for this piece resulted from the need for a sturdy, easy to maintain, yet visually exciting gift for a five year old with a December birthday. Acrylic was chosen for ease of maintenance.

Christmas complements of red and green balanced with ivory were chosen to appeal to the preference of children for intense color, while the simplicity of the design was created to mirror the types of drawings or designs children tend to create themselves. Visual interest was added through the use of a border mini-stripe and through the "bleeding" of the tree design onto adjacent stripes.
Hand smocking and enhancement with pearls were techniques employed to create this 100% cotton sundress. The garment is a child's size 6, measuring 22 1/2 inches wide at armhole level and 25 inches long. The smocked design both front and back measures 8 inches wide and 3 inches high.

The inspiration for this piece came initially from a desire to create a functional yet elegantly feminine party dress for a young girl who loves flowers. The goal was to create an ornamented effect through the use of clean lines and precise techniques that were both visually stimulating and easy to maintain. Further inspiration for color and pattern came from the fabric itself.

The fabric selected for the design was a multi-hued confetti dot print on a ground of robin's egg blue. The primary pattern of the smocked design employed a garden trellis of matching blue filled with a diamond pattern of flowers mirroring hues of the dress fabric. The secondary pattern featured borders of wheat and flowered cable and enhancement of the trellis with hand applied pearls.

Techniques of finishing the garment further addressed the desire for a clean, sturdy design. French seams and clean finished hem, bias strips at armhole, and lined fabric straps were used to eliminate all raw edges. A fabric bow was added at each shoulder for visual interest, while buttonholes on the end of each strap button invisibly at the back of the dress for ease of removal.
The current work, "Horizon of Color" explores the mixing of colors using Ikat technique to create unusual effects in the warp of the fabric. The inspiration for this work stems from previous work in basketry where using different weaving techniques produced curious effects in the finished work. In an effort to transfer some of these results to fabric weaving, patterned Ikat designs were experimented with.

The procedures for creating the warp involved positioning mercerized cotton around nails placed in boards in a random zig-zag pattern. Using Ikat technique, sections of the yarn were wrapped and dipped in fiber reactive dyes. As a result of double dyeing certain areas of the warp, colors produced ranged from deep purple to shades and tints of red. In warping, blue strips of dyed yarns were added close to the edges as an accent and to give continuity to the garment to be made. Weaving a twill pattern with white mercerized cotton created a shadow effect in the fabric. The deeper colors of the warp were thus spotlighted.

Since the purpose of the work was to experiment with color, a simple design was chosen for the garment produced from this fabric. The jacket constructed consisted of a straight loose fitting bodice and off the shoulder wide sleeves with cuffs. The finished jacket was 26" in length and 50" wide from cuff to cuff.

The contrast created by the Ikat dyeing, using blue and red in various degrees of intensity, communicates a feeling of dynamic movement through the transition of color. This could be compared to the rapid change of splendorous color that takes place along the horizon at sunset. The textural effect of the twill weave creates a feeling of depth in the finished garment.
MEDIA

Garment fabric is beige raw silk and peacock blue slub woven polyester. Four silk ties are used for embellishment. Rayon braid, hand-plied variegated rayon and metallic yarns, various metallic trims and paillettes decorate detail edges. The coat is underlined in cotton/polyester broadcloth and lined in rayon.

TECHNIQUES

Garment pattern was created using flat pattern design. Silk ties were applied to garment fabric by a combination of machine-stitched strip piecing and hand sewing. Braid, trims, and yarn were applied by hand.

INSPIRATION

Two sources of inspiration guided the creation of this garment. First, I was inspired by four color-related ties that had belonged to my father, a strong mentor in my life. The ties were taken apart and incorporated into the structure of the coat side panels, in contrast to their original use as an accessory item. The diagonal placement of the tie pieces on the side panels replicates the bias grain of the original ties. A part of one tie was used to form a narrow stand collar. Pieces of the Hermès tie were used as epaulets to add a whimsical touch by prominently displaying the Hermès logo. The original tie-keepers were used as epaulet straps. My long-standing interest in ethnic costume served as my second source of inspiration. This piece was inspired by clothing of the Turkoman Empire.

GARMENT DESCRIPTION

The coat's distinct silhouette focuses attention on the embellishments of its structure, and provides a base for the mirrored shape in contrast fabric. Side panels provide a dramatic contrast of line, shape, color, and texture. The kimono sleeve and asymmetric front opening reflect the Asian influence.
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Today's smart retailers know that customers buy clothes that say success. Today's women are busier than ever...some 88% of American women work and 70% of that number have children under two. When these women shop, they buy collections. They do not have time to go to store after store, and they understand that color coordinated pieces are the best image-makers.

They demand clothes with a distinct point of view...separates with classic elegance updated in the finest of pure imported fabrics, soft colorations and feminine, comfortable silhouettes. They demand confidence in the quality of their clothes and the image they project.

Meeting the needs of these upwardly mobile, busy women is the focus of Fashion Development Concepts, which offers exclusive private label collections that provide a successful fashion image for customers and bigger gross margins for clients. Fashion Development Concepts is a product development company which was founded two years ago, and its track record proves it satisfies both retailers and customer. In this brief time, FDC has doubled its clients to 40 better specialty stores around the country. FDC retail clients can expect a mark-up of 62% or better.

FDC consistently offers saleable collections with a distinct point of view. From color trends to finished product, it conceptualizes product development with group members. Each collection begins with color, fabrication and design that is specially created for clients and color-keyed to the season's forecast. In addition, FDC, with the store's direction, creates a merchandising plan with color, fabrication and design. FDC then markets the product in fall and spring catalogues which are provided to its member stores to be mailed to their customers. These color catalogues are customized for each store member at a fraction of normal production costs to the store.

FDC's product is only offered by its store members in non-conflicting geographical trading areas, consequently, markdowns are not prevalent.

The FDC collection program, 12 pieces per style and color minimum...a remarkably lower minimum than most private label programs...is sold under the Elliot Andrews name. FDC also offers other labels: Susan Whiteman, St. Anton or, with sufficient quantities, the store's own label.

Select retailers subscribe to FDC services on a yearly contract basis. No letters of credit are required for merchandise.

Three collections are offered each year, with three color groupings in each season. The seasons are Fall, Holiday/Cruise and Spring. Formal presentations of the collections are presented at the Fashion Institute of Technology, after which stores review the collections individually.

Collections are designed and trends forecast from annual trips to Europe, where store members are encouraged to participate. Fabrics from some 30 mills from around the world are incorporated in the collections.

Clients receive personalized direction every step of the way...from inception of exclusive collections to in-store appearances by FDC executives to train store personnel and conduct fashion seminars for customers.

(Summarized by L. Susan Stark, panel moderator)
My theme today is Product Development and Styling in the textile mills and how they link up with the clothiers, retailers and the consumers. We, at Burlington Menswear, work closely with some retailers, but many mills do not. Somebody in charge of many defunct mills did not understand that to fabricate and style for the clothing market you always have to be flexible and willing to change. The market never remains stagnant over a long period of time. There must be a constant evolution that goes on in product development and styling.

Table I shows the recent influences in Product Development. There has been a change in the use of fibers in this industry. Table II and III shows the changes in fiber usage.

Table IV demonstrates what’s happening with wool prices. The price has gone up by 200% in the higher grades in the last two years. Note, the higher the wool grade, the finer, softer and more expensive the wool is. This price rise happens at a time when demand has been going up all over the world. The demand has now actually exceeded the supply and the price pressure is unlikely to abate soon. Our wool fabrics have skyrocketed in cost.

We had an enormous amount of forward motion in product development in recent years. There was just as great a change in Burlington Menswear styling. Table V illustrates the differences in suiting ranges, open line/exclusive, and patterns a season.

How do we do this? We get linkage input from everywhere. The most important being to hire good, young people right out of college. Intelligent, creative, curious, logical, decisive, flexible people with a positive self image and willing to change with the tide when necessary.

In both styling and product development, we constantly meet with our clothing customers to discuss what is selling and, just as importantly, what isn’t. Not just on our goods, but on everything they buy. They tell us what they learn on their trips abroad and around this country and we share information from our trips. I have heard from three of my biggest customers in the last two weeks about lighter colored clothing finally coming back for Spring ’90. We immediately changed our depth of color mix in the last few blankets from the season. If it happens, we are ready. If it doesn’t happen and everyone still wants dark clothing we were still right to do it.

Our product development is totally market driven and we use all of the information to create new products in two different ways; internal styling and merchandising. In addition we use our customer contacts, our national and international retail sector contacts, and an historical perspective to link up our product with the public demands.

For our styling linkages, as our creative input, we look to the traditional patterns: historical sources, customers, retail stores, information exchanges with European mills, editorial sources from U.S. and European fashion and trade publications, forecasts from associations, i.e., Wool Bureau, Color Association, etc., subscriptions to swatch forecasting services in Paris and Biella, Italy, U.S. swatch houses, AND all things beautiful and/or interesting.

Thank you.

(Summarized by L. Susan Stark, panel moderator)
Most consumers are aware that private label exists but do not understand where it comes from or why. Consumers are also finding limited selections of branded goods from department store to department store. Carter, Hawley, Hale creative market service/product development to answer two goals:

1. Profitability
2. Exclusivity

Market service/product development was formed to be the sourcing arm of product and information for Carter, Hawley, Hale stores. The arm consists of three divisions working together: production management, product development, and design and creative marketing. Together we participate with very focused accountabilities in manufacturing our lines. The linkages between these departments in creating our private labels is extremely important.

First, we use our forecasting service as seen in this booklet put together for Carter, Hawley, Hale use. Pre-planning goes on between the product development merchandisers and the designer to look at the merchandising needs of the stores for any given season. Designing includes a careful examination of the merchandising plans, the sourcing books, fabrics, packaging, and Carter, Hawley, Hale concepts and themes for the season. Once the designs are in place, the product management team is contacted to fine tune the domestic and imported sources, to purchase fabrics, to negotiate prices, to consolidate resources and source new facilities for manufacture, to create leverage on piece goods purchases, i.e., substituting oxford for fleece due to a better price.

The product development merchandiser and designer are involved in creating the line, but it is the buyers selections that finish our cycle. The Carter, Hawley, Hale stores do not have a minimum percent of Carter, Hawley, Hale private label which they must carry. We actually compete with all of the other vendors. Hopefully, we can manufacture with greater quality, less cost, and address our customers. Our performance is measured by the performance of the product lines at retail, and by our penetration percent to the total cost of purchase which is our private label. In the past it has been 70-75% - a remarkably high penetration percent.

Market service/product development forces longer lead times, units must be large which is not a problem for buying office. Generally group purchasing and joint selections are made to ensure larger units. In addition, we cannot enjoy any returns or cancellations.

Branded names can react closer to the season, and, they enjoy the many flexibilities in terms of sale, i.e., dated invoices, FOB terms, etc.

Product development has obvious drawbacks, but our buyers have been satisfied with the lower costs, the consistent quality, and the high fashion.

(Summarized by L. Susan Stark, panel moderator)
Today, over fifty percent of the clothing sold to and worn by men, women and children in the U.S. is produced internationally. In international buying, one takes nothing for granted. Even though in the 60's we see the realization of Woodrow Wilson and Wendell Wilkie, a "One World" when one produces globally, there are many factors to consider in Global Sourcing.

First, those buyers seeking to sell their goods to the customer must satisfy perceived and actual wants and needs. This is true whether the buyer sources his or her goods domestically or internationally. Even though international buying presents both problems and opportunities not present with domestic production, the fundamentals are still the same.

The objectives of any fashion merchandiser are to fulfill the "five rights", i.e., to sell the right merchandise, at the right price, in the right quantity, at the right time, and in the right way. This allows the store to prosper, promotes growth and increases profits. The fashion merchandiser who does this is able to serve a larger percentage of the target market.

To attain success buyers must consider many things before any merchandise is purchased. These include: lowest price for the highest quality, most unique styling, most desirable colors, best fit, easiest care, most comfort, and best life style adaptability.

In selecting the country in which the buyer will purchase the fashion garments, several areas need to be examined: quota limitations, level of skill of the work force, level of technology available, political stability, ability to adhere to delivery dates and the U.S. tariff schedule.

As can be seen in Figure 1, the four blocks on which to build a Global Sourcing Strategy are Quota, Price, Quality and Delivery. Merchandise produced and purchased by retailers must be both desirable and available. As the chart shows, without quota, the merchandise cannot enter the U.S. Quota, as defined by Random House's 1965 American College Dictionary is "1. the proportional part or share of a total which is due from, or due or belongs to, a particular district, state, person etc. 2. a proportional part or share of a fixed total amount or quantity."

The United States has bilateral trade agreements with over thirty countries. These agreements define the amount of merchandise that can be shipped into the U.S. from each country by fiber and the Standard Industrial Classification (S.I.C.) for each garment.

The quota system is very complex and cumbersome. Quota is traded, owned and controlled by governments, buying offices, manufacturers and individuals. How quota is administered varies with each country. Often there is no quota for emerging producers of textiles and apparel, but when production reaches certain levels, the U.S. Department of Commerce "calls" the country and limits or, worse, stops all shipments. The latter is also true when quota levels have been filled either from a country or within an S.I.C. classification for the country.

A well designed product has high consumer perceived value. As mentioned, quota is a limited fixed factor. If skirts are perceived by the consumer to be well designed and the right fashion merchandise one season, quota price increases.
1987, quota price on skirts out of Hong Kong ran as high as $150 per dozen. This means that in order to get these skirts into the U.S., buyers must first buy or have in their possession quota. Thus, the first cost price of each skirt was increased by $12.50. This did not include the landed (transportation cost) and loading. The latter refers to the 8% deduction given by domestic manufacturers if goods are paid for within thirty days after they are delivered. Often goods purchased outside the U.S. must be paid for with either letters of credit or at the time these goods are shipped.

Moreover, a firm might purchase quota in a certain country one year and find the price either up or down the next year. Our skirt example is a case in point. Demand for skirts because of the variation in lengths was not as great in Spring 1988, so quota prices dropped; yet in order to purchase skirts, one had to figure the quota price in the cost price. When quota prices dropped because consumer demand shifted, stores had loaded stocks because the merchandise violated the “five rights” essential for the sale of fashion merchandise.

The Philippines is a perfect example of a country that could possess quota and have good prices, yet political instability meant that at various times production drops occurred. Often restricted power sources meant that “Brown Outs” (no power for several hours) occurred weekly. In addition, as previously noted, S.I.C. classification controls not only quota but also U.S. tariff rates. Almost five thousand, seven digit S.I.C. classifications exist. Tariff rates change with decoration, embroidery, etc. on basic skirts, blouses, pants, sweaters, dresses, suits, coats, etc. Often these tariff rates vary depending on the interpretation of laws in the dozen or more ports of entry custom officials’ interpretation of the U.S. tariff schedule rates. Shifts occur from 5% to 40% based on this factor as well as on whether the country has a most favored nation, developing country or other standing.

Thus, although we have not yet discussed the price paid to the manufacturer of the garment, added to the price must be the quota price, the time/price equation that could be involved with political instability and the U.S. tariff schedule price.

Directly involved with price are the communication and transportation costs. Take Sri Lanka as an example. Limited telex, phone, shipping either by air or ship facilities, can delay delivery and increase costs. Bi-weekly water shipping could mean that the more expensive tri-weekly air shipping facilities would need to be used. Often, this space must be contracted for and purchased ahead of time. Thus, if the manufacturer cannot deliver, a cost factor has been incurred with little chance of recovery. As Figure 1 illustrates, then, a number of factors influence the design of the garment.

Now we shall discuss the factors that influence the manufacture of the garment. How completely is the buyer going to control the garment construction? Do buyers just purchase the garment in one country, or do they purchase the parts listed below in a variety of countries and have the apparel manufactured in one country?

Where does the fiber come from? Where does the yarn come from? Where is this fabric finished in order to provide the consumer comfort, aesthetic or performance features? Where do the “findings” come from? All of the parts necessary for manufacturing must be present in one place at production time. In addition, the machinery and worker skills needed for production must be available.

Figure 1
In order to support the Four Blocks, Quality, Delivery, Quota, and Price, certain other things need to be available

<table>
<thead>
<tr>
<th>B. Quota/Price</th>
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</thead>
<tbody>
<tr>
<td>A: Quota</td>
</tr>
<tr>
<td>C: Price</td>
</tr>
<tr>
<td>D: Communication</td>
</tr>
<tr>
<td>E: Transportation</td>
</tr>
</tbody>
</table>

Desirability

| A: without political stability an environment capable of sustaining production does not exist |
| B: without close adherence to the U.S. tariff schedule product design can double cost or change quota |
| C: without communication garment fit cannot be checked during production |
| D: without transportation nothing comes out of the producing country |

—Mary Barry

Most International Buying by Retailers involves Specification Buying in which the retailer or importer controls the quality. Garment fit is essential. The big question is: How do you obtain a garment that fits so well that it is flattering to a variety of body builds? The latter assumes you know the body measurements of the customer you seek to fit.

In garment sizing, where is fit most important? The buyer must consider neck opening, armhole, sleeve length from neckline, width circumference, length for regular, short and long size ranges.

The many methods of measuring the body are also important. Vertical measurements include stature, cervical height, waist height, crotch height and knee height. Girth measurements include chest, waist, hip, trunk, total crotch length (girth of crotch), thigh, knee, calf, neckbase, armeyes, upper arm, elbow and wrist. Width and length measurements include shoulder length, cross-back width, cross-chest width, scye depth (measure from the cervical to point where chest line crossed the “center back” line),
cervical to waist, including curve of spine (posterior waist length), collar bone to waist, along front of body (anterior waist length), waist to hip, shoulder slope (degrees), cervical to waist length and others.

Garment construction specifications are essential to quality. These include grain location as pieces are cut as well as the size of the hems. Fashion detail and technical directions where applicable need to be included, e.g., collar cut and treatment; type of decorative treatment with exact placement; sleeve opening and cuff type and treatment; buttonhole size, placement; stitching; button size and stitching; zipper length and exact placement; dart length, stitching and pressing plus marking the points; waistband or waist seam; belt type and construction; hem width, finish, stitching; pleats and other details. Seams with their width, number of stitches and finishes must be specified. Labels, hang tags, and pressing must be decided upon and the former ordered and obtained.

It is important to note that before garment construction can occur, fabric, trim and findings specifications need to be determined and agreed upon. Included in the fabric question is the fiber type or blend, yarn, fabric construction, finish and fabric performance characteristics. Trim also has a fiber type, construction characteristics and trim performance characteristics. These specifications must also be applied to the findings. Thus, thread, zipper, buckle and buttons must be specified in addition to construction and performance characteristics.

Presently, sample garments are made up by the manufacturer. These are sent to the buying office or store. Garments are put on a mannequin to insure proper fit. Many are washed by some buying offices who then try them on the mannequins to see how much shrinkage has occurred. The buying offices house a library of all garments that they are having made to their specifications. In addition, some vendors and retailers try the garments on models. Actual fit is a subpart of garment construction.

Department 13 of the A.S.T.M. sets performance specifications for Textile Products. These tests by either country, store or outside laboratories insure quality. Figure 3 illustrates the importance of quality and delivery.

Indeed, retail is detail. Global sourcing involves a great deal of detail and coordination. Delay of a label, a button, the right color thread or interfacing can mean the product would be delivered after the consumer's desire has shifted to something else. Major retailers, importers, and product developers have support staffs to aid, control and supplement buyers. These staffs often function and have their expertise based on one of the four blocks on which a Global Sourcing Strategy is built (see Figure 1). They are experts on either quota, price, quality and delivery. The latter often is called a traffic controller, transportation department head or merchandise mover.

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In order to support the Four Blocks, Quality, Delivery, Quota, and Price certain other things need to be available

A. Delivery/Quality
B. Quality
C. Delivery
D. Transportation

A - without skilled workers the product cannot be made
B - without available machinery the product cannot be made
C - without the parts necessary for manufacture the product cannot be made
D - without transportation the product cannot be delivered

-Mary Barry

In summary, and to repeat again, to attain success in Global Sourcing of Apparel, buying decisions must be based on knowledge and understanding of quota, price, quality and delivery. Consumer desire must be met by detailed planning of merchandise assortments by the merchandiser.
Determinants of International Trade in Textile Products

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The objective of this study was to investigate the export performance of twenty-six major textile exporting countries in the 1970-1980 time period. Export performance was measured by a country's gross exports and net exports (exports minus imports). Two models were used in the analysis, a static model and a dynamic model. Cross section data for 1970, 1975, and 1980 were used in the static model while data for the 1970-1975 and 1975-1980 time periods were used in the dynamic model.

Multiple regression analysis was used in all analyses. The selection of the independent variables was based on major trade theories and included physical capital, technological capital, human capital, unit labor costs and domestic apparel production. Physical capital was measured by the summation of gross domestic investment over 15 years. Technological capital was measured by the number of scientists and engineers engaged in research and development. Human capital was measured by the indexes of education at the second and third levels which are equivalent to high school and college education in the United States respectively. Unit labor costs were the ratio of wages of textile workers to value added. Domestic apparel production was used to represent the demand for textiles in the home market.

In the static model, the index of education at the third level and domestic apparel production had a significant and negative impact on both gross and net exports in all three years. The impact of physical capital on gross exports was significant and positive in all three years, though its impact on net exports was significant and positive only in 1970. These results indicate that countries with more college graduates and more domestic apparel production are less likely to be gross or net exporters of textiles than other countries. In contrast, countries with more physical capital are more likely to be gross and net exporters of textiles than other countries. The impact of technological capital varied according to the dependent variable. It was negative for gross exports in 1975 and 1980, but positive for net exports in 1970 and 1975.

Somewhat different results were obtained in the dynamic model. Changes in the values of several independent variables had a significant impact on changes in gross and net exports in both periods. Physical capital had a positive impact while the index of education at the third level and unit labor costs had a negative impact. The significance of unit labor costs is in contrast to the results for the static model and indicates that labor costs are still important to the textile industry. This suggests that increases in labor productivity must keep pace with the increase in wages if a country is to remain competitive in the world market.

An interesting finding occurred with respect to technological capital. It had a significant and negative impact on changes in both gross and net exports in the first period, and a significant and positive impact on both dependent variables in the second period. This suggests that technology is becoming more important to the textile industry over time and is in agreement with the finding of the World Bank that the developed countries are relying on technical change to improve their competitive position in the world textile market (World Bank, 1987).

The results of this research should be of interest to textile industry analysts and policy makers concerned with factors influencing a country's competitiveness in the world textile market.

Reference

Opinions About the Impact of Imports on the Domestic Textile and Apparel Industry

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Significance of the Problem: The domestic textile and apparel industry is a vital part of the overall economy, the American consumers may not be aware that this industry is losing its competitive edge in the international market. Various commercial publications have provided consumers with general information about the impact of imports on the domestic textile and apparel industry. These publications have made consumers aware of the problem, but an analysis of related cognitive structure variables (i.e., opinions, beliefs, attitudes, intentions and observed behavior) is needed in order to assess the informational impact on consumers with regard to the effect of imports on the domestic textile and apparel industry.

Purpose: The purpose of this study was to examine the groups, opinion about the textile and apparel industry before and after exposure to publications.

Methods: A questionnaire was used to include statements based on review literature and brochures published by the textile and apparel industry. The multigroup pretest-posttest control group design was used for the study with college students enrolled in three home economics classes. College students were used because they are one subgroup of the general population that should be informed about the impact of imports on the domestic textile and apparel industries. Classes were randomly assigned as experimental groups I and II and a control group. Each group completed the pretest questionnaire and three weeks later the experimental groups were shown either video or printed information (slightly modified versions of commercial publications currently in use). Following the experimental treatment they completed the posttest questionnaire. Difference between pretest and posttest mean scores were used to determine if a significant difference existed among groups. One-way analysis of variance and Duncan multiple-range test were used in the analysis. The t test for correlated samples was used to determine the amount of increase for the groups.

Findings and Conclusions: For the pretest a significant difference existed among the groups on their opinions about the impact of imports on the domestic textile and apparel industry. Five of the seventeen opinion statements indicated a difference among the groups. The level of significance ranged from .0001 to .03. The five statements were related to industry activities and size of the industry. The posttest results indicated that groups were different on 11 of the statements. The level of significance ranged from .0001 to .03. The five statements that were different for the pretest were included in these 11 statements. The additional six statements, where a difference was identified, related to the impact of imports on the domestic textile and apparel industry with regard to employment status and possible resolutions that might slow down the flow of imports. Also each of the five statements where pretest differences occurred increased after exposure to the publication. The control group showed the smallest amount of increase. These findings suggest that the publication produced a change in the groups' opinion about the impact of imports on the domestic textile and apparel industry.

Researching opinions is important in understanding consumer behavior on specific subject matter. However, to persuade and educate consumers, researchers must investigate multifaceted forces, (i.e. beliefs, attitudes, intentions, observed behavior) that shape consumer behavior. This study provides basic background knowledge for the development of information to be disseminated to consumers. Furthermore, continued investigation in this area would assist educators and marketers in their efforts to effectively disseminate valuable educational information to the consumer.
CONSUMER'S EVALUATIONS OF RETAIL SERVICE: A CONJOINT ANALYSIS

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Increasing competition between department and specialty stores has led to renewed interest in service. Department stores were pioneers in offering services to consumers; however, in an effort to cut costs, many department stores have reduced their service. Consequently, the service-oriented consumer is now believed to patronize specialty stores. Models of consumer decision-making suggest that a set of product attributes is likely to affect purchase decisions. Similarly, a set of service attributes is likely to affect retail patronage decisions. If service is to be used effectively as a competitive strategy, it is critical that the attributes of store service which customers consider important be identified. The purpose of this study was to evaluate the relative importance of a set of service attributes on the patronage decisions of specialty store customers. As competition in the retail market increases, this information should be useful to retail stores in planning service strategies.

Fifty customers of a small specialty store chain were randomly selected from the store's mailing list. Each was mailed a research instrument composed of a set of conjoint profiles describing retail stores in terms of eight service attributes: checkout time, level of personal selling, knowledgeability of salespeople, availability of gift wrapping, availability of restrooms, availability of a store charge card, return policy, and convenience of parking. Each attribute was varied at two levels in a 1/16 fractional factorial design consisting of 16 profiles with a full replication. For each store profile, participants were asked to indicate the likelihood of their shopping in that store by placing a slash (/) along an unmarked 100 millimeter continuum with ends defined as "Not at all likely" (scored 0) and "Very likely" (scored 100). Thirty-nine usable instruments were returned for a 78% response rate.

The store patronage decisions of each participant were analyzed using an individual-subject analysis of variance (ANOVA) and Hays' omega square ($\omega^2$), techniques borrowed from decision-making research in psychology and marketing. The results showed that knowledgeability of salespeople, the store's return policy, and checkout time, were, in order, the three most important service attributes. Convenient parking, the level of personal selling, and the availability of restrooms, were of secondary importance. The availability of a store charge card and gift wrapping had little effect on patronage decisions.

The results of this research suggest that in planning their service strategies, retailers should focus on educating their salespeople, maintaining a liberal return policy, and having enough salespeople available so that customers don't have to wait in line. However, the scope of this research was limited -- the sample was small and included only one store. Future research involving a larger sample includes not only specialty store customers, but also department and discount store customers is recommended.
Computerizing Coverlet Design Motifs:

A Pilot Study

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There has been an extensive study of United States coverlets as a part of the University of Maryland Historic Textile Data Base. New Jersey, New York, Maryland, and Indiana coverlets have already been entered in the data base. Coverlets from Pennsylvania, Ohio, Illinois, Michigan, Iowa, and West Virginia are in the documentation process and will be entered in the near future.

One of the objectives of the data base has been the classification, computerization, image capture and recall of coverlet design elements. This information will enable the researchers to trace the geographic transmission of these motifs as well as the time frame and frequency of their use. The New Jersey data was used to develop the methodology because of the relatively small number of coverlets in the sample (250) and the great variety of motifs used in these coverlets. Design elements, up to this time, have been traditionally studied for their meaning or country of origin. This approach seemed inappropriate for functional objects that appear to have commonality in their design sources. Evidence indicates that the majority of "figured and fancy" weavers purchased design sheets to punch their own Jacquard cards or they purchased pre-punched cards. A small number advertised they could "...weave any kind of figure in carpets and coverlets that can be drawn on paper ..." which implied that they could design their coverlets.

The sample consisted of any coverlet that could be attributed to a New Jersey weaver and that had been seen and documented or photographed and documented. Photocopies of the coverlet photographs were made and they were separated into five basic groupings, the centerfield area, side borders, bottom borders, corner blocks and cartouches. Within each of these areas, the overall motifs were carefully examined and a further separation was made of all those with similar patterns. Exact duplicates were then removed so that each possible configuration was represented only once. Each of these areas was further divided into individual design elements for ease of computer sorting. Design elements were then categorized by layout, general design type, and specific design type. Each of the five basic groupings received a letter code and each category received a three digit code. The design elements of each coverlet were then coded. The New Jersey coverlets were then sorted for a number of different elements, different design element combinations, and frequency of the use of different elements.

This methodology will provide researchers with a new quantitative method of studying design elements. It will also be applicable to other costume and textile elements.
In recent years, more and more attention has been turned to exploring the lives of black Americans and their origins as slaves in this country. However, one area that has received little attention by scholars, probably because of the seeming lack of sources, is slave clothing. Understanding the history of these textile products -- the uses of clothing and textiles, the textiles used, the allotment of clothing provided by the owner, the construction techniques, the fabrication process, the colors, and the description of the bondsmen’s clothing -- provides a wealth of clues about daily lives and physical comfort in the slave community.

The primary sources used to research slave clothing were eighteenth and nineteenth century North Carolina newspaper advertisements for runaway slaves. Identification for many of the runaways was often through their dress, since slave owners who advertised for their absconded property usually included a vivid description of the clothing worn and taken by the slaves. Fifty-eight extant newspapers containing owners’ descriptions of more than 800 runaway slaves were used in this study and represented a cross-section of all the newspapers in existence between 1775 and 1835 in North Carolina. In addition, records of plantation owners provided further information, while secondary sources consisted of materials published by scholars of Afro-American slavery.

From these descriptions, one may begin to see a pattern of dress common to the slave community. It was generally simple clothing, unadorned or accessorized, made from simple cloth, with the additional oddity, such as a “pair of cotton stockings” added for specificity. The cotton homespun textiles used for slave clothing in antebellum North Carolina, and by extension the southern United States, were often but not always called “Negro cloth.” Other fabrications were calicos, nankeens, osnaburgs, tows, linsey-woolseys, kersey, and twills in their many variations. All were plain, coarse, even harsh fabrics, many of them doubling for sacking. Occasionally, a finer fabric such as cassimere would be described, probably worn by a house slave as a uniform or a hand-me-down from the master. The fibers and fabrics used were either home-grown, homespun, woven on the plantation, purchased from the north or imported from abroad by southern merchants. Such fabrications to clothe slaves were not only cost-efficient but were also a constant reminder of the slave’s “place” and his plight in life.

Its drab, rough nature was different in quality from the textiles used by the owners themselves. The slave clothing in general was used in several meaningful ways. It was first a means of covering human bodies, but, and more importantly for the social system, it was a means of control over the slaves. Further, it defined distinctions in hierarchy among the slaves themselves, and provided an indication of status among the slave-owners. It indicated the plantation’s main crop, and served as a vivid means of identification of a slave who had been stolen or absconded from his master.
STATEMENT OF PURPOSE:

The United States currently has agreements with 30 countries providing for quotas on imports of specified apparel and textile products. The major market for many of the emerging apparel and textile exporting countries is the United States, whose imports from these and other countries have increased considerably during the 1980's. Significant shifts have occurred in apparel and textile production and employment from the developed countries to the developing countries.

METHOD:

A course studying the 14 countries that have a relatively large supply of low-cost labor and have developed an apparel and textile manufacturing sector to produce exports competitive in the world market was implemented in the merchandising program.

The United States is the major market for many of the 14 emerging countries; these countries are China, Brazil, Indonesia, Macau, Malaysia, Pakistan, the Philippines, Singapore, Sri Lanka, Thailand, the Dominican Republic, and Haiti, all of which have potential for growth. India and Mexico are among the 14 countries, but are not expected to expand production in the near future.

PROCEDURE:

Trade in apparel and textile of cotton, wool, and manmade fibers has, since 1974, been governed by the Multifiber Agreement. The MFA provides the framework for the negotiation of bilateral agreements between importing and exporting countries, to prevent market disruption. Apparel and textile data, categories for imports/exports and the quotas used by the 14 countries were studied.

Strengths and weaknesses of the 14 low labor cost countries were analyzed. Maps indicating major apparel and textile production areas for each country were available with demographic, climate, and natural resource data. Current videos of many of the countries were used in the classroom, exposing the students to the country, major cities, and the people.

Apparel imported under item 807 of the Tariff Schedules of the United States (TSUS) are those that have been assembled abroad, but partly manufactured in the United States. The apparel industry uses the special tariff provision as a method of reducing its labor costs. Study of the apparel trade under TSUS item 807 initially involved Mexico, more recently it includes the Dominican Republic and Haiti.

Countries using the TSUS 807 provision have made a strong commitment to increasing their export capabilities, by establishing duty-free zones, and tax incentives. A study was made of apparel manufacturers that have apparel cut in the United States, assembled by companies located in duty-free zones, then exported to the United States market.

Implications:

The potential for growth in the manufacturing of apparel and textile products exists for 12 of the 14 developing countries. Apparel and textile manufacturing plays an important role in the economy of most of the developing countries.

As apparel and textile quotas are renewed and increased for the developing countries, greater competition will be experienced by manufacturers in the United States.

Evaluations:

The Import/Exports class was offered during the Spring Semester of 1988, with an enrollment of 35 junior and senior fashion merchandising majors. Embassies for the 14 countries were contacted for the latest import/export data.

A survey of the hourly wage, number of employees in apparel and textile industry, number of manufacturing plants, quotas, growth potential, etc. was charted. An evaluation of the Apparel and Textiles Imports/Exports in Developing Countries course has revealed the timely topic was well received by the students.
Computer technology has become a critical factor in every stage of the apparel design, production, merchandising, and marketing process. This technology is forcing us to view what were once sharply segmented areas of the apparel industry as integral components of the total industry.

As the apparel industry continues to encompass computer usage, the University's apparel CAD system becomes an ideal tool for linking two program areas: Apparel Design and Fashion Merchandising. This is particularly true because the design and merchandising industries are becoming closely allied. One way that designers, who formerly worked independently from retailers, are linking with them is through private label programs whereby the designer and retailer work together to develop private label products that enhance the individual retailer's image of exclusivity.

To transfer this concept of linkage to students in fashion design and merchandising, an experimental course, "Computer-Aided Fashion Design and Merchandising," was developed. Emphasis was placed upon developing products and promotional strategies by using an advanced computer-aided graphics design system to demonstrate one method of designing and merchandising private label fashion products. Hypothetical retailers with a set of specialized product/image requirements provided the mechanism that enabled students to:

1. become familiar with the role that private labels play in the fashion industry.

2. understand the roles of designer in developing a private label program.

3. become familiar with fundamental computer graphics terminology.

4. utilize computer graphics to develop a private label program for a hypothetical market by:
   a. defining the market,
   b. creating a label and logo,
   c. designing a fabric and apparel grouping, and
   d. developing a promotional strategy.

5. become familiar with computer-aided graphics design systems used by the fashion industry.

The course is unique for two reasons. First, it links two program areas that are usually considered as separate entities in many educational settings. As a result it enables design and merchandising students to recognize the common threads linking their programs, as well as providing faculty with opportunities for sharing their expertise. Secondly, the course utilizes a new teaching tool, an advanced CAD graphics system.

Faculty representing each program area identified common instructional concepts and topics specific to each area. Exercises integrating the instruction of computer graphics functions with related course concepts were developed. Industry speakers and field trips provided insight into private label programs and industry computer graphics utilization. The private label design projects were evaluated by industry representatives at the end of the course.

The course was evaluated positively by the students. Evaluations pinpointed that once students became familiar with the CAD system, they discovered that it enabled them to explore their ideas more fully. Future refinement should include developing additional CAD exercises. Both faculty and students felt that the course increased understanding of how private label designs can be used as a strong profit enhancing tool for the retailer.
MODERNIZING APPAREL DESIGN COURSES BY DEVELOPING AND INTEGRATING

COMPUTER-AIDED DESIGN BY MICROCOMPUTER

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As competition stiffens, apparel manufacturers are finding it necessary to computerize their operations. However, apparel-oriented computer systems, such as Gerber, Lectra, and Microdynamics, can cost $200,000 or more -- well beyond the budgets of smaller manufacturers and educational institutions. Because of its low cost, the microcomputer is a viable alternative. With the goal of integrating microcomputers into all apparel design courses and of developing alternatives for industry, an experimental course was developed in which students did all work by microcomputer.

Because there is little or no software available for apparel applications, the authors developed the apparel applications taught in the course using AutoCAD software. The course work included developing and illustrating a design line, digitizing slopers, pattern making, alterations, grading, and marker making. Many of the techniques had been tested with approximately 112 participants in AutoCAD apparel workshops throughout the United States.

The course participants were senior and graduate advanced design students. After learning basic AutoCAD commands, each student developed a series of children's croquis figures and a line of children's wear. Every student constructed two garments -- one to fit a child model and the other to fit a Wolf form. After digitizing slopers, the students did all pattern making and marking by computer. Modifications and alterations identified during the muslin fittings were also performed by computer. The final garments were evaluated on fit and pattern making technique as well as aesthetic appeal and proportion. This aesthetic critique was extremely important in evaluating the computer as a design tool. It identified possible difficulties that designers might encounter when designing on a computer screen.

Both students and critics considered the project a success. Overall, the students were impressed with computer-aided design. Although the skills and techniques took time to develop at first, the ability to redesign and rework sketches and patterns were worth the effort. While students initially reported some difficulty in visually evaluating the proportion of design details of garments on the computer screen, they felt that, for the most part, the garments turned out as they envisioned them. Having gone through the process twice while making the two garments, the students felt that they could now accurately gauge proportion in this new design medium. Any other difficulties were the same as would have been encountered as the result of traditional pattern making methods. The students were most impressed by the dimensional accuracy of the patterns, the precision with which the pieces fit together, and the speed with which pattern pieces could be perfected and duplicated for facings.

The quality of the sketches was evaluated by Coty Award-winning New York designer Jon Haggins. He was impressed by the neatness, precision, and aesthetic appeal of the sketches. He also stated that the sketches had great potential for companies involved in offshore manufacturing. They could be easily telefaxed to other countries along with the specifications and were precise enough to be accurately translated into patterns. Progressive exercises and activities are being integrated into the five apparel design courses at Cornell, which range from beginning to advanced. Students will be introduced to the computer in the basic courses and will be able to complete all work by computer at the advanced levels.
Using formal classroom instruction to help "problem solve" with "real world" situations is a key challenge for educators. However, this integration of knowledge is essential for students to function effectively as professionals. Preparation of students who are familiar with and who understand the interrelationships of the textile/apparel pipeline is important as the lines between designer, manufacturer, retailer, and product developer increasingly overlap. The Back to Basics Seminar provided a unique opportunity for students to grow in first-hand knowledge of the textile/apparel industry and to make personal contact with individuals in the pipeline. It also helped students to become aware of the "lifelong learning" concept.

The nation's first Back to Basics Seminar was designed to address needs of the small apparel contractors through an in-service education program. Topics included the basics of costing; scheduling, loading, and communication; 807 and 807A; the manufacturer/contractor relationship; private label; and retail issues. This seminar was jointly sponsored by a leading trade association, an apparel industry publication, an apparel contract networking company, and a land-grant university. The overall goal of the seminar was to help improve the competitiveness of the U.S. apparel industry.

Students played a critical role in the implementation of the seminar. Because this was a new concept, recruitment of participants was essential and the students were a vital link in the information dissemination and recruitment.

Students signed up for a special problems course in which they were responsible for contacting apparel producers. Each student was assigned a number of counties and given a list of the apparel producers in those counties. The student was to call (in state) or write (out-of-state) each owner or plant manager to explain the seminar—its purpose, speakers, date, place, cost and sponsoring organizations. Through personal contact the student was to try to develop interest and participation in the seminar, then follow-up to see if the company would send someone to the seminar. When the students were talking with the representatives of a given company, they were to ask questions about the current situation, e.g., products currently being produced, whether or not they were operating at capacity or whether they needed work or assistance with the orders they had, reactions to the seminar topics, and suggestions for additional seminars. If a company was no longer in existence, the students were to make a note of it. All of the information gathered about the companies was used to update the data base that had been set up previously.

The students also assisted with the seminar itself. This gave the student an opportunity to meet and interact with the seminar sponsors, speakers, and participants. They were able to hear the presentations and observe the interactions between apparel manufacturers and contractors.

Evaluation by the seminar participants was very positive. Participants were especially pleased with the workshops which focused on 807/807A, the manufacturer/contractor relationship and private label. The students indicated that the seminar was an extremely valuable experience for them. They learned first hand about organizing, promoting, and implementing a major event. They obtained in-depth information about companies in a selected geographic area. They met and interacted with key individuals in various parts of the textile/apparel pipeline. The seminar presentations and the dialogue between seminar participants and speakers gave students the opportunity to tie together what they had learned in the classroom.

The emphasis by seminar speakers on private label and product development reinforced the viability of this career option for students. The students overwhelmingly felt that this type of experience gave them contacts and better understanding of the textile/apparel pipeline, thus enhancing their ability to compete in the professional world.
Match marketing involves bringing buyer's needs together with seller's capabilities. On a more specific level, it relates to bringing parts of the apparel pipeline together to conduct business. For instance, profitable match marketing opportunities occur when apparel producers who have either goods or capacity to sell successfully connect with retailers or manufacturers who are seeking to purchase goods or services. The Auburn University Apparel Sourcing Fairs have provided one facet of successful match marketing activities. However, data from these activities can also be used to point out educational needs in this area. Half of the contractors and manufacturers attending the first fair were not currently working at full capacity and wanted to find additional work.

Many producers in the state are small in size and do not have the resources or knowledge to market their products that larger companies possess. Traditionally, apparel contractors and manufacturers have not communicated effectively leaving a gap between existing market needs and production capabilities.

Trade fairs that offer match marketing opportunities for apparel producers are a relatively new concept for smaller apparel producers. A number of new trade shows are emerging. However, these events are costly with exhibit space at some shows costing up to $2500 for a 10 ft. x 10 ft. space in addition to travel expenses. Recognizing these factors, the Alabama Cooperative Extension Service developed an educational program to help small apparel firms market themselves more effectively than they could as individuals. Since the state development office has traditionally been more involved with recruiting new industry than supporting existing industry, the educational program also involved education of state government to the needs of this existing industry.

Predictions are that of the $100 billion business at the distributor level of the apparel pipeline, private label will encompass from twenty-five to forty percent during the next few years.

The Private Label Trade Show held in New York, June 1-3, 1988, was selected as the demonstration site. Extension specialists approached state government with information regarding match marketing in apparel. The Alabama Development Office agreed to fund exhibit space for a number of small apparel manufacturers to exhibit at the Private Label Show, Extension with its statewide network, made the opportunity available to all producers and identified ten producers with varying apparel categories and production capabilities. Phone conferences linked participating apparel producers and the Alabama Development Office to state Extension specialists to develop an effective marketing strategy for the show.

Eight Alabama apparel firms exhibited garments and made contacts during the three-day trade show. An on-site evaluation revealed that these producers connected with 75-105 potential business leads. Seventy-five percent of the producers surveyed felt that the group effort was extremely successful in making Alabama apparel producers visible to manufacturers/retailers at the show. All would be willing to exhibit in a joint effort at some future trade show.

A follow-up phone survey in mid-August showed that two firms had completed orders for a total of 5,000 dozen units. Four firms had contracts pending. Two firms who were listed in a promotional brochure but were unable to attend the event received calls from manufacturers interested in total package goods. Networking among the trade show participants resulted in one additional contract.

Lenda Jo Anderson, Extension Clothing Specialist, and Pat Dillon, Florence Sportswear, talk with a potential client at the Private Label Trade Show.

The hottest subject on campus today is the study of small business formation and growth, or entrepreneurship. More than 10,000 students are enrolled in entrepreneurial courses taught in 350 colleges and universities throughout the United States (1). According to the U.S. Small Business Administration, 12.2 million people are expected to go into business for themselves by the year 2001 (2). Predictions indicate that the majority of students who work for businesses in the future will work for small businesses, growth businesses, or their own business. With these predictions, educators will need to address entrepreneurship as an academic subject matter (1). The areas of specialization within home economics lend themselves to the entrepreneurial approach to employment.

To meet the above challenge, a course "Entrepreneurship: Individual Enterprises" was developed to be taught during Interim, a three-week term between spring and summer semesters. The purpose of the course was to offer sound advice and vital practical information on specific aspects of managing a small business.

The course objectives were to:
1. develop knowledge concerning the personal characteristics which would contribute to becoming a successful entrepreneur,
2. develop knowledge of financial strategies available for financing a new business,
3. develop knowledge of the basic bookkeeping skills necessary for managing a new business,
4. examine the processes necessary to select an appropriate location and building,
5. develop an awareness of the importance of identifying the type of business that would be successful in an identified location,
6. examine the options available concerning the structure of a business or legal form,
7. examine the importance of inventory purchase control and pricing,
8. identify appropriate promotional strategies,
9. identify insurance needs necessary for a small business,
10. identify staffing needs of a small business and procedures used to meet payroll and tax requirements, and
11. develop a business plan.

Instructional strategies included lecture, guest speakers from the areas of accounting, law, advertising, marketing, real estate, insurance, banking, and successful entrepreneurs as well as those who had recently gone into business. Field trips to local businesses and a Statewide Business Fair were incorporated into the class schedule. Relevant video tapes and slides provided a variety of learning experiences. The majority of the students in the class were juniors and seniors and were enrolled in various disciplines across campus.

The course was evaluated using the University Wide Student Opinion Summary form and the College of Human Environmental Sciences Student Opinion form. The majority of students agreed that (1) the course was a valuable learning experience, (2) they had learned basic concepts from the course they would apply in business situations, (3) the course included concepts and principles necessary for an overall understanding of entrepreneurship, and (4) the aims and objectives of the course were met. Due to the positive evaluation, the course will be offered again in the future.

References
TEXTILE PRODUCTION PROCESSES:
A COURSE BUILT AROUND TEXTILE PLANT VISITS

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Textile Production Processes is a university course which takes advantage of the many, diverse textile manufacturing facilities near the campus. Production processes and their relationships with the overall operation of manufacturing plants are examined in a series of plant visits integrated with lectures, readings, and term projects. Though textile and clothing curricula often incorporate field trips and study tours, this course appears unique in its approach.

Objectives and Implementation. The objectives are to: (1) increase student’s knowledge of textile production processes and equipment and of fiber, yarn, fabric, and textile product manufacturing in general; and (2) engage students in individual learning experiences on aspects of textile processing relevant across production sectors.

The course is built around six to eight plant visits spaced over each spring term. Plants visited typically encompass fiber manufacturing, texturing, spinning, weaving, knitting, tufting, dyeing, finishing and apparel manufacturing. Readings deal with processes in the plants and with related factors, e.g., quality control, productivity, computerization, and government regulation. Lectures by the instructor begin with orientation to the planned plant visits and to factors impacting the entire industry. Before each plant visit, lecture focuses on key aspects of processes that will be seen: filament extrusion, false twist and other texturing, slashing, shuttle and shuttleless weaving, etc. Handouts, visuals, and props (e.g., yarn and fabric samples, jets) greatly aid explanation. Exams draw from lectures, readings, and plant visits.

For the term project, each student selects a different topic relevant to all the plants. Examples are quality control, waste management, worker safety, inventory management, and computer use. Students are responsible for obtaining information on their topics at each plant. Each project culminates in a paper which explains the present situation and past or expected changes, as well as reasons and effects.

Effectiveness. Most students are seniors or graduate students who have taken basic textile science and a textile evaluation course. The textile science undergraduate curriculum requires the production processes course. Students in other options, e.g., merchandising and apparel design, have comprised a rising proportion of the registrants over the nine times of offering the course. Enrollment has ranged from five to 14, usually 10-14 in recent years. Enrollment is capped at 20 due to transportation and plant tour constraints.

Students anonymously evaluate the course at the end of the term, mainly by rating the instructor on class sessions, readings, and course organization. Written comments also are frequently given. Overall, evaluations have been positive. Comments often stress the value of viewing production, interacting with plant personnel, and experiencing the plant environment. A few have said that the course helped with career decisions.

While not formally evaluated, good rapport and cooperation have been established with personnel at the plants. They seem to appreciate students' professional interest and knowledge of their operations, and that the visits have focused educational purposes. The plant visits have fostered company managers' broader involvement in the department’s instruction and research.

Plans for Continuation and Follow-up. The course is well established in the curriculum. High transportation costs may lead to reducing plant trip numbers and distances. Yet, realized and potential payoffs to students and the department bode well for continuing the course much as described here. Major elements in maintaining the course’s quality are: forward planning and organization of the many interconnected details; lectures and readings which stay abreast with textile plants and the industry, and which challenge students beyond their prior backgrounds; and good, sustained communication and working relationships with plant management personnel.
Training Correlated with Role Conflict and Role Ambiguity in the Softgoods Areas of a Department Store

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Previous researchers (Brief & Oliver, 1977-78; Dubinsky & Skinner, 1984; Fisher & Gitelson, 1983) have used role conflict and role ambiguity theories to investigate the consequences of role conflict and role ambiguity. Much of this research was done using mid-management level employees. Little research has been conducted concerning the training of retail sales associates, particularly as training relates to role conflict and role ambiguity. For these reasons a study was conducted to determine the training of sales associates in the softgoods areas of two department store units and the relationship of this training to role conflict and role ambiguity.

Questionnaires were hand delivered to sales associates employed in the softgoods areas of the two stores. The questionnaire consisted of six parts which elicited information on: (1) the amount of training, (2) the adequacy of training, (3) the level of knowledge expected by the supervisor, (4) customer requests for information, (5) role conflict and role ambiguity, and (6) demographic information. Sales associates responded to statements concerning training in the areas of product knowledge, sales techniques, operational procedures, and store policy.

Statistical analysis using t-tests revealed a significantly (p ≤ .05) lower amount of training was received in product knowledge than in sales techniques, operational procedures, and store policy. The supervisor expected the sales associate to possess an above average level of knowledge while the customer expected the sales associate to possess only an average level of knowledge (p ≤ .05). Pearson product-moment correlation coefficients indicated no significant relationship between role conflict and role ambiguity and (a) the amount of training, (b) the adequacy of training, (c) level of knowledge expected by the supervisor, nor (d) customer requests for information.

The amount of training varied among the areas of product knowledge, sales techniques, operational procedures, and store policy. Role conflict and role ambiguity was not related to training because the sales associates employed in this store received adequate and frequent training. Sales associates employed by other retailers, which have poor training programs, may experience role conflict and role ambiguity. Further research is needed to examine specific areas of products knowledge training and other possible sources of role conflict and role ambiguity for the salesperson.

References


According to Sheth (1973), the key decision in organizational buying is vendor selection. This decision is thought to be affected by a set of evaluative criteria, the use of which may vary by product type. Francis and Brown (1985-86) studied the vendor selection decisions of retail buyers, using a survey and self-report method, and found that apparel buyers were more likely than appliance buyers to report using product fashionability. Unfortunately, self-reports are notoriously poor surrogates for the decision-making process, even among expert decision-makers like retail buyers. In psychology and marketing, conjoint analysis is often used to correct for this deficiency. Consequently, a conjoint method was used in this study to analyze the vendor selection decisions of retail buyers.

Eighty buyers from a large regional department store were asked to complete a conjoint task composed of a set of descriptions of hypothetical vendors. Each vendor was described in terms of eight evaluative criteria culled from the organizational buying literature. The task was based on a $4 \times 8$ mixed $1/16$ fractional factorial design with full replication. The two main factors were the four merchandise groups (women’s, men’s, accessories, and home products) and the eight vendor selection criteria (reputation, service, country of origin, quality, fashionability, delivery, markup, selling history), each of which was varied at two levels. For each vendor, the buyers were asked to indicate the likelihood of their purchasing merchandise from that vendor with a slash (/) placed along a 100 millimeter continuum with ends marked “very likely” (0) and “not at all likely” (100). Sixty-two usable instruments were returned for a 78% response rate.

An individual-subject analysis of variance (ANOVA) and Hays’ omega square ($\omega^2$) were used to identify the criteria affecting the buyers’ vendor selection decisions and to assess the relative importance of each. The results showed that the dominant criteria are selling history, markup, and delivery. Quality and fashionability are of secondary importance, while reputation, service, and country of origin are of little or no importance. A post-hoc $4 \times 8$ ANOVA was used to compare the average $\omega^2$ values for each criterion by merchandise group. The results of a Scheffé test showed that buyers of home products are less likely than either ready-to-wear or accessories buyers to use selling history in choosing vendors. This result lends support to Sheth’s (1973) contention that vendor selection decisions are likely to vary by merchandise category.

The Sheth (1973) model also suggests that vendor selection decisions are likely to vary by organization type. Consequently, future research involving buyers from both discount and specialty store organizations is recommended.


Profit Determinants of the Apparel Industry

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The objective of this analysis was to investigate the influence of variables related to industry structure and characteristics on profits of U.S. apparel firms. Profits for the U.S. apparel industry have traditionally been lower than that for other U.S. industries due to its market structure and competition from imports. However, little research has been done on the profit determinants of the U.S. apparel industry.

Two separate cross-section analyses were performed, an industry analysis using data for 1982 and a firm analysis using data for 1986. Multiple regression analysis was used for both analyses.

The industry analysis included 25 four-digit apparel producing Standard Industrial Classification code industries. The dependent variable, profits, was measured by the return on stockholders' equity. The independent variables were Inventories, Sales Growth and Imports based on their designation as key variables for the apparel industry as well as Assets, Relative Industry Size and Concentration based on their significance in previous empirical studies.

Various functional relationships between the dependent and independent variables were examined including the linear, semi-log and double-log forms. The adjusted $R^2$ values ranged from 0.39 for the linear form to 0.66 for the double-log form which is high for cross-section data. Assets, Relative Industry Size, Sales Growth and Concentration had a significant impact on industry profits. Assets and Sales Growth were positively related to profits while Relative Industry Size and Concentration were negatively related to profits. Imports were not significant which can be attributed to the use of domestic and foreign sourcing by U.S. apparel firms.

The firm analysis included 25 public firms and used data from Fairchild's Textile and Apparel Financial Directory. The independent variables selected were Assets, Inventories, Sales Growth and Relative Firm Size since no data were available by firm for Imports and Concentration. A dummy variable was used for Sales Growth to determine whether positive or negative growth had a significant impact on profits. Interaction terms were also created between Sales Growth and the other three independent variables to determine if firms with positive or negative growth behaved similarly with respect to profits.

Both linear and semi-log forms of the model were used. The adjusted $R^2$ values ranged from 0.36 for the semi-log form to 0.61 for the linear form. Assets, Inventories and Relative Firm Size had a significant impact on firm profits. The significance of the interaction terms indicated that the effect of Assets and Inventories on profits depended on whether a firm had experienced positive or negative sales growth. Relative Firm Size had a positive impact on profits in all instances. For positive growth firms, Assets had a positive impact on profits while Inventories had a negative impact. For negative growth firms, Assets had a negative impact on profits while Inventories had a positive impact.

The positive impact of Assets on profits for positive growth firms indicated that assets were being efficiently managed while the negative impact of Assets on profits for negative growth firms indicated that assets were being inefficiently managed. One explanation for this inefficiency is that negative growth firms were not able to use their assets at full capacity, since they had experienced decreased sales over the past five years. The negative impact of inventories on profits for positive growth firms is in agreement with the apparel literature, while the positive impact of inventories on profits for negative growth firms may reflect better inventory management by such firms and their emphasis on profits as opposed to sales.

In conclusion, the results of this research are of interest to industry analysts and firm managers who can develop management strategies based on the relationship between profits and the various independent variables.
Blood and Perspiration Removal From Soil-Release and Non-Soil Release Knit Fabrics

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An experiment was conducted to determine the effectiveness of a soil-release finish on knit goods in the removal of blood stains. The study was undertaken because the removal of stains, particularly protein stains such as blood, from durable press polyester blended fabrics, presents numerous choices to the consumer in selecting an effective, efficient laundry procedure for soil and stain removal (Corbett & Owens, 1981). The research design was a 2 x 3 x 2 factorial design: 2 finishes (soil-release and non-soil release finished fabric), 3 fiber contents (100% cotton, 50% polyester/50% cotton, and 44% polyester/41% cotton/15% rayon), 2 stains (blood only and blood-with-perspiration), 3 pretreatments (no pretreatment, Era Plus®, and Shout®), and 2 time periods (within 1 hour and after 24 hours). The fabric specimens were stained, pretreated, washed, and evaluated for stain removal using the Hunter LabScan II Spectrocolorimeter. The data were analyzed using the Stain Removal Index (Neiditch, 1980).

ANOVA revealed significant main effects for all 5 factors. Also, significant two-way, three-way, four-way, and five-way interactions were found (p ≤ .05). Tukey's HSD follow-up procedure for pairwise comparisons revealed no difference in stain removal attributable to finish, stain, or pretreatment. Thus, the soil-release finish and the non-finished fabrics were similar in the removal of blood stains. Additionally, the three methods of pretreatment were similar. Significantly more stain was removed from cotton and P/C/R (polyester/cotton/rayon) fabrics than from polyester/cotton fabrics. These findings imply that fabric blends containing more than 50% cellulose release blood stains better than fabric blends of 50% or less cellulose. Also, a significantly greater amount of stain was removed within 1 hour than after 24 hours.

The significant interactions indicate that stain removal presents a complex situation. The recommended method for removal is not consistent with finish, fiber content, pretreatment, and time. The soil-release finish was not effective in releasing blood stains. Further research is needed to examine other variables that influence the effectiveness of soil-release finishes.

References


PHYSICAL DISABILITY, DRESS, AND FEMALE JOB APPLICANTS

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Widespread discrimination against people with physical disabilities severely restricts their employment opportunities in the labor market (Vash, 1981). When employers are influenced by the presence of a disability, it becomes the primary cue to judge ability, knowledge, and skill. The presence of a disability creates strained and uncomfortable interaction between an employer and a disabled applicant. For this reason, the disability operates as a negative factor—a reason not to hire someone.

Dress is capable of conveying the impression of professionalism, competence, and ability of job applicants. Findings presented in past research point to the usefulness of appropriate dress in improving the impression of employment potential of able-bodied women during an interview. Little research has been conducted to determine if dress functions in a similar manner for women with physical disabilities. Research indicates that women with disabilities fare worse than both men with disabilities and nondisabled women economically, socially, and psychologically. Sixty-five to 76 percent of all disabled women are unemployed (Fine and Asch, 1985). The purpose of this research was to examine the impact of dress on employers' perceptions of female job applicants with a highly visible physical disability in a simulated job interview.

Impression formation theory provided the framework. Perceivers integrate cues given by a complex stimulus including physical appearance, gestures, verbal messages, and the situation to form an impression and predict future behavior. To simplify this process, each perceiver chooses cues salient to him to assign traits to others. The subsequent impression is a composite based on the choice of salient cues provided by the observed person and the situation.

A dress (most, moderate, and inappropriate for an interview) by physical condition (able-bodied, crutches, wheelchair) factorial design was used to determine employers' perceptions of the female job applicants. Nine videotapes of the applicant in combinations of the three levels of dress and three levels of physical condition were used as the stimulus. One hundred eighty subjects who interview, manage, or supervise employees in various companies rated the applicant on the employment characteristics: personality, power, competence, and professionalism and on management potential.

Factor analysis, analysis of variance, Duncan's Multiple Range Test and a test of the strength of relationships among the independent variables were used to examine the data. Significant differences were found. Employers rated the applicants significantly higher when dressed in the most and moderately appropriate dress levels than when dressed inappropriately for all dependent measures. Employers also rated the applicants in the disabled conditions significantly higher than the able-bodied applicant for all dependent measures. Examination of the strength of relationships among the independent variables revealed that dress was the most powerful influence on subjects' perception of the applicants.

Results were interpreted from the perspective of impression formation theory, particularly how individuals combine various cues to arrive at an impression of an observed person. Implications are particularly relevant to rehabilitation personnel and clothing designers. People with disabilities should be made aware of the importance of dress during an interview. Dress that minimizes the effect of a physical disability on others' perceptions may lead to assignment of more positive traits to people with disabilities.


The growing trade deficit is an issue of increasing concern to policymakers and private citizens. In 1967 the U.S. textile and apparel trade deficit was $771 million; by 1987 it exceeded $24.5 billion. In contrast to the increasing import trend in this sector, some firms have recognized the need to build strong export programs. Exporting has resulted in organizational growth, as these firms have become more competitive in the world market.

Many studies have taken an aggregate approach to determine requirements for successful exporting of manufactured goods; yet little research has provided an in-depth view of the complexities involved in export expansion, particularly in this industry. A model for successful exporting was developed for this study based on the findings of published research. The purpose of this research was to identify, examine, and understand the unique characteristics underlying the export strategies of four firms in this import-impacted industry. To examine the phenomena of successful textile and apparel exporting in an in-depth manner, the case study methodology was identified as the most appropriate research strategy.

Four firms were selected for investigation through purposeful sampling. "Successful exporters" were defined as manufacturers who had maintained continuous export activity in a minimum of three overseas markets since 1980; thus, they had exported during unfavorable economic conditions and relatively poor export performance by the industry as a whole. Selection was based on combinations of the following variables: product (represented were home furnishing textiles, apparel textiles, yarn, and finished apparel), size of the firm (small=less than 500 employees, large=500 or more), and number of years in exporting (short=less than 10 years, long=10 years or more). For the number of years in exporting variable, firms included in the "short" category had started their overseas activity during a strong export growth period in the late 1970s and had continued exporting despite the dramatic decrease in textile and apparel exports after 1981. The firm's willingness to cooperate with the investigators throughout this research was also a determining factor in the selection process.

Data were collected using multiple sources of evidence, including a mail survey, semi-structured personal interviews, product sample examinations, data-base literature searches, and company literature reviews. Main topics discussed with the four exporters included top management commitment to export activity, export planning, and product adaptation. These subjects formed the basis of the original model suggested by the literature.

Analytical methods included cross-case comparisons as well as the qualitative testing of individual cases against the model developed for successful exporting. The original model was modified based on the findings of this research. The revised model delineated attributes necessary for successful textile and apparel exporting as a long-term growth strategy: dedication on the part of the manager responsible for export activity, an understanding of individual markets, product depth or breadth, non-price selling points, proactive planning, and organizational soundness.

Suggestions for firms interested in pursuing exporting as a long-term growth strategy and new directions for public policy related to export promotion were offered. Recommendations for further research included the development of an export potential rating mechanism for textile and apparel export promotion programs.
The profusion of upholstery fabrics and finishes on the market today can spell confusion for consumers who desire to be knowledgeable about effective stain removal techniques. Care labels found on upholstered furniture generally designate the type of cleaning agent which will do the least harm to the fabric; not necessarily the cleaning product or method which will be most effective on a specific type of stain. Therefore, this study was designed to evaluate the effectiveness of stain removal products and procedures on selected upholstery fabrics stained with selected soils.

Sixteen fabrics with varying fiber contents, finishes and fabric constructions were stained with each of 11 staining agents. These stains were left to set 20-48 hours, then cleaned. Five stain removal agents and two replicates of each fabric/stain/cleaner combination were used. Specimens were evaluated for stain removal by two trained raters using the 3-M eight point evaluation scale with 8 indicating no visible evidence of the stain. Analysis of variance with Duncan's Multiple Range Test was run to determine significant differences between fabrics, stains, cleaners, and interactions between these variables.

When averaged over all stains and cleaning products, the tufted acrylic velvet with a retailer-applied fluorocarbon stain repellent finish and an untreated nylon flocked fabric exhibited the best stain removal ratings (5.7). The cotton matelasse with fiberfill, both untreated and the same fabric treated with a silicone-based retailer applied stain repellent finish, exhibited the poorest stain removal ratings (3.2-3.7). The remaining fabrics consisted of a mixture of fiber contents, fabric constructions, and finishes. No clear removal patterns were evident.

The water-based stains were most effectively removed, followed by the oil-based and alcohol/water combination stains. The most difficult stains to remove were liquid make-up, chocolate syrup, ball point ink, and blood. Overall, tap water, the powdered cleaner, and the water-based cleaner were significantly more effective in removing the stains than were the solvent-based cleaners. Only with the coffee and the spaghetti sauce stains did the solvent-based cleaners perform as satisfactorily as did the powdered or water-based cleaners.

Five of the fabrics used in the study were tested both in the untreated state and after application of a retailer-applied stain repellent treatment. The presence of the retailer-applied finish (which was silicone based except for one fabric) did not offer additional protection from staining in any of these fabric/stain combinations. Neither was stain removal more effective on the matched fabrics with the retailer applied finishes.

Generally speaking, the water and the powder-based cleaners were more effective than the solvent-based cleaners on a broad range of stains typical of those found in a consumer's home. However, many of the fabrics currently on the market have care labels which recommend the use of solvent-based cleaners for spot or localized stain removal. Although the solvent-based cleaners may do less damage to some fabrics, e.g., in terms of faded colors, pile distortion, and localized shrinkage, the effectiveness of the stain removal is questionable. In cases where water cannot be recommended, use of the powdered cleaners probably represents the safer, more effective cleaning alternative.
SWEATSHIRTS FROM SINGAPORE, SRI LANKA, OR SWITZERLAND: WHICH WILL YIELD THE HIGHEST PROFIT?

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The internationalization of the textile and apparel market necessitates knowledge of sourcing for students who expect to hold positions in any part of the textile and apparel chain. Fiber producers purchase chemicals, spinners obtain fibers, fabric manufacturers buy yarn, apparel firms order fabric, and retailers procure finished apparel. Problem sets can be developed to help students understand the variables involved and to simulate the decision-making process. A limit is quickly reached, however, of the amount of material which can be simultaneously presented and assessed. In addition, the nature of the problem requires frequent update of information if the goal of simulating reality is to be achieved.

An apparel sourcing program was developed to automate this currently static decision-making scenario and present students with an interactive system to simulate more closely the environment in which these decisions are actually made. Students are required to make a series of decisions similar to those which would be required by an apparel manager sourcing a product line. This interactive format made possible more complete and immediate feedback on the consequences of the choices made by each student than is possible in a traditional instructional format.

Students assume the role of a domestic manufacturer who sources apparel internationally. The program begins by generating an order negotiation scenario. The student must bargain with the retailer for an acceptable price and then make production and distribution decisions based on available data and apparel manufacturing information. If the student chooses an optimum sourcing decision for the scenario, a profit will be made at the end of the game. Quality of decisions can be evaluated by examining the profit margin. Variables which must be considered number almost two dozen and include garment style and fiber content, delivery time and fashion level, availability of production capacity and labor skills, weight and transportation costs, tariff rates, exchange rates, and political and economic risks associated with potential trading countries. These decisions must be made considering such environmental factors as the imposition of quotas and embargoes, changes in fashion and consumer demand, and the shifts which occur in international comparative advantage. The challenge is to weigh or evaluate the factors and variables in order to come up with a successful sourcing strategy. The relationship between variables is complex, and the consequences of an individual selection or decision may affect multiple variables and lead to unexpected consequences.

The student begins by choosing one of 16 garments to source. The program provides the name of a retailer, the quantity to be manufactured, and the delivery time. Once a price and delivery schedule have been agreed upon, the student must make a series of sourcing decisions. The final phase of the simulation displays the outcome of the sourcing venture. Profit or loss, profit margin, and any problems which may have occurred are presented. Information is provided to students on four frequently made mistakes: late shipment, exceeded quota, incorrect fabric or fabric weight, and wrong price point for retailer.

The program has been used in an upper level undergraduate course entitled Management and Marketing Issues, the second course in a series following an introductory course on the economics and marketing of the textile and apparel industries. The assignment was to make a profit on each of 16 garments. Computer printouts provided by the program allowed the instructor to evaluate each student's effort (number of times played) and the development of a logical sourcing strategy. Minimum, maximum, and mean profit margins were determined for each garment, and class discussion was used to explain why some strategies were better than others.
The purpose of this presentation is to discuss the process of planning, producing, marketing, and evaluating innovative videotapes for textile and apparel education. The author has completed one videotape and accompanying written educational materials. This program, entitled "Championship Material," was designed to teach basic textile concepts to young people through changes in athletic uniforms. The video will be used to illustrate the presentation. Another video, "Textiles in Aviation," is currently in the production phase.

PLANNING
1. Time Frame - The entire process of making a videotape is extremely time consuming. After the background research for "Championship Material" was completed, it took a year to actually produce the video and more time for marketing, completing the written educational materials, and evaluating the project. This time period, of course, is dependent on many factors that will be discussed, such as type of production, amount of time devoted to the project, and outside assistance.

2. Funding - Costs are high for making a videotape, both in terms of time and actual production costs. Costs vary widely depending on type of production. Selecting production methods may be dependent on available funding.

PRODUCING
1. Background research must be conducted and this time period varies widely.
2. Next the script must be drafted and distributed to varied reviewers. This process often takes several stages as drafts are revised, then re-submitted to other reviewers, but comments and suggestions are invaluable.
3. Meanwhile visuals must be obtained. A great deal more visuals are needed than one may realize. A single photograph cannot remain static on the screen during several sentences of narration. Action often must change at least once within each sentence to keep a video moving.
4. Finally a rough edit of the video is prepared by putting together the visuals with the narration. This rough edit must then be pilot tested, re-edited, then pilot tested again, and so on, until the results are acceptable.
5. There are many techniques that can be used to add interest and variety to a video. These include purchased commercial film, in-studio scenes, location shooting, still photographs, computer graphics, special effects, a celebrity narrator, and recorded music. All were included in this videotape.

MARKETING
Strategies used include news releases, promotional brochures, targeted mailing lists, advertisements, magazine reviews, presentations, and lending preview copies of the video to appropriate persons.

EVALUATING
Hard data concerning number of videos sold, distribution areas, etc. has been collected for this project. Procedures were also developed to evaluate content and educational value.

OTHER TOPICS
1. Written materials. A video often cannot contain all the information that you may want to present. Therefore, for "Championship Material," a written handbook was developed to explain and detail the information presented in the video. The video itself became an eye-catching method for stimulating interest and excitement in the topic.
2. Other projects. Results from this experience have demonstrated that educators at all levels are interested in using videos. However, these same educators have identified textiles and apparel as an area that has few available videos. ACPTC members may want to consider this need.
Kimono IV is one kimono in a series of two women's kimonos where variation in texture is used to create interest. 

Kimonos have traditionally been considered as art by their designers, makers and patrons, and functioned as a source of inspiration for this piece. My goal was to design a contemporary interpretation of the traditional kimono. Further, this project was designed to: 1. Explore diagonal lines within the T-shaped kimono silhouette, and 2. Explore the interaction of various monochromatic textures.

The media used are various textures of white silk and lace. The lines within the silhouette are emphasized with piping, made from the same fabrics, and interest is added with pleated tassels (see Figure 1).

The project served as a continuation of my previous work. My previous work focused on the relationship of vertical and horizontal lines within the T-shaped kimono silhouette. Previous work also focused on the color red in relationship to the colors blue and purple.

Kimono VII is one kimono in another series of three kimonos where various colors and geometric surface designs are combined. All of the fabrics are cotton fabrics. The lines within the silhouette are once again emphasized with piping and hanging pleated tassels create additional interest. This time the piping and tassels are red and made especially for this kimono.

This project, like the previous one, was designed to explore various diagonal lines within the T-shaped silhouette. In addition, this project combined the many variables explored individually in previous projects (see Figure 2).

Figure 1. "Kimono IV"

Figure 2. "Kimono VII"
Weaving was the major technique incorporated into the creation of this project. The weaves used were tabby, twill, reverse twill, circular, semi-circular, interlock, and lay-in. Knitting was used to create the lapel. Satin stitches were used to connect the garment pieces. The fiber content of the coat includes wool, silk, cotton, linen, angora, and rabbit fur. The dimensions of the project are 32 inches from the center back neckline to the hem edge, 45 inches around the bust area, and 30 inches from the neckline to the sleeve hem edge.

Texture was the predominant element addressed in designing the fabric. The inspiration for the design of the coat came from the natural fibers incorporated. The designer's interest and expertise in knitting influenced the choice of a knitted lapel.
The technique used to create the design was knitting with variations of the cable stitch. The fiber content of the knitting yarns is 100 percent wool. The dimensions of the project are 25 inches from the back of the neckline to the edge of the bottom, 40 inches for the bust area and 28 inches for the length of the sleeves from neckline to the edge of the sleeve.

The purpose of the project was to meet a design assignment of designing a ski sweater. Nature, specifically a tree, played a major role in the inspiration of the design. Texture was created through the use of cable stitches. The off-white color of the yarn was chosen to enhance the texture.
The purpose for the design of the woman's trouser and jacket was to create a fashionable garment from a 1970 vintage formal which had been constructed from a green and gold cotton sari purchased at a garage sale for $2.00. The original garment was a halter style with a floorlength gathered skirt accompanied by a waistlength jacket with set-in sleeves. When the dress and jacket were disassembled, it became apparent that the new garment would require additional fabric. A tour of local fabric stores revealed that the sari fabric's shade of green was definitely not currently in vogue; matching lining, zipper, and even thread was nonexistent. In the back corner of a boutique-type fabric store, however, the artist found a green cotton muslin printed with metallic gold stripes that was a near perfect match with the sari fabric.

With the fabrics on hand, design criteria were formulated. Since the original fabric was meant to be used as a sari, a draped garment, the draped silhouette would remain. Indian flavor would be carried throughout the design from garment style to the subtle repeat of the understated metallic gold trim.

Fashion magazines at the time were showing sheer jackets over camisole tops and this seemed to be a possible way to combine fine cotton sari fabric with the heavier weight print. The jacket was designed by draping the gathered skirt from the formal on the dress form, taking care to retain the flow of the border pattern. The trousers and bodice were designed by the flat pattern method using pleating based on the regularity of the garment's printed stripe. The full-hipped trousers with wide ankle-hugging cuffs were inspired by the loose-fitting pants that are a part of Indian ethnic dress. A focal point for the ensemble was created by knotting gold ropes and fabric cords and appliquing them to a silk tie belt.
My design entry "Kris Kros" began as an assignment for a draping design class at Auburn University. As a final project each student was required to produce an original garment using the draping method of design. The assignment required that the pattern pieces not be obviously distinguishable when looking at the garment.

My inspiration for a cocktail dress came from a dress I had seen in a Virginia Slims ad a few years ago. The dress I remember was quite interesting and stuck in my mind. It was very different from my design but I used the idea of overlapping contrasting colors to create the crisscross affect down the center front. The dress in the ad was a loose fitting straight sheath with thin shoulder straps. It was constructed of panels of two colors overlapping in the center which created a woven illusion. Further inspiration came after I chose washable crinkled silk as fabric for the bodice. I liked the effect of shirred crinkled silk and decided to incorporate it into my design. The main emphasis of the bodice is the intersection of the two colors in the center which serve to guide the eye inward and down which lengthens and slenderizes the torso.

To continue total unity in the dress I designed a curvacious wrapping skirt to harmonize with the rounded lines of the bodice. For the skirt I chose polyester ribbed taffeta for its excellent draping quality. It was a perfect texture for the crinkled silk.

I chose black and white for the color combination because it says,"naughty but nice." Black and white is a classic and striking combination. I felt that hot pink or red was too flashy for the mood and look I wanted to achieve.

I highlighted the dress with a black bow for a asymmetrical appeal. It also served a dual purpose in illusion of line. While the design lines of the dress direct the eye to the bow, the bow in turn guides the eye back onto the features of the dress as if the lines radiated from the bow.

In constructing the dress I supported the bodice with very stiff woven interfacing. The shirred pieces were sewn onto the interfacing and then stitched together. The skirt lining was stitched and turned to create a finished edge for the skirt, then applied as one piece to the bodice. The bodice lining was then constructed separately and sewn into the bodice. The lining was hand stitched over the skirt seam and the zipper.

As part of the project the class entered a design contest. I never would have believed that we could actually win. But, we did!
Lady Macbeth

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Lady Macbeth was inspired by the play Macbeth written by William Shakespeare. The black velveteen fitted bodice has an oval shaped hole in the back. It has leg o' mutton sleeves with gold lamé insets in the top and gold soutache braid on the lower sleeve. The braid is also attached to the collar, front bodice and back hole opening. It has a gold lamé cummerbund and comes to mid-thigh. The shell fabric is 100% cotton velveteen and is fully lined with 100% acetate. It has gold-toned metal buttons on the lower sleeve. Lady Macbeth was created by the Flat Pattern Method.
China's Empire

China's Empire, a black and white satin semi-formal, has a rounded neckline in the front that is dropped and squared in the back. The dress has shoulder padded dolman sleeves and a curved empire waistline. Front bodice has pinch pleats. Mid calf length skirt is pegged, closely fitted at the waist and has a back slit. Pattern construction method was flat pattern. Black and white slipper satin is the fabric that was used. Notions include a zipper, a hook and eye, shoulder pads, and interfacing. The mood created is one of bold simplicity. Inspiration: artwork by Franz Kline.

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A Comparison of Ski Fashion at Six Colorado Ski Resorts

Janet Hethorn, Minneapolis College of Art and Design

Presently, the market research services available to skiwear designers, manufacturers, and retailers are limited. They include an adaptation of information gathered for other facets of the apparel industry as well as sales reports which track the numbers of individual styles receiving consumer acceptance. This information is lacking in that it is not gathered specifically for the ski industry and does not provide an accurate description of what is actually worn.

This study focused on the identification of ski fashion; current as well as future directions. The objectives were to identify current ski fashion; total appearances as found in the environment of use, to identify new trends in ski fashion and to compare ski fashion among selected ski resorts in Colorado.

Preliminary data was gathered to develop background knowledge and to develop working terminology for layout and surface characteristics. Approximately 50 catalogs of ski apparel and equipment for the 1987-88 season were received from manufacturers. Also, interviews were conducted with retail executives and manufacturers of skiwear. Observation forms and interview formats were then completed. Training of research assistants on visual analysis techniques included a pilot study and slide identification.

With the assistance of Colorado Ski Country U.S.A., six resorts were selected which represented a range in location and skier profile. The study was then conducted at Aspen, Breckenridge, Loveland, Steamboat, Telluride, and Winter Park on two separate dates; early season, and mid season. The methods of data collection included fashion counts, following newly designed forms, and interviews. A total of 15,000 skiers were observed and 240 skiers were photographed and interviewed.

The results were analyzed with the use of descriptive statistics and correlations. Observation data was compiled to describe and compare the total appearance (layout and surface combined) as well as individual style descriptions. Percentages of color combinations and style choices were included and compared between resorts. These were also compared to ski fashion forecasts for the season. Interview input on design suggestions and needs. This was analyzed along with skier profiles. Trend spotters were also at work with video and photography. Each research team compiled observations.

This information augments existing sources of market research by providing comprehensive data on exactly what is worn on the slopes, how this varies between resorts, as well as the identification of future fashion directions. This information will assist designers, manufacturers, and retailers in identifying their market and filling their customers needs.

This research is also beneficial to others interested in identifying appearance in other contexts. As a model of method, it should be useful in describing total appearance. Observation research is most commonly concerned with pieces out of context, i.e.; a style of jacket, or color of surface. This study incorporated observation methods which focused on the total form within the context of use. The resulting descriptions can be a welcome addition to decision making criteria in the area of planning and design direction, especially in a time when resources are minimal and meeting consumer needs is a high priority.
Effects of Economic Stress on Perceived Clothing Deprivation among High School Students

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Clothing deprivation (CD) has been studied in relation to a number of variables. Studies of the relationship between socio-economic status (SES) and CD have not produced consistent results. High CD has been associated with both lower SES and middle SES; other researchers have found no differences in CD according to SES. Given the economy of the 1980's, economic stress may be more pertinent to the study of clothing deprivation than SES. However, no study of the effects of economic stress on perceived clothing deprivation has been conducted. Therefore, the purpose of the present study was to investigate the effects of economic stress (ES) on perceived clothing deprivation among high school students.

Survey methodology was employed. Questionnaires were completed by 336 ninth through twelfth grade students who were enrolled in home economics classes at 6 Oregon high schools. The students were 13 to 20 years of age (mode=16 yrs); 82% were female. The CD measure (dependent variable) consisted of 27 items based on measures used by Brawley, Brewton, Cheek, Edwards, Kness, and Stuart. Factor analysis generated 2 factors from the 27 items which were used as the 2 dependent variables in subsequent analyses: F1: Inability to buy; and F2: Clothing deprivation relative to peers. ES (independent variable) was measured by summing reported decrease in family income (1=no decrease; 4=very substantial decrease) and reported increase in financial demands (1=no unusually large demands; 4=unusually large demands). The students were divided into 4 approximately equal groups according to level of reported ES. ANOVA was used to analyze the data.

ES had a significant overall effect on perceived clothing deprivation (F=6.46, df=6, 510, p<.001). Univariate F tests revealed significant effects for both F1, Inability to buy, (F=11.50, df=3, 256, p<.001) and F2, Clothing deprivation relative to peers, (F=4.07, df=3, 256, p<.001). Newman-Keuls' post hoc procedure to identify significant contrasts. For F1, the lowest economic stress group perceived significantly less clothing deprivation than did any of the other 3 economic stress groups. Also, the second lowest economic stress group perceived less clothing deprivation (p<.05) than did the highest economic stress group. For F2, the highest economic stress group perceived significantly (p<.05) higher clothing deprivation than did any of the other 3 groups.

The extent that perceived deprivation is a form of dissatisfaction, these results are consistent with satisfaction theory which states that dissatisfaction (CD) results from a negative comparison between what is expected/desired and what is received.


BUYING COMPETENCIES:
A COMPARISON OF PERCEPTIONS AMONG BUYERS, MANAGERS, AND STUDENTS

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Managers in many retail settings tend to work closely with buyers and some aspire to become buyers, as do many students in merchandising programs. But, do managers and students really understand what competencies are necessary in a buying position?

The purpose of the study was to determine the degree of importance of thirty-five buyer competencies among buyers and to compare their perceptions with those of retail managers and students studying merchandising. Data were collected using eighty-six buyers and seventy-three managers from a variety of retail ownership groups responding to a self-administered questionnaire. There were two hundred fifty-two students involved in the study representing twelve merchandising programs.

The rating of buying competencies among the three groups was facilitated by using both Kruskal-Wallis and One-way ANOVA. Buyers ranked the following competencies as most important: 1) ability to effectively negotiate with sales representatives; 2) the ability to apply judicious judgment and common sense; and 3) ability to understand customers' needs. The competency ranked as most important by both students and managers was the ability to understand customers' needs. All other rankings of the competencies varied among the groups.

Significant differences among the groups were determined using Chi-square analysis. Twenty-two of the thirty-five competencies had significant differences in the mean scores of at least two of the groups.

Some of the key findings included:

Competencies ranked higher by buyers than by managers or students:
- ability to effectively negotiate with sales reps
- ability to apply judicious judgment and common sense
- ability to understand and apply high ethical standards
- ability to establish efficient time management habits

Competencies ranked higher by students than by buyers or managers:
- ability to understand buying process
- ability to forecast fashion
- ability to understand customers' needs

Competencies ranked higher by managers than by buyers or students:
- ability to see the whole of a situation
- ability to judge salability

The findings of this study have implications for retailers as well as educators. It is understandable why managers give salability of merchandise a high priority. It is, however, evident that buyers perceive their negotiating, time management, and judgment competencies to be of even more importance. Managers who aspire to become buyers may not realize the importance of other personal skills which contribute to the making of a good buyer.

While it is important for merchandising curriculum to include study in the areas of understanding customers' needs, the buying process, and fashion forecasting it appears that these areas may have been over emphasized while other areas have not been emphasized enough. Merchandising educators should attempt to work more with students to develop an awareness of the importance of competencies in the areas of negotiation, communication, time management, listening, communication, salability judgment, and goal orientation.
Recent studies (Wilson, 1987) (Dallas and Wilson, 1988) suggested a need for data regarding consumer usage of fabric softeners. The objectives of this study were to determine (1) extent fabric softeners are used by consumers, (2) to what textile products consumers apply fabric softener, (3) which brands and types of fabric softeners are purchased by consumers (4) the importance to consumers of properties claimed by manufacturers of fabric softeners and (5) the problems consumers experience when fabric softeners are used in the laundry process. Since fabric softener usage may be linked to health problems being investigated in a regional experiment station project W-175, Consumer Health Influenced by Clothing and Household Fabrics, questions regarding fabric softeners were included in the Colorado statewide W-175 questionnaire. A random sample of 331 persons from Colorado, representing a 53% return, responded.

The results showed that at least 85% of the respondents used fabric softeners in doing their laundry. Younger persons were somewhat more apt to use fabric softeners than older persons ($r = .13$, $p < .01$) and females somewhat more likely to use than males ($r = .12$, $p = .02$). Fabric softeners were used on a wide variety of household and personal textiles, including diapers. Bounce, Downy and Snuggle were the most frequently used brands. Lesser known and generic brands were also identified as products used.

Reduced static cling (93%) was clearly the most important reason for using fabric softeners followed by increased softness (89%), pleasant smell (83%). Persons, who indicated reduced static cling was an important property, were likely to use a dryer sheet ($r = .23$, $p = .01$). The four most frequent problems perceived by consumers attributed to fabric softener use were in order of importance: decreased absorbency (38%), fabric spotting (28%), objectionable odor (22%), and fabric waxiness or greasiness (21%). It appears that respondents were able to notice "loss of absorbency" as a problem associated with fabric softener use on shirts and blouses ($r = .12$, $p = .01$). However, there was no correlation between loss of absorbency and fabric softener use on towels.

Of particular interest to the researchers were the 17% of the respondents who stated that the use of fabric softeners caused an allergic reaction. Persons who stated they experienced allergies used Downy infrequently or never ($r = -.12$, $p = .02$), but were using generic or lesser known brands more frequently than those who had fewer allergy problems ($r = .20$, $p = .01$). Correlations for allergies and the use of Bounce, Snuggle, and Fab were not significant.

Manufacturers provide consumers with limited information on the benefits/problems associated with fabric softener use. Consumers need an increased awareness of some of the negative aspects of fabric softeners in order to make better product selection based on health, financial and other considerations.

References:
Attitudes Toward Imported and Domestic Apparel Among College Students: The Fishbein Model and External Variables

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Objectives. This study utilized Fishbein's (1967) attitude model to test the role of "external variables" on attitudes toward imported and domestic apparel among college students. The classification of external variables was adopted from Ajzen and Fishbein's Theory of Reasoned Action (1980) and included demographics, clothing attitudes, students' self-perceptions, and level of fashion involvement.

Data Collection and Statistical Analysis. Data were obtained from a questionnaire that was completed by 741 students enrolled in randomly selected classes at a major Western university. Statistical analysis of results included t-tests, stepwise multiple regression, and stepwise discriminant analysis.

Results and Discussion. The attitude toward imported clothing was influenced by the level of fashion involvement, the prestige clothing attitude, the social activities clothing attitude, and social acceptance, in that order of importance. The attitude toward domestic clothing was influenced by the level of fashion involvement, social acceptance, the social activities clothing attitude, and the garment styling clothing attitude, in that order of importance. The only major difference in predictions of attitudes toward imported and domestic clothing was that the prestige clothing attitude was included only in the attitude toward imported clothing while the garment styling clothing attitude was included only in the attitude toward domestic clothing. This indicates that these two variables, with prestige clothing attitude being stronger, might be determinant variables in predicting those who prefer imported clothing to domestic apparel. Characteristics related to practical garment features, such as good fit, durability and ease-of-care, received consistently more positive evaluations for domestic than imported garments. Students who preferred imported clothing tended to have higher scores on the prestige clothing attitude, indicating that they perceived imported clothing as expensive clothing and with high-priced brands. The stores that sold imported clothing were seen as being more exclusive. Students' attitudes toward specific European or other countries with quality clothing may have influenced their responses. Clothing from developing countries might not have received such high ratings. Nontraditional age students (25 and over) appeared to have a more favorable attitude toward imported clothing. This may be because, these students might be more mature and more likely to be educated and experienced consumers. In addition, the students who preferred imported clothing were less likely to be Caucasian. Other students may be more willing to purchase foreign brands, because of their international heritage. As expected, students majoring in the humanities and social sciences were more likely to prefer imported clothing.

Implications. This research has implications for theoreticians, retailers, and manufacturers and contributes to the understanding of the variables affecting consumer attitudes and to the development of a theoretical framework. It will also assist retailers and manufacturers in developing promotional strategies.

References:


American garment manufacturers adhere to no required uniform sizing standards. Sizing determinations are based on standard industry mannequins, competitor's garments, company's target customer, professional fit models, and U.S. government statistics. The result is widespread industry inconsistencies in sizing and fit. This research investigated the sizing currently being used in the junior classification of the American garment industry by: 1) requesting manufacturers of junior-sized garments to measure their fit models; and 2) measuring female consumers of junior-sized garments. Second, the average body measurements obtained from the manufacturers and the consumers were compared to each other and to the government standard PS 42-70 to determine if consumers fit manufacturers' size determinations and if discrepancies existed among the consumers', manufacturers', and PS 42-70 body measurements.

A survey questionnaire included a section regarding type and sizes of garments manufactured and criteria for size standardization. A second section requested 12 body measurements of the company's fit model adapted from the Voluntary Products PS 42-70: stature, bust, waist, hip, high hip, calf, upper arm, cross-back, waist to hips, arm length, and crotch length. Sketches showing body measurement locations and descriptions of how to measure were included. The same 12 measurements were used for the consumer sample. Surveys were sent to 417 junior manufacturers, 81 were returned. Only 21 respondents had a fit model and completed the measurement section. The consumer sample consisted of 23 women who purchased either junior size seven or nine garments. The independent variables included: 1) manufacturers with a fit model, 2) the junior consumer sample, and 3) PS 42-70. The dependent variables included the 12 body measurements. Data were analyzed by t-tests.

Most manufacturers produced sportswear, pants and skirts in a size range of 3 to 15 and in a sample size nine. In general, the PS 42-70 measurements were smaller than the mean scores of both the manufacturer's and consumer's measurements for each sample. The mean scores for the manufacturer's and consumer's measurements had more similarities, although the consumer's range was greater. Significant differences were found between PS 42-70 and all 12 average body measurements of the junior garment manufacturers. Significant differences were found between PS 42-70 and the body measurements of stature, bust, waist, hip, high hip, thigh, calf, upper arm, cross-back, and waist to hips of junior-sized female consumers. Finally, significant differences were found between the stature, waist, cross-back, and arm length body measurements given by the manufacturer and the junior-sized consumer.

The Voluntary Product Standard PS 42-70 is not reflective of today's women; thus, American garment manufacturers need to and are redefining the junior classification. The new junior is taller with increased waist, high hip, and thigh girth measurements in greater proportions than other girth measurements. Although the average measurements of manufacturers and consumers surveyed were similar, the range tended to be greater among consumers, especially in stature. This could account for a great deal of the fit complaints, the increasing need for petite and tall size categories, and the difficulty in creating a size standardization.
Dermatological Health Problems Attributed by Consumers to Contact with Clothing and Laundry Products

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In isolated case studies, dermatological conditions have been reported by dermatologists as being caused by and/or aggravated by fibers, dyes, and fabric finishes. Fibers such as nylon, wool, silk, fiberglass, spandex, and rubber have been implicated as allergens and irritants. Over thirty-one dyes are known allergens. Nine types of chemical finishes have caused severe problems for some individuals. Unsolicited reports given by consumers of what they believe are textile-related dermatological problems suggest that the frequency of such problems to be greater than the medical literature suggests it should be. However, no one has described consumers' perceptions of adverse reactions to clothing and laundry products. Such a description would help to define the perceived problems and point the way to determining the actual cause of the problems. Therefore, the purpose of this research was to assess the percentage of the population who perceive dermatological health problems due to textiles and fabric care products and to determine the relationship between perceived dermatological health problems associated with textiles and the consumers' demographic characteristics and climatic conditions of the consumers' residences.

A self-administered mail questionnaire incorporating the Total Design Method (Dillman, 1978) of questionnaire construction and implementation was used. The questionnaire was pretested to identify any defects in its construction. A pilot study was also conducted to identify problems in sampling procedures, implementation, and the coding and analysis of the data. A disproportionate stratified random sample of 750 households was systematically drawn from telephone directories of each of five western states (total=3,750). The sample was stratified according to state. The sample was disproportionate in that the same number of households were sampled in each state. The questionnaires were sent to the full sample in the Fall of 1987. Postcard reminders were sent to the full sample one week later. Two and four weeks later replacement questionnaires were sent to non-respondents. 1,785 usable questionnaires were returned resulting in a response rate of 55% (percent usable of total mailed less undeliverable and ineligible). In analyzing the data, a weighting procedure was used to compensate for the oversampling or undersampling of particular states.

Results indicated that 29.2% of the respondents had perceived problems with fabrics that caused skin irritation and 25.6% of the respondents had perceived problems with laundry products that caused skin irritation. These problems were more evident for females, for individuals between the ages of 20 and 35 for fabric problems, for individuals under 20 years of age for laundry products, and for individuals living in cold or dry climates.

These results provide baseline data on the evidence of perceived dermatological problems attributed by consumers to clothing and laundry products. It appears that the evidence of such problems is much greater than what the medical literature suggests. Apparently, individuals with such problems do not go to the medical community for diagnosis. Instead, it is likely that by trial and error the irritating fabric or laundry product is identified and its usage discontinued.

References:

Apparel has been part of the video revolution for several years. Videotape is utilized to capture fashion of the moment and make it longer lasting and more accessible to buyers, sales associates, as well as consumers. Marketing fashion through commercials, point-of-purchase videos, and documentaries is expected to continue as a major force in fashion. This trend requires merchandisers who understand the processes involved in video production and can communicate with fashion video producers and crews.

Clothing, textiles, and fashion merchandising undergraduate students at New Mexico State University (NMSU) were provided an opportunity to develop skill in video production techniques. The College of Agriculture and Home Economics at NMSU is uniquely equipped to provide students with an opportunity to become acquainted with video. The Department of Agricultural Information located within the College has a broadcast quality television production facility staffed with professionals.

A class was developed by the Department of Home Economics in close cooperation with the Department of Agricultural Information with the goal of producing two 30-second fashion videos. Funding was secured from the Agricultural Experiment Station to produce the two fashion videos as part of an Economic Development Project for the State. The purpose of producing the videos was to promote New Mexico Acala cotton and New Mexico wool.

The 18 students were presented with the problem of producing the videos and were instructed to develop a script and storyboard, a written and pictorial representation of the videotaping. Once the storyboard was finalized, students were assigned the responsibilities for organizing the shooting of the video, beginning with recruiting talent and models for a screen test. Class members were also required to participate in the screen test in order to become more familiar with conditions that occur during a typical test.

Responsibility was then assigned to students for scouting locations; locating props and scenery; selecting fashions and accessories; advising on makeup and hair-styles; selecting music; assisting the camera crew, the producer, and director; taking still shots and recording the day's events on a portable video camera; and cleaning of the location. Actual camera work was the responsibility of professionals in the Department of Agricultural Information. A class was developed by the Department of Agricultural Information in close cooperation with the College of Agriculture and Home Economics. Students indicated on a written evaluation of the course that the opportunity to work on the videos was invaluable and something that could not be learned except by first-hand experience. Class members also remarked that they were surprised at how the appearance of apparel was altered by variables introduced by camera work. In addition, students stressed the importance of preparation and organization throughout the production. One student concluded, "This class was frustrating. It was fun. It was irritating and enjoyable. It was an experience."

Introduction of this "real life" experience into the classroom has strengthened the curriculum. Future courses in fashion video production will provide students with a similar experience with the exception that each student will receive a copy of the raw footage and then be responsible for doing their own editing and dubbing of music and commentary to the tape. In addition, students will have an opportunity to develop basic camera skills by conducting "practice video sessions" with a 1/2" portable video camera. The Fashion Video Production course familiarizes students with processes involved in the technology they will ultimately face in their career in fashion merchandising.
TEACHING COMPUTER-AIDED APPAREL DESIGN

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The purpose of this curriculum project was to give apparel design and merchandising students computer-aided design (CAD) experience. Projections for the use of computers by apparel manufacturing companies in the next five years show the greatest increases in computer utilization for illustration and patternmaking (Sheldon, 1988). Jim Eaton, Vice President and Chief Information Officer at Levi Strauss and Company stated that CAD systems project the future and apparel manufacturers will seek out designers with CAD experience (Van de Bogart, 1988).

Computer-aided Design was offered for the first time at CSU, Chico during Spring semester 1988. There were two sections: one for apparel design and the other for merchandising and interior design. The basis of the course relied on fashion illustration and flat pattern knowledge for apparel design students. The merchandising and interior design section relied on the student's knowledge of drafting and interior design. CAD software was selected because it has been more sophisticated than graphic software packages since they are based on geometry and incorporate X,Y coordinates. Micro Graphic Manufacturing Station (MGMS) software was used for the course because of its comprehensive graphics capabilities, compatibility with an existing Apple Macintosh computer lab, and the company's willingness to offer a good educational price.

Objectives of the course for apparel design students included the ability to use a computer-aided design program to:
1. illustrate a seasonal apparel line;
2. present garments in alternate fabrications;
3. draw slopers to scale;
4. make patterns using flat pattern techniques;
5. simulate pattern grading; and
6. make markers.

Future objectives for fashion merchandising students which emphasize store planning will include the ability to use a computer-aided design program to:
1. design a store layout utilizing contribution factors;
2. develop a store floor plan with merchandise fixtures; and
3. design original templates.

The course format was comprised of two hours of lecture/demonstration. Student learning was perceived to be higher when the students were practicing the lecture topics on the computer as the instructor explained the task. Students were assigned projects which were designed to be completed during open computer lab hours.

Methods of evaluation of perceived student learning included quizzes over concepts learned, one comprehensive exam, and project assignments which showed competence in skills learned. Through assignments, students first learned the basic CAD concepts. The apparel design projects consisted of illustration of a line of garment designs, illustration of one garment in a variety of fabrications, creation of slopers, pattern manipulation through flat pattern methods, grading a bodice and making a marker. Future merchandising projects would consist of drafting a small store floor plan, template design, and manipulation of department sales areas.

Results of this experimental course were:
1. students increased confidence in working with computers;
2. students felt this increased their salability in the job market; and
3. the course has been adopted as a regular course in the curriculum which will be required for all apparel design and interior design majors. The course will be considered for increased relevance for merchandising majors.

References:
Questions have been raised regarding whether clothing construction courses are desirable for fashion merchandising majors. In a limited discussion during the 1987 Western Regional Meeting, ACPTC members were divided over the issues. Consequently, a survey was conducted to ascertain the opinions of active ACPTC members, who have teaching responsibilities, regarding the importance of clothing construction courses in fashion merchandising programs.

Of the 529 surveys sent during Spring 1988, data from approximately 61% or 324 surveys were utilized. Respondents agreed that two construction courses were needed by fashion merchandising majors. More than half (62%) of the respondents indicated apparel production methods should be part of the curriculum, while nearly 56% responded that basic clothing construction was necessary. Intermediate construction and flat pattern were reported as being required by about 13% and 12%, respectively. Less than 2% of the respondents agreed that tailoring and draping should be required of fashion merchandising majors. Interestingly, apparel analysis, which may or may not include a construction component, received support for inclusion in the curriculum by almost 94% of the research participants.

While 66% of the respondents reported they were willing to teach clothing construction, only 56% of those individuals reported that clothing construction courses are important to the curriculum. It is interesting to note that nearly 47% of the respondents who reported they were willing to teach clothing construction indicated that they had a personal interest in that area.

Almost one-third of the total respondents (about 32%) indicated they were unwilling to teach clothing construction courses. Reasons reported by about half of the respondents included “too time consuming” and “less status gained when teaching construction courses.” Amazingly enough, less than one-half (about 42%) reported teaching a construction course at the time of completing the instrument. However, about 84% reported they had taught a construction course sometime during their academic careers.

If clothing construction courses are deemed necessary for fashion merchandising majors and are included in the curricula, who will be assigned to teach the construction courses? Data derived from this research suggests that not all clothing, textiles and fashion merchandising faculty are willing to teach clothing construction. Perhaps the format of construction courses could be revised to reduce the time spent by the instructor in the construction laboratory. If fashion merchandising majors need clothing construction courses, why are these courses perceived as having less status by the respondents to this survey?

The value or advantages of offering clothing construction courses must be balanced with the time, expense, and instructor expertise required to provide such courses. The data derived from this research does not provide all of the answers, but may serve as a starting point for clothing, textiles, and fashion merchandising faculties to assess clothing construction curriculum at their individual institutions.
The high valuation of the U.S. dollar has made U.S. textile exports less competitive around the world. At the same time low cost imports are penetrating the domestic market. Firms have been forced to examine their manufacturing and management strategies and to become more technological and efficient. The purpose of this study was to investigate the technological innovativeness and management participation of U.S. textile manufacturers, in addition it sought to determine relationships with these trends and whether firms exported their textile products.

Method. A purposive sample consisted of 319 manufacturers producing textiles for apparel which appeared in the Davison’s Textile Blue Book (1986). Data were collected through a twenty-one item questionnaire which was mailed to the sample; 109 were returned. Six types of information technology and five items relating to management participation were considered as the independent variables. Export status (yes or no) was the dependent variable. It was hypothesized that firms using sophisticated and innovative information technologies and management techniques would be more likely to expand their production to export. Firms also indicated export incentives. Frequencies, Spearman Rho Correlations, and Chi-Square analyses were used to analyze the data.

Results. Firm size ranged from 5-50 to 10,000-55,000 employees with the most reporting firm sizes of 5-50 and 100-500 employees. About half (n=51) exported with n=58 not exporting. The larger firms appeared to export more than the smaller firms. Of the information technologies investigated, Quick Response and Just-in-Time were utilized the most by reporting firms. Barcoding was used to a lesser extent. Computers linked office and plants more than they linked plants with retailers or plants with suppliers. Of the management participation techniques investigated, respondents indicated high usage of operators performing many tasks as needed, management and employees working as a team, and other participative techniques. Less usage was reported of quality circles and employees making autonomous decisions when problems arose.

There were no significant relationships between exporting and Quick Response, Just-in-time and computers linking office and plant. These three technologies were used the most by all firms and it appears exporting did not differentiate this usage. However, those technologies used less often did show significant relationships with exporting. Barcoding and computer linking plants with retailers and suppliers were used more by those firms exporting than by firms not exporting. Only one of the five management types showed a significant relationship with exporting. Firms exporting used other participative management techniques more than those firms not exporting.

Market and sales expansion in addition to global competitiveness were indicated as the most important reason why firms exported.

Implications. This study indicates some relationships between using new manufacturing and management techniques and exporting textile products. If the U.S. textile industry is to become more competitive in global markets, the utilization of these techniques needs to be introduced on a wide scale. Since large firms are exporting more than small firms, perhaps the trend of consolidation may be healthy for the industry.
Quick Response has been hailed by apparel industry experts to be the best weapon to fight escalating import penetration. Although domestic companies are unlikely to be able to offer retailers the same prices as those on imported goods, they may be able to offer retailers better profits through shortened response time which can reduce forecasting errors and markdowns. Thus, there has been unlimited discussion about Quick Response in publications and conference agendas. Many strategies for shortening response time have been discussed including computerization of various processes and improved communication systems.

Although computerized technology has been available to the apparel industry for many years, adoption has been slow by the majority of companies due to high cost investment. However, with the recent emphasis on Quick Response, apparel companies have been urged by analysts to computerize. Quick Response may be the impetus needed to computerize the apparel manufacturing industry. A research project conducted last year sought to determine how much emphasis apparel firms are putting on Quick Response and the strategies they are utilizing to accomplish quick response.

Method. One hundred-fifty randomly selected apparel manufacturing firms were mailed questionnaires. Ninety-five were returned. This response rate of sixty-three percent shows a high interest by the industry. Participating firms included a cross section of companies in terms of company annual gross sales, types of apparel produced, and geographic location throughout the United States. A Chi-square analysis was done to determine differences.

Results. Respondents to the questionnaire indicated a high interest in Quick Response. Forty-seven percent of the companies considered it a high priority; another thirty-four percent of the companies indicated they were putting some effort into Quick Response now. The Chi-square analysis showed no significant differences in the emphasis put on Quick Response by firm size or type of apparel produced. Computerization of production, automation of distribution, automation of production and changes in communications systems were the most commonly utilized methods to shorten response time. Less commonly used methods were reducing the number of garments per line and computerization of the design process. The only significant difference found in companies of different sizes in the Chi-square analysis was that larger firms are more likely to use computers for design to shorten response time.

Implications. It appears that many American apparel firms are opting to compete in the world apparel market by investing in technology for quicker response. Institutions training people to work in the apparel industry also need to gear up to the increased technology of the apparel industry. With increased use of computerized equipment, there will be a demand for trained personnel. College apparel design and merchandising programs must respond by preparing graduates with appropriate technological skills.
According to fashion diffusion theory, fashion innovators initiate or are the first to use an innovative fashion. Past research in the area has investigated the psychographic and demographic characteristics as well as the clothing purchase behavior of fashion innovators. The purpose of this study was to further the study of the fashion diffusion process and investigate the differences between fashion innovators and non-fashion innovators in their clothing disposal practices. It was predicted that fashion innovators and non-fashion innovators would differ in the length of time they retained clothing, the ways in which they disposed of used clothing, and the factors underlying the disposal of their used clothing.

Eighty-nine college females, ages 18-30, completed a questionnaire which consisted of a fashion innovativeness scale (Hirschman & Adcock, 1978), demographic questions, and questions asking about how long clothing items were worn before disposal, ways in which used clothing was disposed, and reasons underlying the disposal of used clothing. Subjects were classified as fashion innovators or non-fashion innovators by their scores on the fashion innovativeness scale. Multivariate analysis of variance statistical procedures were used to analyze the data.

Results indicated that fashion innovators in this sample were more likely to wear clothing for a shorter period of time than were non-fashion innovators (p<.05). In terms of ways they disposed of used clothing, it was found that fashion innovators were less likely to use used clothing for rags than were non-fashion innovators. With regards to factors underlying the disposal of clothing, it was found that fashion innovators were more likely to dispose of clothing due to fashionability and conformity reasons than were non-fashion innovators.

The findings of this study have broadened the knowledge of the decline stage of the fashion cycle. Whereas abundant information is available regarding the introduction, growth, and maturity stages of the fashion cycle, few studies have been concerned with the decline stage. Thus, the results of this study provide information about possible reasons why clothing fashions reach the decline stage, ways in which clothing fashions are disposed of in the decline stage, and the effect of fashion innovativeness on these clothing fashion disposal practices.

References:
Factors Influencing Sources of Information Utilized During the Purchasing Process Among Retail Buyers of Apparel

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The purpose of this study was to examine retail apparel buyers' utilization of the various components of a manufacturer's total communication effort. More specifically, through a survey of retail buyers of apparel, this research addresses two major research questions: 1) What information sources do retail buyers of apparel rely on during the procurement process? 2) What factors help to determine the patterns of information sources among retail apparel buyers?

The hypotheses were: The information source patterns are related to the following five categories: H1) Individual, H2) Product, H3) Buying situation, H4) Company characteristics, and H5) Vendor selection criteria. Data were collected using seventy-three buyers from a variety of retail ownership groups responding to a self-administered questionnaire. Using a Principal Components Factor Analysis of information sources, five factors were extracted and labeled: General Media/Printed Promotion, Fashion Trade, Personal Sources, Outside Sources, and Trade Show. These five factors were served as criterion variables. Based on the highly significant F-tests for each information source pattern, it was concluded that information sources utilized by retail buyers of apparel were influenced by various factors such as individual, product, buying situation, and company characteristics, as well as vendor selection criteria. Among individual characteristics, personal income, sex, and years of experience appeared to be important. For product characteristics, fashion innovativeness of product and the perception toward fashion consciousness of typical consumers of products were more likely to influence the information sources than were merchandise lines. Time pressure and perceived company economic risk appeared to be more associated with information sources than perceived personal economic risk as buying situation characteristics. The significant variables of company characteristics included the number of buyers and geographic region, but not store categories and buying system. Seven factors extracted from twenty-four items of vendor selection criteria were highly associated with the information source patterns. In addition to the hypotheses testing, the relative importance of various information sources and vendor selection criteria were discussed. The manufacturer's representatives was ranked highest as the most important information source, indicating that personal selling appeared to be the most effective promotion strategy for apparel manufacturers or wholesalers. Top management, buying office, and fellow employees were ranked relatively high as providing input to the buyers' decision process in this study. This indicates manufacturer's direct selling strategies to these influencing agents may be desirable. The four highest ranked vendor selection criteria were relevant to merchandise quality such as quality, quality control, vendor stands behind merchandise, and consistency in specifications. This indicates that manufacturers need to be more concerned with the quality of their product than negotiation, price, or other services. The vendor's reliability and flexibility were also relatively highly ranked. Based on the major results of this study, the profiles of each pattern of information sources were developed. The implications were discussed in three areas: manufacturers, retailers, and educators. This information is useful to manufacturers in terms of: 1) understanding the informational needs of retail buyers, and 2) more efficient allocation of resources within their promotional budgets. The results of this research are also beneficial to a variety of retail institutions in developing their executive training programs and to universities in designing their retailing or merchandising curriculum. Finally, this research may also contribute to the basis of developing a model for retail buying behavior.
Clothing Acquisition, Evaluative Criteria and Information Sources:

A Cross-Cultural Study of U.S. and N.Z. University Women

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The Pacific Rim which includes the West-coast United States and New Zealand has been identified as a major marketing growth area. Global apparel and textile marketing is important to both these economies. The U.S. and N.Z. share a common language, similar Western traditions and values; however, they are influenced by different protectionist and trade philosophies, consumer preferences, and available clothing acquisition and information sources. This research adds to the cross-cultural knowledge regarding clothing acquisition and identifies factors which might aid apparel manufacturers and international retailers in product marketing in both countries.

Women students at an urban university on the West-coast of the United States (n=108) and on the South Island of New Zealand (n=101) served as the sample. A survey instrument was used to gather data for demographic variables and the three dependent variables: 1) clothing acquisition including four methods of acquiring clothing and seven types of stores, 2) seven store evaluative criteria, and 3) eight market and two reference person information sources. Nationality served as the independent variable. Data were analyzed in the U.S. using t-tests and correlations.

The samples reflected general characteristics of the university populations from which they were drawn. The U.S. sample was predominantly single (82%) and employed (71%) with a mean age of 24.6; the N.Z. sample was mostly single (97%) and not employed (79%) with a mean age of 20. Mean scores indicated the U.S. sample most often shopped at department stores using price, assortment, fashion leadership, displays, advertising, and location as the evaluative criteria. N.Z. subjects shopped most often at specialty stores using price as the criterion. The highest mean scores for store evaluative criteria for both groups were assortment and price. However, in choosing a store the evaluative criteria of sales assistance, fashion leadership, merchandise display, advertising, and location were used more by the U.S. than the N.Z. sample. Both groups used domestic and foreign fashion magazines the most as clothing information sources. However, the two groups differed in the extent to which they used information sources with domestic and foreign fashion magazines used more by the U.S. sample as well as catalogues/direct mail, store salespersons, and newspapers. Both groups exhibited a high use of friends as sources of information on clothing; however, a difference was found in the N.Z. sample's high use of family members.

Cross-cultural understanding of consumer clothing acquisition can aid in the global marketing of appropriate apparel products. These student populations may be a microcosm of larger national populations. Although some markets may seem similar on first inspection, a careful analysis is needed to determine where subtle differences may lie. A product, its presentation, and how it is merchandised may work in one country but not another.

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Consumers' Reactions to Odd Price Endings of Apparel Products:

An Example of Experimental Method Using Creative Questionnaire

Jikyeong Kang-Park, University of Minnesota

George A. Morgan and Antigone Kotsiopulos, Colorado State University

The possible impact of odd-even retail price endings of apparel products was investigated using multiple versions of a questionnaire administered to three different samples of consumers. Three dependent variables (perceived value of the product, perceived likelihood of buying the product, and perceived extent to which the product is a bargain) were measured on selected apparel products, which were presented with three price endings (even price, 0.1% reduced odd price, and 1.0% reduced odd price).

Four hundred subjects, who were selected from various public places located on the Front Range of Colorado, participated in the study. Each subject was exposed to a total of nine products and each product was presented with a price which used one of the three price endings.

The analyses were performed to investigate whether: (1) apparel items would be rated as significantly less of a value or a bargain and significantly less likely to be bought at even prices than odd prices which are 0.1% or 1.0% reduced from the even prices; (2) consumers' positive reactions to odd prices would be significantly more likely to occur for lower price level apparel items; (3) consumers in particular demographic subgroups would be significantly more prone to odd prices than others; and (4) consumers with particular buying habits would be significantly more prone to odd prices than others.

The overall results indicated that there was little or no impact of odd prices on the selected apparel items. The interactions between four price levels (low, low-medium, high-medium, and high) and three price endings were weak and did not yield a generalized conclusion due to the complexity and subtlety of the results. Moreover, no particular demographic subgroups of age, marital status, educational level, or household incomes showed proneness to odd prices. Buying habit characteristics (such as impulse buying, search for special prices or good bargains, and budget constraints) did not show any significant relationship with proneness to odd prices. As a conclusion, odd prices do not seem to be a major factor in changing consumers' reactions to apparel products.

Perhaps, this is due to the unique product characteristics of apparel products, such as high involvement.

The study confirmed the argument that many stores have used odd prices because of custom or because "everyone else does it" (McCarthy & Perreault, 1984). The significance of the findings to retailers of apparel could be shown by examining amount of money lost if ineffective odd prices were used. It appears that, even though the percentage increases in profits would be small, large retailers could substantially increase total dollar sales by utilizing even prices.

Reference
This research explored women's dress patterns in Qatar, an Arab state on the Persian Gulf. Since its independence from Great Britain in 1971, affluence and education have affected major social changes and modernization. Little information is published about the social structure of this small OPEC country; however, like other Arab nations Islam is deeply embedded in the lives of the Qatari people. Greater understanding of world cultures is needed as we live in a global society. With little apparel production of its own, Qatar may be a potential new market for U.S. firms.

Method. Fifty urban Qatari women were interviewed by a non-national whose home is Qatar. Only women were present during interviews. Attempts were made to stratify the sample on demographic variables. Age, education, socioeconomic status (SES), marital status, children, work and travel were investigated as independent variables. Dependent variables included degree of traditionalism of outer garment worn in eleven different situations; and market sources used for clothing acquisition and information. Data were returned to the United States for statistical analysis.

Results. About half the subjects had a college education. The median age was 25, two-thirds were single, and half worked outside the home. SES, measured by family name and occupation, ranged from sheik's wives to middle class workers. All had traveled outside Qatar; most to other Arab countries and Europe; 11% to the U.S. This demographic makeup is representative of the female population in age, marital status, social status, and travel; however, it is higher than the norm in respect to education and work status.

Society prescribes proper outer clothing. Most wore the abaya and shilla, or abaya and burqah; 14% wore Western or other dress. If given a choice, 30% indicated Western/other dress would be preferred. When traveling outside Qatar more than 70% wore Western/other dress, or only the shilla with no abaya, perhaps indicating some discontent.

Subjects dressed most traditionally while in public situations and traveling within Qatar. Less traditional dress was worn at home or friends' homes, at work, and when traveling outside Qatar. All of the 11 situations investigated were affected by demographic variables, of which age appears to be most important. Those wearing more traditional dress in most situations were older, married, and had more children. Those who worked outside the home were less traditional dress. In some situations travel, education and SES affected dress.

Information sources used most by subjects were store displays, videos, TV and family members, followed by friends, newspapers, salespersons, and fashion magazines (Arab, American and European). Acquisition sources used most were a tailor, suq, sources outside Qatar, women's boutiques, and finally a center similar to U.S. malls. Clothing at this center often is imported and expensive. All demographic variables investigated affected the use of information and acquisition sources to some degree. The use of media information sources and the use of suqs, boutiques and shopping centers appeared to be most affected by demography.

Implications. This work contributes to cultural dress knowledge where data are collected in the home country. Traditional dress is retained by Qatari women; however, this study suggests at times they may prefer more Western dress and their definition of acceptable dress depends on the situation. As U.S. apparel market growth declines due to import penetration, new markets are sought. Qatar has an affluent, fast growing population which is less conservative than its Arab neighbors; thus, this country might be open to importing U.S. products, especially since it has little apparel production. American firms interested in exporting to Qatar should be aware of consumer characteristics and socially accepted standards.
Ideals of Beauty as Portrayed by Children's Fashion Dolls

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Perceptions of beauty are influenced by cultural ideals. The Greek model of beauty has long been important in Western civilization (Horn & Gurel, 1981). Additional ideals have developed including a fashion ideal (an ideal of beauty accepted by the majority that varies over time). Children learn through teaching and conditioning. Conditioned learning is implied, subjective, subtle, and possibly unconscious and often occurs via observations or imitations. Childhood doll play is a form of socialization and learning. Development of the body image can include self-comparison of the body to the doll bodies with which the child plays (Davis, 1980; Storm, 1987).

The toy industry markets many types of dolls. Among these are fashion dolls, which are sold as vehicles for the sale of fashionable doll clothes (Cox, 1977). What type of learning takes place when a child plays with fashion dolls? What type of beauty ideals are fashion dolls portraying? The purpose of this study was to determine the ideal of beauty portrayed by today's fashion dolls by evaluating their body proportions in comparison with the Greek ideal (societal norm) and the fashion model ideal (an ideal of beauty based on the models utilized to display fashion at any one time).

Toy stores in one city were surveyed in April 1988 to determine the types of fashion dolls available. One doll of each type by manufacturer was purchased for the study. The total sample consisted of twelve 11½'' dolls, one 12½, one 17½, and one 18½'' doll. To determine the dolls' body proportions a modified version of Body Analysis, Method 2 in Kefgen and Touchie-Specht (1986) was used. Due to the small sample size and the exploratory nature of this study, descriptive statistics were utilized.

The fashion dolls' measurements are not proportionate to average measurements. The dolls are short waisted in comparison with proportions of the fashion model and the Greek ideal. The dolls' waist to crotch length is short, giving them longer legs than either the fashion model or the Greek ideal. The researchers calculated relative body proportions by assigning the dolls a height of 5'6" and recalculating personal measurements on that basis. At this height, bust circumference ranged from 26.38 to 32"; waist circumference ranged from 17 to 23.25"; and hip circumference ranged from 26.88 to 32.25". When the dolls' circumferential measurements were standardized to a bust measurement of 36", their heights ranged from 6'2" to 7'5".

Barbie's and other fashion dolls' influences on children are potentially very strong (Cox, 1977). Research is needed to determine if children perceive these dolls as the image they would like to achieve. The dolls' appeal includes the subsequent purchases of accessories and clothing (Cox, 1977). Fashion dolls' influence on children's perceptions, interests, and attitudes toward fashionable clothing and lifestyles should also be explored.

References

Quantification, meaning to reduce primary data to numbers and to find meaningful relationships among those numbers, is a fairly new research technique in the textile field. While not all areas of research can be "quantified", when used correctly the method gives statistical data that is not otherwise obvious.

As a textile historian, I wondered if quantification could generate a tool to use in dating the cotton prints commonly called calicoes. Museum curators, private collectors, and textile/clothing personnel could judge when a specific calico was printed if quantification of calicoes provided such guidelines.

In a pilot study to test the feasibility and value of quantification of calicoes, 112 swatches bought in Tucson, Arizona between 1974 and 1978 were taken from the researcher’s collection, another 112 calicoes were purchased in Ames, Iowa between 1984 and 1988, and a similar number of printed cottons from a 1930s quilt were located.

The method of study enumerated differences in physical properties of these swatches and then developed a sheet for recording the data. Warp and weft threads were counted. Numbers of motif elements per swatch were noted. The background and all other colors used within the print were coded. Size of motif, numbers and types of motif per square inch, and density of motifs on the ground were all quantified.

My hypothesis stated that there would be a significant difference in at least some variable of these calicoes to differentiate among the three decades. If correct, the study would then be continued on calicoes from all available decades.

Findings identified a difference in thread counts among the swatch sets. An unbalanced count, as defined by a difference of more than 20 threads between the warp and weft counts was found in 32 percent of the 1930s set, 22 percent of the 1970s set, and 12 percent of the 1980s set. The range of warp and weft threads per inch were very similar in all three decades: 60 to 104 warps, and 48 to 80 or 92 wefts per inch. However, the mean warp and weft count was six percent higher in the 1930s set.

Background colors were the primary difference found among the sets tested. The data failed to support the commonly held opinion that 1930s fabric was printed in pastel colors. My observation that 1980s fabrics seemed much more dull in color than the 1970s set also was not supported.

The number of swatches with white as a ground color held the key to refute both of these ideas. Fifty-four percent of the 1930s swatches, thirty-nine percent of the 1970s calicoes, and only six percent of the 1980s fabrics had white backgrounds. The presence of so much white in the background seems to account for the erroneous view that the 1930s were a period of pastels, and a relative absence of white leads to the mis-perception of the 1980s set as dull.

<table>
<thead>
<tr>
<th>Percentage of Ground Colors</th>
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<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>White</td>
</tr>
<tr>
<td>1930: 53.6</td>
</tr>
<tr>
<td>1970: 29.5</td>
</tr>
<tr>
<td>1980: 6.0</td>
</tr>
</tbody>
</table>

| Red                         |
| 1930: 13.4                  |
| 1970: 7.0                   |
| 1980: 11.6*                 |

| Yellow                      |
| 1930: -                     |
| 1970: 13.4                  |
| 1980: 12.5                 |

| Blue                        |
| 1930: 10.7                  |
| 1970: 14.3                  |
| 1980: 15.0                  |

| Red-Orange                  |
| 1930: -                     |
| 1970: 4.5                   |
| 1980: 14.3                  |

| Green                       |
| 1930: 6.0#                  |
| 1970: 5.3                   |
| 1980: 15.3                  |

| Purple                      |
| 1930: -                     |
| 1970: 7.0                   |
| 1980: 17.9                  |

| Other                        |
| 1930: 14.3                  |
| 1970: 19.0                  |
| 1980: 8.4                   |

| 1930: 100.0                 |
| 1970: 100.0                 |
| 1980: 100.0                 |

*Red-purple
#Blue-green

While numerical differences were noted, no conclusions should be drawn from this pilot study. While differences in thread count exist, they are not sufficient to say 1930s calicoes are unbalanced, and that 1980s calicoes are balanced. While general differences in the colors used to print cottons exist, there are too many exceptions to form any sort of "rule". Even if more sophisticated statistical methods were used to find differences among the data in printed cottons, they would not be useful if the differences could not be consistently seen by the eye of someone attempting to date calicoes.

If, in future studies, researchers were able to quantify complete runs of calicoes printed in a decade, perhaps more definite findings would generate the still-sought dating tool.

BUCKLES AND BUTTONS: AN INQUIRY INTO FASTENING SYSTEMS USED ON EIGHTEENTH CENTURY BREECHES

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The study of fastening systems used on clothing of previous eras holds a fascination for costume historians and period historic costumers. Little information about fastening systems used on garments from previous centuries is available in historic costume texts. The secondary sources, such as paintings and prints often do not depict the fastening systems of clothing. Therefore, the costume researcher must use primary sources, the extant costumes, to study fastening systems. Since far less research has been conducted pertaining to men's costume as compared to women's costume, this study focused on men's fastening systems. The time period of the eighteenth century yielded enough artifacts to provide sufficient research data.

The focus of this study was the documentation and analysis of the leg outseam fastenings, back waist fastening systems and front fastening systems used for eighteenth century men's breeches. The sample consisted of 73 garments dating from the eighteenth century. Extant garments from 5 museum costume collections in England were examined, illustrated, photographed, categorized and tabulated. A series of 3 to 7 buttons and buttonholes was used to close each leg outseam on all breeches in this sample. The majority of breeches (89%) used 4 buttons and buttonholes (N=36) or 5 buttons and buttonholes (N=27) to close each leg outseam. Except for 5 pairs of breeches that used ribbon ties or eyelets with laces to fasten the ends of the kneebands, the kneebands on the remaining 68 breeches were fastened with removable buckles.

Three pairs of breeches had no back waist fastening system, while 13 pairs had been altered at the back waist, or no data was available. The remaining 57 pairs of breeches fastened at the back waist with eyelets with laces (N=27), straps with buckle (N=28), or both eyelets with laces and straps with buckle (N=2). Either a slit at center back, or a gusset inserted into the center back at the waist provided a space for expansion/contraction of the waist girth.

Of this sample, only 8 pairs of breeches (10%) used a vertical button front fastening system, with 1 button (N=1) or 2 buttons (N=7) used to close the opening. The whole fall, a flap extending across the front to cover the front opening, was used on 2 pairs of breeches (3%). Five buttons were used to close the whole fall on both pairs of breeches. The remaining 63 pairs of breeches (86%) used a front fastening system known as a small fall, a flap extending across only the central part of the front to cover the front opening. Either 2 buttons (N=32) or 3 buttons (N=25) were used to close the small fall of the 57 breeches for which data were available. The small fall fastening system included several detail variations—24 pairs (38%) had horizontal, vertical, or both horizontal and vertical bands that edged the small fall. Although the small fall was the most prevalent front fastening system used on breeches in this sample, it could not be concluded that the small fall was the most prevalent front fastening system in the eighteenth century, as this study was based only on artifacts available for study in costume collections.

This study extends historic costume research by documenting and analyzing the types and frequencies of fastening systems used on men's breeches in western Europe during the eighteenth century. In addition, providing data about historically accurate costume fastenings is viewed by many theatrical costumers as critical to the authenticity of a period production.

Had it been possible to use artifacts dated within narrower time spans, a system of dating eighteenth century breeches based upon the types of leg, back waist and front fastening systems could have been developed.
Fashionable Clothing in the Mormon Kingdom: A Significant Symbol

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Mormons have been identified as a separate American ethnic group based on their unique religious beliefs, the forced exodus from Nauvoo, Illinois, in 1846 and the subsequent move west to build a new "Zion," God's Kingdom on earth. Converts who accepted Mormon religious beliefs and demonstrated sufficient commitment received their "endowments" as a step on the way to eventual acceptance into God's celestial kingdom. Additional acts of worthiness and service on earth indicated successful progression toward the aim of greater individual celestial glory. A uniquely styled and marked undergarment was worn to symbolize this commitment. Building Zion required a membership large enough to secure the area proposed for the "Kingdom" placing group priorities on organization, proselyting for new members, and faithfulness to the religious and temporal aspects of the cause.

During early settlement years in Utah Territory, Mormon self-sufficiency was required to construct clothing locally. Textiles and other needed materials had to be brought by individuals or freighted in by wagon train from the United States. Church members with expertise in creating textiles and clothing, familiar with men's and women's 19th century fashion, its symbolic meaning of success in the world, and its established construction techniques were among those gathering in Utah. While work clothing was necessary, newspaper advertisements, extant clothing, and photographs indicate that fashionable clothing was soon in demand and was worn. Salt Lake City became an early merchandising center for dry goods and clothing freighted in from eastern, west coast, and mid-west sources by businessmen supplying both Mormons and western migrating "gentiles."

Church leaders, their families, and others who could afford the price wore fashionable clothing, establishing this practice as a visible symbol of Mormon success within the group and before the world. Missionaries were outfitted in fashionable clothing to promote the image of Mormon church success and the desirability of joining the group. Clothing became an important behavioral issue when church leaders perceived a serious threat against Mormon control of Utah Territory initiated by the United States government in 1857. Tight control over the membership was needed to present the image of a group working to achieve self-sufficiency and separation from the outside world. Members were explicitly and repeatedly counseled to give up dry goods, clothing, and fashions from "Babylon," and wear only items of their own design, manufactured from locally grown materials. Women leaders were charged with the task of organizing church women and implementing programs among them that would accomplish these expectations.

A simplified version of current fashion was worn by women, and homespun was used for some men's, boy's, women's and girl's clothing, showing some compliance with leaders' counsel. However, many church members, both male and female, who had already adopted fashionable 19th century clothing either as a symbol of their status in the group, or of the "Kingdom's" perceived success did not relinquish the symbol. Few references to clothing were made in church leaders' counsel after 1879.

The three distinct clothing symbols manifested within the developing Mormon culture provided useful clues to the material environment and cultural setting of the "Kingdom" building period. The undergarment with prescribed styling worn at all times by faithful members provided a common but hidden symbol of religious commitment. The simplified form of 19th century fashion made locally from home grown and processed materials indicated support of Mormon goals during a stressful period and in some cases a lower economic status. The fashionable 19th century clothing worn to announce successful advancement in social or economic status indicated the value placed on success and progression within the Mormon culture.
Aristotle suggested that observing and contrasting one group with another, one system with the next is the key to understanding natural phenomena. In addition, Foner (1986) stated that since old people represent just one part of the society, they must be viewed in the context of all age groupings.

The purpose of this study was to identify clothing related problems experienced by women and to investigate if a relationship exists between reported problems and age. One of the main objectives of this study was to determine if older women experience more clothing problems than middle-aged and/or young women. An intrafamilial sample, totaling 90 participants, consisted of 30 women, ages 17 to 34 years; their mothers, ages 35 to 64 years and their maternal grandmothers, 65 to 96 years.

The data were collected by personal interviews which lasted between forty-five minutes and an hour each. The interview schedule was designed to obtain demographic information as well as information concerning clothing problems. The questions pertaining to clothing problems included items on barriers to finding appropriate clothing, clothing acquisition, performance of garments, as well as difficulties experienced with seventeen specific garment types.

Eighty-two percent of the women reported having problems when purchasing new garments, at least some of the time. A variety of barriers to acquiring appropriate clothing were identified. Of major concern were limited style selection, price, lack of affordable good quality garment, and inadequate fitting rooms.

The women ranked six factors in order of importance when purchasing new clothing. Three factors, namely colour, comfort and ease of care were found to be of equal importance to each of the three generations. Significant differences were found for fit, style and cost. Mothers and grandmothers ranked fit higher than daughters who ranked garment style as more important.

All seventeen types of garments presented problems to some of the women regardless of age, with 62 women reporting problems with 6 to 11 garment types. Nine of the 17 garment types were reported as being a problem for more than 50 percent of the participants, and nine garment types were found to be dependent on age (p<.05). The results of this study suggest that perception of clothing problems do not increase with age and thus, do not support popular beliefs that seniors experience more problems with clothing than younger people. Further intergenerational research using larger and different samples of men and women would be valuable in establishing new knowledge on clothing problems throughout the life cycle.

Reference
The manufacturing of many modern electronic components is done in cleanroom environments which are designed to control contaminants (e.g. dust) that could otherwise diminish the quality of sensitive electronic components. It is widely acknowledged that cleanroom personnel are a major source of particle contamination in the cleanroom. Every human activity as well as the cleanroom garment itself contribute to particulate contamination, causing 15-20 percent of component failures.

The primary function of the cleanroom garment is to isolate and protect the manufacturing environment from particles generated and released by personnel. Cleanroom workers typically wear protective coveralls, hoods, face coverings, boots, and gloves. In studies by Dahlstrom (1983) and Minamino and Fujii (1984), the human head and face area were found to be significant in generating and releasing particle contamination in the cleanroom. However, limited research attention has been directed toward investigating contamination from the face and head and the effectiveness of coverings to contain such contamination.

Due to the limited research effort and the recent introduction of more sophisticated and costly complete hood and face coverings, research was initiated to compare the generation and release of particles from a traditional "executioner" hood with particles generated and released from a recently introduced complete coverage hood assembly with a remote breathing device.

All testing of human subjects in protective cleanroom garments was carried out in a special four by four by eight ft. testing chamber with a stainless steel grated floor and a HEPA filter ceiling. Air flow in the chamber was kept constant at 70 ft. per minute. The number and size of particles larger than 0.19 microns in the chamber were measured by a Met I Laser Particle Counter. Particle counts were taken during seven minute testing periods in the chamber.

Human subjects wore coveralls, boots, gloves, and either a traditional hood or a complete coverage hood assembly. All subjects wore identical street clothing under the protective garments. In order to isolate and measure only particles generated and released from the head and face, all other garment openings including neckline, leg and arm cuffs, zipper placket, and garment seams were securely taped shut. Subjects followed a specific dressing and undressing sequence and test period protocol consisting of five types of movements performed in the test chamber.

The number of particles generated from subjects during testing was multiplied by the size of the test chamber times the square feet of the chamber to obtain particle generation rates. A non-standard t-test was used to determine if significant differences existed between the particle generation rates of the two types of head and face coverings. Significant differences were observed in the particle generation rates, with the traditional hood generating a higher number of particles and the complete coverage hood assembly generating a lower number of particles during the standing, arm, feet, and head movements.

Research results indicate that the use of a complete coverage hood assembly with a remote breathing device should be considered for more effective containment of particle contamination from worker's heads and faces. Reduced component failures and increased yields resulting from more effective head and face covering could offset the added expense of a complete coverage hood assembly with a remote breathing device.


Internships in museums provide innovative, "hands-on" learning opportunities for students and faculty in unique environments, strengthen classroom experiences, and foster professional development. In addition, some internships serve public relations functions by promoting the profession and campus programs, provide valuable services to the community, and increase educational partnerships with business/government.

Education is recognized as the primary role in American museums. The strengthening of collaborative relationships with educational institutions has been recommended by professionals in this field.

While museum internships in costume have been reported in the literature and at conferences, none could be identified which focused on other specific textile artifacts such as Oriental rugs. Because of the interest in the preservation of textile heirlooms and because Oriental rugs are such popular investments for commercial and residential interiors, textiles/merchandising and interior design students should develop increased awareness of these artifacts, learn to evaluate their condition and quality, and understand the requisite preservation and presentation techniques.

Hearst San Simeon State Historical Monument (Hearst Castle) was the laboratory setting for internships involving Oriental rugs. This museum, now owned by the California State Department of Parks and Recreation, houses the artifacts of William Randolph Hearst, collector, newspaper magnate and publisher, film producer, politician, and builder of this La Cuesta Encantada (The Enchanted Hill) home. Oriental rugs in the collection date from the mid 1880s and include the following: Bidgar, Meshed, Kazak, Kerman, Sarouk, Khorassan, Keshan, and Tabriz (slides). Although most of the rugs are wool, the collection also includes four valuable silk artifacts (slides).

During the last two summers, students and faculty participated in the wet cleaning, preservation, and display of the wool Oriental rugs under the direction and evaluation of the private curator on contract. Wet cleaning was conducted on site. Repairs were performed under the guidance of the curator including: replacement of warp and filling yarns, repiling of worn areas, securing of kilims, insertion and reweaving of side cords, and repair of slits. Some rugs were lined and prepared for hanging display (slides).

While this particular program involving the rug collection concluded at the end of Summer, 1988 (due to the water shortage), other internships in preservation and documentation at Hearst Castle are on-going. In addition, the monument has established focus tours of the textiles collection, and this private curator has agreed to sponsor other interns.
The purpose of this classroom project was to reinforce theoretical constructs of functional clothing design, such as mobility, comfort, and aesthetics, while supporting the Function Design Process (DeJonge, 1984). Also, to address problems associated with group processes including communication, human relations and group dynamics.

The first group, explored the design problem by stating objectives conducting a literature search on design and social/psychological meaning on past Trustee and Commencement robes at various institutions. Group one then defined the design problem in a one sentence definition. This definition would serve as the standard to evaluating the success of the final design.

The second group explored the design situation by analyzing the current robe for it's assets and liabilities related to mobility, space, social/psychological needs, and situational/activity needs. They then analyzed the market for fabric combinations and compiled a fabric library resource for the design group.

Group three, using the information provided by the preceding groups and by interviewing university administration analyzed the current needs of the Trustees and described specifications for the design group through a process of ranking and weighing. The design group, group four, presented design solutions based on the class evaluation and upon recommendation of the President of the University. After selection, a formal rationale was written to accompany the Trustee robe when it was later presented to administration.

The final group, group five, obtained measurements of the 40-member Trustee Board, constructed the prototype, and presented it to the class and administration.

The implications of this experience were manifold:
1) Students were challenged to transfer theoretical knowledge into practical problem solving skills.
2) Students were involved in group process that required accountability from them as each stage contributed to the success of the next.
3) Student interaction from other faculty and administration necessitated professional behavior in a client/designer situation.
4) Students will see the results of their work at their commencement services. This vital involvement of Home Economics students not only reinforced a positive campus reputation, but boosted self-esteem among the class members.

The Trustee robe was eagerly accepted by administration and was later voted in by the Trustee Board. Construction will be contracted out and the final product will be seen at the Spring 1989 Commencement Service.
